UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
ALEXANDRIA DIVISION

RICHARD ROE et al., Plaintiffs, v. PATRICK M. SHANAHAN et al., Defendants.	Case No. 1:18-cv-01565 (LMB/IDD)

DECLARATION OF PETER PERKOWSKI IN SUPPORT OF MOTION FOR PRELIMINARY INJUNCTION

1. My name is Peter Perkowski. I am the Legal & Policy Director of Plaintiff OutServe-SLDN, Inc.

2. I am over 18 years of age, am competent to testify about the information contained in this declaration if needed, and offer this declaration based on my own actual, personal knowledge.

3. OutServe-SLDN is a non-partisan, non-profit, legal services, watchdog, and policy organization that represents the U.S. LGBTQ+ military community—service members, veterans, civilian Department of Defense, and their spouses and families—worldwide. The organization's mission is to address and end—through litigation, policy advocacy, and education—all forms of unequal or unfair treatment against members of its community based on sexual orientation, gender identity, or HIV status.

4. OutServe-SLDN is in part a membership organization, or the functional equivalent of a membership organization. It has well over 7,000 members—veterans, active-duty

and reserve-component service members, and civilian Department of Defense workers throughout the world who identify as LGBTQ or are living with HIV—and more than 54,000 supporters. OutServe-SLDN also has more than 54 chapters worldwide, including 35 in the United States, and 20 additional special group forums, one of which is the "Positive Forum" for people living with HIV. These chapters are not just social groups: because service members who are LGBTQ+ and/or living with HIV are minority groups that are still sometimes marginalized, stigmatized, or ostracized in the military, the chapters allow these service members to establish emotional support networks and to exchange information that is important for career advancement and professional growth. The chapters also provide a direct link for service members to access services and programs that OutServe-SLDN offers.

5. OutServe-SLDN provides pro-bono advocacy and legal services for members of the military living with HIV. Advocacy work includes working with Congress to change or approve legislation and regulations affecting service members with HIV, as well as working directly with the Department of Defense, the Secretary of Defense, and the service Secretaries on the same issues. Legal services work includes writing and submitting amicus briefs in cases involving HIV-related issues (e.g., *United States v. Forbes*, Court of Appeals for the Armed Forces Case No. 18-0304/NA); filing and litigating impact litigation to change Department of Defense policies; directly representing servicemembers with HIV in administrative-separation and court-martial proceedings; and providing cultural-competency assistance, education and information, and training to Judge Advocate General defense lawyers in all service branches.

6. As Legal & Policy Director, my duties include supervising OutServe-SLDN's legal department and overseeing its legal-services function. I am therefore familiar with the inquiries that the organization receives from members requesting legal assistance.

7. Since the filing of the Complaint in this matter, OutServe-SLDN's legal department has received numerous calls and emails from service members with HIV who are going through a process like plaintiffs Staff Sergeant (SSgt) Roe and Senior Airman (SrA) Voe in this matter. Many of these service members are currently facing separation. OutServe-SLDN's legal staff, including myself, have spoken to these service members and collected relevant documents from them. The facts set forth below are based on those documents and conversations.

8. K.R. is a Senior Airman who joined the Air Force in 2014 and is currently stationed at an Air Force base outside the United States. SrA K.R. was diagnosed with HIV in late 2016 and was immediately put into the Integrated Disability Evaluation System (IDES) to determine whether he would be returned to duty or instead would be separated because of his medical condition. As with plaintiffs, the boards evaluating SrA K.R. determined that he was not worldwide deployable and therefore unfit for duty, and he was recommended for separation.

9. SrA K.R. appealed to the Secretary of the Air Force (SAF). On November 7, 2018, the SAF's designee—John Vallario, Deputy Director of the SAF Personnel Council—issued a memorandum decision stating: "On behalf of the Secretary of the Air Force, it is directed that Senior Airman [K.R.] be discharged." A copy of this memorandum is attached to this declaration as Exhibit C1. (To avoid potential stigma and discrimination based on his HIV status, personal identifying information has been redacted to protect SrA K.R.'s anonymity.)

10. The memorandum to SrA K.R. is almost identical to those received by plaintiffs, and it was issued the same day. As a basis for the decision, it states: "[T]he member's condition precludes him from being able to deploy world-wide without a waiver and renders him ineligible for deployment to the Central Command (CENTCOM) Area of Responsibility (AOR)[.] …

Therefore, based on his inability to deploy and considering his current career point, the Board determined he is unfit for continued military service and shall be discharged with severance pay."

11. SrA K.R. has received orders stating that his Date of Separation (DOS) is March 28, 2019. (Because of the large amount of personal identifying information in the separation orders, I have not attached it to this declaration.) SrA K.R. wants to continue serving in the Air Force, and he has the support of his command, who favor his retention. But without an injunction from this Court he will be separated on March 28.

12. SrA K.R. is also a member of OutServe-SLDN's "Positive Forum," a secret Facebook group for service members, veterans, and others in the military community who are living with HIV. By virtue of this, and by availing himself of OutServe-SLDN's legal services, SrA K.R. is a member of OutServe-SLDN.

13. S.H. is a Senior Airman who joined the Air Force in 2016 and is currently stationed at an Air Force base in the southern United States. SrA S.H. was diagnosed with HIV in early 2018 and was immediately put into the IDES to determine whether he would be returned to duty or instead would be separated because of his medical condition. As with plaintiffs, the boards evaluating SrA S.H. determined that he was not worldwide deployable and therefore unfit for duty, and he was recommended for separation.

14. SrA S.H. appealed to the SAF. On December 4, 2018, the SAF's designee—John Vallario, Deputy Director of the SAF Personnel Council—issued a memorandum decision stating: "On behalf of the Secretary of the Air Force, it is directed that [Airman First Class] [S.H.] be discharged." (SrA S.H. was promoted from Airman First Class (A1C) to Senior Airman while his appeal was pending.) A copy of this memorandum is attached to this

declaration as Exhibit C2. (To avoid potential stigma and discrimination based on his HIV status, personal identifying information has been redacted to protect SrA S.H.'s anonymity.)

15. The memorandum to SrA S.H. is almost identical to those received by plaintiffs, and by SrA K.R. As a basis for the decision, it states: "[T]he member's condition precludes him from being able to deploy world-wide without a waiver and renders him ineligible for deployment to the Central Command (CENTCOM) Area of Responsibility (AOR)[.] … Therefore, based on his inability to deploy and considering his current career point, the [Board] determined he is unfit for continued military service and shall be discharged with severance pay."

16. SrA S.H. has received orders stating that his DOS is March 28, 2019. (Because of the large amount of personal identifying information in the separation orders, I have not attached it to this declaration.) SrA S.H. wants to continue serving in the Air Force, and he has the support of his command, who favor his retention. But without an injunction from this Court he will be separated on March 28.

17. SrA S.H. is also a member of OutServe-SLDN's "Positive Forum." By virtue of this, and by availing himself of OutServe-SLDN's legal services, SrA S.H. is a member of OutServe-SLDN.

18. D.N. is a Senior Airman who joined the Air Force in 2016 and is currently stationed at an Air Force base in the Midwest United States. SrA D.N. was diagnosed with HIV in early 2018 and was immediately put into the IDES to determine whether he would be returned to duty or instead would be separated because of his medical condition. As with plaintiffs, the boards evaluating SrA D.N. determined that he was not worldwide deployable and therefore unfit for duty, and he was recommended for separation.

19. SrA D.N. appealed to the SAF. On December 5, 2018, the SAF's designee—Shane Prater, Director of the SAF Personnel Council—issued a memorandum decision stating: "On behalf of the Secretary of the Air Force, it is directed that SrA [D.N.] be discharged." A copy of this memorandum is attached to this declaration as Exhibit C3. (To avoid potential stigma and discrimination based on his HIV status, personal identifying information has been redacted to protect SrA D.N.'s anonymity.)

20. The memorandum to SrA D.N. is almost identical to that received by plaintiffs and by SrA K.R. and SrA S.H. As a basis for the decision, it states: "[T]he member's condition precludes him from being able to deploy world-wide without a waiver and renders him ineligible for deployment to the Central Command (CENTCOM) Area of Responsibility (AOR)[.] … Therefore, based on his inability to deploy and considering his current career point, the [Board] determined he is unfit for continued military service and shall be discharged with severance pay."

21. SrA D.N. has not yet received orders informing him of his DOS. He wants to continue serving in the Air Force, and he has the support of his command, who favor his retention. But without an injunction from this Court, SrA D.N. will be discharged.

22. SrA D.N. is also a member of OutServe-SLDN's "Positive Forum." By virtue of this, and by availing himself of OutServe-SLDN's legal services, SrA D.N. is a member of OutServe-SLDN.

23. J.B. is a Staff Sergeant who joined the Air Force in 2014 and is currently stationed at an Air Force base in southern United States. SSgt J.B. was diagnosed with HIV in late 2017 and was put into the IDES to determine whether he would be returned to duty or instead would be separated because of his medical condition. As with plaintiffs, the boards

evaluating SSgt J.B. determined that he was not worldwide deployable and therefore unfit for duty, and he was recommended for separation.

24. SSgt J.B. appealed to the SAF. On November 7, 2018, the SECAF's designee—John Vallario, Deputy Director of the SAF Personnel Council—issued a memorandum decision stating: "On behalf of the Secretary of the Air Force, it is directed that Senior Airman [J.B.] be placed on the Temporary Disability Retired List (TDRL) with a disability rating of 60 percent … ." (SSgt J.B. was a Senior Airman at the time but was subsequently promoted to Staff Sergeant.) A copy of this memorandum is attached to this declaration as Exhibit C4. (To avoid potential stigma and discrimination based on his HIV status, personal identifying information has been redacted to protect SSgt J.B.'s anonymity.)

25. The SAF memorandum to SSgt J.B. is almost identical to those received by plaintiffs, and by SrA K.R., SrA S.H., and SrA D.N, and it was issued the same day as plaintiffs'. As a basis for the decision, it states: "[T]he member's condition precludes him from being able to deploy world-wide without a waiver and renders him ineligible for deployment to the Central Command (CENTCOM) Area of Responsibility (AOR)[.] … Therefore, based on his inability to deploy and considering his current career point, the Board determined he is unfit for continued military service and shall be placed on the Temporary Disability Retired List (TDRL) … ."

26. SSgt J.B. has received orders stating that the date he will be relieved of duty is February 25, 2019. (Because of the large amount of personal identifying information in the separation orders, I have not attached it to this declaration.)

27. SSgt J.B. is also a member of OutServe-SLDN's "Positive Forum." By virtue of this, and by availing himself of OutServe-SLDN's legal services, SSgt J.B. is a member of OutServe-SLDN.

28. OutServe-SLDN has also heard from members of the Air National Guard (ANG) who are facing separation because their HIV status makes them not worldwide deployable. Q.S. is a Senior Airman in the ANG of a state in the Midwest. SrA Q.S. enlisted in 2011 and was diagnosed with HIV in June 2018. SrA Q.S.'s current enlistment period expires on February 18, 2019, and he wants to re-enlist.

29. But SrA Q.S. is not being allowed to re-enlist. Instead, on January 10, 2019, his command presented SrA Q.S. with Form AF 418—by which commanders may "select" or "non-select" enlisted personnel for re-enlistment—stating that SrA Q.S. was "not selected for reenlistment." The reason given for non-selecting SrA Q.S. was that his HIV status renders him non-deployable.

30. Without an injunction from this Court, SrA Q.S. will be separated from the ANG as of his Expiration Term of Service (ETS) date of February 18.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 10th day of January, 2019.

Peter Perkowski

EXHIBIT C1

DEPARTMENT OF THE AIR FORCE
WASHINGTON, DC

Office of the Assistant Secretary

MEMORANDUM FOR AFPC/DPFDD

FROM: SAF/MRBP

SUBJECT: Physical Evaluation—Senior Airman [redacted]

On behalf of the Secretary of the Air Force, it is directed that Senior Airman [redacted] be discharged and receive severance pay with a disability rating of 10 percent under the provisions of Title 10, United States Code, Section 1203. This disability rating was determined based on the Veterans Affairs Schedule for Rating Disabilities (VASRD) in accordance with the National Defense Authorization Act of 2008.

Senior Airman [redacted]'s case was considered by the Air Force Personnel Board (AFPB), which made a recommendation regarding its disposition. The following rationale is provided for the final decision in this case. The Board considered the member's contention that he is fit and should be returned to duty. The Board noted the member has been compliant with all treatment, is currently asymptomatic, and has an undetectable human immunodeficiency virus (HIV) viral load. Additionally, he is able to perform all in garrison duties, has passed his most recent fitness assessment without any component exemptions, and his commander strongly supports his retention. However, the Board noted the member's condition precludes him from being able to deploy world-wide without a waiver and renders him ineligible for deployment to the Central Command (CENTCOM) Area of Responsibility (AOR), where the majority of Air Force members are expected to deploy. Deployability is a key factor in determining fitness for duty and the Board recognized the member belongs to a career field with a comparatively high deployment rate/tempo. Therefore, based on his inability to deploy and considering his current career point, the Board determined he is unfit for continued military service and shall be discharged with severance pay.

The applicant also contends that there are numerous Air Force instructions indicating he should not be discharged due to having this condition. In support of this assertion, he includes a copy of a HQ AF/A1P memo, *Retention of Airmen with HIV*, dated 11 Oct 17, which indicates that asymptomatic HIV alone is not unfitting for continued service. However, this memo also indicates AFPC/DP2NP may return Airmen with asymptomatic HIV to duty, or refer them into the Integrated Disability Evaluation System (IDES). There is no evidence to indicate that AFPC/DP2NP's action to refer the member's case into the IDES was somehow inappropriate or contrary to governing instructions. After a thorough review of his case, both the Informal Physical Evaluation Board (IPEB) and Formal Physical Evaluation Board (FPEB) determined that Senior Airman [redacted]'s condition rendered him unfit. For the reasons indicated above, the

AFPB agrees that his condition precludes him from performing the full range of his military duties and he is therefore unfit for continued military service.

Addressing the applicant's disability rating award, the Board is required by law to rate a disability using criteria outlined in the VASRD. The AFPB typically applies the disability ratings proposed by the Department of Veterans Affairs (DVA) under the Integrated Disability Evaluation System (IDES), as these ratings should be in compliance with the VASRD. The Board therefore assigned a rating of 10 percent for the member's HIV infection. This rating warranted discharge with severance pay.

This action is taken under the authority delegated by the Secretary of the Air Force.

11/7/2018

X John K. Vallario

JOHN K. VALLARIO
Deputy Director, SAF Personnel Council
Signed by: VALLARIO.JOHN.K.1069511070

Attachment:
Additional Information Sheet

EXHIBIT C2

DEPARTMENT OF THE AIR FORCE
WASHINGTON, DC

Office of the Assistant Secretary

MEMORANDUM FOR AFPC/DPFDD

FROM: SAF/MRBP

SUBJECT: Physical Evaluation - Airman First Class [redacted] [redacted]

On behalf of the Secretary of the Air Force, it is directed that A1C [redacted] be discharged and receive severance pay with a disability rating of zero percent under the provisions of Title 10, United States Code, Section 1203. This disability rating was determined based on the Veterans Affairs Schedule for Rating Disabilities (VASRD) in accordance with the National Defense Authorization Act of 2008.

A1C [redacted]'s case was considered by the Air Force Personnel Board (AFPB), which made a recommendation regarding its disposition. The following rationale is provided for the final decision in this case. The AFPB considered the member's contention that he is fit and should be returned to duty. The AFPB noted the member has been compliant with all treatment, is currently asymptomatic, and has a nearly undetectable human immunodeficiency virus (HIV) viral load. Additionally, he is able to perform all in-garrison duties, passed his most recent fitness assessment without any component exemptions, and his commander supports his retention. However, the AFPB noted the member's condition precludes him from being able to deploy worldwide without a waiver and renders him ineligible for deployment to the Central Command (CENTCOM) Area of Responsibility (AOR), where the majority of Air Force members are expected to deploy. Deployability is a key factor in determining fitness for duty and the AFPB recognized the member belongs to a career field with a comparatively high deployment rate/tempo. Therefore, based on his inability to deploy and considering his current career point, the AFPB determined he is unfit for continued military service and shall be discharged with severance pay.

When addressing the applicant's disability rating award, the AFPB is required by law to rate a disability using criteria outlined in the VASRD. The AFPB typically applies the disability ratings proposed by the Department of Veterans Affairs (DVA) under the Integrated Disability Evaluation System (IDES), as these ratings should be in compliance with the VASRD. Therefore, the AFPB assigned a rating of zero percent to the member's HIV condition, VASRD Code 6351. This disability rating warranted discharge with severance pay.

This action is taken under the authority delegated by the Secretary of the Air Force.

12/4/2018

X Shane Prater

SHANE T PRATER, Colonel, USAF
Director, SAF Personnel Council
Signed by: PRATER SHANE T 1081079567

Attachment:
Additional Information Sheet

EXHIBIT C3

DEPARTMENT OF THE AIR FORCE
WASHINGTON, DC

Office of the Assistant Secretary

MEMORANDUM FOR AFPC/DPFDD

FROM: SAF/MRBP

SUBJECT: Physical Evaluation – Senior Airman [redacted]

On behalf of the Secretary of the Air Force, it is directed that SrA [redacted] be discharged and receive severance pay with a disability rating of 10 percent under the provisions of Title 10, United States Code, Section 1203. This disability rating was determined based on the Veterans Affairs Schedule for Rating Disabilities (VASRD) in accordance with the National Defense Authorization Act of 2008.

SrA [redacted]'s case was considered by the Air Force Personnel Board (AFPB), which made a recommendation regarding its disposition. The following rationale is provided for the final decision in this case. The AFPB considered the member's contention that he is fit and should be returned to duty. The AFPB noted the member has been compliant with all treatment, is currently asymptomatic, and has a nearly undetectable human immunodeficiency virus (HIV) viral load. Additionally, he is able to perform all in-garrison duties and his commander supports his retention. He passed his most recent fitness assessment with some component exemptions that were not related to his HIV. However, the AFPB noted the member's condition precludes him from being able to deploy worldwide without a waiver and renders him ineligible for deployment to the Central Command (CENTCOM) Area of Responsibility (AOR), where the majority of Air Force members are expected to deploy. Deployability is a key factor in determining fitness for duty and the AFPB recognized the member belongs to a career field with a comparatively high deployment rate/tempo. Therefore, based on his inability to deploy and considering his current career point, the AFPB determined he is unfit for continued military service and shall be discharged with severance pay.

When addressing the applicant's disability rating award, the AFPB is required by law to rate a disability using criteria outlined in the VASRD. The AFPB typically applies the disability ratings proposed by the Department of Veterans Affairs (DVA) under the Integrated Disability Evaluation System (IDES), as these ratings should be in compliance with the VASRD. Therefore, the AFPB assigned a rating of 10 percent to the member's HIV condition, VASRD Code 6351. This disability rating warranted discharge with severance pay.

This action is taken under the authority delegated by the Secretary of the Air Force.

12/5/2018

X Shane Prater

SHANE T. PRATER, Colonel, USAF
Director, SAF Personnel Council
Signed by: PRATER.SHANE.T.1081079567

Attachment:
Additional Information Sheet

Additional Information Sheet

Your case was reviewed by the Air Force Personnel Board (AFPB) of the Secretary of the Air Force Personnel Council (SAFPC) under authority delegated by the Secretary of the Air Force. The board reviewed all facts and evidence in the case, to include the testimony presented before the Formal Physical Evaluation Board (FPEB) and the remarks of the FPEB (if applicable), the remarks of the Informal Physical Evaluation Board (IPEB), the service medical record (including electronic entries contained in the Armed Forces Health Longitudinal Technology Application, or AHLTA), the Narrative Summary of the Medical Evaluation Board (MEB), the Department of Veterans Affairs (DVA) medical examination, information provided by you and your counsel, and any additional information that was provided.

If you are on extended active duty and have between 15 and 19+ years of active duty service (but less than 20 years), have an essentially stable condition, and wish to return to duty, you ***may*** be eligible to apply for the Limited Assignment Status (LAS) program. Please see Chapter 6 of AFI 36-3212 for more information or discuss your options with your Office of Airmen's Counsel (OAC) representative. Note: you are normally **not** eligible to apply for LAS if you are being placed on the Temporary Disability Retired List (TDRL).

The board is sensitive to your potential need for continuing medical care. Therefore, the board encourages you to utilize the resources of the DVA to the extent that you may be entitled. The DVA is the agency chartered by Congress to provide assistance to all eligible veterans. A full complement of medical services is available at any tertiary-level DVA health care facility. The DVA's Vocational Rehabilitation and Employment Program's mission is to assist veterans with a service-connected disability to prepare for and find suitable employment. Additional information regarding this program can be obtained at the following website: http://www.benefits.va.gov/vocrehab/index.asp. The Military Disability Evaluation System (MDES) is responsible for maintaining a fit and vital fighting force. While the MDES considers all of the service member's medical conditions, compensation can only be offered for those medical conditions that cut short a service member's career, and then only to the degree of severity present at the time of final disposition. However, the DVA, operating under a different set of laws (Title 38, United States Code), is empowered to periodically re-evaluate veterans for the purpose of adjusting their disability ratings should their degree of impairment vary over time.

You are also advised of your right to pursue further appeal through application to the Air Force Board for Correction of Military Records (AFBCMR) should you find reason that brings into question the decision of the board. The AFBCMR is an independent body chartered by Congress to redress any Air Force personnel action without influence of previous boards or their respective decisions. You may obtain information on appeal procedures from the AFBCMR website at: http://www.afpc.af.mil/Board-for-Correction-of-Military-Records.

EXHIBIT C4

DEPARTMENT OF THE AIR FORCE
WASHINGTON, DC

Office of the Assistant Secretary

MEMORANDUM FOR AFPC/DPFDD

FROM: SAF/MRBP

SUBJECT: Physical Evaluation—Senior Airman [redacted]

On behalf of the Secretary of the Air Force, it is directed that Senior Airman [redacted] be placed on the Temporary Disability Retired List (TDRL) with a disability rating of 60 percent under the provisions of Title 10, United States Code, Section 1202. This disability rating was determined based on the Veterans Administration Schedule for Rating Disabilities (VASRD) in accordance with the National Defense Authorization Act of 2008.

Senior Airman [redacted]'s case was considered by the Air Force Personnel Board (AFPB), which made a recommendation regarding its disposition. The following rationale is provided for the final decision in this case. The Board considered the member's contention that he is fit and should be returned to duty. The Board noted the member has been compliant with all treatment, is currently asymptomatic and has a low human immunodeficiency virus (HIV) viral load. Additionally, he is able to perform all in garrison duties, has passed his most recent fitness assessment without any component exemptions, and his commander strongly supports his retention. However, the Board noted the member's condition precludes him from being able to deploy worldwide without a waiver and renders him ineligible for deployment to the Central Command (CENTCOM) Area of Responsibility (AOR), where the majority of Air Force members are expected to deploy. Deployability is a key factor in determining fitness for duty and the Board recognized the member belongs to a career field with a comparatively high deployment rate/tempo. Therefore, based on his inability to deploy and considering his current career point, the Board determined he is unfit for continued military service and shall be placed on the Temporary Disability Retired List (TDRL) with a disability rating of 60 percent.

The member should be reevaluated in 12 months, to consist of an evaluation by an Infectious Disease Specialist (to include comments on interim course/treatment, compliance, current HIV labs/virus status/ treatment, social/industrial impairment, functionality, employability, and prognosis). The member is reminded to bring all of his interim healthcare records to the TDRL reevaluation, to ensure that he receives the correct disability rating. Per DoDI 1332.18, Enclosure 3, Appendix 4, paragraph 2.h, the member shall provide to the examining physician, for submission to the Physical Evaluation Board, copies of all his medical records (civilian, DVA, and all military medical records) documenting treatment since the last disability evaluation.

Addressing the applicant's disability rating award, the Board is required by law to rate a disability using criteria outlined in the VASRD. It typically applies the disability ratings proposed by the DVA under the Integrated Disability Evaluation System (IDES), as these ratings should be in compliance with the VASRD. The AFPB therefore assigned a rating of 60 percent.

This action is taken under the authority delegated by the Secretary of the Air Force.

11/7/2018

X John K. Vallario

JOHN K. VALLARIO
Deputy Director, SAF Personnel Council
Signed by: VALLARIO.JOHN.K.1069511070

Attachment:
Additional Information Sheet

EXHIBIT D

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Alexandria Division

NICHOLAS HARRISON and
OUTSERVE-SLDN, INC.

Plaintiffs,

v.

JAMES N. MATTIS, in his official capacity as Secretary of Defense; MARK ESPER, in his official capacity as the Secretary of the Army; and the UNITED STATES DEPARTMENT OF DEFENSE,

Defendants.

Case No. 1:18-cv-641 (LMB/IDD)

EXPERT DECLARATION OF CARLOS DEL RIO, M.D., IN SUPPORT OF PLAINTIFFS' MOTION FOR PRELIMINARY INJUNCTION

I. INTRODUCTION

1. My name is Carlos del Rio. I have been retained by counsel for Plaintiffs as an expert in connection with this litigation.

2. I am offering this declaration to provide my expert opinions regarding HIV—its etiology, the mechanism by which it operates to undermine a person's immune system, the routes and relative risks of transmission, the care and treatment of people living with HIV, the effect of treatment with antiretrovirals on the immunological and overall health of people living with HIV, and the effect of treatment on the risks of transmission.

3. The opinions I express are my own and do not reflect the official policy of any organization with which I am affiliated. I am not receiving any compensation for my work.

4. I am knowledgeable about the matters set forth below based upon my own knowledge and experience, as well as my review of various materials cited herein.

II. PROFESSIONAL BACKGROUND & QUALIFICATIONS

5. I am the Hubert Professor and Chair of the Department of Global Health and Professor of Epidemiology at the Rollins School of Public Health and Professor of Medicine in the Division of Infectious Diseases at Emory University School of Medicine. I am also Principal Investigator and co-Director of the Emory Center for AIDS Research (CFAR).

6. I am a native of Mexico where I attended medical school at Universidad La Salle, graduating in 1983. I did my Internal Medicine and Infectious Diseases residencies at Emory University. In 1989, I returned to Mexico where I was Executive Director of the National AIDS Council of Mexico (CONASIDA, the Federal agency of the Mexican Government responsible for AIDS Policy throughout Mexico) from 1992 through 1996. In November 1996, I returned to Emory where I have been involved in patient care, teaching and research. I was Chief of the

Emory Medical Service at Grady Memorial Hospital from 2001 to 2009 and I am now the interim Executive Associate Dean for Emory at Grady.

7. My research focuses on early diagnosis, access to care, engagement in care, compliance with antiretrovirals and prevention of HIV. I am the co-Primary Investigator of the NIH-funded Emory-CDC HIV Clinical Trials Unit, Clinical Site Leader for the Adult AIDS Clinical Trials Group (ACTG) and the site Primary Investigator for the HIV Prevention Trials Network (HPTN) of the NIAID/NIH. My international work includes collaborations in the following countries: Georgia, Ethiopia, Kenya, Thailand, Vietnam and Mexico. I have also worked on emerging infections, such as pandemic influenza, and was a member of the WHO Influenza A(H1N1) Clinical Advisory Group and of the CDC Influenza A(H1N1) Task Force during the 2009 pandemic.

8. I am a Member of the Board of Directors of the International Antiviral Society-USA (IAS-USA) and was the Chair of the HIVMA of the Infectious Diseases Society of America (IDSA). I was also a member of the Advisory Committee on HIV, Hepatitis and STD Prevention and Treatment of the Centers for Disease Control and Prevention and Health Resources and Services Administration as well as of the Department of Health and Human Services (DHHS) Antiretroviral Treatment Guidelines Panel. I serve as Chief Section Editor for HIV/AIDS for NEJM Journal Watch Infectious Diseases, Associate Editor for Clinical Infectious Diseases and I am a member of the editorial board of the Journal of AIDS and Global Public Health.

9. I have co-authored 30 book chapters and over 300 scientific papers. Among other honors, I received the James H. Nakano Citation in 2001 and was recognized by the Centers for Disease Control and Prevention for an outstanding scientific paper published in 2000; awarded

the Emory University Marion V. Creekmore Achievement Award for Internationalization; selected by the "Atlanta Magazine" as one of the 55 most influential foreign-born Atlantans in 2007. In 2013, I was elected to the Institute of Medicine of the National Academies.

10. My curriculum vitae is attached, which describes my education, work experience, and publications. *See* Attach. 1 (del Rio CV).

III. BACKGROUND ON THE HUMAN IMMUNODEFICIENCY VIRUS

A. An Introduction to HIV

11. Since Acquired Immune Deficiency Syndrome (AIDS) was first identified as a cause of death in the United States in the early 1980s, there has been incredible progress in the treatment of this disease. Once considered invariably fatal within a matter of years, HIV is now considered a chronic, manageable condition. Those diagnosed in a timely manner and provided with appropriate care and treatment with antiretroviral medications experience no noticeable effects on their physical health and enjoy a life expectancy that is nearly the same as those who do not have HIV.

12. HIV, which is an acronym for human immunodeficiency virus, attacks the body's immune system. Specifically, HIV attacks the body's CD4 cells, also referred to as T-cells. When HIV takes over a CD4 cell, it forces the cell to produce multiple copies of the virus, which in turn take over other CD4 cells.

13. CD4 cells help the immune systems fight off other types of infections. As HIV reduces the number CD4 cells in the body, it becomes increasingly harder for a person to fend off infections or disease.

14. After the acute stage of infection, a person enters a period of clinical latency that can last years. After time, however, if the person does not receive appropriate treatment, the

amount of virus in their blood (i.e., their "viral load") will rise and their CD4 count will start to drop. Eventually, an untreated individual's CD4 count will drop below 200 and/or the person will develop an infection the body would be able to fight off under normal circumstances (i.e., an "opportunistic infection"), at which point that person would have an AIDS diagnosis.

B. The Treatment of HIV

15. At almost any point in the progression of HIV, however, consistent treatment with antiretroviral therapy will halt and reverse the downward slope in immune function and restore the person to good health.

16. In 1996, effective antiretroviral therapy (ART) became widely available. In the mid-1990's, medical researchers discovered that a combination of three antiretroviral medications (from at least two different subclasses) would not only prevent HIV from reproducing, but would also prevent the virus from mutating and becoming resistant to the medications, as had been the problem with mono and dual therapy approaches. .

17. With adherence to ART, the person's viral load drops and their CD4 count rebounds. Within several months, the person's HIV will become "virally suppressed," defined as less than 200 copies of the virus per milliliter of blood,[1] and shortly after that, they would have an "undetectable"[2] viral load, which is generally defined as less than 50 copies per milliliter of blood.

---

[1] *See* U.S. Centers for Disease Control and Prevention, *Evidence of HIV Treatment and Viral Suppression in Preventing the Sexual Transmission of HIV* (Dec. 2017), available at https://www.cdc.gov/hiv/pdf/risk/art/cdc-hiv-art-viral-suppression.pdf; U.S. Centers for Disease Control and Prevention, *HIV Treatment as Prevention*, available at www.cdc.gov/hiv/risk/art ("[V]iral suppression [is] defined as having less than 200 copies of HIV per milliliter of blood.").

[2] At one time, the testing technologies were not sensitive enough to reliably detect the virus below approximately 50 copies per milliliter. Newer testing technologies are able to detect HIV

18. Every person living with HIV who adheres to their antiretroviral medications will eventually achieve and maintain an undetectable viral load. There is an effective treatment regimen for virtually every person living with HIV, and difficulties in reaching an undetectable viral load are related to a lack of consistent access to the health care and/or other social determinants of health, such as instable housing or food insecurity, that make medication adherence more difficult.

19. Development of resistance to a particular ART regimen does not occur unless the patient is not adherent to their prescribed medications. One of the important features of the ART regimens used today is that if the virus is suppressed the development of mutations that lead to resistance becomes impossible. With three or more medications combatting the virus in different ways at the same time, the virus is not able to mutate around any of those medications. For patients who develop resistance due to non-adherence, switching to a different regimen to which their virus has not developed resistance and to which they are subsequently adherent will return that patient to viral suppression.

20. As drugs have less and less side effected, adherence to ART has grown easier and easier over the past 20 years. Today, most people living with HIV are on a single tablet regimen ("STR")—in which all three or four medications are combined into one pill—that is taken once a day. STRs have no dietary restrictions, and side effects are minimal and generally very well tolerated.

---

below this level, but the term "undetectable" is still used to describe a viral load at or below this level.

21. A person who is diagnosed with HIV in a timely manner and adheres to their prescribed ART has very nearly the same life expectancy as a person who is not living with HIV.[3]

C. The Transmission of HIV

22. HIV can only be transmitted via certain body fluids—blood, semen, pre-seminal fluid, rectal fluids, vaginal fluids, and breast milk.[4] For transmission to occur, these fluids from a person who has HIV must either come in contact with a mucous membrane or damaged tissue or be directly injected into the bloodstream (with a needle or syringe). Mucous membranes are found inside the rectum, vagina, penis, and mouth. HIV is not spread through saliva, sweat, tears, urine, or feces.

23. Most commonly, HIV is transmitted by engaging in sexual activities or sharing needles or syringes. Outside of the contexts of sexual activity, sharing of injection drug equipment, blood transfusion, needle sticks, or perinatal exposure (including breastfeeding), transmission of HIV is rare. For all other activities—including biting, spitting, and throwing of body fluids—the CDC characterizes the risk as "negligible" and further states that "HIV transmission through these exposure routes is technically possible but unlikely and not well documented."[5]

---

[3] *See* U.S. Centers for Disease Control and Prevention, *About HIV/AIDS*, available at https://www.cdc.gov/hiv/basics/whatishiv.html.

[4] *See* U.S. Centers for Disease Control and Prevention, *HIV Transmission*, available at https://www.cdc.gov/hiv/basics/transmission.html.

[5] *See* U.S. Centers for Disease Control and Prevention, *HIV Risk Behaviors: Estimated Per-Act Probability of Acquiring HIV from an Infected Source, by Exposure Act*, available at www.cdc.gov/hiv/risk/estimates/riskbehaviors.html.

24. Contrary to popular belief, HIV is not an easily transmitted virus. In the absence of treatment and condom use, the CDC estimates that the per-act risk of transmission for the riskiest sexual activity—receptive anal intercourse—is approximately 1.38% (138 out of 10,000 exposures).[6] The per-act risk of transmission for other sexual activities is between zero and .08%.

25. Furthermore, people living with HIV who are virally suppressed or have an undetectable viral load are incapable of transmitting HIV. Advances in understanding of the preventive effects of ART have led the CDC to declare that "...people who take ART daily as prescribed and achieve and maintain an undetectable viral load have effectively no risk of sexually transmitting the virus to an HIV negative partner. *See* CDC, "Dear Colleague: Information from CDC's Division of HIV/AIDS Prevention," Sept. 27, 2017, *available at* https://www.cdc.gov/hiv/library/dcl/dcl/092717.html (last viewed June 26, 2018).[7]

26. As further stated in the CDC letter, "Across three different studies, including thousands of couples and many thousands of acts of sex without a condom or pre-exposure prophylaxis (PrEP), no HIV transmissions to an HIV-negative partner were observed when the HIV-positive person was virally suppressed"[8] (i.e., a viral load of less than 200 copies/ml).

---

[6] *See* U.S. Centers for Disease Control and Prevention, *HIV Risk Behaviors: Estimated Per-Act Probability of Acquiring HIV from an Infected Source, by Exposure Act*, available at www.cdc.gov/hiv/risk/estimates/riskbehaviors.html.

[7] *See* U.S. Centers for Disease Control and Prevention, *Treatment as Prevention*, available at www.cdc.gov/hiv/risk/art ("People living with HIV who take HIV medicine as prescribed and get and keep an undetectable viral load have effectively no risk of transmitting HIV to their HIV-negative sexual partners.").

[8] The referenced scientific studies: The HIV Prevention Treatment Network Study No. 052 as published in the New England Journal of Medicine 08/11/11, *available at* https://www.nejm.org/doi/full/10.1056/NEJMoa1105243?query=recirc_curatedRelated_article; PARTNER Study, published in the Journal of the American Medical Association (JAMA) July

27. Based on these studies regarding the effect of a suppressed or undetectable viral load on sexual transmission risk and the extremely low—and possibly only theoretical—risk of transmission via blood splash and other non-injection activities, I am reasonably certain that it is not possible for a person with a suppressed or undetectable viral load to transmit HIV through such exposures.

IV. CONCLUSION

HIV is now a relatively easy to manage, chronic condition that, when properly treated, presents no cognizable risk to the health or safety of others through occupational exposures, including exposures that could potentially occur during military service.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this 18 day of July, 2018

Carlos del Rio, M.D.

12, 2016, *available at* https://ncbi.nlm.nih.gov/pubmed/27404185: and Opposites Attract study reported at the Conference on Retroviruses and Opportunistic Infections (CROI) in 2015, *available at* https://www.croiconference.org/sites/default/files/posters-2015/1019LB.pdf and the International AIDS Conference in 2017.

Attachment

EMORY UNIVERSITY
CURRICULUM VITAE

Name: CARLOS DEL RIO, MD

Office Address: 1518 Clifton Road NE
Claudia N. Rollins Building, 7011
Atlanta GA 30322

Phone: (404) 727-7112
Fax: (404) 727-1278

E-mail Address: cdelrio@emory.edu

Birth Date and Place: August 28, 1959. Mexico City, Mexico

Citizenship: United States of America and Mexico

Websites:
http://medicine.emory.edu/infectious-diseases/faculty-directory/del-rio-carlos.html &
https://sph.emory.edu/faculty/profile/#!cdelrio
ResearcherID:
http://www.researcherid.com/ProfileView.action?returnCode=ROUTER.Success&Init=Yes&SrcApp=CR&queryString=KG0UuZjN5WmP6yAsUHIlBIEGQkwtKoQLBlp0gCLTBbs%253D&SID=7Co6dCuimpqh4njckXt

Current Titles and Affiliations:

a. Academic appointments:

April 1, 2009 – present: Hubert Professor & Chair, Hubert Dept. of Global Health, Rollins School of Public Health of Emory University

Sept. 1, 2003 – present: Professor of Medicine (Tenured), Emory University School of Medicine

b. Clinical Appointments:

March 1997 – July 2011: Active Medical Staff, Grady Health System
Oct 1999 – present: Medical Staff member, The Emory Clinic
July 2011 – present: Active-Courtesy staff member, Grady Health System
June 2013 – present: Infectious Diseases Clinical Chief of Service at Emory University Hospital

c. Other administrative appointments:

Jan 16, 2017 – present: Interim Executive Associate Dean for Emory at Grady
Oct 1, 2005 – present: Co-Director, Emory Center for AIDS Research.
Jan. 1, 2007 – present: Clinical Research Site (CRS) Leader at the Ponce de Leon Center for the Emory AIDS Clinical Trials Group (ACTG).

Previous Academic and Professional Appointments:

1990 – 1996: Associate Professor of Medicine, Universidad La Salle, Mexico City, Mexico.
1989 – 1996: Chief of Infectious Diseases and Chairman of the Infection Control Committee, Hospital Angeles del Pedregal, Mexico City, Mexico.

1993 – 1999: National Investigator, National Research Council (Sistema Nacional de Investigatores), Mexico.
1996 – 1997: Assistant Professor of Medicine (transient appointment), Emory University School of Medicine (EUSM).
1997 – 2001: Associate Director for Clinical Services at the Ponce de Leon Center of the Grady Health System and Director of the Special Immunology Service at Grady Memorial Hospital
September 1, 1997 – August 31, 2003: Associate Professor of Medicine (Infectious Diseases), Emory University School of Medicine
December 18, 1997 – August 31, 2005: Adjunct Associate Professor of International Health, Rollins School of Public Health, Emory University
September 1, 2005 – March 31. 2009: Adjunct Professor of Global Health, Rollins School of Public Health, Emory University.

Previous Administrative Appointments:

1992 – 1994: Executive Director of the National AIDS Council (CONASIDA), Mexico.
1994 – 1996: General Coordinator of the National AIDS Council (CONASIDA), Mexico.
1995 – 1997: Member of the Program Coordinating Board, Joint United Nations Program on HIV/AIDS (UNAIDS)
July 1999 – July 2000: Associate Director of the Internal Medicine Residency Program
January 1998 – July 2001: Director, Clinical Core of the Emory CFAR
July 1, 2000 – March 31, 2001: Program Director, Emory Internal Medicine Residency Program
April 1, 2001 - January 31, 2006: Co-Director, J. Willis Hurst Internal Medicine Program.
April 1, 2001 - March 31, 2009: Chief of Medical Service, Grady Memorial Hospital
February 1, 2006 – February 29, 2008: Director for Resident Scholarly Activities, J. Willis Hurst Internal Medicine Residency Program.
July 1, 2001 – September 30, 2005: Associate Director for Clinical Sciences and International Research, Emory Center for AIDS Research
July 1, 2004 – June 1, 2006: Executive Director, Hope Clinic of the Emory Vaccine Center.
February 1, 2006 – March 31, 2009: Vice Chair for Grady Affairs, Dept. of Medicine, EUSM
March 1, 2008 – May 31, 2010: Program Director, J. Willis Hurst Internal Medicine Residency Program of Emory University.
Sept. 1998 – June 2015: Director and Principal Investigator, AIDS International Training and Research Program (AITRP) of Emory University.

Licensures/Boards:

Georgia Medical License: 027282
1981: ECFMG (Educational Commission for Foreign Medical Graduates)
1982: VQE (Visa Qualifying Examination)
1984: FLEX (Federation Licensing Examination)

Specialty Boards:

1986, American Board of Internal Medicine (#108785)
1988, American Board of Internal Medicine (Infectious Diseases)

Education:

1977-83: Medical School, Universidad La Salle, Mexico City, Mexico
1981-82: Pregraduate internship (senior year of medical school), six months at the University of Oregon, Portland, Oregon and six months at Emory University, Atlanta, Georgia
1982-83: Social service, Department of Critical Care Medicine, Instituto Nacional de la Nutrición Salvador Zubirán, Mexico City, Mexico

Postgraduate Training:

1983-86: Internal Medicine Residency, Emory University School of Medicine, Atlanta, Georgia (five months in JAR year at Johns Hopkins Hospital, Baltimore, MD)
1986-88: Infectious Disease Fellowship, Emory University School of Medicine, Atlanta, Georgia
1988-89: Chief Resident in Medicine at Crawford Long Hospital of Emory University, Atlanta, Georgia

Executive Training:

Jan 2007: Program for Chiefs of Clinical Services. Department of Health Policy and Management, Harvard School of Public Health.

Jan 2008: Woodruff Health Sciences Center Quality Academy.

Committee Memberships:

a. National and International:

- Member of the Scientific Advisory Committee of the Latin-American AIDS Initiative (SIDALAC) (1996 – 2000)
- Member of the Monitoring of the AIDS Pandemic (MAP) Network (1996 – 2000)
- Chair, Committee on the Status of Minority Microbiologists, Public and Scientific Affairs Board, American Society for Microbiology (June 1997 - June 2003)
- CDC, Member of the Task Force to develop the "*HIV Prevention Strategic Plan Through 2005*" (February 2000).
- Member of the CDC Advisory Committee on HIV and STD Prevention (September 2000 – November 2003)
- Member of the UNAIDS Performance Monitoring and Evaluation Plan Working Group (1997)
- NIH Office of AIDS Research, Member of the Planning Group on International AIDS Research Priorities (April, 2001 and February 2002)
- NIH, Chairman of Special Emphasis Panel for NIH NOT AI-01-018 "*Comprehensive International Program of Research on AIDS*" (August, 2001)
- NIH, Member of Special Emphasis Panel for NH-00-0048 "*Early detection of HIV: Implications for Prevention Research*" (June 2000)
- NIH, Member of Special Emphasis Panel for NH-00-004 "*Long-term Maintenance of HIV/STD Behavior Change*" (June 2000)
- Elizabeth Glaser Pediatric AIDS Foundation, Member of Review Panel for "Call for Action Projects" (January 1996 to present)

- Member, Institute of Medicine's Committee on the Ryan White Care Act: Data for Resource Allocation, Planning and Evaluation. (January 2002 – October 2003).
- NIH, Member of the Outcomes Committee of the Adult AIDS Clinical Trials Group (July 2001 – December 2006)
- Member, International AIDS Society – USA Core Faculty (April 2002 to present)
- NIH, Chairman of Special Emphasis Panel ZAI1-GPJ-A-S2 "*Comprehensive International Program of Research on AIDS - CIPRA*" (May, 2003)
- CDC, Member Special Emphasis Panel 2003-N-008922 "*A US Clinical Trial Site to Conduct Evaluation of Topical Microbicides in Heterosexual Women and Men*" (August, 2003)
- Member, Education Committee, Infectious Diseases Society of America (2003 – 2005)
- NIH, Member of Special Emphasis Panel ICP-2 "*International Bioethics Reviews*" (March 2004)
- NIH, Member of Special Emphasis Panel ZAI1 GP J-M (M1) "*NIAID Enhancement Awards for Underrepresented Minority Scientists*" (June 28 – 30, 2004)
- CDC, Member on Special Emphasis Panel PA 04156, "*Simplified Procedures for Routine HIV Screening in Acute Care Settings*" (August 17, 2004)
- NIH – Charter Member of the AIDS Clinical Studies and Epidemiology Study Section (formerly AARR-6), November 2004 – July 2009.
- Member of the Board of Directors, International AIDS Society – USA (January 2005 – present)
- NIH, Member of Special Emphasis Panel ZAI1 LD-A-J1 "*Unsolicited Research Project Grant Application*" (January 2006)
- NIH, Member of Special Emphasis Panel ZAI1 SV-A (S1) "*TB/HIV Immune Cell Expression*" (August 2006)
- NIH, Chair of Special Emphasis Panel ZAI1QV-1 "*Review of Clinical Trials and Implementation Grants*" (September 2006)
- NIH, Member of Special Emphasis Panel ZRG1 IC2-B (51) "*Phase II Comprehensive ICOHRTA-AIDS/TB (U2R) Review*" (November 2006)
- Representative of HIVMA on the Education Committee of IDSA (2006 – 2010)
- External Reviewer of the draft report by the Committee on the "*President's Emergency Plan for AIDS [PEPFAR] Implementation Evaluation*". (November 2006)
- Member, Institute of Medicine's Committee on Methodological Challenges in HIV Prevention Trials (January 2007 – February 2008).
- Member, DHHS Panel for Antiretroviral Guidelines for Adults and Adolescents (February 2007 – February 2010 and February 2010 – February 2014)
- NIH, Member of Special Emphasis Panel ZAI1 ESB-A (M1) "*HIV Prevention in Men Review*" (April 2007)
- NIH, Member of Special Emphasis Panel ZRG1 BDA-A (52) "*FICRS Resource and Support Center Review*" (April 2007)
- CDC, Member of Special Emphasis Panel ZPS1 FXR (03) "*Minority HIV/AIDS Research Initiative to Build Capacity in Black and Hispanic Communities and Among Black and Hispanic Researchers to Conduct HIV/AIDS Epidemiologic and Prevention Research – MARI*" (May 2007)

- NIH, Member of Special Emphasis Panel ZAI1 SR-M (1) "*NIAID Clinical Trials Planning Grants*" (June 2007)
- Member of the Board of Directors of the HIVMA - HIV Medicine Association of IDSA - (October 2007 – Oct 2017)
    - Chair of the Board (Oct 2015 – Oct 2016)
- Member of the Board of Advisors of HealthSTAT (July 2007 – present)
- NIH, Member of Special Emphasis Panel ZRG1 ICP2-B (51) "*Global Infectious Diseases Training Program*" (February 2008)
- NIH, Member of Special Emphasis Panel ZRG1 ICP2-B (50) "International Research in Infectious Diseases" (February 2008)
- NIH, Member of Special Emphasis Panel ZDA1 NXR-B 13 1, "International Collaborations for HIV and Drug Abuse" (April 2, 2008)
- Member of the OpMAN (Optimization of Co-Infection and Co-Morbidity Committee) of the AIDS Clinical Trials Group (May 2008 – May 2010)
- Member of the Advisory Committee on HIV and STD Prevention and Treatment of the Centers for Disease Control and Prevention and Health Resources and Services Administration (July 1, 2008 – June 30, 2012 and July 1, 2012 – December 30, 2016)
- NIH, Member of Special Emphasis Panel ZDA1 NXR-B 08 1, "Pre-Applications for the Avant-Garde Program" (April 19, 2009)
- NIH, Member of Special Emphasis Panel ZRG1 AARR-C 22 "AIDS Fellowship Review" (July 28-29, 2009)
- Member, Institute of Medicine Committee on HIV Social Security Disability Criteria (Dec 2009 – June 2010)
- Member, WHO Influenza A(H1N1) Clinical Advisory Group (2009)
- Member, CDC Influenza A(H1N1) Task Force (2009)
- NIH, Member of Special Emphasis Panel ZCA1 RTRB-8 M2 R "A Developing Research Capacity in Africa for the Studies of HIV-Associated Malignancies" (March 15, 2010)
- NIH, Member of Special Emphasis Panel ZDA1 NXR-B 08 1, "Pre-Applications for the Avant-Garde Program" (April 23, 2010)
- Member of the ACTG Executive Committee (June 1, 2010 – May 31, 2013)
- Member of the Board of Directors of the Infectious Diseases Society of America (October 2010 – September 2013)
- Member, Institute of Medicine Committee to Review Data Systems for Monitoring HIV Care (February 2011 – September 2012)
- NIH, Member of Special Emphasis Panel ZRG1 IDM-R (50) R, "International Research in Infectious Diseases including AIDS (IRIDA)". (February 11, 2011)
- NIH, Chair, Special Emphasis Panel ZRG1 F12B-U (20) L, "Fellowships: Psychopathology, Disabilities, Stress and Aging. (February 24, 2011)
- NIH, Member of Special Emphasis Panel ZDA1 NXR-B 15, "Pre-Applications for the 2011 Avant-Garde Program for HIV/AIDS Research" (March 28, 2011)
- NIH/NIAID – Charter Member, Acquired Immunodeficiency Syndrome Research Review Committee (AIDS RRC), (July 1, 2011 – June 30, 2015).
- NIH, Member of Special Emphasis Panel ZRG1 AARR-H (55) "Career Development in International Settings". (June 29, 2011)

- NIH/FIC – Member, US-India Joint Working Group on Prevention of Sexually Transmitted Diseases and HIV/AIDS (Oct 31, 2011)
- NIH, Member of Special Emphasis Panel ZDA1 NXR-B, "Pre-Applications for the Avant-Garde Program" (Jan 11, 2012)
- NIH, Chair of Special Emphasis Panel ZRG1 AARR-H, "HIV International Research Training" (Oct 31 – Nov 1, 2012)
- Member of the Board of Director, ACTHIV (April 2013 – present)
- Co-Chair, International Antiviral Society-USA Panel on Development of Recommendations for Biomedical Prevention of HIV Infection (2013)
- NIH, member of Special Emphasis Panel ZAI1 BP-A (S4), "Clinical Trials Implementation UO1 Grants" (Aug 26, 2013)
- NIH, member of Special Emphasis Panel ZRG1 AARR-F (52), "Methodologies and Formative Work for Combination HIV Prevention Approaches" (Dec 16, 2013)
- Member, Office of HIV/AIDS Network Coordination (HANC) Behavioral Sciences Consultative Group (Jan 1, 2015 – Dec 31, 2018)
- NIH/NIAID – Chair, Acquired Immunodeficiency Syndrome Research Review Committee (AIDS RRC), (July 1, 2014 – June 30, 2017)
- Member, UNAIDS Scientific and Technical Advisory Committee (Dec 2014 – present)
- Member, Fulton County Task Force on HIV/AIDS (Dec 2014 – Sept 2017)
- Chair, PEPFAR Scientific Advisory Board (March 1, 2015 – present)
- Vice-Chair, ACTG Underrepresented Populations Committee (Dec 1, 2016 – Nov 30, 2018)

b. Regional and State:

- Member of the Scientific Advisory Committee of the AIDS consortium of Atlanta (1996 – 2004)
- Member of the Board, AID Atlanta (1998 – 2004)
- Member of the Board of Trustees, The Paideia School (1998 – 2004)
- Member of the Parent Council of Emory University (2007 – 2010)
- Member of the Board of Directors, Atlanta Symphony Orchestra (2011 – present)

c. Institutional

- LCME Graduate Medical Education/Continuing Education Committee (1998)
- Dean of School of Nursing Search Committee (1999)
- GME Advisory Committee (July 1999 - present)
- Representative of the School of Medicine on the International Affairs Council (November 2000 to 2009)
- Member of the School of Medicine Faculty Committee on Appointments and Promotions (June 2001 – September 2004)
- Member of the Faculty Council of Emory University (2000- 2004)
- Member, Advisory Board of the Center for the Study of Health, Culture and Society (December 2000 – May 2009)
- Internal Medicine House Staff Evaluation Committee (March 1998 - present)
- Orthopedic Chair Search Committee (2001)
- Medical Executive Committee, Grady Health System (April 2001 – March 2009)

- Chair, Education and Training Subcommittee, Woodruff Health Sciences Center Bioterrorism Taskforce (April 2002 – December 2003)
- Representative of the School of Medicine on the Coordinating Committee for University Internationalization (September 2002 – April 2009)
- Chair, Medical Records Committee, Grady Health System (May 2002 – December 2005)
- Member, EMCF Practice Committee (June 2002 – March 2009)
- Member, Emory GCRC Advisory Committee (June 2002 – June 2007)
- Radiology Chair Search Committee (2003-2004)
- Member, Emory University Strategic Planning Committee (Subcommittees on Global Health and Internationalization).
- Co-Chair, Curriculum Planning Steering Committee of Emory University School of Medicine (September 2004 – December 2005)
- GCRC Director Search Committee (2005)
- Member, Faculty Development Committee for the Department of Medicine (2005 – 2009)
- Chair, Department of Medicine Promotions and Tenure Subcommittee (2005 – 2007)
- Member, Honorary Degrees Committee of Emory University (2006 – 2009)
- Member, Global Health Institute Advisory Committee, Emory University (2006 – present)
- Member, Institute for Developing Nations Academic Board, Emory University (2006 – present)
- Co-Chair Task Force on Faculty and Staff Development, Emory University School of Medicine (December 2006 – August 2007)
- Member, Search Advisory Committee for the Senior Vice President for Health Affairs of the Woodruff Health Sciences Center of Emory University (January – July 2007)
- Member, LCME Faculty Subcommittee (2007)
- Member, Presidential Advisory Committee (PAC) of Emory University (September 2007 – August 2009)
- Member, Surgery Chair Search Advisory Committee (2007-08)
- Member, Director of Critical Care for Emory Healthcare Search Advisory Committee (2008-09)
- Member, Research Advisory Committee of the School of Medicine (March 1, 2009 – August 31, 2010)
- Member, Woodruff Health Sciences Center Research Advisory Council (April 2009 – present)
- Chair of the Research Training and Education subcommittee for the WHSC Research Strategic Plan (August 2009 – May 2010)
- Co-Chair, Culture Transformation Group, Woodruff Health Sciences Center (May 2009 – May 2011).
- Member, Task Force on Protest, Dissent and Community (May 2011 – May 2015)
- Member, Emory University Faculty Advisory Committee for Finance and Administration (Oct 2011 – May 2015)
- Member, Family and Preventive Medicine Chair Search Committee (2012)

- Member, Graduate Medical Education Strategic Planning Committee (2013)
- Member, Director of Yerkes National Primate Research Center Search Committee (2013)
- Member, LCME Taskforce (2015)
- Co-Chair, Emory University's Provost Search Advisory Committee (Oct 2016 – 2017)

Consultantships:

- Centers for Disease Control and Prevention, Consultant for the drafting of the "*HIV Prevention Strategic Plan Through 2005*". September 2000.
- Centers for Disease Control and Prevention, External consultant for the "*Control of Neisseria gonorrheae infection in the United States"*. Oct 10 – 11, 2001.
- Centers for Disease Control and Prevention, Consultant on "*Bioterrorism Education for Clinicians*", August 2002.
- Abbott Laboratories. HOPE Partnership (December 2001 – December 2002)
- Centers for Disease Control and Prevention, Consultant on implementing HIV Testing in Acute Care Settings. March 2004.
- NIH/Harvard Medical School Division of AIDS, Participant in the scientific workshop addressing "*When to Switch HIV Antiviral Therapy in Resource-Limited Settings*". Boston, MA. November 12, 2004.
- Centers for Disease Control and Prevention, Participant in Satellite Broadcast/Web Cast "*Incorporating HIV Prevention into the Medical Care of Persons Living with HIV*". November 13, 2004.
- Centers for Disease Control and Prevention, Consultant in drafting the "*HIV Screening Recommendations for Adults, Adolescents, and Pregnant Women in Health Care Settings*". November 1 – 2, 2005. Published as "*Revised Recommendations for HIV testing of Adults, Adolescents, and Pregnant Women in Health-Care Settings"*. *MMWR 2006; 55(RR-14)*
- Interagency Task Force on Antimicrobial Resistance, Consultant in drafting "*A Public Health Action Plan to Combat Antimicrobial Resistance*". December 12-13, 2007.
- Centers for Disease Control and Prevention, consultant for the "*External Peer Review of DHAP Surveillance, Research, and HIV Prevention Programs*". April 13 – 15, 2009
- Centers for Disease Control and Prevention, consultant for the "*Consultation on Revised Guidelines for HIV Counseling, Testing, and Referral in non-clinical settings*". June 1 – 2, 2009.
- Centers for Disease Control and Prevention, consultant during a meeting entitled: "*Developing a Rapid Impact Assessment Framework for Pandemic Influenza Response"*. August 26, 2010
- Centers for Disease Control and Prevention, consultant for the "*Consultation on Monitoring and Use of Laboratory Data Reported to HIV Surveillance*". Jan 12 – 13, 2011
- Centers for Disease Control and Prevention, consultant for the "*Consultation on MSM Pre-Exposure Prophylaxis (PrEP) Implementation Guidelines"*. May 3 – 4, 2011.

- Centers for Disease Control and Prevention, consultant for the "*HIV surveillance Case Definition"*. Feb 7 – 8, 2012.
- Centers for Disease Control and Prevention, consultant for the "*STD Treatment Guidelines 2013*". April 30 – May 2, 2013.

Editorship and Editorial Boards:

- Chief Editor, HIV/AIDS *Journal Watch Infectious Diseases (2014 – present)*
- Associate Editor for HIV, *Clinical Infectious Diseases* (2016 – present)
- Senior Clinical Editor, *AIDS Research and Human Retroviruses (2007 – 2017)*
- Editorial board, *AIDS Clinical Care (2000 – 2014)*
- Editorial Board, *Journal of AIDS*
- Editorial Board, *Global Public Health*
- Editorial Board, *Women, Children and HIV*
- Editorial board, *Archives of Medical Research*

Manuscript reviewer

- AIDS
- AIDS Research and Human Retroviruses
- AIDS and Behavior
- American Journal of Medicine
- American Journal of Public Health
- American Journal of Preventive Medicine
- American Journal of the Medical Sciences
- Annals of Internal Medicine
- Annals of Emergency Medicine
- Archives of Internal Medicine
- Archives of Medical Research
- Clinical Infectious Diseases
- Emerging Infectious Diseases
- Gaceta Médica de México
- JAMA
- Journal of AIDS
- Journal of General Internal Medicine
- Journal of Infectious Diseases
- Lancet
- New England Journal of Medicine
- PLoS One
- Salud Pública de México
- Sexually Transmitted Infections
- Social Sciences and Medicine
- Vaccine

Honors and Awards:

1982 Valedictorian, medical school class of 1982, Universidad La Salle, Mexico
1983 Awarded "Los mejores estudiantes de México" (Best students in Mexico)
1987 Elected member of A.O.A.
1988 Trainee Travel Award, American Federation for Clinical Research
1990 Fellow of the American College of Physicians
1989, 91, 96 Physician Recognition Award, American Medical Association
1992-99 "Investigador Nacional Nivel I" (National Researcher) by the "Sistema Nacional de Investigadores" in Mexico
1993 Award "Hermano Miguel" given by the Universidad La Salle in Mexico in recognition of academic achievement
1996 Glaxo-Wellcome Foundation Award for Clinical Research. Mexico City, Mexico.
1996 Fellow of the Infectious Diseases Society of America
2001 James H. Nakano Citation (for an outstanding scientific paper published in 2000)
2002 Finalist, Atlanta Business Chronicle "Health-Care Heroes" Award in the

Physician category
2006 Outstanding Achievement Award in the Field of HIV/AIDS awarded by the First Lady of Georgia for "*Personal Contribution in Developing a modern HIV/AIDS Control Program in Georgia*"
2007 Marion V. Creekmore Award for Internationalization, Emory University
2006, 2007, 2009, 2010, 2011, 2012, 2013 and 2017 "Best Conference Award", as voted by the residents for the most outstanding conference in the Emory Internal Medicine Residency Program.
2007 Selected by "*Atlanta Magazine*" as one of the 55 most influential foreign-born Atlantans (October 2007 issue)
2009 Elected member of the American Clinical and Climatological Association
2011 Elected member of the American Epidemiological Society
2011 Silver Pear Research Mentoring Award, Department of Medicine, Emory Univ.
2013 Fellows Award for Distinguished Educator in Infectious Diseases, University of Pittsburgh Division of Infectious Diseases
2013 Elected to the National Academy of Medicine (formerly the Institute of Medicine)
2014 Winner of the Thomas Jefferson Award at Emory University
2015 Winner of the Department of Medicine R. Wayne Alexander Research Achievement Award
2015 Department of Medicine Research Day, 3rd place winner in the "Clinical, Quality and Health Services Research Poster" category.
2016 Elected to Delta Omega (Honorary Society in Public Health) by the member students of the Phi Chapter at the Rollins School of Public Health
2016 Recipient of the "Ohtli Award" from the Mexican Government for "*distinguished work that benefits the interests of the Mexican community or communities of Mexican origin living in the US*".
2017 John P. McGovern Award Lectureship delivered at the 47th Annual Meeting of the American Osler Society. Atlanta, GA April 10th, 2017.
2017 Distinguished Medical Alumni Achievement Award – Emory University School of Medicine
2017 Inducted to the Emory MilliPub Club (The MilliPub Club honors and recognizes Emoy faculty who have published one or more papers that have garnered more than 1,000 citations).
2017 Winner of the Emory University Shool of Medicine Mentoring Award

Society Memberships:

- American College of Physicians
- Member of the American Society for Microbiology
- Asociación Mexicana de Medicina Interna
- Infectious Diseases Society of America
- Asociación Mexicana de Infectología y Microbiología Clínica
- American Federation for Medical Research
- International AIDS Society

Organization of National or International Conferences:

a. Administrative positions:

- Organizing committee of the 8th International Pathogenic *Neisseria* Conference, October 1992, Cuernavaca, Mexico
- Coordinator of the IV National AIDS Conference, October 1993, Mexico City, Mexico
- Organizing committee of the IV International Conference on Travel Medicine, April 1995, Acapulco, Mexico
- Coordinator of the V National AIDS Conference, November 1995, Mexico City, Mexico
- Scientific Committee, 1st IAS Conference on HIV Pathogenesis and Treatment, Buenos Aires, Argentina, July 2001
- Track Co-chair, 2001 National HIV Prevention Conference, Atlanta, GA, August 2001
- Scientific Program Committee Member, 3rd Conference on Global Strategies for the Prevention of HIV Transmission from Mothers to Infants. Kampala, Uganda. September 2001.
- International Scientific Committee, XIV International Conference on AIDS, Barcelona, Spain, July 2002
- Scientific Program Committee, 8th World STI/AIDS Congress, Punta del Este, Uruguay, December 2-5, 2003.
- Joint Program Committee Track Co-chair, XVI International Conference on AIDS, Mexico City, Mexico, August 2008.
- Track Co-chair, 2009 National HIV Prevention Conference, Atlanta, GA, August 2009
- Planning Committee Member, 36th Remington Winter Course in Infectious Diseases. Vail, CO. February 21 - 26, 2010
- Co-Chair, AIDS Vaccine 2010. Atlanta, GA. September 28 – October 1, 2010
- Regional Chair, HIVDART 2010. Los Cabos, Mex. December 7 – 10, 2010
- Planning Committee Member, 37th Remington Winter Course in Infectious Diseases. Snowmass, CO. February 6 – 11, 2011
- Member, Clinical Science Track Committee, XIX International Conference on AIDS, Washington, DC. July 22 – 27, 2012
- Member, Scientific Advisory Committee, 2nd International Treatment as Prevention (TasP) Workshop. Vancouver, BC. April 22 – 25, 2012
- Member, Scientific Advisory Committee, 3rd International Treatment as Prevention (TasP) Workshop. Vancouver, BC. April 22 – 25, 2013
- Co-Chair of Planning Committee, The American Conference for the Treatment of HIV (ACTHIV), Denver, Co. May 8 – 10, 2014
- Scientific Advisory Committee, HIVDART 2014. Key Biscayne, Fla. December 9 – 12, 2014
- Member of the Scientific Program Committee, HIV Drug Therapy in the Americas 2015. Mexico City, Mx. April 16 – 18, 2015.
- Co-Chair of Planning Committee, The American Conference for the Treatment of HIV (ACTHIV), Dallas, Tx. Apr 29 – May 3, 2015
- Member of the Core Committee, HIV & Hepatitis in the Americas 2016. Mexico City, Mx. April 28 – 30, 2016.
- Member of the Core Committee, HIV & Hepatitis in the Americas 2017. Rio de Janeiro, Brazil. April 6 – 8, 2017.

Research focus:
My research efforts focus on access to care, linkage to care and barriers to care among HIV-infected hard to reach populations in the United States and abroad. I also do research on treatment and prevention of HIV/AIDS as well as adherence and the impact of therapy on behavior. I also work on TB and other co-infections like HCV an STI's, in particular gonorrhea. Finally, my research has expanded to include the eperging opioid epidemic and looking for ways to improve opioid prescribing and management of pain in clinical settings.

Grant Support:

a. Active support:

- NIH (2P30 AI 50409). Emory CFAR. (PI: C. del Rio) 08/01/17 – 7/31/22.
- NIH/NIAID (AI069418). Emory-Duke-Orlando-CDC Clinical Trials Unit. (co-PIs: J. Lennox; C. del Rio & M. Mulligan) 12/10/13 – 11/30/20
- NIH/NIDA (1RO1DA037768). Improving Physician Opioid Prescribing for Chronic Pain in HIV-infected Persons (co-PIs: J. Samet & C. del Rio), 09/15/2014 – 08/31/2018.
- NIH/NIDA (1RO1DA032098-03). Project Retain: Providing Integrated Care for HIV-infected crack cocaine users (co-PIs: L. Metsch & C. del Rio), 07/15/2011 – 04/30/2017 (no cost extension).
- CDC (1H25-PS004311). The Emory Atlanta Gonococcal Isolate Surveillance Project - GISP (PI: C. del Rio), 01/01/14 - 12/31/18.
- NIH/NIDA (5U10DA013720). Florida Node of the Drug Abuse Clinical Trials Network (PI: J. Szapocznik & L. Metsch; Emory site PI: C del Rio) 00/30/2000 – 08/31/2020
- CDC (5T01GH001185). Emory Center for Public Health Training in Complex Humanitarian Emergencies (PI: C. del Rio) 9/1/2015 – 08/31/2018
- NIH (D43 TW007124). Emory-Georgia Tuberculosis Research Training Program (PI: H. Blumberg; Co-PI: C. del Rio), 09/30/04 - 06/30/19.
- NIH (D43 TW009127) Emory-Ethiopia Tuberculosis Research Training Program (PI: H. Blumberg; Co-PI: C. del Rio), 07/1/13 - 01/31/18.

Lectureship, Seminar Invitations, and Visiting Professorship: (last ten years)

* "*Global and regional priorities in Infectious Diseases"*. Opening plenary talk at the XLII Congress of the National Infectious Diseases Society of Mexico. Puebla, Mx. May 24, 2017
* *"Top 10 in HIV"*. Closing Plenary Speaker at the 11th Annual ACTHIV meeting. Dallas, TX April 20-22, 2017.
* "*Improving patient outcomes by focusing on the HIV Care Continuum*". Keynote speaker at the Symposium: Emerging Strategies for HIV and Viral Hepatitis Co-Infection Symposium. Atlanta, GA. Dec 1st, 2016.
* "*What reviewers look for in your RPG application: perspectives from reviewers*". Invited talk at the NIAID Research Career ("K") Development: Fostering Science Leaders Workshop. NIH/NIAID Bethesda, MD. November 29, 2016.
* *"Health Equity: Improving outcomes in Hard to Reach Populations"*. Invited talk at the 10th Annual Meeting of the CFAR Social and Behavioral Sciences Research Network. Miami, FLA. October 20, 2016.

* *"The HIV Care Continuum"*. Invited Talk at the Symposium on Clinical and Prevention Care organized by the Fulton County Department of Health and Wellness. Atlanta, Ga. June 20, 2016.
* *"High Impact Research Transforming Health Policy"*. HIV Grand Rounds organized by the Univ. of Pennsylvania CFAR. Philadelphia, Penn June 16, 2016.
* *"High Impact Research Transforming Health Policy"*. Invited talk at the 3rd Annual "Advancing Healthcare Quality Research at Emory University: Symposium. Atlanta, Ga. May 18, 2016.
* *"Improving retention and viral suppression among hard-to-reach HIV-infected populations"*. University of Miami CFAR Visiting Professor. Miami, Fla. May 5th, 2016.
* *"Sexual Transmission and Mosquitoes: A New Phenomenon in Arbovirology?"* Bridging the Sciences: Zika Virus. Atlanta, GA May 1 – 2, 2016.
* *"Global Health and US Universities"*, invited speaker at the University of South Carolina Global Health Initiative Workshop. Columbus, SC Oct 22 -23, 2015.
* "*Becoming an investigator: From Medicine Resident to Professor of Medicine and CFAR co-Director"*, invited lecture at the NIAID/IDSA Infectious Diseases Careers Meeting 2015. Bethesda, MD June 4 – 6, 2015.
* "*Tactical decision making in Health and Humanitarian Supply Chain Management"*. Invited lecture at the Georgia Tech course "Health & Humanitarian Supply Chain Management". May 14th, 2015.
* *"Ebola and other Global Issues of Local Concern"*. Invited talk at the 2015 Infectious Diseases Association of California (IDAC) Spring Symposium. Costa Mesa, CA May 2-3, 2015.
* *"The Ebola Crisis: Lessons in International Cooperation for Global Health"*. Invited talk at the Association of Academic Health Centers 2015 International Forum. Washington, DC April 20 - 21, 2015.
* Keynote speaker "*What will it take to end the AIDS epidemic?"*. Invited talk at the HIV Drug Therapy in the Americas Congress 2015. Mexico City, MEX. April 16 – 18, 2015.
* Keynote Address at the 12th Annual Graduate Division of Biological and Biomedical Sciences Student Research Symposium. Emory University School of Medicine. Jan 15th, 2015.
* *"How Far We've Come and How Far We Still Need to Go: Engagement in HIV Care for our Most Vulnerable Populations of People Living with HIV in Atlanta and the Southern United States"*. Invited talk at the 16th World AIDS Day Symposium organized by the UNC Center for AIDS Research and the Institute for Global Health and Infectious Diseases. Dec 5th, 2014.
* *"The Past, Present, and Future of Global Health Engagement by Academic Institutions"*. Keynote Lecture at the CFAR HIV Research in International Settings (CHRIS) Meeting hosted by the UCSD CFAR. Oct 1st, 2014.
* *"Advances in Seek, Test and Treat Strategies/Treatment as Prevention"*. Invited talk at the US-Georgia Program Development Workshop on HIV/AIDS, Tuberculosis and Hepatitis. Tbilisi, Georgia. June 16 – 18, 2014.
* *"The Diagnosis and Treatment of HIV infection: Translating research into policy and practice"*. Invited talk at the 7th Anniversary of CISIDAT (Consorcio de Investigacion sobre VIH/SIDA/TB). Mexico City, Mex. June 5, 2014.

* *"Can we end the HIV epidemic"*. Life of the Mind Lecture Series organized by the Provost of Emory University. March 26, 2014.
* *"Linkage and Retention: What works and what doesn't"*. Invited talk at the 4th International HIV Workshop on Treatment as Prevention. Vancouver, BC. April 1 – 4, 2014.
* *"Challenges in the HIV Continuum of Care and its Relevance to Treatment as Prevention"*. University of Miami CFAR Visiting Professor. February 28, 2014.
* *"Current Status of HIV Continuum of Care Research"*, Invited Talk at the 2nd National CFAR/APC HIV Continuum of Care Working Group Meeting: Implementation Science to Address the Challenges of the HIV Continuum of Care. Washington, DC. Feb 3 – 4, 2014.
* *"The Fight Against AIDS"*, Invited TEDx Talk at Institut LeRosey, Switzerland. Nov 9, 2013 (http://tedxtalks.ted.com/video/The-Fight-Against-AIDS-Dr-Carlo & http://www.youtube.com/watch?v=F2Hz4t66-Ig)
* *"Seek, Test, Treat and Retain Among Vulnerable Populations"*, Invited Speaker to the Spring Meeting of the Massachusetts Infectious Diseases Society. Boston, Mass May 14, 2013.
* *"Treatment is Prevention: novel approaches to HIV therapy"*, Key Note Speaker, AIDS United Access to Care Grantee Meeting, Atlanta, GA April 5, 2012.
* *"The Future of HIV Prevention"*, Key Note Speaker at the 5th Research Meeting on HIV/AIDS diagnosis, care and prevention among vulnerable populations. Mexico City, Mexico. November 14, 2011
* *"History of HIV/AIDS in the US"*, Speaker at the 2011 American Conference for the Treatment of HIV (ACTHIV). Denver, CO. April 7, 2011.
* *"Building on Success"*. Speaker at the CDC World AIDS Day Event. Atlanta, GA. December 1, 2010
* Invited Keynote speaker: *"Evidence Based Global Health"*. Annual Meeting of the Mexican National Epidemiological Surveillance System (Reunion Nacional del Sistema Nacional de Vigilancia Epidemiologica). Cancun, Mex. November 22, 2010
* Invited Keynote address: *"Recent Advances in Biomedical HIV Prevention: Translating Research into Practice"*. 5th National Scientific Meeting of the CFAR's Social and Behavioral Sciences Research Network. Atlanta, GA. October 8, 2010
* *"14th Annual Paul J. Galkin Lectureship"* Brown University, Providence, RI. September 20-21, 2010.
* *"University of Massachusetts Center for Global Health Visiting Professor"* University of Massachusetts, Worchester, MA. May 19, 2010
* *"Facilitators and Barriers to HIV testing in hospital and other ambulatory care settings"*. Presentation to the Institute of Medicine Workshop to identify facilitators and barriers to HIV testing. Washington DC. April 15, 2010.
* *"Tim Gills Visiting Professorship"* University of Colorado at Denver Center for AIDS Research, Denver CO. March 30-31, 2010.
* *"Viral Zip Codes: Novel Influenza A (H1N1): what have we learned in the last 6 months?* Invited speaker at the Fifth Annual National Symposium on Predictive Health "Human Health: Molecules to Mankind". Atlanta, GA. December 14, 2009
* *"Public Health and Health Care: Working Together for HIV Prevention"*. Discussant in CDC Panel for World AIDS Day. Atlanta, GA. December 1, 2009

* *"The Healthcare needs of Migrants.* Key Note Speaker at the Hispanic Health Coalition of Georgia Latino Health Summit. Atlanta, GA. February 27, 2009.
* *"Challenges in improving the National Response to the HIV/AIDS Epidemic"*. Invited Speaker at the Seminar organized by the Instituto Nacional de Salud Publica and the Secretaria de Salud, Mexico. February 20, 2009
* *"Challenges and Controversies in Infectious Diseases in the XXI Century"*. Invited Lecture at the XXI Annual Meeting of the Medical Society of Hospital Angeles, Mexico City, Mex. February 19, 2009
* *"Antiretroviral Therapy: 25 years of Progress"*. Medical Grand Rounds, SUNY Downstate Medical Center, Brooklyn NY. December 11, 2008
* *"Confronting the Global HIV epidemic: moving forward after Mexico City"*. Invited key note speaker to the Second Annual International; HIV/AIDS Research Day of the UCSD CFAR. San Diego, CA. October 7, 2008
* *"In the Eye of the Storm: The Emerging Epidemics of HIV, Hepatitis and Tuberculosis in the Former Soviet Republic of the Caucasus"*. Invited Global Health Institute seminar speaker, University of North Carolina, Chapel Hill, NC. December 8, 2007.
* *"Strategies for Initial Antiretroviral Therapy through Complicated Failure: A Case-Based Discussion"*. Lecture presented at the Annual IAS-USA Course Improving the Management of HIV Disease. New York, NY. October 19, 2007
* *"New Antiretrovirals"*. Lecture presented at the Annual IAS-USA Course Improving the Management of HIV Disease. Washington, DC. May 23, 2007.
* *"Antiretroviral Therapy Failure: A case based discussion"*. Lecture presented at the Annual IAS-USA Course Improving the Management of HIV disease. Atlanta, GA. April 27, 2007.
* "*The Perfect Storm: Emerging Epidemics of HIV, HCV and TB in the Republics of the Former Soviet Union*". Invited Lecture in the course: AIDS: A Multidisciplinary Approach" at the University of Washington. Seattle, WA. April 2, 2007
* *"Strategies for Recruitment of Minority Study Participants"*. Invited lecture presented at the symposium "Ethics in Action: Building Trust and Effectiveness in the Clinical Trial Process – Are we doing our best? Organized by the Emory University School of Medicine Clinical Trials Office and the Emory Center for Ethics. Atlanta, GA. March 1, 2006.
* *"Antiretroviral Therapy in the Treatment Experienced Patient"*. Lecture Presented at the 13th Annual IAS-USA Current challenges in HIV disease. New York, NY. October 17, 2005.
* *"Update in HIV infection"*. Lecture presented at the Northside Hospital Internal Medicine Conference. Atlanta, GA. September 8, 2005.
* *"Strategies for Providing Care to Hard to Reach Populations"*. Invited Lecture and visiting Professorship at the University of North Carolina, Chapel Hill, NC. June 9 -10, 2005.

Invitations to National or International Conferences: (last ten years)

- *"Linkage to Care"* Plennary Speaker at ANAC2016. Atlanta, GA. Nov 10 – 12, 2016
- *"What's Hot in HIV Clinical Research"*. Invited speaker at IDWeek2016. New Orleans, LA. Oct 26 – 30, 2016
- *"What's New, What's Next, What's Ahead?"* Invited Plennary Speaker at AIDS2016.

Durban, South Africa. July 17 – 22, 2016.

- *"Meeting the Health Care Workforce Challenge"*, Invited speaker at the 2016 Pre-Conference UN 90-90-90 Target Workshop. Durban, South Africa. July 17, 2016.
- *"Diagnosis and management of Zika infected and exposed pregnant women"*, Invited talk at the XXI Congreso Mexicano de Especialistas en Ginecologia y Obstetricia, A.C. Mexico City, Mex. June 23, 2016.
- *"Interactive Cases: Infectious Diseases in Travelers"*, Invited speaker at the XLI Congress of the Mexican Infectious Diseases Society. Monterrey, Mex. May 25 – 28, 2016.
- *"Optimizing Adherence to Antiretroviral Therapy: Current and Future Options"*, Invited speaker at IDWeek2015. San Diego, Calif. Oct 7 – 11, 2015.
- *"Update on vaccines for HIV-infected Patients"*, Invited speaker at the 54th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC). Washington, DC Sept 5 – 9, 2014.
- *"Infectious Diseases in the context of Global Health"*, Invited Plenary Speaker at the XXXIX Congress of the Mexican Infectious Diseases Society. Acapulco, Mex. May 28 – 31, 2014.
- *"HIV Prevention 2013"*, Invited Plenary Speaker at the 26th Annual Conference of the Association of Nurses in AIDS Care (ANAC). Atlanta, GA November 22, 2013
- *"Vaccines in Immunocompromised patients"*, Invited Speaker at the 4th International Workshop on HIV & Aging. Baltimore, MD Oct 31, 2013
- *"Addressing the Gaps in the HIV Care Cascade"*. Invited talk at the "Treatment as Prevention and Pre-Exposure Prophylaxis Summit". London, UK. Sept 22 – 24, 2013.
- *"Early Diagnosis and Treatment of HIV Infection"*, Invited talk at the 15th International Symposium on HIV/AIDS of the Mexican Infectious Diseases Society. Queretaro, Mex. Aug 29 – 31, 2013.
- *"Confronting the challenge of infectious diseases among substance abusers"* Invited Conference at the XIII Congress of the Argentinian Society for Infectious Diseases. Mar del Plata, Argentina. June 9 – 11, 2013
- *"Biomedical HIV Prevention"* Invited Conference at the XIII Congress of the Argentinian Society for Infectious Diseases. Mar del Plata, Argentina. June 9 – 11, 2013
- *"Introduction to Global Health"*. Invited Speaker to Lab Medicine 2013. 48th Annual Meeting of the Academy of Clinical Laboratory Physicians & Scientists. Atlanta, GA June 6 – 8, 2013
- *"How Should We Spend our Prevention Dollars?* Invited Speaker to the 20th Conference on Retroviruses and Opportunistic Infections (CROI). Atlanta, GA March 3 – 6, 2013
- *"Opportunistic Infections in Patients with HIV Infection"* and *"The Pregnant Patient with HIV"*. Invited Speaker at the 39th Remington Winter Course in Infectious Diseases. Beaver Creek, CO. February 10 – 15, 2013
- *"The Importance and Implications of Antibiotic Resistance for the Clinician"*. Keynote Speaker at the VII Congreso Grupo Angeles. Mexico City, Mex. Oct 25 – 27, 2012.
- *"Adherence and Retention in Care"*. Invited Speaker to the AWACC (Annual Workshop on Advanced Clinical Care) – AIDS 2012 Conference. Durban, South Africa. October 5, 2012.
- *"Antiretroviral Therapy as Prevention: A Debate on the Role of ART as Prevention in*

Clinical Practice". Open Plenary Speaker at the 2012 American Conference for the Treatment of HIV (ACTHIV), Denver, CO. May 10 -12, 2012,

- *"Aging and HIV: Update from CROI"*. Invited Speaker at the 5th International Course HIV: Pathogenesis, Prevention and Treatment. Lima, Peru. March 23 – 24, 2012.
- *"Neurological Complications of HIV Infection"* and "*Clinical Spectrum of Acute Retrovirus Syndrome"*. Invited Speaker at the 37th Remington Winter Course in Infectious Diseases. Snowmass, CO. February 6 – 11, 2011
- "*Retention in Care*". Invited Speaker at the 48th Annual Meeting of the Infectious Diseases Society of America Vancouver, Canada. October 21-24, 2010
- *"HIV infection – beginning HAART"* and *"HIV infection – Managing opportunistic infections"*. Invited Speaker at the 36th Remington Winter Course in Infectious Diseases. Vail, CO. February 21 – 26, 2010
- "*HIV Prevention among hard to reach populations*". United States-Russia Workshop on HIV Prevention Science organized by the Office of AIDS Research. Moscow, Russia. October 28 – 30, 2009.
- "*The role of Integrease inhibitors in the treatment of HIV infection*". Invited speaker at the 9th International Symposium of the Mexican Association of HIV Providers (AMMVIH). Cancun, Mex. November 22, 2008
- "*Current Issues and Controversies in HIV Infection Management*" Invited panelist to an Interactive Symposium at the 48th Annual ICAAC/46th Annual IDSA. Washington, DC. October 27, 2008
- "*HIV, STDs and the Global AIDS Pandemic: Lethal Synergy 2008*" Invited panelist to an Interactive Symposium at the 48th Annual ICAAC/46th Annual IDSA. Washington, DC. October 28, 2008
- *"Treating Tuberculosis in People Living with HIV*". Invited Plenary Speaker at the Second Eastern Europe and Central Asia AIDS Conference. Moscow, Russian Federation, May 3 – 5, 2008.
- Poster discussant in the session "*New approaches to HIV testing*" at the 15th Conference on Retroviruses and Opportunistic Infections (CROI). Boston, MA. February 4, 2008.
- "*New drugs and old challenges in AIDS*". Invited plenary speaker at the X Mexican National HIV/AIDS Meeting. Leon, Mex. December 1, 2007.
- "*The Metamorphosis of the HIV Epidemic*". Invited lecture presented at the XXIV National Congress of Biomedical Research in Mexico. Monterrey, NL. Mex. Aug 30, 2007
- *"Management of HIV Infection*". Invited panelist to an Interactive Symposium at the 44th Annual Meeting of the Infectious Diseases Society of America. Toronto, Canada. October 13, 2006
- *"Yellow fever: New Challenges to an Old Scourge"*. Invited lecture presented at the Annual Meeting of the Binford-Dammin Society of Infectious Disease Pathologists. Atlanta, GA. February 12, 2006.
- *"Antiretroviral Therapy and its impact on Public Health"*. Invited speaker at the XI National Public Health Congress. Cuernavaca, Mex. March 2, 2005.
- *"Screening for HIV in Emergency Departments"*. Invited lecture presented at the 2005 National HIV Prevention Conference. Atlanta, GA. June 13, 2005.

Bibliography:

a. Published and accepted research articles in refereed journals:

1. Gallo S, Marin E, Ramírez A, **del Río C**, Elizondo J, Ramírez J. Colocación Endoscópica de Sondas para Alimentación Enteral. Rev. Gastroenterol Mex. 1984; 49(4): 247-50 [PMID 6442452].
2. Guarner J, **del Río C**, Slade BA. Tuberculosis as a Manifestation of the Acquired Immunodeficiency Syndrome. JAMA 1986; 256(22):3092. [PMID 3783842]
3. **del Río C**, McGowan J. Severe diarrhea in pneumococcal bacteremia: croupous colitis. JAMA 1987; 257(2): 189 [PMID 3795402].
4. Levy D, **del Río C**, Stephens DS. Meningococcemia in identical twins: changes in serum susceptibility after rifampin chemoprophylaxis. J Infect Dis 1988; 157:1064-8 [PMID 3129520].
5. **del Río C**, Guarner J, Honig EG, Slade BA. Sputum examination in the diagnosis of *Pneumocystis carinii* pneumonia in the acquired immune deficiency syndrome. Arch Pathol Lab Med 1988; 112:1229-1232 [PMID 3142440].
6. Mirra SS, **del Río C**. The fine structure of AIDS encephalopathy. Arch Pathol Lab Med 1989; 113:858-65. [PMID 2757485]
7. **del Río C**, Stephens DS, Knapp JS, Rice RJ, Schalla WO. Comparison of isolates of *Neisseria gonorrhoeae* causing meningitis and report of gonococcal meningitis in a patient with C8 deficiency. J Clin Microbiol 1989; 27(5): 1045-49 [PMID 2473091/PMC 267480].
8. Guarner J, **del Río C**, Williams P, McGowan JE. Fungal peritonitis caused by *Curvularia lunata* in a patient undergoing peritoneal dialysis. Am J Med Sci 1989; 298 (5): 320-23 [PMID 26837770].
9. **del Río C**, Soffer O, Widell JL, Judd RL, Slade BA. Acute Human Immunodeficiency virus infection temporally associated with rhabdomyolisis, acute renal failure and nephrosis. Rev. Infect Dis 1990; 12(2): 282-85 [PMID 2330481].
10. Guarner J, **del Río C**, Hendrix L, Unger ER. Composite Hodgkin's and non-Hodgkin's lymphoma in a patient with AIDS. In situ demonstration of Epstein-Barr Virus. Cancer 1990; 66(4): 796-800 [PMID 2167145].
11. Beciewicz PA, **del Río C,** Goncalves MA, Lattouf OM, et al. Catastrophic thrombosis of porcine aortic bioprosthesis. Ann Thorac Surg 1990; 50: 817-9 [PMID 2241350].
12. Guarner J, **del Río C**, Carr D, Hendrix LE, Eley JW, Unger ER. Non-Hodgkin's lymphomas in patients with HIV infection: Presence of Epstein - Barr virus by "in-situ" hybridization. Clinical Presentation and Follow-up. Cancer 1991; 68: 2460-65 [PMID 1657357].
13. Majluf-Cruz AS, Hurtado R, Mijangos C, Souto C, **del Río C**, Simón J. Síndrome Hemofagocítico en Asociación a Histoplasmosis en el Síndrome de Inmunodeficiencia Adquirida: descripción de tres casos y revisión de la literatura. (Haemophagocytic syndrome associated to histoplasmosis in AIDS: report of three cases). Sangre 1993; 38(1): 51-55 [PMID 8470036].
14. **del Río C**, Téllez I. Ganancia de peso con el uso del acetato de megestrol (Megace^{R}) en pacientes con SIDA y pérdida de peso en México. (Weight gain with the use of Megace^{R} in Mexican patients with AIDS). Enf Infecc y Microbiol 1993; 13(5): 249-52.
15. Guarner J, Izazola J, **del Río C**. Los problemas de conteo células T CD4+. (Problems in CD4+ T-cell count). Rev Invest Clin 1994; 46:163-4 [PMID 7914377].

16. Souto-Meriño CA, Simón-Domínguez J, Pulido-Priego MA, Hernández-Pérez A, García-Hernández IC, **del Río C.** Prevalencia de Marcadores para Hepatitis A, B y C en un Hospital de México. (The Prevalence of markers for hepatitis A, B and C in a hospital in Mexico). Salud Públ Mex 1994; 36:257-262 [PMID 7940005].
17. Izazola JA, Valdez M, Sánchez HJ, **del Río C**. Mortalidad por el Síndrome de Inmunodeficiencia Adquirida (SIDA) en México de 1983 a 1992. Tendencias y años perdidos de vida potencial. (AIDS mortality in Mexico, 1983 to 1992. Trends and years of potential life lost). Salud Públ Méx 1995; 37:140-148 [PMID 7618114].
18. **del Rio C**, Muñiz M, Mellado E, et al. Premarital HIV testing: the Case of Mexico. AIDS & Public Policy Journal 1995; 10(2): 104-106.
19. **del Río C**, Guarner J, Izazola JA. The use of oral fluid to determine HIV-1 prevalence rates among men in Mexico City. AIDS 1996; 10(2): 233-235 [PMID 8838717]**.**
20. Uribe-Salas F, **del Rio-Chiriboga C,** Conde C, Juarez-Figueroa L, Uribe-Zuniga P, Calderón –Jaimes E, Hernandez-Ávila M. Prevalence, incidence and determinants of syphilis in female commercial sex workers in Mexico City. Sex Transm Dis 1996; 23(2): 120-126 [PMID 8919738].
21. **del Río-Chiriboga C** y Orzechowski A. Sarampión en adultos: características clínicas en 25 pacientes hospitalizados. (Measles in adults: characteristics of 25 hospitalized adults). Enf Infec Microbiol 1996; 16 (1): 12-15.
22. **del Río C**, Tellez I, Orzechowski A, Alanis A. The spectrum of HIV infection in patients seen at a private hospital in Mexico City: 115 patients seen from 1984 to 1990. Arch Med Res 1996; 27(2): 201-204 [PMID 8696065].
23. Ponce de León S, **del Río C**, Rangel S, Magis C. Infección por VIH en trabajadores de la salud en México. (HIV infection in healthcare workers in Mexico). SIDA-ETS 1996; 2(1): 14-16.
24. Guarner J, Sánchez Mejorada G, **del Río C**, Mohar A. Simplificación en el conteo de linfocitos T-CD4 positivos en 500 personas con infección por VIH/SIDA en México. (A simplified CD4 T-lymphocyte cell count in patients with HIV/AIDS in Mexico). Salud Públ Méx 1996; 38(3): 207-211 [PMID 8757546].
25. Guarner J, Uribe-Zúñiga P, Hernández G, Terán X, **del Río C**. Comparison of CD4 positive T-cell counts in men and women recently diagnosed with HIV infection on Mexico City, Mexico. AIDS 1997; 11(5): 701-2 [PMID 9108965].
26. Hernández C, Uribe F, Conde C, Cruz A, Juárez L, Uribe P, **del Río C**, Hernández M. Seroprevalencias a diversos virus y características sociodemográficas en mujeres que buscan detectarse VIH (Seroprevalence of viruses and sociodemographic characteristics in women seeking HIV screening). Revista de Investigación Clínica 1997; 49(1):5-13 [PMID 9229756].
27. Juárez-Figueroa L, Uribe-Salas F, Conde-González C, Hernández-Avila M, Hernández-Nevárez P, Uribe-Zúñiga P, **del Río-Chiriboga C.** Hepatitis B markers in men with high risk sexual behavior in Mexico City. Sexually Transm Dis 1997; 24(4): 211-217 [PMID 9101632].
28. **del Río C**, Edupuganti S, Cassoobhoy M, et al. Malaria in an Immigrant and Travelers - Georgia, Vermont, and Tennessee, 1996. MMWR 1997; 46(23):536-539.
29. Uribe-Salas F, Conde-González C, Allen B, **del Río-Chiriboga C**, de Zalundo B, Hernández-Avila M, Juárez-Figueroa L, Anaya-Ocampo R, Uribe-Zúñiga P. Low HIV and STD Prevalence in a Random Sample of Female Commercial Sex Workers in

Mexico City. Amer J Pub Health 1997; 87(6): 1012-15 [PMID 9224186/PMC 1380940].
30. Guarner J, Montoya P, **del Río C**, Hernández-Tepichin G. CD4+ T-Lymphocyte variations in Patients with Advanced HIV Infection and Counts Below 100 cells/µL. Cytometry (Communic Clin Cytometry) 1997; 30:178-80 [PMID 9298835].
31. **del Rio C**, Orzechowski A, Sánchez Mejorada G. Toxoplasmosis of the Central Nervous System in Patients with AIDS in Mexico. Arch of Medical Research 1997; 28(4):527-530 [PMID 9428578].
32. **del Río-Chiriboga C**, Sánchez Mejorada G, Orzechowski A, Lanfranchi R, Esponda J, Robles M. El síndrome de inmunodeficiencia adquirida en la unidad de terapia intensiva del Hospital Angeles del Pedregal. (AIDS in the intensive care unit at Hospital Angeles). Enf Infecc y Microbiol 1997; 17(6): 156-159.
33. Albrecht H, **del Rio C**, Rimland D. Seminal viral load. AIDS 1998; 12(3):333-334 [PMID 95180003].
34. **del Río C**, Kamarulzaman A, Schüklenk U. Ethics, Economic Realities and Medical Research in Developing Countries. Repr Health Matters 1998; 6(11): 135-6.
35. Jurado R, **del Río C**, Nassar G, Navarrete J, Pimentel JL. The Low Anion Gap. Southern Med J 1998; 91(7):625-629 [PMID 9671832].
36. Volkow P, Pérez R, **del Río C**, Mohar A. The role of commercial plasmapheresis facilities on the AIDS epidemic in Mexico. Rev Invest Clin 1998; 50(3): 221-226 [PMID 9763887].
37. López C, Guarner J, Magis C, Uribe P, **del Río C**. Zidovudina más didanosina en pacientes asintomáticos infectados por VIH previamente tratados con zidovudina (Zidovudine plus didanosine in the treatment of HIV asymptomatic patients previously treated with zidovudine). Rev Invest Clin 1998; 50 (4): 335-339 [PMID 9830323].
38. Rothenberg RB, Scarlett M, **del Rio C**, Reznik D, O'Daniels C. Oral Transmission of HIV. AIDS 1998; 12:2095-2105 [PMID 9833850].
39. Wilfert CM, Ammann A, Bayer R, Curran JW, **del Rio C**, et al. Science, ethics, and the future of research into maternal infant transmission of HIV-1. Lancet 1999; 353:832-35.
40. Beard CB, Carter JL, Keely SP, Hung L, Pieniazek NJ, Moura I, Freeman AR, Lee S, Stringer JR, Duchin JS, **del Rio C**, Rimland D, Baughman RP, Levy DA, Dietz VJ, Simon P, Navin TR. Genetic Variation in *Pneumocystis carinii* Isolates from Different Geographic Regions: Implications for Transmission. Emerg Inf Dis 2000; 6(3): 265-272 [PMID 10827116/ PMC 26400877].
41. Hung L, Beard CB, Creasman J, Levy D, Duchin JS, Lee S, Pieniazek N, Carter J, **del Rio C**, Rimland D, Navin TR. Sulfa or Sulfone Prophylaxis and Geographic Region Predict Mutations in the *P. carinii* Dihydropteroate Synthase Gene. J Inf Dis 2000; 182:1192-8 [PMID 10979917].
42. Bruce BB, Blass MA, Blumberg HM, Lennox JL, **del Rio C**, Horburgh CR. Risk of *Cryptosporidium parvum* Transmission between Hospital Roommates. Clin Infect Dis 2000; 31:947-50 [PMID 11049775].
43. Green S, **del Rio C**. HIV pretest and posttest counseling: still missing from medical school curriculum. Arch Intern Med 2000; 160: 3326 [PMID 11088096].
44. Albrecht H. Lennox JL, **del Rio C**. Quinidine and Malaria**.** Arch Intern Med 2001; 161: 1118-1119 [PMID 11322855].

45. Fox KK, **del Rio C**, Holmes KK, Hook EW, Judson FN, Knapp JS, et al. Gonorrhea in the HIV Era: A reversal in Trends among Men who have sex with men. Am J Publ Health 2001; 91:959-964 [PMID 11392941/PMC 1446475].
46. **del Rio C**, Franco-Paredes C, Duffus W, et al. Routinely Recommended HIV Testing at an Urban Urgent-Care Clinic - Atlanta, GA 2000. MMWR 2001; 50(25): 538-541.
47. Navin TR, Beard CB, Hung L, **del Rio C**, Lee S, Pieniazek NJ, Carter JL, Lee T, Hightower A, Rimland D. Effect of Mutations in the *Pneumocystis carinii* dihydropteroate synthase gene do not affect outcome of *P. carinii* pneumonia in HIV-infected patients. Lancet 2001; 358: 545-549 [PMID 11520525].
48. Blumberg H & **del Rio C**. Management of Tuberculosis (correspondence). New Engl J Med 2001; 345(20):1501 [PMID 11794210].
49. Eichler M, **del Rio C,** Ray S. The Effectiveness of HIV post-test counseling in determining healthcare seeking behavior. AIDS 2002; 16(6): 943-945 [PMID 11919504].
50. Nimri L, Moura IN, Huang L, **del Rio C**, Rimland R, Duchin J, Dotson E, Beard CB. Genetic Diversity of *Pneumocystis carinii f.* sp. *hominis* Based on Variations in Nucleotide Sequences of Internal Transcribed Spacers of rRNA Genes. J. Clin Microbiol 2002; 40(4):1146-1151 [PMID 11923323/PMC 140386].
51. Hernández –Girón C, Tovar V, **del Rio C**. AIDS Mortality in Mexico, 1988 – 1997. Salud Publica de Mexico 2002; 44: 207 – 212 [PMID 12132317].
52. **del Rio C**, Sepúlveda J. AIDS in Mexico: lessons learned and implications for developing countries. AIDS 2002; 16: 1445 – 1457 [PMID 12131182].
53. DiClemente R, Wingood GM, **del Rio C**, Crosby RA. Prevention Interventions for HIV-Positive Individuals: A Public Health Priority. Sex Trans Inf 2002; 78:393-395 [PMID 12473796].
54. Franco-Paredes C, Guarner J, Mehrabi D, McCall C, **del Rio C**. Clinical and Pathological Recognition of Leprosy. Am J Med 2003; 114:246-47 [PMID 12637144].
55. Duffus WA, Barragán M, Metsch L, Krawczyk CS, Loughlin AM, Gardner LI, Anderson-Mahoney P, Dickinson G, **del Rio C**. Effect of Physician Specialty on Counseling Practices and Medical Referral Patterns for Physicians Caring for Disadvantaged HIV-infected Populations. Clin Infect Dis 2003; 36:1577-84 [PMID 12802759].
56. Rothenberg R, Campos P, **del Rio C,** Johnson W, Jacob Arriola K, Brown M. Once and Future Treatment: A comparison of Clinic and Community Groups. Int J of STD & AIDS 2003; 14(7): 438-447 [PMID 12869222].
57. Tobin M, Blass M, **del Rio C**, Havlosa S, Blumberg H, Horsburgh CR. Hospital water as a source of *Mycobacterium avium* complex (MAC) isolates in respiratory specimens. J Infect Dis 2004; 189:98-104 [PMID 14702159].
58. Hutchinson AB, Corbie-Smith G, Thomas S, Mohanan S, **del Rio C**. Understanding the Patients Perspective on Rapid and Routine HIV Testing in an Inner-City Urgent Care Center. AIDS Education and Prevention 2004; 16(2):101-114 [PMID 15154119].
59. Zaller N, Nelson K, Aladashvili M, Badridze N, **del Rio C**, Tsertsvadeze T. Risk Factors for Hepatitis C virus infection among Blood donors in Georgia. Eur J Epidiemiol 2004; 19:547-553 [PMID 15330127].
60. Metsch LR, Pereyra M, **del Rio C**, Gardner L, Duffus W, Dickinson G, Kerndt P, Anderson-Mahoney P, Strathdee S, Greenberg A. The Delivery of HIV Prevention Counseling by Physicians at HIV Medical Care Settings in Four US Cities. Am J Publ

Health 2004; 94:1186-1192 [PMID 15226141/PMC 1448419].
61. Valverde E, **del Rio C**, Metsch L, et al. Characteristics of Ryan White and Non-Ryan White-Funded HIV Medical Care Facilities across Four Metropolitan Areas. Results from the ARTAS Site Survey. AIDS Care 2004; 16(7): 841-850 [PMID 15385239].
62. **del Rio C**, Barragan M, Franco-Paredes C. Pneumocystis Pneumonia (correspondence). New Engl J Med 2004; 351(12):1262 -3 [PMID 15371588].
63. Vicas A, Albrecht H, Lennox JL, **del Rio C**. Imported Malaria at an inner-city Hospital in the United States. Am J Med Sci 2005; 329(1): 6-12 [PMID 15654173].
64. Tkeshelashvilli-Kessler A**, del Rio C**, Nelson K, Tsertsvadze T. The Emerging HIV/AIDS Epidemic in Georgia. Int J of STD & AIDS 2005; 16(1): 61-67 [PMID 15705276].
65. Volkow P, **del Rio C**. Paid donation and plasma trade: unrecognized forces that drive the AIDS epidemic in developing countries. Int J of STD & AIDS 2005; 16(1): 5-8 [PMID 15705264].
66. Leonard MK, Osterholt D, Kourbatova EV, **del Rio C**, Wang W, Blumberg HM. How many sputum specimens are necessary to diagnose pulmonary tuberculosis? Am J Infect Control 2005; 33:58-61 [PMID 15685138].
67. Priddy, F, Tasfaye F, Mengistu Y, Rothenberg R, Fitzmaurice D, Mariam, DH, **del Rio C**, Oli K, Worku A. Potential for Medical Transmission of HIV in Ethiopia. AIDS 2005; 19 (3): 348-350 [PMID 15718849].
68. Franco-Paredes C, Rodriguez A, **del Rio C**. Lepromatous Leprosy. Infections in Medicine 2005; 22(5): 229.
69. Gardner LI, Metsch LR, Anderson-Mahoney P, Laughlin AL, **del Rio C**, Strathdee S, Samsom SL, Siegal HA, Greenberg AE, Holmberg SD. Efficacy of a case management intervention to link recently diagnosed HIV-infected person to care. AIDS 2005; 19: 423-431. [PMID 15750396]
70. Beckwith CG, Flanigan TP, **del Rio C**, Simmons E, Wing EJ, Carpenter CCJ, Bartlett JG. It is Time to Implement Routine, Not Risk-Based HIV Testing. Clin Infect Dis 2005; 40:1037-40 [PMID 15824997].
71. Rudy E, Mahoney-Anderson P, Loughlin A, Metsch L, Kerndt P, Gaul Z, **del Rio C**. Perceptions of HIV Testing Services among HIV-positive Persons not in Medical Care. Sex Transm Dis 2005; 32(4): 207-21 [PMID 15788917].
72. Barragán M, Hicks G, Williams M, Franco-Paredes C, Duffus W, **del Rio C**. Low Health Literacy is Associated with HIV Test Acceptance. Journal of Gen Intern Med 2005; 20 (5): 422-425.[PMID 15963165/PMC1490105]
73. Cassoobhoy M, Wetterhall SF, Collins DF, Cantey PT, Iverson CJ, Rudnick JR, **del Rio C**. Bridging the gap between clinicians and public health through the development of an interactive bioterrorism and emerging infections curriculum for medical students and internal medicine residents. Publ Health Reports 2005; 120 (suppl 1): 59-63. [PMID 16025708/PMC 2569989]
74. Rimland D, Guest JL, Hernandez I, **del Rio C**, Anh Le N, Brown WV. Increased ApoCIII to Triglyceride Ratios in HIV Positive Men on Antiretroviral Therapy. HIV Medicine 2005; 6: 326-333. [PMID 16156880]
75. Silk B, **del Rio C**, Kim Ivansco L, Wetterhall S, Augustine J, Blumberg HM, Berkelman R. Pre-event Willingness to receive smallpox vaccine among physicians and public safety personnel. Southern Med Journal 2005; 98 (9):876-882 [PMID 16217979].

76. Beard CB, Fox MR, Lawrence GG, Guarner J, Hanzlick RL, Huang L, **del Rio C**, Rimland D, Duchin JS, Colley DG. Genetic Differences in *Pneumocystis* Isolates from Immunocompetent Infants and from Adults with AIDS: Epidemiological Implications. Journal of Infect Dis 2005; 192:1815-8 [PMID 16235182].
77. Nicholls DJ, King M, Holland D, Bala J, **del Rio C**. Intracranial Tuberculomas Developing while on Therapy for Pulmonary Tuberculosis. Lancet Infect Dis 2005; 795 – 801 [PMID 16310151].
78. Beckwith CG, Flanigan TP, **del Rio C**, Bartlett JG. Screening for HIV (Letter to the Editor). Annals of Intern Med 2005; 143:916.
79. Moanna A, Bajaj R, **del Rio C**. Emphysematous cholecystitis due to *Salmonella derby*. Lancet Infect Dis 2006; 6:118-120. [PMID 16439332]
80. Richards DC, Mikiashvili T, Parris JJ, Kourbatova EV, Wilson JC, Shubladze N, Tsertsvadze T, Khechinashvili G, **del Rio C**, Blumberg HM. High Prevalence of Hepatitis C Infection but not HIV co-infection among patients with Tuberculosis in the Republic of Georgia. Int J TB and Lung Dis 2006; 10(4): 1-6. [PMID 16602403]
81. Leonard MK, Egan KB, Kourbatova E, White N, Parrott P, **del Rio C**, Blumberg HM. Increased efficiency in evaluating patients with suspected pulmonary tuberculosis by use of a dedicated airborne infection isolation unit. Am J Infect Cont 2006; 34: 69-72. [PMID 16490609].
82. Whitney EA, Heilpern KL, Woods CW, Bahn CC, Franko EA, **del Rio C**, Silk BJ, Ratcliff JJ, Bryant KA, Park MM, Watkins SJ, Caram LB, Blumberg HM, Berkelman RL. West Nile Virus Infection among Hospitalized Febrile Patients: a case for expanding diagnostic testing. Vector Borne and Zoonotic Diseases 2006; 6(1): 42 – 49. [PMID 16584326]
83. Stvilia K, Tsertsvadze T, Sharvadze L, Aladashvili M, **del Rio C**, Kuniholm MH, Nelson KE. Prevalence of Hepatitis C, HIV, and Risk Behaviors for Blood-Borne Infections: A population-based study of the adult population of Tbilisi, Republic of Georgia. J Urban Health 2006; 83 (2): 289 – 298. [PMID 16736377/PMC 2527157]
84. Shapatava E, Nelson KE, Tsertsvadze T, **del Rio C**. Risk Behaviors and the Transmission of HIV, Hepatitis B and Hepatitis C among Injecting Drug Users in Georgia. Drug and Alcohol Dependence 2006; 82 (suppl 1): S35 – S38. [PMID 16769443]
85. Rimland D, Guest JL, Hernandez-Ramos I, **del Rio C**, Le AN, Brown WV. Antiretroviral Therapy in HIV Positive Women is Associated with Increased ApoCIII and Total Cholesterol. J Acquir Immune Def Synd 2006; 42: 307 – 313. [PMID 16770290]
86. Valverde E, Waldrop-Valverde D, Anderson-Mahoney P, Loughlin A, **del Rio C,** Metsch L, Gardner L. System and Patient Barriers to Appropriate HIV Care for Disadvantaged Populations: the HIV Medical Care Provider Perspective. Journal of the Association of Nurses in AIDS Care 2006; 17(3): 18-28. [PMID 16829359]
87. Hutchinson AB, Farnham PG Dean HD, Ekwueme DU, **del Rio C**, Kamimoto L, Kellermann SE. The Economic Burden of HIV in the US in the Era of Highly Active Antiretroviral Therapy: Evidence of Continuing Racial and Ethnic Differences. JAIDS 2006; 43: 451 – 457. [PMID 16980906]
88. Hicks G, Barragán M, Franco-Paredes C, Williams M, **del Rio C**. Health Literacy is a Predictor of HIV/AIDS Knowledge Level. Family Medicine 2006; 38(10): 717-23. [PMID 17075745]
89. Kourbatova K, Leonard M, Romo J, Kraft C, **del Rio C**, Blumberg HM. Risk Factors for

Mortality among patients with intrapulmonary tuberculosis at an academic inner-city hospital in the US. European J Epidemiol 2006; 21(9): 715-21. [E-pub Oct 27, 2006] [PMID 17072539]

90. Kourbatova K, Borodulin B, Borodulina E, Leonard M, **del Rio C**, Blumberg H. Risk factors for mortality among patients with newly diagnosed tuberculosis in Samara, Russia. Int J TB & Lung Dis 2006; 10(11): 1224-1230. [PMID 17131780]
91. Markosyan KM, Babikian T, DiClemente RJ, Hirsch JS, Grigoryan S, **del Rio C**. Correlates of HIV Risk and Preventive Behaviors in Armenian Female Sex Workers. AIDS and Behavior 2007; 11(2): 325 – 34 (E-pub July 6th, 2006). [PMID 16823626]
92. Anthony MN, Gardner L, Marks G, Anderson-Mahoney P, Metsch L, Valverde E, **del Rio C**, Loughlin A. Factors associated with use of HIV primary care among persons recently diagnosed with HIV: Examination of variables from the behavioral model of health-care utilization. AIDS Care 2007; 19(2): 195-202. [PMID 17364398]
93. Kelley C, Hernandez-Ramos I, Franco-Paredes C, **del Rio C**. The Clinical and Epidemiologic Characteristics of Foreign Born Latinos with HIV/AIDS at an Urban Clinic in the Southeastern United States. The AIDS Reader 2007; 17: 73 – 88. [PMID 17323506]
94. Priddy FH, Pilcher CD, Moore RH, Tambe P, Park MN, Fiscus SA, Feinberg MB, **del Rio C**. Detection of acute HIV in an urban HIV counseling and testing population in the United States. JAIDS 2007; 44(2): 196 - 202. [PMID 17312561]
95. Brewer T, Zhao W, Pereira M, **del Rio C**, Loughlin A, Anderson-Mahoney P, Gardner L. Metsch L: ARTAS Study Group. Initiating HIV Care: Attitudes and Perceptions of HIV Positive Crack Cocaine Users. AIDS and Behavior 2007; 11(6): 879-904. [Epub ahead of print Feb 13th, 2007] [PMID 17295070].
96. **del Rio C**, Hall G, Hook EW, Holmes KK, Whittington WLH, Judson FN, et al. *Update to CDC's Sexually Transmitted Diseases Treatment Guidelines, 2006*: Fluoroquinolones No Longer Recommended for Treatment of Gonococcal Infections. MMWR 2007; 56(14): 333 – 336.
97. Hirsch JS, Meneses S, Thompson B, Negroni M, Plancarte B, **del Rio C**. The inevitability of Infidelity: Sexual Reputation, Social Geographies, and Marital HIV Risk in Rural Mexico. Am J Publ Health 2007; 97 (6): 986 – 96 [Epub ahead of print Apr 26th, 2007] [PMID 17463368/PMC 1874214]
98. Gardner LI, Marks G, Metsch LR, Loughlin AM, O'Daniels C, **del Rio C**, Anderson-Mahoney P, Wilkinson JD. Psychological and Behavioral correlates of entering care for HIV infection: The Antiretroviral Treatment Access Study (ARTAS). AIDS Patient Care and STD 2007; 21 (6): 418-25. [PMID 17594251]
99. Wang SA, Harvey AB, Conner SM, Zaidi AA, Knapp JS, Whittington WLH, **del Rio C**, Judson FN, Holmes KK. Trends in antimicrobial resistance for *Neisseria gonorrheae* in the United States, 1988 – 2003: the increasing spread of fluoroquinolone-resistance. Ann Intern Med 2007; 147: 81-88. [PMID 17638718]
100. Vargas-Infante Y, Guerrero L, Ruiz-Palacios G, Soto-Ramirez L, **del Rio C**, Carranza J, Dominguez-Cherit G, Sierra-Madero J. Improving Outcome of Human Immunodeficiency Virus Infected Patients in a Mexican Intensive Care Unit. Arch Med Res 2007; 38:827-833. [PMID 17923262]
101. Kuniholm M, Mark J, Aladashvili M, Shubladze N, Khechinashvili G, Tsertsvadze T, **del Rio C,** Nelson K. Risk factor and algorithms to identify Hepatitis C, Hepatitis B

and HIV infection in Tuberculosis patients in Georgia. Intl J Infect Dis 2008; 12 (1): 51-6. {E-pub 2007 Jul 23} [PMID 17644020/PMC 2649965].

102. Tellez I, Barragán M, Franco-Paredes C, Petraro P, Nelson K, **del Rio C**. *Pneumocystis jiroveci* infection in patients with AIDS in the Inner City: A Persistent and Deadly Opportunistic Infection. Am J Med Sci 2008; 335(3): 192-97 [PMID 18344692].
103. Salomon MM, Smith MJ, **del Rio C**. Low educational level: a risk factor for sexually transmitted infections among commercial sex workers in Quito, Ecuador. Intl J. STD & AIDS 2008; 19:264 – 267 [PMID 18482947].
104. Mirtskhulava V, Kempker R, Shields KL, Leonard MK, Tsertsvadze T, **del Rio C**, Salakaia A, Blumberg HM. Prevalence and Risk Factors for latent tuberculosis infection among health care workers in Georgia. Int J Tuberc Lung Dis 2008; 12(5): 513-519. [PMID 18419886/PMC 2742226].
105. Frew PM, Archibald M, Martinez N, **del Rio C**, Mulligan MJ. Promoting HIV Vaccine Research in African American Communities: Does the Theory of Reasoned Action Explain Potential Outcomes of Involvement? Challenge (Atlanta Ga). 2007;13(2):61-97. [PMID 20686675/ PMC2913490]
106. Frew P, **del Rio C**, Clifton S, Hormes JT, Mulligan J. M. Factors influencing HIV vaccine community engagement in the urban South. J Community of Health 2008; 33:259-269 {Epub ahead of print Apr 4}, [PMID 18389351].
107. Miller JD, van der Most RG, Akondy RS, Glidewell JT, Albott S, Masopust D, Muraqli-Krishna K, Mahar PL, Edupuganti S, Lalor S, Germon S, **del Rio C**, Mulligan MJ, Staprans SI, Altman JD, Feinberg MB, Ahmed R. Human effector and memory CD8+ T cell responses to smallpox and yellow fever vaccines. Immunity 2008 May;28(5):710-22. {Epub 2008 May 8} [PMID 18468462]
108. Metsch L, Pereyra M, Messinger S, **del Rio C**, Strathdee SA, Anderson-Mahoney P, Rudy E, Marks G, Gardner L. HIV transmission Risk behaviors among HIV-infected persons who are successfully linked to care. Clin Infect Dis 2008; 47:577-584 [PMID 18624629].
    - Article selected for reprint as part of "*2009 Clinical Issues in HIV Medicine*", published by the Infectious Diseases Society of America
109. Mdivani N, Zangaladze E, Volkova N, Kourbatova E, Jibuti T, Shubladze N, Kutateladze T, Khechinashvili G, **del Rio C**, Salakaia A, Blumberg HM. High Prevalence of Multidrug-Resistant Tuberculosis in Georgia. Int J Inf Dis 2008; 12:635 – 644. {E-pub ahead of print on May 29}, [PMID 18514008/PMC 2645041].
110. Pulendran P, Miller J, Troy DQ, Akondy R, Moseley N, Laur O, Glidewell J, Monson N, Zhu T, Staprans S, Lee D, Brinton MA, Perelygin AA, Vellozzi C, Brachman P, Lalor S, Teuwen D, Eidex RB, Cetron M, Priddy F, **del Rio C,** Altman J, Ahmed R. Case of Yellow Fever Vaccine-Associated Viscerothropic Disease with Prolonged Viremia, Robust Adaptive Immune Responses and Polymorphisms in CCR5 and Rantes Genes. J Infect Dis 2008; 198: 500-507 [PMID18598196/PMC 3734802].
111. Smith DJ, Wakasiaka S, Hoang TD, Bwayo JJ, **del Rio C**, Priddy FH. An evaluation of intravaginal rings as a potential HIV prevention device in urban Kenya: Behaviors and attitudes that might influence uptake within a high-risk population. Journal of Woman's Health 2008; 17(6): 1-10 [PMID 18681822/PMC 2942749].
112. Kuniholm MH, Aladashvili, **del Rio C**, Stvilia K, Gabelia N, Chitale RA, Tsertsvadze T, Nelson KE. Not all Injection Drug Users are Created Equal: Heterogeneity of HIV,

Hepatitis C Virus and Hepatitis B Virus Infection in the Republic of Georgia. Substance Use and Misuse 2008; 43: 1424-1437, [PMID 18696377/PMC2825388].

113. Gardner LI, Metsch L, Strathdee SA, **del Rio C**, Mahoney P, Holmberg SD for the ARTAS Study Group. Frequency of discussing HIV prevention and care topics with HIV-infected patients: Influence of physician gender, race-ethnicity and practice characteristics Gender Med 2008; 5(3): 259 – 269 [PMID 18727992]
114. Shuster JM, Sterk CE, Frew P, **del Rio C**. The Cultural and Community-Level Acceptance of Antiretroviral Therapy (ART) Among Traditional Healers in Eastern Cape, South Africa. J of Community Health 2009; 34(1): 16-22 {e-pub ahead of print Oct 16, 2008} [PMID 18923887].
115. Buchbinder SP, Mehrotra DV, Duerr A, Fitzgerald DW, Mogg R, Li D, Gilbert PB, Lama JR, Marmor M, **del Rio C**, McElrath MJ, Casimiro DR, Gottesdiener KM, Chodakewitz JA, Carey L, Robertson MN, and the Step Study Protocol Team. Efficacy assessment of a cell-medicated immunity HIV-1 vaccine (the Step Study): a double-blind, randomized, placebo-controlled, test-of-concept trial. The Lancet 2008; 372(9653):1881-93 {published online Nov 13, 2008} [PMID 19012954/PMC 2721012]
116. Frew PM, Archibald M, Martinez N, **del Rio C**, Mulligan MJ. Promoting HIV Vaccine Research in African American Communities: Does the Theory of Reasoned Action Explain Potential Outcomes of Involvement? Challenge 2007; 13(2): 61-97. [PMID 20686675]
117. Frew P, **del Rio C**, Lu Lu, Clifton S, Mulligan M. Understanding Differences in Enrollment Outcomes among High-Risk Populations in a Phase IIb HIV Vaccine Trial. JAIDS 2009; 50 (3): 214-391 [PMID 19194310].
118. Kelley CF, Checkley W, Maninno DM, Franco-Paredes C, **del Rio C**, Holguin F. Trends in hospitalizations for AIDS-Related *Pneumocystis jeroveci* Pneumonia in the United States (1986 – 2005). Chest 2009; 36(1): 190-7. {epub ahead of print March 2} [PMID 19255292].
119. Metsch LR, Bell C, Cardenas G, Pereyra M, Sullivan T, Rodriguez A, Gooden L, Khoury N, Kuper T, Brewer T, **del Rio C**. Hospitalized HIV-infected Patients: A Population of Concern in the Era of HAART. Am J Publ Health 2009, 99 (6): 1045-9. {epub ahead of print April 16} [PMID 19372520/PMC 2679801].
120. Gardner L, Marks G, Craw J, Metsch L, Strathdee S, Anderson-Mahoney P, **del Rio C**. for the Antiretroviral Treatment Access Study Group. Demographic, psychological, and behavioral modifiers of the Antiretroviral Treatment Access Study Group. AIDS Patient Care & STD 2009; 23 (9): 1 – 8. {epub ahead of print Aug 2} [PMID 19645619].
121. Schaffner J, Chochua S, Kourbatova EV, Barragan M, Wang YF, Blumberg HM, **del Rio C**, Walker HK, Leonard MK. High mortality among patients with positive blood cultures at the children's hospital in Tbilisi, Georgia. J Infect Dev Ctries 2009 May 1; 3(4): 267-72. [PMID 19759489/PMC 2864639]
122. Akondy RS, Monson ND, Miller JD, Edupuganti S, Teuwen D, Quyyumi F, Garg S, Altman JD, **del Rio C**, Keyserling HL, Ploss A, Rice C, Mulligan MJ, Orenstein WA, Ahmed R. The Yellow Fever Virus Vaccine Induces a Broad and Polyfunctional Human Memory CD8+ T-cell Response. Journal Immunol 2009; {Epub ahead of print Nov 23} [PMID 19933869/PMC 3374958].

123. Asmuth DM, Brown EL, DiNubile MJ, Sun X, **del Rio C**, Harro C, Keefer MC, Kublin JG, Dubey SA, Kierstead LS, Casimiro DR, Shiver JW, Robertson MN, Quick EK, Mehrotra DV. Comparative Cell-Mediated Immunogenicity of DNA/DNA, DNA/Ad5, or Ad5/Ad5 HIV-1 Clade B *gag* Vaccine Prime-boost Regimens. J Infect Dis 2009 [Epub ahead of print Nov 24} [PMID 19929694].
124. Bell DM, Weisfuse IB, Hernandez-Avila M, **del Rio C**, Bustamante X, Rodier G. Pandemic influenza as 21st century urban health crisis. Emerg Infect Dis 2009; 15(12): 1963 – 9 [PMID 19961676/PMC 3044553]
125. Frew PM, Archibald M, Dixon Diallo D, Hou SI, Horton T, Chan K, Mulligan M, **del Rio C**. An Extended Model of Reasoned Action to Understand the Influence of Individual and Network-Level Factors on African American's Participation in HIV Vaccine Research. Prev Sci 2010; 11:207-218 {E-pub ahead of print Dec 12, 2009} [PMID 20012200; PMC2858782]
126. Esteves-Jaramillo A, Omer SB, Gonzalez-Diaz E, Salmon DA, Hixson B, Navarro F, Kawa-Karaski S, Frew P, Morfin-Otero R, Rodriguez Noriega E, Ramirez Y, Rosas A, Acosta E, Varela-Badillo V, **del Rio C**. Acceptance of a Vaccine Against Novel Influenza A (H1N1) Virus Among Health Care Workers in Two Major Cities in Mexico. Arch Med Res 2009; 40: 705-711 [PMID 20304260/PMC2854164]
127. Vogenthaler NS, Hadley C, Lewis S, Rodriguez A, Metsch L, **del Rio C**. Food Insufficiency among HIV-infected Crack Cocaine users in Atlanta and Miami. Public Health Nutr 2010 Jan 15:1-7 {Epub ahead of print Jan 15, 2010] [PMID 20074395/PMC 2973997].
128. Narayan KM & **del Rio C**. Comparative efficacy of influenza vaccines. New Engl J Med 2010; 362(2): 179-80. [PMID 20071712]
129. Vogenthaler NS, Hadley C, Rodriguez AE, Valverde EE, Metsch L, **del Rio C**. Depressive symptoms and food insecurity among HIV-infected crack users in Atlanta and Miami. AIDS and Behavior 2010; 15(7): 1520-6. {E-pub ahead of print Jan 23} [PMID 20099017/PMC2934749].
130. Zaragoza-Macias E, Cosco D, Nguyen M, **del Rio C**, Lennox JL. Predictors of success with highly active antiretroviral therapy in an antiretroviral naive urban population. AIDS Res Hum Retroviruses 2010; Feb;26(2):133-8 [PMID 20156096/PMC2858896].
131. Bell C, Metsch L, Vogenthaler N, Cardenas G, Rodriguez A, Locascio V, Kuper T, Scharf E, Marquez A, Yohannan M, **del Rio C**. Never in Care: Characteristics of HIV-infected crack cocaine users in two U.S. cities who never been to primary outpatient HIV care. JAIDS 2010; Aug 1; 54(4): 376-80. {Epub ahead of print Feb 18, 2010} [PMID 20173648/PMC2888612].
132. Frew PM, Hou SI, Davis M, Chan K, Horton T, Shuster J, Hixson B, **del Rio C**. The likelihood of participation in clinical trials can be measured: The Clinical Research Involvement Scales (CRIS). Journal Clin Epidemiol. 2010; 63: 110-1117. {Epub ahead of print March 18, 2010} [PMID 20303711/PMC2892193].
133. Crabtree-Ramirez B, Villasis-Keever A, Galindo-Fraga A, **del Rio C**, Sierra-Madero J. Effectiveness of Highly Active Antiretroviral Therapy (HAART) among HIV-infected patients in Mexico. AIDS Res Human Retroviruses 2010; 26 (4): 373 – 378. {E-pub ahead of print April 8} [PMID 20377418/ PMC 2933160].
134. Frew PM, Mulligan MJ, Hou, SI, Chan K, **del Rio C**. Time will tell: community

acceptability of HIV vaccine Research before and after the "Step Study" vaccine discontinuation. Open Access Journal of Clinical Trials 2010; 2: 149 - 156. [PMID 21152413/PMC 2996614]

135. Wrammert J, Koutsonanos D, Li GM, Edupuganti S, Sui J, Morrissey SM, McCausland M, Skoutzou I, Hornig M, Lipkin WI, Mehta A, Razavi B, **del Rio C**, et al. Broadly cross-reactive antibodies dominate the acute B cell response against pandemic 2009 H1N1 influenza virus infection in humans. J Exp Med 2011, 208(1): 181-93. {Epub ahead of print Jan 10, 2011} [PMID 21220454/PMC 3023136]
136. Hixson BA, Omer SB, **del Rio C**, Frew PM. Spatial Clustering of HIV Prevalence in Atlanta, Georgia and Population Characteristics Associated with Case Concentrations. J Urban Health 2011; {Epub ahead of print Jan 20} [PMID 21249526/PMC 3042078].
137. Tsertsvadze T, Chkhartishvili N, Sharvadze L, Dvali N, Chokoshvili O, Gabunia P, Abutidze A, Nelson K, DeHovitz J, **del Rio C**. Outcomes of Universal Access to Antiretroviral Therapy (ART) in Georgia. AIDS Research and Treatment 2011; 2011: 621078. {Epub feb 21, 2011. doi:10.1155/2011/621078}. [PMID 21490781/PMC 3065882]
138. Gardner EM, McLees MP, Steiner JF, **del Rio C**, Burman WJ. The Spectrum of Engagement in HIV Care and its Relevance to "Test and Treat" Strategies for Prevention of HIV Infection. Clin Infect Dis 2011; 52 (6): 793-800. [PMID 21367734/PMC 3106261]. {Article selected for reprint as part of "*2010 Clinical Issues in HIV Medicine*", published by the Infectious Diseases Society of America}
    -Article was published with an accompanying editorial: Lange JMA. "Test and Treat": Is It Enough? Clin Infect Dis 2011 (52): 801-2.
139. Priddy FH, Wakasiaka S, Hoang TD, Smith JD, Farah B, **del Rio C,** Ndinya-Achola J. Anal sex, vaginal practices and HIV incidence in female commercial sex workers in urban Kenya: Implications for development of intravaginal HIV prevention methods. AIDS Res Human Retroviruses 2011; 27(10: 1067-72. {Epub ahead of print Mar 15} [PMID 21406032]
140. Rebolledo-Esteinou P, Kourbatova E, Rothenberg, R, **del Rio C**. Factors Associated with Utilization of HAART amongst hard-to-reach HIV-infected individuals in Atlanta, GA. J AIDS and HIV Research 2011; 3(3): 63-70 [PMID 21866279/PMC 3159491].
141. Frew PM, Hixon B, **del Rio C**, Esteves-Jaramillo A, Omer S. Acceptance of pandemic 2009 influenza A (H1N1) vaccine in a minority population: determinants and potential points of intervention. Pediatrics 2011; May; 127 Suppl 1:S113-9. {Epub 2011, Apr 18} [PMID 21502254].
142. Dionne-Odom J, Tambe P, Yee E, Weinstock H, **del Rio C**. Antimicrobial Resistant Gonorrhea in Atlanta: 1988 – 2006. Sex Trans Dis 2011; 38 (8): 780 - 782 {Epub ahead of print March 18; doi: 10.1097/OLQ.0b013e318214e306} [PMID 21844728/PMC 3156986/NIHMS 280105].
143. Wheatley MA, Copeland B, Shah B, Heilpern K, **del Rio C**, Houry D. Efficacy of Emergency Department Based HIV Screening Program in the Deep South. J Urban Health 2011; 88(6): 1015-1019. [PMID 21630105/PMC 3232419].
144. Hong NT, Wolfe MI, Dat TT, McFarland DA, Kamb ML, Thang NT, Thai HN, **del Rio C**. Utilization of HIV Voluntary Counseling and Testing in Vietnam: An Evaluation

of Five Years of Routine Program Data for National Response. AIDS Education and Prevention, 2011 June:23(3 Suppl):30-48. [PMID 21689035]

145. Frew PM, Archibald M, Hixson B, **del Rio C**. Socioecological influences on community involvement in HIV vaccine research. Vaccine 2011; 29 (36): 6136 - 43 [PMID 21722689/PMC 3170874/NIHMS 314370].
146. **del Rio C**, Hall G, Hook EW, Whittington W, Kirkcaldy R, Papp JR, Weinstock H, Murray EL. Cephalosporin Susceptibility Among *Neisseria gonorrheae* isolates – United States, 2000 – 2010. MMWR 2011; 60(26): 873 – 977. [PMID 21734634]
147. Kandelaki G, Butsashvili M, Geleishvili M, Avaliani N, Macharashvili N, Topuridze M, **del Rio C**, Blumberg H, Tsertsvadze T. Nosocomial Infections in Tbilisi, Georgia: A retrospective study of microbiological data from 4 major tertiary hospitals. Infect Control Hosp Epidemiol 2011; 32 (9): 933- 4. [PMID 21828982].
148. Talati N, Gonzalez-Diaz E, Mutemba C, Wendt J, Kilembe W, Mwananyanda L, Chomba E, Allen S, **del Rio C**, Blumberg H. Diagnosis of Latent Tuberculosis Infection among HIV discordant partners using interferon Gama Releasing Assays. BMC Infectious 2011 Sept 30, 11:264 (doi:10.1186/1471-2334-11-264). [PMID 21962029/PMC 3198954].
149. Steinau M, Reddy D, Sumbry A, Reznik D, Gunthel CJ, **del Rio C**, Lennox JL, Unger ER, Nguyen ML. Oral Sampling and human papillomavirus genotyping in HIV-infected patients. J Oral Pathol Med 2012; 41(4): 288 – 91 [PMID 22082117]
150. Hogan C, DeGruttola V, Sun X, Fiscus SA, **del Rio C**, Bradley Hare C, Markowitz M, Connick E, Macatangay B, Tashima KT, Kallungal B, Camp R, Frazier T, Daar ES, Little S. The Setpoint Study (ACTG A5217) – Effect of Immediate versus Deferred Antiretroviral Therapy on Virologic Setpoint in Recently HIV-1 Infected Individuals. J Infec Dis2012; (1): 87 – 96 [PMID 22180621/PMC 3242744]
151. Doshi RK, Vogenthaler N, Lewis S, Rodriguez A, Metsch L, **del Rio C.** Correlates of antiretroviral utilization among hospitalized HIV-infected crack cocaine users. AIDS Res Hum Retroviruses 2012; 28 (9): 1007 – 14. [PMID 22214200/PMC 3423644]
152. Bonney LE, Cooper HL, Caliendo AM, **del Rio C**. Hunter-Jones J, Swan DF, Rothenberg R, Druss B. Access to Health Services and Sexually Transmitted Infections in a Cohort of Relocating African American Public Housing Residents: An Association Between Travel Time and Infection. Sex Transm Dis 2012 Feb; 39(2): 116 – 121 [PMID 22249300]
153. Copeland BL, Shah B, Wheatley M, Heilpern K, **del Rio C**, Houry D. Diagnosing HIV in Men Who Have Sex with Men: An Emergency Department's Experience. AIDS Patient Care and STD 2012; 26 (4): 202 – 7. [PMID 22356726/PMC 3317392]
154. Ofotokun I, Sheth AN, Sanford SE, Easley KA, Shenvi N, White K, Eaton ME, **del Rio C**, Lennox JL. A Switch in Therapy to a Reverse Transcriptase Inhibitor Sparing Combination of Lopinavir/Ritonavir and Raltegavir in Virologically Suppressed HIV-infected Patients: A Pilot Randomized Trial to Assess Efficacy and Safety Profile: the KITE Study. AIDS Res Human Retroviruses 2012; 28 (10): 1196 – 206 [PMID 22364141/ PMC3448110].
155. Kalokhe A, Paranjape A, Bell CE, Cardenas GA, Kuper T, Metsch LR, **del Rio C**. Intimate Partner Violence among HIV-infected crack cocaine users. AIDS Patient Care and STDS 2012; 25(4): 234 – 40. [PMID 22364209/PMC 3317393]
156. Leeds IL, Magee MJ, Kurbatova EV, **del Rio C**, Blumberg HB, Leonard MK, Kraft CS.

Site of extrapulmonary tuberculosis is associated with HIV infection. Clin Infect Dis 2012; 55(1): 75 – 81 [PMID 22423123/PMC 3493181].

157. Frew PM, Painter JE, Hixson B, Kulb C, Moore K, **del Rio C**, Esteves-Jaramillo A, Omer SB. Factors mediating seasonal and influenza A (H1N1) vaccine acceptance among ethnically diverse populations in the urban south. Vaccine 2012; 30 (28): 4200 – 8. [PMID 22537991/PMC 35222428]
158. Duerr A, Huang Y, Buchbinder S, Coombs RW, Sanchez J, **del Rio C**, Casapia M, Santiago S, Gilbert P, Corey L, Robertson MN, for the Step/HVTN 504 study team. Extended follow-up confirms early vaccine-enhanced risk of HIV acquisition and demonstrates waning effect over time among participants in a randomized trial of a recombinant adenovirus HIV vaccine (Step study). J Infect Dis 2012; 206 (2): 258 – 66. [PMID 22561365/PMC 3490694]
159. Goldstein E, Kirkcaldy RD, Reshef D, Berman S, Weinstock H, Sabeti P, **del Rio C**, Hall G, Hook EW, Lipsitch M. Factors Related to Increasing Prevalence of Resistance to Ciprofloxacin and other Antimicrobial Drugs in *Neisseria gonorrheae*, United States. Emerg Infect Dis 2012; 18(8): 1290 – 7. [PMID 22840274/PMC 3414012]
160. **del Rio C**, Hall G, Holmes K, Soge O, Hook EW, et al. Update to CDC's *Sexually Transmitted Diseases Treatment Guideline, 2010:* Oral Cephalosporins no Longer a Recommended Treatment for Gonococcal Infections. MMWR 2012; 61(31): 590 – 594. [PMID 22874837] (also published in JAMA 2012; 308(18): 1850 – 1853)
161. Kelley CF, Rosenberg ES, O'Hara BM, Sanchez T, **del Rio C**, Sullivan PS. Prevalence of Urethral Trichomonas vaginalis in Black and White Men Who Have Sex with Men. Sex Transm Dis 2012; 39(9): 739. [PMID 22902674/PMC 3665349]
162. Edupuganti S, Eidex R, Keyserling H, Orenstein W, **del Rio C**, Akondy R, Lanciotti R, Pan Y, Querec T, Lipman H, Barrett A, Ahmed R, Teuwen D, Cetron M, Mulligan M. A Randomized, double-blind, controlled trial of the 17D Yellow fever virus vaccine in combination with immune globulin or placebo: comparative viremia and immunogenicity. Am J Trop Med & Hyg 2013; 88 (1): 172 – 7. [PMID 23208880/PMC 3541731]
163. Kelley CF, Rosenberg ES, O'Hara BM, Frew PM, Sanchez T, Peterson JL, **del Rio C**, Sullivan PS. Measuring Population Transmission Risk for HIV: An Alternative Metric of Exposure in Men Who Have Sex with Men (MSM) in the US. PLoS One 2012; 7 (12): e53284. Doi: 10.1371/journal.pone.0053284. [PMID 23285274/PMC 3532405].
164. Hodder SL, Justman J, Hughes J, Wang J, Haley D, Adimora AA, **del Rio C**, Golin CE, Kou I, Rompalo A, Soto-Torres L, Mannheimer SB, Johnson-Lewis L, Eshleman SH, El-Sadr W for the HIV Prevention Trials Network 064 ; the Women's HIV SeroIncidence Study Team. HIV Acquisition Among Women from Selected Areas of the United States: A Cohort Study. Ann Intern Med 2013; 158 (1): 10 – 18. [PMID 23277896]
165. Kirkcaldy RD, Zaidi A, Hook EW, Holmes KH, Soge O, **del Rio C**, Hall G, Papp J, Bolan G, Weinstock HS. *Neisseria gonorrheae* Antimicrobial Resistance among Men who Have Sex with Men and Men who have Sex with Women, The Gonococcal Isolate Surveillance Project, 2005 – 2010. Ann Intern Med 2013; 158: 321 – 328 [PMID 2346005]

166. Dionne-Odom J, Karita E, Kilembe W, Henderson F, Vwalika B, Bayingana R, Li Zhigang, Mulenga J, Chomba E, **del Rio C**, Khu NH, Tichacek A, Allen S. Syphilis Treatment Response among HIV Discordant Couples in Zambia and Rwanda. Clin Infect Dis 2013; 56(23): 1829 – 37. [PMID 23487377/PMC 3658364]
167. Acosta AM, Bonney LE, Fost M, Green VL, del Rio C. HPV Knowledge among a Marginalized Population [Letter]. Prev Chronic Dis 2013 Mar; 10;E44. doi: 10.5888/pcd10.130088. [PMID 23537518].
168. Martin D, Dbouk RH, Deleon-Carnes M, **del Rio C**, Guarner J. *Haemophilus influenzae* acute endometritis with bacteremia: case report and literature review. Diagn Microbiol Infect Dis 2013 Jun; 76(2): 235 – 6. [PMID 23537790]
169. Guarner, J, Armstrong WS, Satola SW, Mehta AK, Jerris R, Hilinski J, Burd, EM, Kraft CS, **del Rio C**. Development, Implementation, and Evaluation of a 4th year Medical School Elective Course in Clinical Microbiology Using Case-Based Vignettes. J Med Microbiol 2013 Jul; 62(Pt 7): 1098 - 110 [PMID 23579393].
170. Guarner J, Burd EM, Williams TC, Jerris R, **del Rio C**. Unusual empyema *Pseudozyma aphidis*. J Clin Microbiol 2013; 51(7): 2017 [PMID 23785070/PMC 3697655] & Answer to July 2013 Photo Quiz. J Clin Microbiol 2013; 51(7): 2473 [PMID 23785071/PMC 3697724].
171. Koblin BA, Mayer KH, Esheman SH, Wang L, Mannheimer S, **del Rio C**, Shaptaw S, Magnus M, Buchbinder S, Wiltion L, Lui TY, Cummings V, Piwowar-Manning E, Dields SD, Grifith S, Elharrar V, Wheeler D for the HPTN 061 Protocol Team. Correlates of HIV acquisition in a cohort of Black men who have sex with men in the United States: HIV Prevention Trials Network (HPTN) 061. PLoS ONE 2013 Jul 26; 8(7): e70413. doi:10.1371/journal.pone.0070413. [PMID 23922989/PMC 3724810]
172. Adimora AA, Hughes JP, Wang J, Haley DF, Golan CE, Magus M, Rompalo A, Justman J, **del Rio C**, El-Sadr W, Mannheimer S, Soto-Torres L, Hodder S. for the HPTN 064 Protocol Team. Characteristics of Multiple and Concurrent Partnerships among Women at High Risk for HIV Infection. JAIDS 2014; 65(1): 99 – 106 {Epub ahead of print Sept 4, 2013} [PMID 24056163; PMC 4172374]
173. Hussen SA, Stephenson R, **del Rio C**, Wilton L, Wallace J, Wheeler D, for the HPTN 061 Protocol Team. HIV Testing Patterns among Black Men who have Sex with Men: A Qualitative Typology. PLoS One 2013, Sept 19; 8(9): e75382. Doi:10.1371/journal.pone.0075382. [PMID 24069408/PMC 3777907]
174. Marzinke MA, Clarke W, Wang L, Cummings V, Liu T-Y, Piwowar-Manning E, Breaud A, Griffith S, Buchbinder S, Shoptaw S, **del Rio C**, Magnus M, Mannheimer S, Fields SD, Mayer KH, Wheeler DP, Koblin BA, Eshleman SH, and Fogel JM. Non-disclosure of HIV status in a clinical trial setting: antiretroviral drug screening can help distinguish between newly-diagnosed and previously-diagnosed HIV infection. Clin Infect Dis. 2014; 58(1) 117 - 120. {Epub ahead of print Oct 2, 2013} [PMID 24092804/PMC 3864502].
175. DeMoss M, Bonney L, Grant J, Klein R, **del Rio C**, Backer JC. Perspectives of Middle-Aged African American Women in the Deep South on Antiretroviral Therapy Adherence. AIDS Care 2013, Oct 8 {Epub ahead of print} [PMID 24176032].
176. Chkhartishvili N, Kempker RR, Dvani N, Abashidze L, Sharavdze L, Gabunia P, Blumberg H, **del Rio C**. Tsersvadze T. Poor agreement between interferon-gamma release assays and the tuberculin skin test among HIV-infected individuals in the

country of Georgia. BMC Infect Dis 2013; Nov 1; 13(1): 513 {Epub ahead of print} [PMID 24176032/PMC 3817813].

177. Marconi VC. Wu B, Hampton J, Ordonez CE, Johnson BA, Singh D, John S, Gordon M. Hare A, Murphy R, Nachega J, Kuritzkes DR, **del Rio C**, Sunpath H and South Africa Resistance Cohort Study Team. Early Warning Indicators for First-line Failure Independent of Adherence Measures in a South African Urban Clinic. AIDS Patient Care STDS 2013 Dec; 27(12): 657 – 68. [PMID 24320011/PMC 3868291]
178. Lomtadze N, Kupreishvili L, Salakaia A, Vashakidze S, Sharvadze L, Kempker RR, Mcgee MJ, **del Rio C**, Blumberg HM. Hepatitis C Virus co-infection increases the Risk of Anti-Tuberculosis Drug-Induced Hepatotoxicity among Patients with Pulmonary Tuberculosis. PLoS ONE 2013; 8(12): e83892. doi: 10.1371/journal.pone.0083892. [PMID 24367617/PMC 3817813]
179. Imai K, Sutton MY, Mdodo R, **del Rio C**. HIV and Menopause: A Systematic Review of the Effects of HIV Infection on Age at Menopause and the Effects of Menopause on the Response to Antiretroviral Therapy. Obstet Gynecol Int. 2013; 2013: 340309. doi: 10.1155/2013/340309. [PMID 24454386/PMC 3880754]
180. Chkhartishvili N, Sharvadze L, Chokoshvili O, Bolokadze N, Rukhadze N, Kempker R, DeHovitz J, **del Rio C**, Tsertsvadze T. Mortality and causes of death among HIV infected individuals in the country of Georgia: 1989 – 2012. AIDS Res Hum Retroviruses 2014 Jun; 30(6): 560 – 6. {epub ahead of print Jan 28} [PMID 24472093/PMC 4046195]
181. Mayer KM, Wang L, Koblin S, Mennheimer S, Magus M, **del Rio C**, Buchbinder S, Wilton L, Cummings V, Watson C, Piwowar-Manning E, Gaydos C, Eshleman SH, Clarke W, Liu T-Y, Griffith S, Wheeler S for the HPTN 061 Team. Concomitant Socioeconomic, Behavioral, and Biological Factors Associated with the disproportionate HIV infection burden among Black Men who have Sex with Men in 6 US Cities. PLoS ONE 2014 Jan 31, 9(1): e87298. Doi:10.1371/journal.pone.0087298. [PMID 24498067/PMC 3909083]
182. Hussen SA, Tsegaye M, Argaw MG, Andes K, Gilliard D, **del Rio C**. Spirituality, Social Capital and Service: Factors Promoting Resilience among Expert Patients living with HIV in Ethiopia. Glob Public Health 2014 Feb 13 {Epub ahead of print} [PMID 24520996]
183. Winskell K, Evans D, Stephenson R, **del Rio C**, Curran JW. Incorporating Global Health Competencies into the Public Health Curriculum. Publ Health Reports 2014; 129 (2): 203 – 208. [PMID 24587558]
184. Sullivan PS, Peterson J, Rosenberg ES, Kelley CF, Cooper H, Vaughan A, Salazar LF, Wingood G, DiClemente R, **del Rio C**, Mulligan M, Sanchez TH. Understanding Racial HIV/STI Disparities in Black and White Men Who Have Sex with Men: A Multilevel Approach. PLoS ONE 9(3): e90514.doi:10.1371/journa.pone.0090514. [PMID 2460176/PMC 3946498]
185. Rosa-Chuha I, Hootoon TM, Cardenas GA, **del Rio C**, Bonney LE, Pereyra M. Metsch LR. Human Papillomavirus Awareness among HIV-infected drug users in two urban áreas. Int J STD AIDS 2014; 25(14): 992-996 {Epub ahead of print March 10}. Doi: 10.1177/0956462414527070 [PMID 24616115]
186. White D, Rosenberg ES, Cooper HL, **del Rio C**, Sanchez TH, Salazar LF, Sulllivan PS. Racial differences in the validity of self-reported drug use among men who have sex

with men in Atlanta, GA. Drugs & Alcohol Dep 2014; 138: 146 – 53. doi.org/10.1016/j_drugalcdep.2014.02.25 {Epub ahead of print Feb 25, 2014} [PMID 24629628]

187. Piwowar-Manning E, Fogel JM, Leayendecket O, Wolf S, Cummings V, Merzinke MA, Clarke W, Breaud A, Wendel S, Wang L, Swanson P, Hackett J, Manheimer S, **del Rio C**, Kuo I, Harawa NT, Koblin BA, Moore R, Blakson JN, Echleman SH. Failure to Identify HIV-Infected Individuals in a Clinical Trial Using Single HIV Rapid Test for Screening. HIV Clin Trials 2014; 15(2): 62 – 68. [PMID 24710920/PMC 4167641]
188. Chkhartishvili N, Rukhadze N, Svanidze M, Sharadze L, DeHovitz JA, Tsertsvadze T, McNutt LA, **del Rio C**. Evaluation of multiple mesures of antiretroviral adherence in the Eastern European country of Georgia. J Int AIDS Soc 2014; Apr 9; 17 (1): 1885. doi: 10.7448/IAS.17.18885.eCollection 2014. [PMID 24721464/PMC 3983475]
189. Peterson JL, Bakeman R, Sullivan P, Millett GA, Rosenberg E, Salazar L, DiClemente RJ, Cooper H, Kelley CF, Mulligan MJ, Frew P, **del Rio C,** Social Discrimination and Resiliency are not associated with Differences in Prevalent HIV Infection in Black and White Men who had Sex with Men. J Acquir Immune Defic Syndr 2014; 66(5): 538 – 43. {Epub ahead of print May 29} [PMID 24820109].
190. Hussen SA, Andes K, Gilliard D, Chakraborty R, **del Rio C**, Malebranche DJ. Transition to Adulthood and Antiretroviral Adherence Among HIV-Positive Young Black Men Who Have Sex with Men. Am J Public Health 2014 {Epub ahead of print June 12} [PMID 24922167]
191. Chkhartishvili N, Sharavdze L, Chokoshvili O, DeHovitz J, **del Rio C**, Tsertsvadze T. The Cascade of Care in the Eastern European Country of Georgia. HIV Med 2015; 16(1): 62 - 66. doi: 10.1111/hiv.12172. {Epub ahead of print June 12, 2014} [PMID 21787384/PMC 3154141].
192. Hare AQ, Ordonez CE, Johnson BA, **del Rio C**, Kearns RA, Wu B, Hampton J, Wu P, Sunpath H, Marconi VC. Gender-Specific Risk Factors for Virologic Failure in KwaZulu-Natal: Automobile Ownership and Financial Insecurity. AIDS Behav 2014; 18(11): 2219-2229 {Epub ahead of print July 19} PPMID 25037488]
193. Marrazzo JM, **del Rio C**, Holtgrave DR, Cohen MS, Kalichman SC, Mayer KH, Montaner JS, Wheeler DP, Grant RM, Grinsztejn B, Kumarasamy N, Shoptaw S, Walensky RP, Dabis F, Sugarman J, Benson CA. HIV Prevention in Clinical Care Settings: 2014 Recommendations of the International Antiviral Society-USA Panel. JAMA 2014; 312(4): 390 – 409. [PMID 25038358]
194. Hernandez-Romieu AC, Sullivan PS, Sanchez TH, Kelley CF, Peterson JL, **del Rio C**, Salazar LF, Frew PM, Rosenberg ES. The comparability of men who have sex with men recruited from venue-time-space sampling and Facebook: a cohort study. JMIR Res Protoc 2014 July 17; 3(3):e37.doi:10.2195/resprot3342. [PMID 25048694]
195. Sanchez TH, Kelley CF, Rosenberg E, Luisi N, O'Hara B, Lambert R, Coleman R, Frew PM, Salazar LF, Tao S, Clarke W, **del Rio C**, Sullivan PS. Lack of Awareness of HIV Infection: Problems and Solutions with Self-reported HIV Serostatus of Men Who Have Sex with Men. Open Forum Infectious Diseases 2014; doi: 10.1093/ofid/ofu084
196. Chen I, Cummings V, Fogel JM, Marzinke MA, Clarke W, Connor MB, Griffith S, Buchbinder S, Shaptaw S, **del Rio C**, Magnus M, Mannheimer S, Wheeler DP,

Mayer KH, Koblin BA, Eshleman SH, . Low-level Viremia Early in HIV Infection. J Acquir Immune Defic Syndr 2014; 67(4): 405 – 8{Epub ahead of print Aug 21} [PMID 25140905; PMC 4213245]

197. Cooper HLF, Linton S, Haley DF, Kelley ME, Dauria EF, Karnes CC, Ross Z, Hunter-Jones J, Renneker KK, **del Rio C**, Adimora A, Wingood GM, Rothenberg RR, Bonney LE. Changes in Exposure to Neighborhood Characteristics Are Associated with Sexual Network Characteristics in a Cohort of Adults Relocating from Public Housing. AIDS and Behavior 2014 {Epub Aug 24} [PMID 25150728]
198. Mannheimer SB, Wang L, Wilton L, Tieu HV, **del Rio C**, Buchbinder S, Fields S, Glick S, Conor MB, Cummings V, Eshleman SH, Koblin B, Mayer KH. Infrequent HIV Testing and Late HIV Diagnosis Are Common Among A Cohort of Black Men who have Sex with Men (BMSM) in Six US Cities. J Acquir Immune Defic Syndr 2014; 67(4): 438-45 {Epub ahead of print Sept 5} [PMID 25197830]
199. Cooper HLF, Haley DF, Linton S, Hunter-Jones J, Martin M, Kelley ME, Karnes CC, Ross Z, Adimora AA, **del Rio C**, Rothenberg R., Wingood GM, Bonney LE. Impact of Public Housing Relocations: Are changes in neighborhood conditions related to STIs among relocaters? Sex Transm Dis 2014 Oct;41(10):573-9. doi: 10.1097/OLQ.0000000000000172. [PMID 25211249]
200. Lofgren SM, Friedman R, Ghermay R, George M, Pittman JR, Shahane A, Zeimer D, **del Rio C**, Marconi VC. Integrating Early Palliative Care for patients with HIV: Provider and patient perceptions of symptoms and need for services. Am J Hosp Palliat Care 2014 Sept 12; doi: 10.1177/1049909114550391. [PMID 25216735]
201. Okafor N, Rosenberg ES, Luisi N, Sanchez T, **del Rio C**, Sullivan PS, Kelley, CF. Disparities in herpes simplex virus type 2 infection between Black and White Man who have Sex with Men in Atlanta, GA. Int J STD AIDS 2014; Sept 22. Pii: 0956462414552814 {Epub ahead of print} [PMID 25246424].
202. Guarner, J, Burd EM, Kraft CS, Armstrong WS, Lennorr K, Spicer JO, Martin D, **del Rio** C. Evaluation of an online program to teach microbiology to internal medicine residents. J Clin Microbiol 2015; 53(1): 278-81. doi: 10.1128/JCM.02696-14. {Epub ahead of print Nov 12} [PMID 2539364]
203. Ali, MK, McKeever K, Gregg EW, **del Rio C**. A Cascade of Care for Diabetes in the United States: Visualizing the Gaps. Ann Intern Med 2014; 161: 681-689. doi: 10.7326/M14-0019 [PMID 25402511]
204. Kirkcaldy RD, Soge O, Papp JR, Hook EW, **del Rio C**, Kublin G, Weinstock HS. Neisseria gonorrhoeae azithromycin susceptibility in the United States, the Gonococcal Isolate Surveillance Project: 2005 – 2013. Antimicrob Agents Chemother 2015; 59(2): 998 – 1003. Doi: 10.1128/AAC.04337-14. {Epub 2014 Dec 1} [PMID 25451056]
205. Rosenberg ES, Millett GA, Sullivan PS, **del Rio C**, Curran JW. Understanding the HIV disparities between Black and White men who have sex with men in the USAusing the HIV care continuum: a modelling study. Lancet HIV 2014; 1(3):e112-e118 {Epub ahead of print Nov 18} [PMID 25530987/PMC 4269168]
206. Kenya S, Chida N, Cardenas G, Pereyra M, **del Rio C**, Rodriguez A, Metsch L. Case Management: Steadfast Resource for Addressing Linkage to Care and Prevention with Hospitalized HIV-infected Crack Users. J HIV AIDS Soc Serv 2014; 13(4): 325 – 26. [PMID 25635176; PMC 4307800]

207. Chow JY, Alsan M, Armstrong WS, **del Rio C**. Marconi VC. Risk factors for AIDS-defining illnesses among a population of poorly adherent people living with HIV/AIDS in Atlanta, Georgia. AIDS Care 2015; Feb 9: 1 – 5 {Epub ahead of print} [PMID 25660100].
208. GuarnerJ, Amukele T, Mehari M, Gemechu T, Woldeamanuel Y, Winkler AM, Wilson ML, **del Rio C**. Building Capacity in Laboratory Medicine in Africa by Increasing Physician Involvement: A Laboratory Medciine Course for Clinicians. Am J Clin Pathol 2015; 143(3): 405 -411. [PMID 25696799].
209. Leon JS, Winskell K, McFarland DA, **del Rio C**. A case-based, problem-based learning approach to prepare master of public health students for the complexities of global health. Am J Public Health 2015 Mar ; 105 (Suppl 1): S92 -6. [PMID 25706029]
210. Weissman HM, Biousse V, Schechter MC, **del Rio C**, Yeh S. Bilateral central retinal artery occlusion associated with herpes simplex virus-associated acute retinal artery necrosis and meningitis: case report and literature review. Ophthalmic Surg Lassers Imaging Retina 2015; 46(2): 279 – 83. [PMID 25707059]
211. Kelley C, Vaughan A, Luisi N, Sanchez TH, Salazar LF, Frew P, Cooper H, DiClemente R, **del Rio C**, Sullivan P, Rosenberg E. The effect of high rates of bacterial sexually transmitted infections on HIV incidence in a cohort of black and white men who have sex with men in Atlanta, GA. AIDS Res Hum Retroviruses 2015; Jun; 31(6): 587 – 92. doi: 10.1089/AID.2015.0013. [PMID 25719950]
212. Sanchez T, Kelley CF, Rosenberg E, Luisi N, O'Hara B, Lambert R, Coleman R, Frew P, Salazar LF, Tao S, Clarke W, **del Rio C**, Sullivan PS. Lack of Awareness of Human Immunodeficiency Virus (HIV) Infection: Problems and Solutions with Self-reported HIV Serostatus of Men who have Sex with Men. Open Forum Infect Dis 2014; Sept 13; 1(2):ofu084. doi: 10.1093/ofid/ofu084. [PMID 25734150; PMC 4281805]
213. Ezewudo MN, Joseph SJ, Castillo-Ramirez S, Dean D, **del Rio C**, Didelot X, Dillon JA, Delden RF, Shafer WM, Turingan RS, Unemo M, Read TD. Population structure of Neisseria gonorrhoeae based on whole genome data and its relationship with antibiotics resitance. Peer J 2015 Mar 5; 3:e806. doi: 10.7717/peerj.806. eCollection 2015. [PMID 25780762; PMC 4358642]
214. Kalokhe AS, Potdar RR, Stephenson R, Dunkle KL, Paranjape A, **del Rio C**, Sahay S. How Well Does the World Health Organization Definition of Domestic Violence Work in India? PLoS One 2015; Mar 26; 10(3):e0120909. doi: 10.1371/journal.pone.0120909. [PMID 25811374; PMC 4374684].
215. Chen I, Connor MB, Clarke W, Marzinke MA, Cummings V, Breaud A, Fogel JM, Laeyendecker O, Fields SD, Donnell D, Griffith S, Scott HM, Schoptaw S, **del Rio C**, Magus M, Mannheimer S, Wheeler DP, Mayer KH, Koblin BA, Eshleman SH. Antiretroviral drug use and HIV drug resitance among HIV-infected Black men who have sex with men: HIV Prevention Trials Network 061. J Acquir Immune Defic Syndr 2015 Aug 1;69(4): 446 – 53. doi: 10.1097/QAI.0000000000000633. [PMID 25861015]
216. Vaughan AS, Kelley CF, Luisi N, **del Rio C**, Sullivan PS, Rosenberg ES. An application of propensity score weighting to quantify the casual effect of rectal sexually transmitted infections on incident HIV among men who have sex with men. BMC Med Res Methodol 2015 Mar 21; 15(1):25. doi: 10.1186/s12874-015-0017-y.

[PMID 25888416]
217. Sullivan PS, Rosenberg ES, Travis TH, Kelley CF, Luisi N, Cooper HL, DiClemente RJ, Wingood GM, Frew PM, Salazar LF, **del Rio C**, Mulligan MJ, Peterson JL. Explaining racial disparities in HIV incidence in black and white men who have sex with men in Atlanta, GA: a prospective observational cohort study. Ann Epidemiol 2015 Jun; 25(6): 445 - 54. doi: 10.1016/j.annepidem.2015.03.006. {Epub ahead of print} [PMID 25911980]
218. Piñeirua A, Sierra-Madero J, Cahn P, Guevara Palmero RN, Martinex Buitrago E, Young B, **del Rio C**. The HIV care continuum in Latin America: challanges and opportunities. Lancet Infect Dis 2015 Jul; 15(7): 833 – 9. doi: 10.1016/S1473-3099(15)00108-3. [PMID 26122456].
219. Polgreen PM, Santibanez S, Koonin LM, Rupp ME, Beekmann SE, **del Rio C**. Infectious Disease Physician Assessment of Hospital Preparedness for Ebola Virus Disease. Open Forum Infect Dis 2015 Jun 18; 2(3):ofv087. doi: 10.1093/ofid/ofv087. [PMID 26180836/PMCID 4499670].
220. Kelley CF, Kahle E, Siegler A, Sanchez T, **del Rio C**, Sullivan PS, Rosenberg ES. Applying a PrEP Continuum of Care for Men who Have Sex with Men in Atlanta, GA. Clin Infect Dis 2015 Nov 15; 61(10): 1590-7. doi:10.1093/cid/civ664. {Epub 2015 Aug 13} [PMID 26270691].
221. Caro-Vega Y, **del Rio C**, Dias Lima V, Lopez-Carvantes M, Crabtree-Ramirez B, Bautista-Arredondo S, Colchero MA, Sierra-Madero J. Estimating the Impact of Earlier ART Initiation and Increased Testing Coverage on HIV Tranmission among Men Who Have Sex with Men in Mexico using a Mathematical Model. PLoS One 2015 Aug 24; 10(8): e0136534. doi: 10.1371/journal.pone.0136534. [PMID 26302044].
222. Tukvadze N, Sanikidze E, Kipiani M, Hebbar G, Easley KA, Shenvi N, Kempker RR, Frediani JK, Mirtskhulava V, Alvarez JA, Lomtadze N, Vashakidze L, Hao L, **del Rio C**, Tangpricha V, Blumberg HM, Ziegler TR. High-dose vitamin D3 in adults with pulmonary tuberculosis: a double-blind, randomized controlled trial. Am J Clin Nutr 2015 Nov; 102(5): 1059 – 69. doi: 10.2945/ajcn.115.113886. {Epub Sept 23} [PMID 26399865]
223. Kirkcaldy RD, Hook EW 3rd, Soge OO, **del Rio C**, Kublin G, Zenilman JM, Papp JR. Trends in Neisseria gonorrhoeae susceptibility to Cephalosporins in the United States, 2006 – 2014. JAMA 2015; Nov 3; 314(17): 1869 – 71. doi: 10.100/jama.2015.10347. [PMID 26529166]
224. Colasanti J, McDaniel D, Johnson B, **del Rio C**, Sunpath H. Marconi V. Novel Predictors of Poor Retention Following a Down-referral from a Hospital-based ART Program in South Africa. AIDS Res Hum Retroviruses 2016 Apr, 32(4):357 – 63. doi: 10.1089/AID.2015.0227. [PMID 26559521].
225. Colasanti J, Kelly J, Pennisi E, Hu YJ, Root C, Hughes D, **del Rio C**, Armstrong WS. Continuous retention and viral suppression provide further insights into the HIV care continuum compared to the cross-sectional HIV care cascade. Clin Infect Dis 2016; 62(5): 648 – 54. doi: 10.1093/cid/civ941. [PMID 26567263].
226. Goswami ND, Schmitz MM, Sanchez T, Desqupta S, Sullivan P, Cooper H, Rane D, Kelly J, **del Rio C**, Waller LA. Understanding Local Spatial Variation along the Care Continuum: The Potential Impact of Transportation Vulnerability on HIV Linkage to

Care and Viral Suppression in High-Poverty Areas, Atlanta, Georgia. J Aquir Immune Def Syndr 2016 May 1: 72(1): 65 – 72. doi:10.1097/QAI.0000000000000914. [PMID 26630673].

227. Kalokhe AS, Stephenson R, Kelly ME, Dunkle KL, Paranjape A, Solas V, Karve L, **del Rio** C. Sahay S. The Development and Validation of the Indian Family Violence and Control Scale. Plos One 2016 Jan 29; 11(1):e0148120. doi: 10.1371/journal.pone.014820. eCollection 2016. [PMID 26824611].
228. Nelson LE, Wilton L, Moineddin R, Zhang N, Siddiqi A, Sa T, Harawa N, Regan R, Dyer TP, Watson CC, Kobin B, **del Rio C**, Buchbinder S, Wheeler DP, Mayer KH; HPTN 061 Study Team. HPTN 061 Study Team. Economic, Legal, and Social Hardships Associated with HIV Risk among Black Men who have Sex with Men in Six US Cities. J Urban Health 2016 Feb; 93(1): 170 – 88. doi: 10.1007/s11524-015-0020-y [PMID 26830422].
229. Kalokhe A, **del Rio C**, Dunkle K, Stephenson R, Metheny N, Paranjape A, Sahay S. Domestic violence against women in India: A systematic review of a decade of quantitative studies. Glob Public Health 2016 Feb 17: 1 – 16 [PMID 26886155]. doi:10.1080/17441692.2015.1119293.
230. Shah M, Perry A, Risher K, Kapoor S, Grey J, Sharma A, Rosenberg ES, **del Rio C**, Sullivan P, Dowdy DS. Effect of the US National HIV/AIDS Strategy targets for improved HIV care engagement: a modelling study. Lancet HIV 2016 Mar; 3(3):e140-6. [PMID 26939737/PMC4787987] doi: 10.1016/S2352-3018(16)00007-2.
231. Colasanti, J, Goswami ND, Khoubian JJ, Pennisi E, Root C, Ziemer D, Armstrong WS, **del Rio, C**. The perilous road from HIV diagnosis in the hospital to viral suppression in the outpatient clinic. AIDS Res Hum Retroviruses 2016 Aug, 32(8): 729 -36 {epub ahead of print March 22} [PMID 27005488]. doi:10.1089/AID.2015.0346.
232. Hernandez-Romieu AC, **del Rio C**, Hernandez-Avila JE, Lopez-Gatell H, Izazola-Licea JA, Uribe-Zuniga P, Hernandez-Avila M. CD4 Counts at Entry to Care in Mexico for Patients under the "Universal Antiviral Treatment Program for the Uninsured Population", 2007-2014. PLOS One 2016 Mar 30; 11(3):e0152444. [PMID 27027505/ PMCID 4814060]. doi: 10.1371/journal.pone.0152444.
233. Frew PM, Archibald M, Schamel J, Saint-Victor D, Fox E, Smith-Bankhead N, Diallo DD, Holstad MM, **del Rio C**. An Integrated Service Delivery Model to Identify Persons Living with HIV and to Provide Linkage to HIV Treatment and Care in Prioritized Neighborhoods: A Geotargeted, Program Outcome Study. JMIR Public Health Surveill 2015; Oct 8; 1(2): e16. [PMID 27227134]. doi: 10.2196/publichealth.4675.
234. Bazan JA, Peterson AS, Kirkcaldy RD, et al. Notes from the Field. Increase in *Neisseria meningitidis*–Associated Urethritis Among Men at Two Sentinel Clinics — Columbus, Ohio, and Oakland County, Michigan, 2015. MMWR Morb Mortal Wkly Rep 2016; 65:550–552. [PMID 27254649]. doi: 10.15585/mmwr.mm6521a5.
235. Gardner LI, Marks G, Strathdee SA, Loughlin A, **del Rio C**, Kerndt P, Mahoney P, Pitasi MA, Metsch LR. Faster entry into HIV care among HIV-infected drug users who had been in drug-use treatment programs. Drug and Alcohol Dependence 2016 Aug 1; 165:15 – 21. [PMID 2729678]. doi:10.1016/drugalcdep.2016.05.018
236. Chen I, Huang W, Connor MB, Frantzell A, Cummings V, Beauchamp GG, Griffith S, Fields SD, Scott HM, Shoptaw S, **del Rio C**, Magus M, Mannheimer S, Tieu HV,

Wheeler DP, Mayer KH, Koblin BA, Eshelman SH. CXCR4-using HIV variants in a cohort of Black men who have sex with men: HIV Prevention Trials Network 061. HIV Clin Trials 2016 Jun 14: 1 – 7 {Epub ahead of print} [PMID 27300696]. doi: 10.1080/15284336.2016.1180771.

237. Unemo M, **dela Rio C**, Shafer WM. 2016. Antimicrobial resistance expressed by Neisseria gonorrhoeae: a major global public health problem in the 21st century. Microbiol Spectr 2016 Jun; 4(3): EI10-0009-2015. [PMID 27337478; PMCID 4920088]. doi: 10.1128/microbiolspec.EI10-0009-2015.
238. Metsch LR, Feaster DJ, Gooden L, Matheson T, Stitzer M, Das M, Jain MK, Rodriguez A, Armstrong WS, Lucas GM, Nijhawan AE, Drainoni ML, Herrera P, Vergara-Rodriguez P, Jacobson JM, Mugavero MJ, Sullivan M, Daar ES, McMahon DK, Lindblad R, VanVeldhuiseP, Oden N, Catellon P, Tross S, Haynes LF, Douaihy A, Sorensen JL, Metzger DS, Mander RN, Colfax GN, **del Rio C**. Effect of Patient Navigation with or without financial incentives on viral suppression among hospitalized patients with HIV infection and substance abuse: A Randomized Clinical Trial. JAMA 2016; 316(2): 156 – 70. doi:10.1001/jama.20168914 [PMID 27404184].
239. Günthard HF, Saag MS, Benson CA, **del Rio C**, Eron JJ, Gallant JE, Hoy JF, Mugavero MJ, Sax PE, Thompson MA, Gandhi RT, Landovitz RJ, Smith DM, Jacobsen DM, Volberding PA. Antiretroviral Drugs for Treatment and Prevention of HIV Infection in Adults: 2016 Recommendations of the International Antiviral Society-USA Panel. JAMA 2016; 316(2): 191 – 210. doi: 10.1001/jama.2016.8900. [PMID 27404187].
240. Kirkcaldy RD, Harvey A, Papp JR, **del Rio C**, Soge OO, Holmes KK, Hook EW 3rd, Kubin G, Riedel S, Zenilman J, Pettus K, Sanders T, Sharpe S, Torrone E. Neisseria gonorrhoeae Antimicrobial Susceptibility Surveillance – The Gonococcal Isolate Surveillance Project, 27 Sites, United States, 2014. MMWR 2016; 65(7): 1 – 19. doi: 10.15585/mmwr.ss6508a1. [PMID 27414503].
241. Evans DP, Anderson M, Shahpar C, **del Rio C**, Curran JW. Innovation in Graduate Education for Health Professionals in Humanitarian Emergencies. Prehosp Disaster Med 2016; Aug 5: 1 – 7. [PMID 27492749].
242. Frew PM, Parker K, Vo L, Haley D, O'Leary A, Dialo DD, Colin CE, Hou I, Soto-Torres L, Wang J, Adimora AA, Randall LA, **del Rio C**, Hodder S, HIV Prevention Trials Network 064 (HPTN) Study Team. Socioecological factors influencing woman's HIV risk in the United States: qualitative findings from the woman's HIV Seroindicence Study (HPTN 064). BMC Public Health 2016 Aug 17; 16 (1): 803; doi:10.1186/s12889-016-3364-7. [PMID 27530401; PMCID 4988035].
243. Santibanez S, Polgreen PM, Beekmann SE, Rupp ME, **del Rio C**. Infectious Disease Physicians' Perceptions About Ebola Preparedness Early in the US Response: A Qualitative Analysis and Lessons for the Future. Health Secur 2016 Sept 1 [Epub ahead of print]. doi: 10.1089/hs/2016.0038 [PMID 27584854]
244. Kalokhe AS, Ibegbu CC, Kaur SP, Amara RR, Kelley ME, **del Rio C**, Stephenson R. Intimae Partner Violence is Associated with Increased CD4+ R-cell Activation Among HIV-Negative High-Risk Women. Pathog Immun 2016 Spring; 1(1): 193 - 213. [PMID 27668294].
245. Nance RM, Delaney JA, Golin CE, Wechsberg WM, Cunningham C, Altice F, Christopoulos K, Knight K, Quan V, Gordon MS, Springer S, Young J, Crane PK,

Mayer KH, Mugavero MJ, **del Rio C**, Kronmal RA, Crane HM. Co-calibration of two self-reported measures of adherence to antiretroviral therapy. AIDS Care 2016 Dec 2: 1 – 5. doi: 10.1080/09540121.2016.1263721. [PMID 27910703].

246. Chen I, Chau G, Wang J, Clarke W, Marzinke MA, Cummings V, Breaud A, Laeyendecke O, Fields SD, Griffith S, Scott HM, Shoptaw S, **del Rio C**, Magnus M, Mannheimer S, Tieu HV, Wheeler DP, Mayer KH, Koblin BA, Eshleman SH. Analysis of HIV Diversity in HIV-Infected Black Men Who Have Sex With Men (HPTN 061). PLoS One 2016 Dec 9; 11(12):e0167629. doi: 10.1371/journal.pone.0167629. [PMID 27936098].
247. Chkhartishvili N, Chokoshvili O, Abutidze A, Dvali N, **del Rio C**, Tsertsvadze T. Progress towards achieving the UNAIDS 90-90-90 goals in HIV care: from diagnosis to durable viral suppression in the country of Georgia. AIDS Res Hum Retroviruses 2017 Jan 4. doi: 10.1089/AID.2016.0103 [PMID 28051324].
248. Colasanti J, Stahl N, Farber EW, **del Rio C**, Armstrong WS. An Exploratory Study to Assess Individual and Structural Level Barriers Associated with Poor Retention and Re-engagement in Care Among Persons Living with HIV/AIDS. J Acquir Immune Defic Syndr 2017 Feb 1; 74 Suppl 2: S113 – S120. doi: 10.1097/QAI.0000000000001242. [PMID 28079721].
249. Mengistu BS, Vins H, Kelly CM, McGee DR, Spicer JO, Derbew M, Bekele A, Matiam DH, **del Rio C**, Blumberg HM, Comeau DL. Student and faculty perceptions of the rapid scale-up of medical students in Ethiopia. BMC Med Educ 2017 Jan 13; 17(1):11. doi: 10.1186/s12909-016-0849-0. [PMID 28086953].
250. Goswami ND, Colasanti J, Khoubian JJ, Huang Y, Armstrong WS, **del Rio C**. A Minority of Patients Newly Diagnosed with AIDS are Started on Antiretroviral Therapy at the Time of Diagnosis in a Large Public Hospital in the Southeastern United States. J Int Assoc Provid AIDS Care 2017 Mar/Apr; 16(2): 174 – 179. doi: 10.1177/2325957417692679. [PMID 28198210].
251. Levy ME, Phillips G 2nd, Mangus M, Kuo I, Beauchamp G, Emel L, Hucks-Ortiz C, Hamilton RL, Wilton L, Chen I, Mannheimer S, Tieu HV, Scott H, Fields SD, **del Rio C**, Shoptaw S, Mayer K. A Longitudinal Analysis of Treatment Optimism and HIV Acquisition and Transmission Risk Behaviors Among Black Men Who Have Sx with Men in HPTN 061. AIDS Behav 2017 Mar 28. Doi: 10.1007/s10461-017-1756-z. [PMID 28352984].
252. Tzeng YL, Bazan JA, Turner AN, Wang X, Retchless AC, Read TD, Toh E, Nelson DE, **del Rio C**, Stephens DS. Emergence of a new *Neisseria meningitidis* clonal complex 11 lineage 11.2 clade as an effective urogenital pathogen. Proc Natl Acad Sci USA 2017 Apr 3. pii: 201620971. doi: 10.1073/pnas.1620971114. [PMID 28373547].
253. Chen I, Zhang Y, Cummings V, Cloherty GA, Connor M, Beauchamp G, Griffith S, Rose S, Gallant J, Scott HM, Shoptaw S, **del Rio C**, Kuo I, Mannheimer S, Tieu HV, Hurt CB, Fields SD, Wheeler DP, Mayer K, Koblin BA, Eshelman SH. Analysis of HIV Integrase Resitence in Black Men Who Have Se with Men in the United States. AIDS Res Hum Retroviruses 2017 Apr 6. doi: 10.1089/1id.2017.0005. [PMID 28384059].
254. Bazan JA, Turner AN, Kirkcaldy RD, Retchless AC, Kretz CB, Briere E, Tzeng YL, Stephens DC, Maierhofer C, **del Rio C**, Abrams AJ, Trees DL, Ervin M, Licon DB,

Fields KS, Roberts MW, Dennison A, Wang X. Large Cluster of Neisseria meningitidis Urthritis in Columbus, Ohio, 2015. Clin Infect Dis 2017; 65(1): 92 - 99. doi: 10.1093/cid/cix215. [PMID 28481980].

255. Alsan M, Beshears J, Armstrong WS, Choi JJ, Marian BC, Nguyen MLT, **del Rio C**, Laibson D, Marconi VC. A commitment contract to achieve cirologic suppression in poorly adherent patients with HIV/AIDS. AIDS 2017 May 16. doi: 10.1097/QAD.0000000000001543. [PMID 28514277].
256. Rolle CP, Rosenberg ES, Luisi N, Grey J, Sanchez T, **del Rio C**, Peterson JL, Frew PM, Sullivan PS, Kelley CF. Willigness to use pre-exposure prophylaxis among Black and White men who have sex with men in Atlanta, Georgia. Int J STD AIDS 22017; Aug 28(9): 849-857. doi: 10.1177/0956462416675095. [PMID 28632468].
257. Evans DP, Luffy SM, Parisi S, **del Rio C**. The development of a massive open online course during the 2014-15 Ebola virus disease epidemic. Ann Epidemiol 2017; Aug 12. doi:10.10.16/j.annepidem.2017.07.137 [PMID 28844550].
258. Hussen SA, Chakraborty R, Knezevic A, Camacho-Gonzalez A, Huang E, Stephenson R. **del Rio C**. Transitioning young adults from paediatric to adult care and the HIV care continuum in Atlanta, Georgia, USA: a retrospective cohort study. J Int AIDS Soc 2017 Sept 1; 20(1): 1-9. doi: 10.7448/IAS.20.1.21848 [PMID 28872281].
259. Kirkcaldy RD, Bartoces MG, Soge OO, Riedel S, Kubin G, **del Rio C**, Papp JR, Hook EW 3rd, Hicks LA. Antimicrobial Drug Prescription and *Neisseria gonorrheae* Susceptibility, United States, 2005 – 2013. Emerg Infect Dis 2017 Oct; 23(10): 1657-1663. doi: 10.3201/eid2310.170488 [PMID 28930001].
260. Howatt Donahoe EL, RochatRW, McFarland D, **del Rio C**. From Albania to Zimbabwe: Surveying 10 years of Summer Field Experiences at the Rollins School of Public Health. Glob HealthSci Pract 2017 Sept 28; 5(3): 468 – 475. doi: 10.9745/GHSP-D-16-00262. [PMID 28963176].

b. Manuscripts published in peer-reviewed journals and acknowledged as a contributor or collaborator

1. Priddy FH, Brown D, Kublin J, Monahan K, Wright DP, Lalezari J, Santiago S, Marmor M, Lally M, Novak RM, Brown SJ, Kulkarni P, Dubey SA, Kierstead LS, Casimiro DR, Mogg R, DiNubile MJ, Shiver JW, Leavitt RY, Robertson MN, Mehrotra DV, Quirk E; Merck V520-016 Study Group. Safety and immunogenicity of a replication-incompetent adenovirus type 5 HIV-1 clade B gag/pol/nef vaccine in healthy adults. Clin Infect Dis. 2008 Jun 1;46(11):1769-81 [PMID 18433307]
2. Harro C, Sun X, Stek JE, Leavitt RY, Mehrotra DV, Wang F, Bett AJ, Casimiro DR, Shiver JW, DiNubile MJ, Quirk E; Merck V526-001 Study Group. Safety and immunogenicity of the Merck adenovirus serotype 5 (MRKAd5) and MRKAd6 human immunodeficiency virus type 1 trigene vaccines alone and in combination in healthy adults.(acknowledged as collaborator) Clin Vaccine Immunol. 2009 Sep;16(9):1285-92. Epub 2009 Jul 15. [PMID 19605598/ PMC2745015]
3. Sax PE, Tierney C, Collier AC, Fischl MA, Mollan K, Peeples L, Godfrey C, Jahed NC, Myers L, Katzenstein D, Farajallah A, Rooney JF, Ha B, Woodward WC, Koletar SL, Johnson VA, Geiseler PJ, Daar ES; AIDS Clinical Trials Group Study A5202 Team. Abacavir-lamivudine versus tenofovir-emtricitabine for initial HIV-1 therapy. N Engl J

Med 2009; 361(23): 2230 – 40 [PMID 19952143/PMC 2800041]
4. Lok JJ, Bosch RJ, Benson CA, Collier AC, Robbins GK, Shafer RW, Hughes MD, ALLRT team. Long-term increase in CD4+ T-cell counts during combination antiretroviral therapy for HIV-1 infection. AIDS 2010 Jul 31; 24(12): 1867-76. [PMID 20467286/PMC 3018341]
5. Granich R, Gupta S, Suthar AB, Hoos D, Viotoria M, Simao M, Hankins C, Schwartlander B, Ridzon R, Bazin B, Williams B, Lo YR, McClure C, Montaner J, Hirnschall G' ART in Prevention of HIV and TB Research Writing Group. Antiretroviral therapy in prevention of HIV and TB: update on current research efforts. Curr HIV Res 2011; Sept; 9(6): 446 – 69 [PMID 2199779].
6. Daar ES, Tierney C, Fischl MA, Sax PE, et al. Atazanavir plus ritonavir or efavirenz as part of a 3-drug regimen for initial treatment of HIV-1 infection. Ann Intern Med 2011; 154(7): 445-56 [PMID 21320923]
7. Sax PE, Tierney C, Collier AC, Daar ES, Mollan K, Budhathoki C, Godfrey C, Jahed NC, Myers L, Katzenstein D, Farajallah A, Rooney JF, Ha B, Woodward WC, Feinberg J, Tashima K, Murphy RL, Fischl MA; AIDS Clinical Trials Group Study A5202 Team. Abacavir-lamivudine versus tenofovir-emtricitabine as part of combination regimens for initial treatment of HIV infection: final results. J Infect Dis 2011 Oct 15; 204(8): 1191 - 201[PMID 21917892]
8. Smith KY, Tierney C, Mollan K, Venuto CS, Budhathoki C, Ma Q, Morse GD, Sax P, Katzenstein D, Godfrey C, Firschl M, Daar ES, Collier AC, AIDS Clinical Trials Group 5202 Study Team. Outcomes by sex following treatment initiation with atazanavir plus ritonavir or efavirenz with abacavir/laminudine or tenofovir/emtrocitabine. Clin Infect Dis 2014; 58(4): 555 – 63 [PMID 24253247/PMC3905755]
9. Grand YH, Kirkcaldy RD, Trees D, Dardel J, Harris SR, Goldstein E, Weinstock H, Parkhill J, Hanage WP, Bentley S, Lipsitch M. Genomic epidemiology of *Neisseria gonorrheae* with reduced susceptibility to cefixime in the USA: a retrospective observational study. Lancet Infect Dis 2014; 14: 220-26.
10. Smith KY, Tierney C, Mollan K, Venuto CS, Budhathoki C, Ma Q, Morse GD, Sax P, Katzenstein D, Godfrey C, Fischl M, Daar ES, Collier AC. AIDS Clnical Trials 5202 Study Team. Outcomes by sex following treatment initiation with atazanavir plus ritonavir or efavirenz with abacavir/lamivudine or tenofovir/emtricitabine. Clin Infect Dis 2014 Feb; 58 (4): 555 – 63. [PMID 24253247].
11. Harawa N, Wilton L, Wang L, Mao C, Kuo I, Penniman T, Shoptaw S, Griffith S, Williams JK, Cummings V, Mayer K, Koblin B. HPTN 061. Types of female partners reported by black men who have sex with men and women (MSMW) and association with intercourse frequency, unprotected sex and HIV and STI prevalence. AIDS Behav 2014 Aug; 18(8): 1548 – 59. [PMID 24523006].
12. Ofotokun I, Na LH, Landovitz RJ, Ribaudo HJ, McComsey GA, Godfrey C, Aweeka F, Cohn SE, Sagar M, Kuritzkes DR, Brown TT, Patterson KB, Para MF, Leavitt RY, Villasis-Keever A, Baugh BR, Lennox JL, Currier JS; AIDS Clinical Trials Group (ACTG) A5257 Team. Comparison of the Metabolic Effects of Ritonavir-boosted Darunavir or Atazanavir versus Raltegravir, and the Impact of Rinonavir Plasma Exposure: ACTG5257. Clin Infect Dis 2015 Jun 15; 60(12): 1842 – 51. doi: 10.1093/cid/civ193. [PMID 25767256]
13. Workowski KA, Bolan GA. CDC. Sexually transmitted diseases treatment guidelines,

2015; MMWR Recomm Rep. 2015 Jun 5; 64(RR-03): 1- 137. [PMID 26042815].
14. Bayrer C, Birx DL, Bekker LG, Barre-Sinoussi F, Cahn P, Dybul MR, Eholie SP, Kavanagh MM, Katabira ET, Lundgren JD, Mworeko L, Pala M, Puttanakit T, Ryan O, Sidibe M, Montaner JS; Vancouver Consensus Sigatories. The Vancouver Consensus: antiretroviral medicines, medical evidence, and political will. Lancet 2015 Aug 8: 386(9993): 505-7. doi: 10.1016/S0140-6736(15)61458-1. [PMID 26293427]

c. Review articles and Editorials:

1. **del Río C**. Sarampión: Conceptos actuales sobre un padecimiento antiguo. Gaceta Med Mex 1990; 126(2): 121.
2. Izazola JA, Sánchez HJ, **del Río-Chiriboga C**. El examen serológico para el virus de Inmunodeficiencia Humano (VIH) como parte de los exámenes prenupciales. (The serological exam for the human immunodeficiency virus (HIV) as part of the premarital exams). Gaceta Med Mex 1992; 128(3):317-27 [PMID 1302741].
3. **del Río C**, Uribe-Zuñiga P. Prevención mediante el uso del condón de enfermedades sexualmente transmisibles incluyendo el SIDA. (The prevention of sexually transmitted diseases and HIV/AIDS through the use of condoms). Salud Públ de México 1993; 35: 508-17 [PMID 8235898]
4. **del Río C**. Report from Washington. AIDS Clinical Care 1994; 6(3):21-22.
5. **del Río C**. Linfopenia ideopática de Linfocitos T CD4+ ("SIDA sin VIH"). Enf Infecc y Microbiol 1994; 14(2): 108-9.
6. **del Río C**. New signs on a difficult road. AIDS Clinical Care 1994; 6(10):98-112.
7. Valdespino-Gómez JL, **del Rio-Chiriboga C**, García-García ML, del Río-Zolezzi A, Magis-Rodríguez C, Salcedo-Alvarez RA, Loo-Méndez ER. Situación y perspectivas del VIH/SIDA en México. Enf Infecc y Microbiol 1995; 15(1): 29-42.
8. **del Río C**. Second National Conference on Human Retroviruses: Good News, Bad News, and No News. AIDS Clinical Care 1995 7(4):30-33 [PMID 11370657]**.**
9. Valdespino-Gómez JL, García-García L, **del Río-Chiriboga C**, Cruz-Palacios C, Loo-Méndez E, López-Sotelo A. Las enfermedades de transmisión sexual y la epidemia de VIH/SIDA. (Sexually Transmitted diseases and the AIDS epidemic in Mexico). Salud Públ Méx 1995; 37 (6): 549-555 [PMID 8599129].
10. Uribe-Zúñiga P, Hernández-Tepichín G**, del Río-Chiriboga C**, Ortiz V. Prostitución y SIDA en la Ciudad de México. (Prostitution and AIDS in Mexico City). Salud Públ Méx 1995; 37 (6): 592-601 [PMID 8599133].
11. Izazola-Licea JA, Avila-Figueroa C, Gortmaker SL, **del Río C**. Transmisión homosexual del VIH/SIDA en México. (The Homosexual transmission of HIV/AIDS in Mexico). Salud Públ Méx 1995; 37 (6): 592-601 [PMID 8599134].
12. Vallejo-Aguilar OJ, Navarrete-Navarro S**, del Río-Chiriboga C**, Avila-Figueroa C, Santos-Preciado JI. El trabajador de salud y la consejería sobre el VIH y SIDA. (The healthcare workers and counseling about HIV/AIDS). Salud Públ Méx 1995; 37 (6): 636-642 [PMID 8599137].
13. Rico B, Bronfman M, **del Río-Chiriboga C**. Las campañas contra el SIDA en México: ¿Los sonidos del silencio o puente sobre aguas turbulentas? (Campaigns against AIDS in Mexico: The sounds of silence or a bridge over troubled waters?). Salud Públ Méx 1995; 37 (6): 643-653 [PMID 8599138].

14. Rico-Galindo B, Uribe-Zúñiga P, Panebianco-Labbe S, **del Río-Chiriboga C**. El SIDA y los derechos humanos. (AIDS and Human Rights). Salud Públ Méx 1995; 37 (6): 661-668 [PMID 8599140].
15. del Río-Chiriboga C & del Río-Rodríguez C. Clásicos en Salud Pública. Salud Públ Méx 1995; 37 (3):256-263. (Translated into English and published with the title "Yellow-fever in Veracruz" in Public Health Pap Rep 1892; 18: 292 – 295; [PMC 2266564])
16. **del Río C**. Tratamientos para el SIDA y Padecimientos Asociados: Costo y Efectividad**.** Gaceta Médica de México 1996; 132 (suppl 1): 77-82.
17. **del Río C.** El tratamiento de la infección por el VIH. Estado actual del arte en 1996 y posibilidades a futuro. Gaceta Médica de México 1996; 132 (suppl 1): 125-131.
18. Magis C, Loo EL, **del Río C**. La epidemia de SIDA en México. Análisis global, 1981-1996 (Epidemic of AIDS in Mexico. Global Analysis 1981 – 1996). Gaceta Médica de México 1996; 132 (5): 545-550 [PMID 8966625].
19. **del Río C** & Hernández-Tepichín G. Conference Report: Optimism Rises on Combination Therapy and Protease Inhibitor Data. AIDS Clinical Care 1996; 8(3):19-23 [PMID 11363408].
20. **del Río C** & Panebianco-Labbé S. AIDS, Human Rights, and NAFTA: Challenges and Opportunities. Canadian HIV/AIDS Policy & Law Newsletter 1996; 3(1): 5-6.
21. **del Rio C**. Report from Washington Meeting January 22-26. AIDS Clinical Care 1997; 9(3):20-23 [PMID 11364122].
22. **del Rio C** & Soto-Ramírez LE. Bridging the Gap? AIDS Clinical Care 1998; 10(9): 65-72 [PMID 11365808].
23. **del Rio C**. Is ethical research feasible in Developed and Developing Countries? Bioethics 1998; 12(43): 328-330 [PMID 11657299].
24. Little S & **del Rio C**. Time for a change? AIDS Clinical Care 1998; 10 (12): 92-98 [PMID 11366070].
25. Izazola-Licea JA, **del Rio-Chiriboga C**, Tolbert K. Las Infecciones de transmision sexual y la pandemia del VIH/SIDA en el ambito de la salud sexual y reproductiva. Gaceta Med Mex 2000; 136 (supl 3): S55-S68.
26. Sobel A, del Rio C, Friedland G, O'Rourke M, Rouzioux C, May T. Access to HIV Medical Care. AIDS Clinical Care 2000; 12(6): 47-51 [PMID 12212542].
27. **del Rio-Chiriboga**, C & Franco-Paredes, C. Bioterrorismo: un Nuevo problema de salud pública. Salud Publica de Mex 2001; 43(6):585-588 PMID 11816235].
28. Bartlett JG & **del Rio C**. Antiretroviral rounds. When success is a pain. AIDS Clinical Care 2001; 13(8): 74-5 [PMID 11547461].
29. **del Rio C**. HIV: it's beginning to look like a chronic disease. AIDS Clinical Care 2001; 13(9): 82-3 [PMID 11547601].
30. Franco-Paredes C, Rebolledo P, Folch E, Hernandez I, **del Rio C**. Diagnosis of Diffuse CD8+ Lymphocytosis Syndrome in HIV-Infected Patients. The AIDS Reader 2002; 12: 408-413 [PMID 12402804].
31. Franco-Paredes C, **del Rio C**, Jurado R. The Clinical Utility of the Urine Gram Stain. Infect Dis Clin Pract 2002; 11(9):561-563.
32. Palefsky J & **del Rio C**. Is high-grade dysplasia on anal Pap a high-grade problem? AIDS Clinical Care 2002; 14(5): 44-5. [PMID 12004877]

33. O'Rourke M, Auerbach J, **del Rio C**, Dooley S, Friedland G. Ridzon R. The place of prevention in HIV clinical care: a roundtable discussion. AIDS Clinical Care 2002; 14(6): 49-53 [PMID 12061143].
34. Abdool Karim SS, Currier J, **del Rio C**, Feinberg J, Friedland GH, Sax PE, Zuger A. Report on the XIV International AIDS Conference. AIDS Clin Care. 2002 Sep;14(9):77-85 [PMID 12236208]
35. Franco-Paredes C, **del Rio C**, Nava-Frias M, Rangel-Frausto S, Tellez I, Santos-Preciado JI. Enfrentando el bioterrorismo: aspectos epidemiologicos, clinicos y preventivos de la viruela (Confronting bioterrorism: Epidemiologic, Clinical and preventive aspects of smallpox). Salud Publica de Mexico 2003; 45 (4):298-309 [PMID 12974047].
36. O'Rourke M, Branson B, **del Rio C**, Larrabee S, Sax PE. Rapid fingerstick testing: a new era in HIV diagnostics. AIDS Clinical Care 2003; 15(3): 19-23 [PMID 12685418].
37. **del Rio, C**. Report from the Tenth Retrovirus Conference. Adherence. AIDS Clin Care. 2003 Apr;15(4):35 [PMID 12712951]
38. **del Rio C**. Report from the Tenth Retrovirus Conference. Diagnostics. AIDS Clin Care. 2003 Apr;15(4):35 [PMID 12712950]
39. **del Rio C**. Report from the Tenth Retrovirus Conference. Acute and recent infection. AIDS Clin Care. 2003 Apr;15(4):34-5 [PMID 12712949]
40. **del Rio C**. Report from the Tenth Retrovirus Conference. Postexposure prophylaxis (PEP). AIDS Clin Care. 2003 Apr;15(4):35-6 [PMID 12712952]
41. **del Rio C**. New Challenges in HIV Care: Prevention among HIV-infected patients. Top HIV Med. 2003 Jul-Aug (4)140-4 [PMID 12876332].
42. Bartlett J, **del Rio C**, DeMaria A Jr., Sepkiwitz KA. Smallpox vaccination and the HIV-infected patient: a roundtable. AIDS Clinical Care 2003; 15(7): 61-63 [PMID 12913953].
43. Franco-Paredes C, Tellez I, **del Rio C**. Inverse Relationship between Decreased Infectious Diseases and Increased Inflammatory Disorder Occurrence: The Price to Pay. Arch Med Research 2004; 35:258-261 [PMID 15163470].
44. **del Rio C**. Report from the 11th conference on retroviruses and opportunistic infections. HIV in resource-limited countries. AIDS Clin Care. 2004 Apr;16(4):34-5. [PMID15124588]
45. **del Rio C**. Report from the 11th conference on retroviruses and opportunistic infections. STI. AIDS Clin Care. 2004 Apr;16(4):27-8. [PMID 15124582].
46. **del Rio C**. Report from the 11th conference on retroviruses and opportunistic infections. Acute and recent infection. AIDS Clin Care. 2004 Apr;16(4):25-6. [PMID 15124580]
47. **del Rio C**. Report from the 11th conference on retroviruses and opportunistic infections. Epidemiology. AIDS Clin Care. 2004 Apr;16(4):25. [PMID 15124579]
48. **del Rio C**. Updated guidelines for the use of rifamycins in HIV/TB-coinfected patients. AIDS Clinical Care 2004; 16(10): 85 [PMID 15526395].
49. Franco-Paredes C, Tellez I, **del Rio C**, Santos-Preciado JI. Pandemia de Influenza: posible impacto de la influenza aviaria. Salud Publ Mex 2005; 47(2): 1 – 2 [PMID 15889635].
50. Franco-Paredes C, Rodriguez A, **del Rio C**. Lepromatous Leprosy (Images in Infectious diseases). Infections in Medicine 2005; 22(5): 229.
51. **del Rio C** & Priddy FH. Outcomes for Patients Receiving Antiretroviral Therapy in the Developing World Appear to be Not Much Different from those in the Developed World (Editorial). Clin Infect Dis 2005; 41:225-6. [PMID 15983919]

52. **del Rio C**. Top Stories of 2004. ACTG5095:efavirenz beats AZT+3TC+abacavir. AIDS Clin Care 2005 Jan;17(1)4 [PMID 1517367].
53. **del Rio C.** New guidelines for antiretroviral therapy in non-occupational post-exposure prophylaxis. AIDS Clinical Care 2005; 17(3): 22 [PMID 15828116].
54. **del Rio C**. Report from the 12th Retrovirus Conference. HIV-associated dementia. AIDS Clin Care. 2005 Apr;17(4):41. [PMID 15884151]
55. Albrecht H, **del Rio C**. Report from the 12th Retrovirus Conference. Vaccines, microbicides, and novel prophylactic interventions. AIDS Clin Care. 2005 Apr;17(4):42, 44 [PMID 15880874]
56. **del Rio, C**. Report from the 12th Retrovirus Conference. Opportunistic infections. AIDS Clin Care. 2005 Apr;17(4):41. [PMID 15880872]
57. **del Rio C**, Friedland GH. Report from the 12th Retrovirus Conference. HIV/AIDS in resource-limited settings. AIDS Clin Care. 2005 Apr;17(4):39-40. [PMID 15875314]
58. **del Rio C.** New USPSTF guidelines on HIV screening. AIDS Clinical Care 2005; 17(8): 74. [PMID 16193572]
59. **del Rio C.** AIDS: The Second Wave. Arch Med Res 2005; 36:682-688.
60. **del Rio C**. Updated Guidelines for occupational postexposure prophylaxis. AIDS Clinical Care 2005; 18 (12): 114. [PMID 16388540]
61. Franco-Paredes C, Rouphael N, **del Rio C**, Santos-Preciado JI. Vaccination strategies to prevent tuberculosis in the new millennium: from BCG to new vaccine candidates. Int J Infect Dis 2006; 10(2): 93-102. [PMID 16377228]
62. Koenig SP, Kuritzkes DR, Hirsch MS, Leandre F, Mukherjee JS, Farmer PE, **del Rio C**. Monitoring HIV Treatment in Developing Countries. Br Med J 2006; 332: 602 – 604. [PMID 16528087/PMC 1397781]
63. **del Rio C**. Report from the 13th Retrovirus Conference: More on False-positive results in rapid HIV testing. AIDS Clinical Care 2006; 18(4): 39. [PMID 16718855]
64. **del Rio C**. Report from the 13th Retrovirus Conference: The new ABC's: Antiretrovirals, Barriers and Circumcision. AIDS Clinical Care 2006; 18(4): 38 - 9.[PMID 16718884]
65. Buehler JW, Craig AS, **del Rio C**, Koplan JP, Stephens DS, Orenstein WA. Critical issues in responding to pandemic influenza [conference summary]. Emerg Infect Dis [serial on the Internet]. 2006 Jul; 12 (7). Available from http://www.cdc.gov/ncidod/EID/vol12no07/06-0463.htm
66. **del Rio C**. Current Concepts in Antiretroviral Therapy Failure. Top HIV Med 2006; 14(3): 102-106. [PMID 16946454]
67. **del Rio C**. Guideline watch. CDC recommends universal, routine adult HIV screening. AIDS Clinical Care 2006 Nov;18(11):1.
68. Franco-Paredes C, Tellez I, **del Rio C**. Rapid HIV Testing: a review of the literature and implications for the clinician. Current HIV/AIDS Reports 2006; 3: 159 – 165. [PMID 17049869]
69. Tellez I, Calderon O, Franco-Paredes C, **del Rio C**. West Nile Virus: a reality in Mexico. Gaceta Med Mex 2006; 142(6): 493-499.
70. **del Rio C**. Report from the 14th Retrovirus Conference. The HIV/AIDS epidemic in the U.S. AIDS Clin Care. 2007 May;19(5):37-8. [PMID 18398986]
71. **del Rio C**. Report from the 14th Retrovirus Conference. The promise of prevention: male circumcision and microbicides. AIDS Clin Care. 2007 May;19 (5):41. [PMID 18401877]
72. Tellez I, Franco-Paredes C, Bendix JM, Caliendo A, **del Rio C**. Assessing the Strengths

and Limitations of Rapid HIV Tests. Infect Med 2007; 24: 381-85. [PMID 17201112]
73. Bonney LE & **del Rio C**. Challenges Facing the US HIV/AIDS Medical Care System. Future HIV Therapy 2008; 2(2): 1 – 6.
74. **del Rio C**. Report from the 15th Retrovirus Conference. Continued problems with late diagnosis and new problems with testing scale-up. AIDS Clinical Care 2008 Apr; 20(4):26-7 [PMID 19256086].
75. **del Rio C**. Report from the 15th Retrovirus Conference. More setbacks in HIV Prevention. AIDS Clinical Care 2008 Apr; 20(4):25-6 [PMID 19256085].
76. **del Rio C**. Updated antiretroviral treatment guidelines from DHHS and EACS. AIDS Clin Care. 2008 Jan;20(1):7. [PMID 18399008]
77. **del Rio C**. HIV-1 vaccine might increase infection risk in certain subgroups. AIDS Clin Care. 2008 Jan;20(1):5. [PMID 18399007]
78. **del Rio C**. To stories of 2008. Crash and burn of HIV vaccine candidates. AIDS Clinical Care 2009 Jan; 21(1):4 [PMID 19219958].
79. Whitaker, J, Franco-Paredes C, **del Rio C,** Edupuganti S. Rethinking Typhoid Fever Vaccines: Implications for Travelers and Those Living in Highly Endemic Areas. J Travel Med 2009; 16: 49 – 52 [PMID 19192128].
80. Franco-Paredes C, Hidron A, Tellez I, Lesesne J, **del Rio C**. HIV Infection and Travel: Pretravel Recommendations and Health-Related Risks. Topics HIV Med 2009; 17(1): 2 – 11 [PMID 19270343].
81. Garcia-Calleja JM, **del Rio C**, Souteyand Y. HIV Infection in the Americas: Improving Strategic Information to Improve Response. JAIDS 2009; 51 (suppl 1): S1-S3. [PMID 19384095]
82. Franco-Paredes C, **del Rio C**, Carrasco P, Santos Preciado JI. Respuesta en Mexico al actual brote de influenza A H1N1. Salud Publ Mex 2009; 51 (3): 183 – 186 [PMID 19967302].
83. Tamma PD, Ault KA, **del Rio C**, Steinhoff MC, Halsey NA, Omer SB. Safety of Influenza Vaccination during Pregnancy. Am J Obst & Gynecol 2009 Dec; 201 (6): 547 – 52. {E-pub ahead of print Oct 21} [PMID 19850275].
84. Bonney LE & **del Rio C**. An HIV/AIDS Fellowship Program for Minority Physicians. J Natl Med Assoc 2009; 1011: 1297 – 8.[PMID 20070021]
85. Armstrong WS & **del Rio C**. HIV-associated resources on the internet. Top HIV Med 2009; 17(5): 151-62. [PMID 20068262]
86. **del Rio C**. Report from the 16th Conference on Retroviruses and Opportunistic Infections. First (sort of) positive anti-HIV microbicide trial. J Watch AIDS Clin Care. 2009 Apr; 21(4):34. [PMID 19544618]
87. **del Rio, C.** Report from the 16th Conference on Retroviruses and Opportunistic Infections. Treatment is preventive, but some risk remains. J Watch AIDS Clin Care. 2009 Apr; 21(4):32. [PMID 19544616]
88. **del Rio C**, Sierra-Madero J. Swine-origin influenza A (H1N1) and HIV. The CDC offers guidance for HIV-infected patients potentially exposed to swine flu. J Watch AIDS Clin Care. 2009 Jun;21(6):51 [PMID 19544612]
89. **del Rio C** & Franco-Paredes C. The perennial threat of influenza pandemics. Arch Med Res 2009; 40(8): 641-2. [PMID 20304250]
90. Santos-Preciado J, Franco-Paredes C, Hernandez-Florez I, Tellez I, **del Rio C**, Tapia-Conyer R. What have we learned from the Novel Influenza A (H1N1) Pandemic in 2009

for Strengthening Pandemic Influenza Preparedness? Arch Med Res 2009; 40: 673-676 [PMID 20304255]
91. **del Rio C** & Hernandez-Avila M. Lessons from Previous Influenza Pandemics and from the Mexican Response to the Current Influenza Pandemic. Arch Med Res 2009; 40: 677-680 [PMID 20304256].
92. Franco-Paredes C, Hernandez-Ramos I, **del Rio C**, Alexander KT, Tapia-Conyer R, Santos-Preciado JI. H1N1 Influenza Pandemics: Comparing the Events of 2009 in Mexico with those of 1976 and 1918-1919. Arch Med Res 2009; 40: 669-672. [PMID 2030452]
93. Southwick F, Katona P, Kauffman C, Monroe S, Pirofski LA, **del Rio C**, Gallis H, Dismukes W. IDSA Guidelines for Improving the Teaching of Preclinical Medical Microbiology and Infectious Diseases. Academic Medicine 2010; 85(1): 19 – 22. [PMID 20042815]
94. **del Rio C**. Report from the 17th Conference on Retrovirus and Opportunistic Infections. Expanding HIV testing and treatment. J. Watch AIDS Clin Care 2010; Apr; 22(4): 29-30. [PMID 20480617]
95. **del Rio C**. Report from the 17th Conference on Retrovirus and Opportunistic Infections. 2009 H1N1 influenza and HIV infection. J Watch AIDS Clin Care 2010; Apr; 22(4): 32 - 3. [PMID 20480931]
96. Vogenthaler N & **del Rio C**. Is directly observed therapy worthwhile in the Treatment of HIV infection? J Watch AIDS Clin Care 2010; Jun; 22(6):55. [PMID 20666005]
97. del Rio C. CD4-cell counts at entry into care: improving but far from ideal. J Watch AIDS Clin Care 2010; Jun; 22(6):52 [PMID 20648722]
98. **del Rio C** & Guarner J. The 2009 Influenza A (H1N1) Pandemic: what have we learned in the past 6 months. Trans Am Clin Climatol Assoc 2010; 121: 128 - 140. [PMID 20697556/PMC 2917128]
99. Albarracin D, Rothman AJ, DiClemente R, **del Rio C.** Wanted: A Theoretical Roadmap to Research and Practice Across Individual, Interpersonal and Structural Level of Analysis. AIDS Behav 2010; Sept 8 {E-pub ahead of print}. [PMID 20824321]
100. Armstrong WS & **del Rio C**. Gender, Race, and Geography: Do They Matter in Primary Human Immunodeficiency Infection? J Infect Dis 2011; 203: 437-438 [PMID 21245158/PMC 3071221]. {Article selected for reprint as part of "*2010 Clinical Issues in HIV Medicine*", published by the Infectious Diseases Society of America}
101. Margoles L, **del Rio C**, Franco-Paredes C. Leprosy: a modern assessment of an ancient neglected disease. Bol Med Hosp Infant Mex 2011; 68(2): 110-116.
102. **del Rio, C**. Obstacle course: the role of health care providers in helping overcome stigma, denial, and ignorance. Posit Aware 2011 Spring; 23(4): 7 – 9. [PMID 21710874]
103. **del Rio C**. Latinos and HIV Care in the Southeastern United States: New Challenges Complicating Longstanding Problems. Clin Infect Dis 2011; 53: 488 – 489 [PMID 21844032].
104. Narayan KM, Ali MK, **del Rio C**, Koplan JP, Curran J. Global Noncommunicable Diseases – Lessons from the HIV-AIDS Experience. N Engl J Med 2011; 365 (10): 876 – 878. [PMID 21899448]
105. **del Rio C**, Armstrong W. Antiretroviral therapy programmes in resource limited settings. BMJ 2011 Nov 9 343:d6853. doi: 10.1136/bmj.d6853. [PMID 22074712]
106. Koplan JP, Curran J, Debas H, **del Rio C**, Gostin LO, Keusch GT, Wasserheit JN, In

support of the US Centers for Disease Control and Prevention. Lancet 2012; 379(9826): 1585. [PMID 22541570]

107. **del Rio C**, Mayer, K. A Tale of Two Realities: What are the challenges and the solutions to improving engagement in HIV care? Clin Infect Dis 2013 57(8): 1172 – 4. {Epub ahead of print June 23} [PMID 23797287]
108. Guarner J & **del Rio C.** What educators do not like to deal with. Am J Clin Pathol 2014; 141(6): 770 – 1. [PMID 24838318].
109. Nachega, JB, Uthman OA, **del Rio C**, Mugavero MJ, Rees H, Mills EJ. Addressing the Achilles' Heel in the HIV Care Continuum for the Success of a Test-and-Treat Strategy to Achieve an AIDS-Free Generation. Clin Infect Dis 2014; 59 (Suppl 1): S21 – 7. [PMID 24926028]
110. Armstrong WS, **del Rio C**. Falling through the cracks and dying: missed clinic visits and mortality among HIV-infected patients in care. Clin Infect Dis 2014; 59(10): 1480-82 {Epub ahead of print August 4}. [PMID 25091313]
111. Crabtree-Ramirez B, **del Rio C**, Grinsztejn B, Sierra-Madero J. HIV and Noncommunicable Diseases (NCDs) in Latin America: A Call for an Integrated and Comprehensive Response. J Acquir Immune Defic Syndr 2014; 67 (suppl 1): S96 – 8. [PMID 25117966].
112. **del Rio C**, Mehta AK, Lyon III GM, Guarner J. Ebola Hemorrhagic Fever in 2014: The Tale of an Evolving Epidemic. Ann Intern Med 2014; 161(10): 746-8 {Epub Aug 19; doi: 10.7326/M14-1880} [PMID 25133433].
113. **del Rio C**. HIV prevention: integrating biomedical and behavioral interventions. Top Antivir Med 2014; Dec-2015; Jan 22(5): 702 – 6. [PMID 25612180]
114. Greenberg AE, Purcell DW, Gordon CM, Barasky RJ**, del Rio C.** Addressing the Challenges of the HIV Continuum of Care in High-Prevalence Cities in the United States. JAIDS 2015; May 1; 69 (suppl 1): S1 – S7. [PMID 25867773]
115. **del Rio C**, Guarner J. Ebola: Implications and Perspectives. Trans Am Clin Climatol Assoc 2015; 126:93 – 112. [PMID 26330663].
116. Flannery B, **del Rio C**. Appreciation: Phillip S. Brachman, 1927 – 2016. Int J Epidemiol 2016 Jun; 45(3): 602 – 4. doi:10.1093/ije/dyw190. [PMID 27450860].
117. **del Rio C**. HIV Infection in Hard-to-Reach Populations. Top Antivir Med 2016 Jul/Aug; 24 (2): 86 – 89. [PMID 27841977].
118. Benson CA, Currier JS, **del Rio C**, Gallant JE, Gulick RM, Marrazzo JM, Richman DD, Saag MS, Schooley RT, Volberding PA. A Conversation Among the IAS-USA Board of Directors: Hot Topics and Emerging Data in HIV Research and Care. Top Antivir Med 2017 Dc/Jan; 24 (4): 142 – 151. [PMID 28208122].
119. Armstrong WS, **del Rio C**. Patient tracking as a tool to improve retention in care, is the juice worth the squeeze? Clin Infect Dis 2017 Mar 17. doi: 10.1093/cid/cix196. [PMID 28329039].
120. Walensky RP, **del Rio C**, Armstrong WS. Charting the Future of Infectious Diseases: Anticipating and Addressing the Supply and Demand Mismatch. Clin Infect Dis 2017 Apr 6. doi: 10.1093/cid/cix173. [PMID 28387806].
121. **del Rio C**. The global HIV epidemic: What the pathologist needs to know. Semin Diagn Pathol 2017 May 19. pii: S0740-2570(17)30059-X. doi: 10.1052/j.semdp.2017.05.001. [PMID 28566241].
122. **del Rio C** & Armstrong WS. Progress Toward Achieving UNAIDS 90-90-90 in Rural

Communities in East Africa. JAMA 2017 Jun 6; 317(21): 2172 – 2174. doi: 10.1001/jaja.2017.5704. [PMID 28586873].

123. Del Rio, C. From Trained Infectious Diseases Clinician to Global Health Leader, Reflections on the last 30 years. J Infect Dis 2017; 216 (suppl 5): S622 – 623. doi: 10.1093/infdis/jix248. [PMID 28938037]

d. Book chapters:

1. Stephens DS, **del Río C**. Gonococcal Diseases. In: Kelly WN (ed.), *Textbook of Internal Medicine*, 1989 (1st. Ed.), pp 1519-1524 & 1991 (2nd. Ed.), pp 1382-1387; JB Lippincott, Philadelphia.
2. McGowan JE Jr, **del Río C**. Other Gram-Negative Bacilli, In: Mandell, Douglas, Bennett (eds.): *Principles and Practice of Infectious Diseases*, 3rd. Ed. 1990. pp 1782-93.
3. Bartley DC, **del Río C**, Shulman JA. Clinical Complications. In: Schlossberg D. *Infectious Mononucleosis*, 2nd Ed. Springer-Verlag Publ. 1989. pp 35-48.
4. Prokesch R, **del Río C**, Shulman JA. Amebiasis. In: Hurst JW. *Medicine for the Practicing Physician*, 3rd Ed. Butterworth-Heinemann 1992. pp 425-28.
5. **del Río C**, Shulman JA. Chronic Fatigue Syndrome. In: Hurst JW. *Medicine for the Practicing Physician*, 3rd Ed. Butterworth-Heinemann 1992. pp 467-69.
6. **del Río C**. Human T cell Lymhotropic virus type 1 infections. In: Hurst JW. *Medicine for the Practicing Physician*, 3rd Ed. Butterworth-Heinemann 1992. pp 479-81.
7. **del Río C**. Enfermedades de Transmisión por Contacto Sexual. In: *Antología de la Sexualidad Humana*. CONAPO 1994. Vol III pp 423-450. (ISBN 970-628-063-4).
8. **del Río C**. Infección por el Virus de Inmunodeficiencia Humana. In: *Antología de la Sexualidad Humana*. CONAPO 1994. Vol III pp 451-491. (ISBN 970-628-063-4).
9. **del Rio C**. Parvovirus. In: Uribe M. *Tratado de Medicina Interna*, 2nd De. Editorial Panamericana 1995. pp 1471-1473. (ISBN 986-7157-56-9).
10. **del Rio C**. Infección por Citomegalovirus durante el embarazo. In: Uribe M. *Tratado de Medicina Interna*, 2nd De. Editorial Panamericana 1995. pp 1840-1842. (ISBN 986-7157-56-9).
11. **del Rio C**, Schwarzmann SW, Hugley CM. Infectious Mononucleosis. In: Hurst JW. *Medicine for the Practicing Physician*, 4th Ed. Appleton & Lange 1996. pp 497-499 (ISBN 0-8385-6317-1).
12. **del Río C** & Shulman JA. Chronic Fatigue Syndrome. In: Hurst JW. *Medicine for the Practicing Physician*, 4th Ed. 1996. pp 500-502 Appleton & Lange (ISBN 0-8385-6317-1).
13. Morgan J & del Río C. Amebiasis. In: Hurst JW. *Medicine for the Practicing Physician*, 4th Ed. Appleton & Lange 1996. pp 457-459 (ISBN 0-8385-6317-1).
14. Gunthel CJ & **del Río C**. Human T-cell Lymphotrophic Virus Type I Infections. In: Hurst JW. *Medicine for the Practicing Physician*, 4th Ed. Appleton & Lange 1996. pp 514-517 (ISBN 0-8385-6317-1).
15. **del Río C**. Tuberculosis y SIDA. En: Sifuentes J & Sada E. *Tuberculosis en México*. Interamericana-McGraw-Hill Vol III (4), 1995. pp 795-808 (ISBN-968-25-2471-7).
16. **del Rio C**, Granter SR, Duray PH. Lyme Borreliosis. In: Horsburgh CR & Nelson AM: *Pathology of Emerging Infections*. American Society for Microbiology 1997. pp269-283 (ISBN 1-55581-120-5).

17. **del Rio C.** Mujer y SIDA: Conceptos sobre el tema. En: Rico B, Vandale S, Allen B y Liguori AL. Situación de las Mujeres y el VIH/SIDA en América Latina. Instituto Nacional de Salud Pública 1997. Pp: 15-19. (ISBN 968-6502-30-0).
18. Schuklenk U, **del Rio C**, Magis C, Chokeviat V. AIDS in the Developing World. In: Chadwick, Ruth (Ed.) Encyclopedia *of Applied Ethic, Vol 1*. Academic Press 1998, San Diego, Ca. pp: 123-127.
19. Schuklenk U, Chokevivat V, **del Río C,** Gbadegesin S, Magis C. AIDS: ethical issues in the Developing World. In: H. Kuhse & P. Singer (Eds): A *Companion to Bioethics*. Blackwell Publishers Ltd. Oxford 1998, pp. 355-365. (ISBN 0-631-19737-0).
20. **del Rio C** & Meier FA. Yellow fever. In: Nelson AM & Horsburgh CR: *Pathology of Emerging Infections 2*. American Society for Microbiology 1998. pp 13-41 (ISBN 1-55581-140-X).
21. **del Rio C** & Curran JW. Epidemiology of HIV Infection and AIDS. In: Goldman and Bennett: *Cecil Textbook of Medicine*, 21st Ed. 2000, pp 1898-1904. (ISBN 0-7216-7995-1).
22. **del Rio C** & Curran JW. Epidemiology and Prevention of AIDS and HIV Infection. In: Mandell, Bennett & Dolin: *Principles and Practice of Infectious Diseases*, 5th Edition. W.B. Saunders 2000, pp 1340-1368 (ISBN 0-443-07593-X).
23. Steinberg J & **del Rio C**. Other Gram-Negative Bacteria. In: Mandell, Bennett & Dolin: *Principles and Practice of Infectious Diseases*, 5th Edition. W.B. Saunders 2000, pp 2459-2474 (ISBN 0-443-07593-X).
24. **del Rio C** & Cahn P. Antiretroviral Therapy and Treatment of Illnesses Associated with HIV/AIDS: General Considerations and Implications for Latin America and the Caribbean. In: JA Izazola: *AIDS in Latin America and the Caribbean: a multidisciplinary view.* Funsalud/SIDALAC/UNAIDS 1999, pp 85-106 (ISBN 968-5018-17-0).
25. Magis C & **del Rio C**. Epidemiología del VIH y del SIDA en México. In Ponce de Leon S & Rangel S. *SIDA: Aspectos Clínicos y Terapéuticos*. McGraw-Hill Interamericana 2000, pp 1-10 (ISBN 970-10-2527-X)
26. **del Rio C** & Franco-Peredes C. Bioterrorism: A New Public Health Problem. In: Sepulveda J: *Panamerican Health in the 21st Century: Strengthening International Cooperation and Development of Human Capital.* National Institute of Public Health 2002, pp 115 –118 (ISBN 968-6502-59-9).
27. **del Rio C** & Sepulveda J. Infection by HIV/AIDS in Mexico. In: Sepulveda J: *Panamerican Health in the 21st Century: Strengthening International Cooperation and Development of Human Capital.* National Institute of Public Health 2002, pp 97 - 101 (ISBN 968-6502-59-9).
28. **del Rio C** & Curran JW. Epidemiology and Prevention of AIDS and HIV Infection. In: Mandell, Bennett & Dolin: *Principles and Practice of Infectious Diseases*, 6th Edition. Elsevier Inc. 2005; pp 1477-1506 (ISBN 0-443-06643-4).
29. Steinberg J & **del Rio C**. Other Gram-Negative and Gram-Variable Bacilli. In: Mandell, Bennett & Dolin: *Principles and Practice of Infectious Diseases*, 6th Edition. 6th Edition. Elsevier Inc. 2005; pp 2751-2768 (ISBN 0-443-06643-4).
30. **del Rio C**. Prevention of Human Immunodeficiency Virus Infection. In Goldman & Ausiello: *Cecil Medicine 23rd Ed*. Elsevier Inc 2008; pp 2567 - 2571 (ISBN 987-1-4160-2805-5)
31. Celentano DD, Bayer C, Davis WW and **del Rio C**. The HIV/AIDS Epidemic of the Americas. In: DD Celentano C Bayer: *Public Health Aspects of HIV/AIDS in Low and*

Middle Income Countries. Epidemiology, Prevention and Care. Springer 2008; 525 – 530. (ISBN 978-0-387-72710-3)
32. Dionne-Odom J, Bonney L & **del Rio C**. Access to Culturally Competent Care for Patients Living with HIV/AIDS. In: Stone, Ojikutu, Rawlins et al: *HIV/AIDS in Minority Communities*. Springer 2009; 69 – 82. (ISBN 978-0-387-98151-2)
33. **del Rio C** & Curran JW. Epidemiology and Prevention of AIDS and HIV Infection. In: Mandell, Bennett & Dolin: *Principles and Practice of Infectious Diseases*, 7th Edition. Elsevier Inc. 2010; pp 1635 – 1661 (ISBN 978-0-4430-6839-3).
34. Guarner J & **del Rio C**. Pathology, Diagnosis, and Treatment of Anthrax in Humans. In: Bergman NH: *Bacillus anthracis* and Anthrax. Wiley-Blackwell 2011; pp 251 – 267 (ISBN 978-0-470-41011-0)
35. Doshi RK, **del Rio C** & Marconi VC. (2011) Social Determinants of HIV Health Care: A Tale of Two Cities. In: *Understanding HIV/AIDS Management and Care – Pandemic Approaches in the 21st Century*. Fyson Hanania Kasenga (Ed.) (ISBN 978-953-307-603-4; InTech, available at: http://www.intechopen.com/books/understanding-hiv-aids-management-and-care-pandemic-approaches-in-the-21st-century/social-determinants-of-hiv-health-care-a-tale-of-two-cities)
36. **del Rio C** & Curran JW. Chapter 121: Epidemiology and Prevention of Acquired Immunodeficiency Syndrome and Human Immunodeficiency Virus Infection. In: Bennett & Dolin & Blaser: *Principles and Practice of Infectious Diseases*, 8th Edition pp: 1483 – 1502. Elsevier 2015. ISBN-13: 9781455748013
37. **del Rio C** & Cohen MS. Chapter 387: Prevention of Human Immunodeficiency Virus Infection. In: Goldman-Cecil *Medicine* 25th Edition pp: 2285 – 2287. Elsevier-Saunders. 2016. ISBN: 978-1-4557-5017-7.
38. Franco-Paredes C, Hare A, **del Rio C**. Leprosy in Latin America and the Caribbean: Burden of Disease and Approaches to Elimination. In: Franco-Paredes C & Santos-Preciado JI Ed). *Neglected Tropical Diseases – Latin America and the Caribbean.* Springer-Verlag 2015; pp: 175 – 184. (INBN 978-3-7091-1421-6)
39. Vermund SH, El-Sadr W, **del Rio C**, Wingood GM. Policy and Human Rights Imlications of Woman's Poverty and Vulnerability in the USA. In: A. O'Leary & PM Frew: *Poverty in the United States*. Springer Link 2017; pp: 221 – 232. doi: 10.1007/978-3-319-43833-7_13. (ISBN 978-3-319-43831-3)

f. Books edited and written:

1. **del Río C**, Hernandez G, Uribe P (editores): Guía *para la Atención Domiciliaria de Personas que viven con VIH/SIDA.* CONASIDA 1993. (ISBN 968-811-211-9).
2. **del Río C** y Uribe P (editores): *Guía para la Atención Psicológica de personas que viven con VIH/SIDA.* CONASIDA 1994. (ISBN 968-811-246-1).
3. **del Río C**, Hernández Tepichín G, Uribe Zúñiga P (editores): *Guía para la Instalación de Centros de Información sobre VIH/SIDA*. CONASIDA 1994 (ISBN 968-811-342-5).
4. McCary JL, McCary SP, Alvarez-Gayou JL, del Río C, Suárez JL. *Sexualidad Humana de McCary*. 5a. edición. El Manual Moderno 1996. (ISBN 968-426-707-X).
5. Ponce de Leon S & **del Río C**. (editores). *Guía para la atención médica del paciente con VIH/SIDA en Consulta Externa y Hospitales*. 2nd Ed. CONASIDA 1996. (ISBN 968-811-291-7) and 3rd Ed. CONASIDA 1997 (ISBN 968-811-617-3).

6. **Institute of Medicine (IOM).** 2004. *Measuring What Matters: Allocation, Planning and Quality Assessment for the Ryan White CARE Act.* Washington DC: The National Academies Press (ISBN 0-309-09115-2)
7. **Institute of Medicine (IOM).** 2008. *Methodological Challenges in Biomedical HIV Prevention Trials.* Washington DC: The National Academies Press. (ISBN 978-309-11430-1)

g. Book reviews:

- Guarner J & **del Río C**. Book review, AIDS Pathology. JAMA 1990; 264:1476.
- **del Río C.** Book Review: Fatal Extraction. Am J Med Sci 1998; 315(5):343-44.

h. Manuals, videos, computer programs, and other teaching aids:

- **del Rio C** & Lennox J. HIV/AIDS Guideline. In: EBM Solutions (http://www.ebmsolutions.com/)
- **del Rio C.** Human Immunodeficiency Virus. In: Clinical Decision Support: Hospital Infection Control, edited by Wenzel, RW and Bearman, G. 2014. Decision Support in Medicine, LLC. Wilmington, DE

EXHIBIT E

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Alexandria Division

NICHOLAS HARRISON and OUTSERVE-SLDN, INC. Plaintiffs, v. JAMES N. MATTIS, in his official capacity as Secretary of Defense; MARK ESPER, in his official capacity as the Secretary of the Army; and the UNITED STATES DEPARTMENT OF DEFENSE, Defendants.	Case No. 1:18-cv-00641 (LMB/IDD)

DECLARATION OF TREVOR HOPPE, MPH, PhD

1. My name is Trevor Hoppe, PhD. I have been retained by counsel for Plaintiffs in the above-captioned case. I have been asked to provide an expert opinion regarding the history of stigma and discrimination against people living with HIV in the United States and use of the public health system and criminal laws to control the behavior of such persons.

2. Except where otherwise stated, I have actual knowledge of the matters stated and would so testify if called as a witness.

3. I am an assistant professor of sociology at the University at Albany, SUNY. My research examines the rise and application of criminal laws related to HIV and other infectious diseases in the United States. I received my doctoral degree from the University of Michigan in 2014 in Sociology and Women's Studies. I also earned a Master's in Public Health in Health Behavior and Health Education from the University of Michigan in 2011. After my doctoral training, I was awarded a postdoctoral fellowship at the University of California at Irvine in the Department of

Criminology, Law and Society. I subsequently joined the sociology faculty at the University at Albany, SUNY, where I research and teach about crime and deviance.

4. I am an active participant in the global HIV research community, having participated in two International AIDS Conferences. In 2011, the Centers for Disease Control and Prevention awarded me the "Young Innovator Award" at their national HIV prevention conference. I have published extensively on the subject, including four peer-reviewed scientific journal articles and a recently published book, *Punishing Disease: HIV and the Criminalization of Sickness.* I consider myself to be an expert in HIV and infectious disease control, permitting me to give the following expert opinion.

5. A true and accurate copy of my curriculum vitae is attached hereto as Exhibit A, and provides a complete overview of my education, training, work experience, and a full list of my publications.

6. I have not testified as an expert at trial or by deposition in the past four years.

7. When the first outbreak of AIDS (acquired immune deficiency syndrome) was reported in the early 1980s, scientists initially did not understand its cause. Young and otherwise healthy patients became very sick across the country, presenting to healthcare providers with a wide array of rare and often deadly infections, commonly Kaposi's sarcoma and *pneumocystis pneumonia*. Many died—hundreds at first, and then thousands across the United States. Because many of these patients were gay men, initial reports of the disease described it as "gay cancer" or "gay-related immune deficiency" (or G.R.I.D., for short). At the beginning of the epidemic, in addition to hemophiliacs, those most frequently diagnosed with AIDS were members of marginalized and highly stigmatized communities, leading some to collectively and derisively refer to people with AIDS as the "4-H club" (homosexuals, heroin users, Haitians, and

hemophiliacs). In the summer of 1984, the cause of the disease was finally identified, a retrovirus that became known as human immunodeficiency virus (HIV), which could establish itself in any person sufficiently exposed. However, by that time many Americans already believed the cause of the disease to be a deviant lifestyle, a stigmatizing belief that conservative commentators and politicians promoted by labeling AIDS as a punishment from God or "God's cure" for homosexuality.

8. During the early years of AIDS, people living with HIV faced frequent discrimination and heightened stigma. Doctors turned away HIV-positive patients. Funeral homes refused to bury people who had died of AIDS-related complications. Even children living with the disease were cast out, as 13-year-old Ryan White experienced in Kokomo, Indiana in 1984. A hemophiliac, Mr. White contracted the disease from tainted blood products. Parents at Mr. White's school successfully petitioned the school board to expel him from the school based on his diagnosis. To this day, people living with HIV continue to face similar forms of discrimination and, in some cases, even violence.

9. Even when untreated, the per-contact risk of sexually transmitting HIV is relatively low.[1] Nonetheless, many Americans not only feared contracting HIV via exposures it had been established presented no risk, such as kissing or sharing a drinking glass, but also as a result of highly improbable scenarios spread through urban legend tales (such as tainted pins planted in movie theater seat cushions).[2]For example, beginning in the 1980s—and even in recent years—

[1] "HIV Risk Behaviors," Centers for Disease and Prevention, accessed July 18, 2018. https://www.cdc.gov/hiv/risk/estimates/riskbehaviors.html

[2] Timothy C. Correll, "'You Know about Needle Boy, Right?': Variation in Rumors and Legends about Attacks with HIV-Infected Needles," *Western Folklore* 67 (2008):59-100.

polling firms have consistently found that a substantial portion of Americans mistakenly believe that kissing can transmit HIV.[3]

10. American's fear and ignorance of HIV transmission, coupled with the intense stigma against communities disproportionately impacted by HIV, led to strident calls for invasive measures to control the epidemic. Conservative commentator William F. Buckley famously called for all newly-diagnosed patients to be tattooed as HIV-positive, but there were countless other leaders who called for public health departments to institute quarantine procedures and to criminalize people living with HIV who they viewed as a threat to the health of others.[4]

11. Once HIV was identified, state lawmakers around the country began to consider bills to institute disease control programs targeting this new epidemic. While most of this legislation featured conventional disease control procedures, lawmakers in 45 states also introduced legislation that imposed felony level criminal sanctions in an effort to control the behavior of people living with HIV. Rather than misdemeanor or civil penalties, most HIV-specific criminal legislation enacted in the United States featured felony penalties that carried stiff prison sentences, ranging from 2-3 years to life in prison.

12. No disease in American history has ever been met with a similarly punitive response from lawmakers. The only comparable case is hepatitis C virus (HCV), a viral infection transmitted through blood-to-blood contact (typically needle-sharing) that has been the subject of criminal legislation enacted in a handful of states. Even in states with HCV-specific laws, however, few cases have ever been prosecuted—perhaps because most people who could plausibly file charges are unlikely to do so as it would require reporting criminal drug-using

---

[3] Gregory H. Herek, John P. Capitanio, and Keith F. Widaman, "HIV-Related Stigma and Knowledge in the United States: Prevalence and Trends, 1991–1999," American Journal of Public Health, 92 (2002):371-377.
[4] Gregory H. Herek and Eric K. Glunt, "An Epidemic of Stigma: Public Reactions to AIDS," *American Psychologist* 43 (1988):886-891.

behavior to the police. Other diseases that can cause serious health complications and even death have not faced similar criminal penalties. For example, human papillomavirus (HPV) is a highly contagious, sexually transmitted infection that can cause lesions on the skin. Studies now show that it can also cause cervical cancer—sometimes fatal—many years after initial infection.[5] There have never been campaigns to criminalize HPV exposure. In part, the nonpunitive response to HPV can be credited to two characteristics of the disease that stand in stark contrast to HIV. First, the high prevalence of HPV in adult Americans (upwards of two-thirds of Americans are estimated to be infected) makes criminal sanctions targeting HPV a costly and impractical policy response. Second, the disease is not overwhelmingly concentrated in highly stigmatized communities already viewed as potentially criminal.

13. According to a 2014 report co-authored by staff from the Centers for Disease Control and Prevention and the Department of Justice, 33 states enacted criminal legislation that specifically targets people living with HIV.[6] Although the federal and state governments do not compile official statistics regarding these prosecutions, research has revealed thousands of criminal cases involving people living with HIV who have been prosecuted under HIV-based criminal laws.[7]

14. Most statutes are construed broadly without regard to transmission or even the risk of transmission from the specific activity in question. In most states with such laws, the crime is defined as failing to disclose one's HIV-positive status before engaging in a range of

---

[5] Guglielmo Ronco, et al. "Efficacy of HPV-Based Screening for Prevention of Invasive Cervical Cancer: Follow-up of Four European Randomised Controlled Trials," *The Lancet* 383 (2014):524-532.

[6] J. Stan Lehman, et al. "Prevalence and Public Health Implications of State Laws That Criminalize Potential HIV Exposure in the United States," *AIDS and Behavior* 18 (2014): 997–1006.

[7] Amira Hasenbush, *HIV Criminalization in Georgia: Penal Implications for People Living with HIV* (Los Angeles, CA: The Williams Institute at UCLA, 2018); Trevor Hoppe, *Punishing Disease: HIV and the Criminalization of Sickness* (Oakland, CA: University of California Press, 2018); Dini Harsono, Carol L. Galletly, Elaine O'Keefe, and Zita Lazzarini, "Criminalization of HIV Exposure: A Review of Empirical Studies in the United States," *AIDS and Behavior* 21 (2017):27-50; Amira Hasenbush, Ayako Miyashita, and Bianca D. M. Wilson, *HIV Criminalization in California: Penal Implications for People Living with HIV* (Los Angeles, CA: The Williams Institute at UCLA, 2015).

behaviors—typically sexual contacts, however some states also prohibit needle sharing and even spitting, biting, or other nonsexual exposures. Use of a condom or other preventive measures is generally irrelevant. In Michigan, for example, the law prohibits people living with HIV from engaging in "sexual penetration" without first disclosing their HIV status. The law defines sexual penetration as "sexual intercourse, cunnilingus, fellatio, anal intercourse, or any other intrusion, however slight, of any part of a person's body or of any object into the genital or anal openings of another person's body."[8] Such imprecise statutory language has facilitated the criminalization of a wide range of practices, including those that are unlikely to transmit the disease and also those that could not conceivably transmit HIV. For example, in a case I review in my book, *Punishing Disease*, a Tennessee man who was admitted to the hospital after attempting suicide was charged in 2010 under that state's HIV exposure law after he bit a hospital attendant.[9] Biting has never definitively been established as a route of HIV transmission; nonetheless, the defendant was sentenced to three years in prison.

15. Lengthy prison sentences are common in these cases. In a study I conducted analyzing 431 prosecutions in six U.S. states between 1992 and 2010, I found that more than three-quarters of defendants convicted under HIV-specific criminal laws were sentenced to jail or prison; of those incarcerated, the average prison term was 92 months (nearly eight years).[10] In 2012, an Iowa man, Nick Rhoades, was accused of engaging in a one-time sexual encounter in which he used a condom; he had an undetectable viral load, which the CDC has recently confirmed

[8] MCL Annotated § 333.5131.
[9] See pp. 150-151 in Trevor Hoppe. *Punishing Disease: HIV and the Criminalization of Sickness* (Oakland: University of California Press, 2018).
[10] See Chapter 6, "Victim Impact," in Ibid.

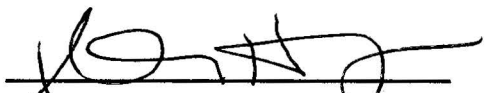
reduces the risk of transmission effectively to zero; there was (of course) no transmission; after pleading guilty, Mr. Rhoades was sentenced to 25 years in prison.[11]

16. HIV-specific criminal legislation codified the stigma against the epidemic that was (and is) pervasive in the United States. At the time these laws were implemented, HIV was a largely terminal and untreatable infection. Much has changed since that time. In the vast majority of cases, people diagnosed as HIV positive today are prescribed a pill-a-day treatment regimen that carries few side effects. By reducing the amount of virus in a person's bodily fluids, studies now show that modern treatment protocols can render people living with HIV noninfectious. Another recent life expectancy study estimates that a 20-year-old gay man diagnosed as HIV-positive today and prescribed treatment is expected to live several years longer than men in the general population.[12] Despite these dramatic improvements in HIV science, however, the laws of the 1980s largely remain unchanged. To date, only three states—Iowa, Colorado and California—have changed their laws in response to demands from HIV advocates.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on: 7/18/2018

Respectfully,



Trevor Hoppe, MPH, PhD

[11] Brian Cox, "Turning the Tide: The Future of HIV Criminalization after *Rhoades v. State* and Legislative Reform in Iowa," *Northwestern Journal of Law and Social Policy* 11 (2016):28-53.

[12] Hasina Samji, et al. "Closing the Gap: Increases in Life Expectancy among Treated HIV-Positive Individuals in the United States and Canada," *PLoS ONE* 8 (2013): e81355.

Exhibit A

Trevor Alexander Hoppe

thoppe@albany.edu | http://www.trevorhoppe.com

EMPLOYMENT

Assistant Professor, University of North Carolina at Greensboro — Greensboro, NC
Department of Sociology (Beginning Fall 2018)

Assistant Professor, University at Albany, SUNY — Albany, NY
Department of Sociology (2015-Present)

Postdoctoral Fellow, University of California at Irvine — Irvine, CA
Department of Criminology, Law and Society (2014-2015)

EDUCATION

Ph.D. University of Michigan (2014) — Ann Arbor, MI
Sociology and Women's Studies
Dissertation: *From Sickness to Badness: Michigan HIV Law as a Site of Social Control*
Committee: Renee Anspach & David Halperin (Co-Chairs), Sarah Burgard, Sandra Levitsky
- WINNER: American Sociological Association (ASA), Martin P. Levine Dissertation Fellowship
- WINNER: ASA, Medical Sociology Section, Roberta G. Simmons Outstanding Dissertation Award

M.P.H University of Michigan (2011) — Ann Arbor, MI
Health Behavior and Health Education, School of Public Health

M.A. San Francisco State University (2007) — San Francisco, CA
Human Sexuality Studies

B.A. University of North Carolina at Chapel Hill (2005) — Chapel Hill, NC

PUBLICATIONS

Books:

2018. *Punishing disease: HIV and the criminalization of sickness.* University of California Press.
- WINNER: 2018 Lambda Literary Award for LGBTQ Studies

2017. Hoppe, Trevor and David Halperin (Eds.). *The war on sex*. Duke University Press
- FINALIST: 2018 Lambda Literary Award for LGBTQ Studies

Journal articles:

"Punishing sex: Sex offenders and the missing punitive turn in sexuality studies." *Law & Social Inquiry*, 2016, 41(3): 573-94.

"Cruel intentions? HIV prevalence and criminalization during an age of mass incarceration, U.S. 1999-2012." Second author, with Bryan Sykes and Kristen Maziarka. *Medicine*, 2016, 95(16):1-9.

"Social science perspectives on pre-exposure prophylaxis for HIV (PrEP)." Second author, with Judith Auerbach. *Journal of the International AIDS Society,* 2015, 18(S3):19983.

"Disparate risks of conviction under Michigan's felony HIV disclosure law: An observational analysis of convictions and HIV diagnoses, 1992-2010." *Punishment & Society*, 2015. 17:73-93.
- Featured in *Ebony, The Nation, TheBody.com*

"From sickness to badness: The criminalization of HIV in Michigan." *Social Science & Medicine*, 2014, 101: 139-147.

"Controlling sex in the name of 'public health': Social control and Michigan HIV law." *Social Problems*, 2013, 60: 27-49.

- ASA, Sexualities Section, Best Graduate Student Paper, 2014
- ASA, Sociology of Law Section, Best Graduate Student Paper, 2013
- University of Michigan, Department of Sociology, Mark Chesler Paper Award, 2013

"Circuits of power, circuits of pleasure: Sexual scripting in gay men's bottom narratives." *Sexualities*, 2011, 14: 193-217.

- Sociologist AIDS Network Martin Levine Student Essay Award, 2009

Book chapters:

Hoppe, Trevor. "Queer and punishment: Sexual social control and the legacy of 'nuts, sluts and preverts'" (Book chapter). Forthcoming in Schilt, Kristen, Tey Meadow, and D'Lane Compton (eds.), *Other, Please Specify:_____: Queer Methods in Sociology*. Berkeley, CA: University of California Press.

Manuscripts in progress or under review:

Rebeca Herrero Saenz*, and **Trevor Hoppe**, "Disease on trial: Microbiological responsibility in HIV exposure and disclosure jury trials, 1992-2014." *Revise and resubmit.*

Hoppe, Trevor, "Othering disease: Spanish flu, Gay-related immunodeficiency, and the stigmatization of infectious disease." *Revise and resubmit.*

Hoppe, Trevor, Bryan Sykes, and Kyle Maksuta* "Sexual threat: Using group threat theory to explain the rise and spread of American sex offender registries."

Hoppe, Trevor, and Renee Anspach. "Towards a critical sociology of public health."

*Authors denoted with an asterisk * are graduate students*

Reviews:

Hoppe, Trevor. Forthcoming. "Review of *Sex Offenders, Stigma, and Social Control*, by Diana Rickard," *Contemporary Sociology.*

Hoppe, Trevor. 2017. "Review of *The Straight Line: How the Fringe Science of Ex-Gay Therapy Reoriented Sexuality*, by Tom Waidzunas," *American Journal of Sociology*, 123(1):312-314.

Hoppe, Trevor. 2011. "Review of *Unlimited Intimacy: Reflections on the Subculture of Barebacking*, by Tim Dean." *Journal of Sex Research*, 48: 506-8.

Hoppe, Trevor. 2009. "Review of *Sexual Inequalities & Social Justice*, N. Teunis & G. Herdt (Eds.), and *The Health of Sexual Minorities,* I. Meyer & M. Northridge (Eds)." *Culture, Health and Sexuality,* 11: 107-10.

Other publications and media appearances:

Interview. 2018, March 26. "How state laws criminalize people with HIV." *The Crime Report.* https://thecrimereport.org/2018/03/26/how-state-laws-criminalize-hiv-sufferers/

Interview and Book Review. 2018, March 2. "Creating criminals: The misguided crackdown on HIV/AIDS." *Undark.* https://undark.org/article/book-review-hoppe-punishing-disease/

Interview. 2018, February 6. "Hepatitis C exposure is a crime in some states; is this the new HIV criminalization?" *The Body*. http://www.thebody.com/content/80840/hepatitis-c-exposure-is-a-crime-in-some-states-is-.html

Interview. 2017, December 12. "What's the future of HIV criminalization activism? An interview with Trevor Hoppe." *The Body*. http://www.thebody.com/content/80680/whats-the-future-of-hiv-criminalization-activism-a.html

Interview. 2017, December 8. "Are we punishing diseases or punishing people? An interview with Trevor Hoppe." *The Body*. http://www.thebody.com/content/80668/are-we-punishing-diseases-or-punishing-people-an-i.html

Hoppe, Trevor. 2017, November 20. "Should we punish the sick?" *Washington Blade*. http://www.washingtonblade.com/2017/11/20/should-we-punish-the-sick/

Interview. 2017, August 14. "Fear and ignorance criminalized HIV. Can science and wisdom undo that?" *Undark*. https://undark.org/article/hiv-criminalization-laws-aids/

Hoppe, Trevor. "Are sex offender registries reinforcing inequality?" *The Conversation*. 2017, August 8. https://theconversation.com/are-sex-offender-registries-reinforcing-inequality-79818

- Reposted in *Newsweek, San Francisco Chronicle*

Hoppe, Trevor, and David Halperin. 2017, June 26. "Two years after SCOTUS gay marriage ruling, the road to sexual freedom remains long." *The Hill*. http://thehill.com/blogs/pundits-blog/civil-rights/337079-two-years-after-scotus-gay-marriage-ruling-long-road-to

Hoppe, Trevor. 2017, May 19. "Lawmakers: Don't give in to the 'stealthing' moral panic." *Advocate*. https://www.advocate.com/commentary/2017/5/19/lawmakers-dont-give-stealthing-moral-panic

Interview. 2016, May 25. "The war on sex offenders is the new war on drugs, which means its about race." *Inverse*. https://www.inverse.com/article/16109-the-war-on-sex-offenders-is-the-new-war-on-drugs-which-means-it-s-about-race

Interview. 2016, April 5. *Stateside*. National Public Radio. http://michiganradio.org/post/stateside-tuesday-april-5-2016

Hoppe, Trevor. 2016, April 3. "The County in Michigan Where HIV is a Crime." *Huffington Post*. http://www.huffingtonpost.com/trevor-hoppe/the-county-in-michigan-wh_b_9602758.html

Hoppe, Trevor. 2015, November 17. "Let's Not Treat Charlie Sheen Like a Criminal." *Huffington Post.* http://www.huffingtonpost.com/trevor-hoppe/lets-not-treat-charlie-sh_b_8583710.html

Interview. 2015, May 29. "The reckless prosecution of 'Tiger Mandingo.' *The Nation*. https://www.thenation.com/article/reckless-prosecution-tiger-mandingo/

Interview. 2013. *More Harm than Good: How Overly Broad HIV Criminalisation is Hurting Public Health*. Documentary Film. Directed by Edwin Bernard, HIV Justice Network. http://www.hivjustice.net/moreharm/

Interview. 2013, March 23. *Strange Fruit*. *89.3 WFPL*. http://wfpl.org/strange-fruit-rob-portman-marriage-equality-trevor-hoppe-criminalization-hiv-0/

AWARDS, GRANTS, SCHOLARSHIPS, AND FELLOWSHIPS

2018 Lambda Literary Award for LGBTQ Studies, Lambda Literary Foundation

2018 Lavender Award for Excellence in LGBTQ+ Scholarship, University at Albany, SUNY

2018 Faculty Research Award Program (FRAP), University at Albany, SUNY ($9850)

2016 Individual Development Award, Campus Professional Development Committee, SUNY-Albany

2015 College of Arts and Sciences Conference Travel Fund Program, SUNY-Albany

2014 American Sociological Association, Sexualities Section, Best Graduate Student Paper

2014 American Sociological Association, Medical Sociology Section, Roberta G. Simmons Outstanding Dissertation Award

2013 American Sociological Association, Sociology of Law Section, Best Graduate Student Paper

2013 University of Michigan Department of Sociology, Mark Chesler Paper Award

2013 Seed Grant, Center for Public Policy in Diverse Societies, Gerald R. Ford School of Public Policy, University of Michigan

2013 American Sociological Association Student Forum, Travel Grant

2013 Lee Student Support Fund Travel Award, Society for the Study of Social Problems

2013 Scholarship, 2nd International Conference for the Social Sciences and Humanities in HIV, Paris, France.

2012 ASA, Martin P. Levine Memorial Dissertation Fellowship

2012 University of Michigan Rackham Predoctoral Fellowship

2012 Scholarship, American Sociological Association Section on Sexualities Mini-Conference

2012 Scholarship, International AIDS Conference, Washington, DC.

2011 Centers for Disease Control and Prevention, Young Innovator Award

2011 Sociologist AIDS Network, Scholarly Activity Award

2011 Community of Scholars Fellowship, Institute for Research on Women and Gender, University of Michigan

2011 Rackham Graduate Student Candidacy Research Grant, University of Michigan

2011 Dissertation Research Grant, Department of Sociology, University of Michigan

2011 Student Research Grant, Center for Education of Women, University of Michigan

2010 Social Science Research Council, Dissertation Proposal Development Fellowship

2009 Sociologist AIDS Network Martin Levine Student Essay Award

2009 Dean's Scholarship, School of Public Health, University of Michigan (Declined)

2008 Rackham Graduate Student Pre-Candidacy Research Grant, University of Michigan

2007 Herbert E. Boynton Scholarship, University of Michigan

2006 SFSU University Scholarship, San Francisco State University

2006 Jim Brogan Teaching Scholarship, San Francisco State University

INVITED LECTURES AND PRESENTATIONS

"Punishing disease: HIV and the criminalization of sickness"

- Department of Women's Studies, University of Michigan, March 2019, Ann Arbor, MI
- Saint Louis University, April 2018, St Louis, MO
- Washington University in St. Louis, April 2018, St Louis, MO

- Middlebury College, April 2018, Middlebury, VT
- Concordia University, March 2018, Montreal, QC, Canada
- Muskegon Community College, March 2018, Muskegon, MI
- Harvard Law School, January 2018, Cambridge, MA
- University of Arizona, January 2018, Tucson, AZ
- HIV is Not a Crime II National Training Academy, May 2016, Huntsville, AL
- HIV Criminalization Working Group, Yale University, April 2016, New Haven, CT
- Department of Sociology, Grand Valley State University, April 2016, Grand Rapids, MI
- Department of Sociomedical Sciences, UCSF, March 2016, San Francisco, CA
- Department of Sociology, UCLA, November 2015, Los Angeles, CA

"Queer and punishment: Sexual social control and the legacy of 'nuts, sluts and preverts," Queer Methods in Sociology Conference, Harvard University, April 2016, Cambridge, MA.

"Punishing sex: Sex offenders and the missing punitive turn in sexuality studies," The Sexualities Project at Northwestern (SPAN) Annual Workshop, April 2015, Chicago, IL

"Surveying the criminalization of HIV in the United States: Preliminary findings." The Williams Institute, University of California at Los Angeles, October 2013, Los Angeles, CA.

"Making sense of disparate outcomes in Michigan trial court HIV nondisclosure convictions: The modifying impact of the partner's gender." York University, April 2013, Toronto, ON.

"The criminalization of HIV." Invited Lecture, WS 212, "Global HIV/AIDS Epidemic." April 2013, Ann Arbor, MI.

"HIV criminalization in Michigan: Criminal justice and public health in contest." Wayne State University, March 2013, Detroit, MI

"The criminalization of HIV/AIDS." Wayne State University, November 2012, Detroit, MI

"'Equal time': Gays, media, and the myth of equality." Invited panelist, Indiana University, April 2012, Bloomington, IN

"The criminalization of HIV." Invited lecture, "Global HIV/AIDS Epidemic." March 2012, Ann Arbor, MI.

"HIV disclosure laws in the United States: Theory, practice, and politics." Summer Institute on Sexuality, San Francisco State University, June 2011, San Francisco, CA.

"Using sociological theory to understand pleasure and power: Bottom identity among gay men as a case study." Summer Institute on Sexuality, San Francisco State University, June 2011, San Francisco, CA.

"Historical mobilizations of 'public health' against public sex venues." Summer Institute on Sexuality, San Francisco State University, June 2010, San Francisco, CA.

"Remembering Eric Rofes." Against Health Conference, University of Michigan, October 2006.

CONFERENCE PRESENTATIONS

"Victim impact: Analyzing disparities by race, gender, and sexuality under state HIV exposure and disclosure laws,"

- American Sociological Association Annual Meeting, August 2017, Montreal, CA.
- International AIDS Conference [Poster presentation], July 2017, Paris, France.

"One million and counting? How policy levers will impact the future of sex offender registries in the United States," Law & Society Association Annual Meeting, June 2017, Mexico City, MX.

"Punishing HIV: Does race impact sentencing under criminal HIV exposure and disclosure laws in the United States?" [Poster presentation] International AIDS Conference, July 2016, Durban, ZA.

"Punishing disease: HIV and the criminalization of sickness"

- International Sociological Forum, July 2016, Vienna, Austria
- Law and Society Association, June 2016, New Orleans, LA
- American Sociological Association Annual Meeting, August 2015, Chicago, IL

"Punishing sex: Sex offenders and the missing punitive turn in sexuality studies."

- After Marriage Conference at CUNY, October 2016, New York, NY
- American Sociological Association, August 2016, Seattle, WA
- American Society of Criminology, November 2015, Washington, DC
- Law & Society Association Annual Meeting, May 2015, Seattle, WA
- Pacific Sociological Association Annual Meeting, April 2015, Long Beach, CA

"HIV stops with me: The repolarization of post-AIDS HIV prevention."

- Association for the Social Sciences and Humanities in HIV, July 2015 Cape Town, ZA
- American Sociological Association Annual Meeting, August 2014, San Francisco, CA.

"Controlling the criminally sick: A systematic analysis of HIV disclosure trial court cases in Michigan."

- American Sociological Association Annual Meeting, August 2013, New York, NY
- Society for the Study of Social Problems Annual Meeting, August 2013, New York, NY
- 2nd International HIV Social Science and Humanities Conference, July 2013, Paris, France
- 17th Annual Sørensen Memorial Conference, Columbia University, April 2013, New York, NY
- Western Society of Criminology, February 2013, Berkeley, CA
- National Women's Studies Association Annual Meeting, November 2012, Oakland, CA
- American Sociological Association Section on Sexualities Mini-Conference, August 2012, Denver, CO
- International AIDS Conference, August 2012, Washington, DC

"From sickness to badness: Towards a theory of medical social control beyond medicalization."

- American Sociology Association Annual Meeting, August 2012, Denver, CO
- Gendered Borders and Queer Frontiers Conference, Madison, WI, March 2012

"Controlling sex in the name of 'public health': Social control and Michigan's HIV disclosure law."

- Making (In)Appropriate Bodies Conference, Vienna, Austria, December 2011
- American Sociological Association Annual Meeting, Las Vegas, NV, August 2011
- National HIV Prevention Conference, Atlanta, GA, August 2011
- Law & Society Association Annual Meeting, San Francisco, CA, June 2011
- Midwest Sociological Society Annual Meeting, St. Louis, MO, March 2011
- Doing Queer Studies Now: A Graduate Conference, Ann Arbor, MI, October 2010
- Midwest Law & Society Retreat, Madison, WI, October 2010.

"Circuits of Power, Circuits of Pleasure: Sexual Scripting in Gay Men's Bottom Narratives"

- American Sociological Association Annual Meeting, San Francisco, CA, August 2009
- National Gay Men's Health Summit, Seattle, WA, October 2008

"Resisting Public Health: Working within the Gay Men's Health Movement to Produce Change." LumpenCity: Marginalizing Discourses | Discourses of Marginalization, Toronto, ON, Canada, March 2009.

"Being Gay Post-HAART: Young Gay Men Negotiating Desire, Risk, and Heternormativity."

- AIDS in Culture IV, Mexico City, Mexico, December 2007
- LGBTI Health Summit, Philadelphia, PA, March 2007.

PUBLIC LECTURES AND READINGS

"Punishing disease: HIV and the criminalization of sickness"

- Flyleaf Books, Chapel Hill, NC, March 2018
- LGBT Center of Raleigh, Raleigh, NC, March 2018
- Center on Halsted, Chicago, IL, February 2018
- West Hollywood Library, Los Angeles, CA, January 2018
- Bluestockings, New York, NY, December 2017
- William Way LGBT Center, Philadelphia, PA, November 2017
- Red Emma's Bookstore, Baltimore, MD, November 2017

"Reframing HIV: From 'prevention' to 'management.'" National Gay Men's Health Summit, August 2010, Fort Lauderdale, FL.

"Power and rethinking risk." Gay Men's Health Summit, October 2009, Seattle, WA

"Bus stops, billboards and you: campaigning for queer health." San Francisco Lesbian, Gay, Bisexual, and Transgender Community Center, July 2008, San Francisco, CA.

TEACHING EXPERIENCE

Assistant Professor, Department of Sociology, UNC-Greensboro 2018 - Present

- "Global Deviance," Fall 2018
- "Law and Society," Fall 2018

Assistant Professor, Department of Sociology, University at Albany, SUNY 2015 - 2018

- "Sociology of Deviant Behavior," Fall 2015, Fall 2016, Spring 2017, Fall 2017, Spring 2018
- "Sociology of Sexualities," Spring 2018
- "The Global HIV/AIDS Epidemic," Fall 2016
- "The Sociology of Law" (Graduate Seminar), Spring 2017

Primary Instructor, University of Michigan 2009, 2014

- "Sociological Analysis of Deviance" (SOC 488), Spring 2014
- "Sociology of Sexuality" (SOC 345), Spring 2009

Graduate Student Instructor, University of Michigan 2008 – 2014

- "Introduction to Sociology" (SOC 100), Fall 2008, Fall 2010, Winter 2011
- "Sociology of Marriage & The Family" (SOC 344), Winter 2009
- "The Global HIV/AIDS Epidemic" (WOMENSTD / ANTHRO 212), Winter 2012, Fall 2013
- "History of Sexuality" (HIST 369), Winter 2010
- "Men's Health" (WOMENSTD 300), Fall 2009

Teaching Assistant, San Francisco State University 2006 – 2007

- "Variations in Human Sexuality" (SOC 400), Spring 2006, Fall 2006, Spring 2006

REVIEWER FOR THE FOLLOWING PUBLICATIONS

Social Problems, Sociological Forum, Sexualities, Law & Social Inquiry, PLOS One, Theoretical Criminology, Contemporary Sociology, Culture, Health & Sexuality, Men and Masculinities, AIDS & Behavior, Journal of Homosexuality, Archives of Sexual Behavior, Sexuality Research & Social Policy, Women's Studies Quarterly, Studies in Law, Politics & Society, Oxford Bibliographies

PROFESSIONAL SERVICE

2018 – 2021	Council Member-Elect, American Sociological Association Section on Sociology of Law
2018 – 2021	Editorial Board, *Social Problems*
2016 – 2019	Council Member-Elect, American Sociological Association Section on Sexualities
2017 – 2018	Member, Undergraduate Committee, University at Albany Department of Sociology
2017	Member, Distinguished Book Award Committee, ASA Section on Sex and Gender
2016 – 2017	Member, Executive Committee, University at Albany Department of Sociology
2016 – 2017	Chair, Advancement Committee, University at Albany Department of Sociology
2015 – 2016	Member, Advancement Committee, University at Albany Department of Sociology
2014 – 2015	Member, Selection Committee, Roberta G. Simmons Outstanding Dissertation Award, American Sociology Association Section on Medical Sociology
2014 – 2015	Member, Selection Committee, Best Graduate Student Paper Award, American Sociology Association Section on Sexualities
2013 – 2014	Member, Nominations Committee, American Sociology Association Section on Sex and Gender
2013 –	Member, Criminalization of HIV Transmission and Exposure Working Group Law, Policy and Ethics (LPE) Core, Center for Interdisciplinary Research on AIDS (CIRA), Yale University
2013	Co-chair with Eric Mykhalovskiy of "Social Science, Criminal Law and HIV Transmission Risks: Novel Research" and "Viral Politics: HIV Criminalization & Social Inquiry" Panels, 2nd International HIV Social Sciences and Humanities Conference
2012 –	Invited Abstract Reviewer, International AIDS Conference
2012	"Sex and Justice" Thematic Panel Organizer, American Sociological Association Section on Sexualities Mini-Conference
2012	Roundtable Discussant, American Sociological Association Section on Sexualities Mini-Conference
2011 –	Martin Levine Paper Prize Committee, Sociologist AIDS Network
2011 – 2012	Graduate Student Representative-Elect, Section on Sexualities, American Sociological Association
2011 – 2012	Organizer, "Sex and Justice" Conference, University of Michigan
2011 – 2012	Graduate Admissions Committee, Department of Sociology, University of Michigan
2010 – 2011	Personnel Committee, Department of Sociology, University of Michigan
2010	Martin Levine Paper Prize Committee, Sociologist AIDS Network

2009 – 2010 Search Committee, HIV/AIDS Cluster Hire, Department of Women's Studies, University of Michigan

2009 – 2010 HIV/AIDS Survey Course Development Committee, Department of Women's Studies, University of Michigan

2009 – 2010 Organizer, "Doing Queer Studies Now" Graduate Conference, University of Michigan

PROFESSIONAL AFFILIATIONS

Member, American Sociological Association (ASA)
- Sections: Medical Sociology; Crime, Law and Deviance; Sex and Gender; Sexualities; Sociology of Law

Member, American Sociology of Criminology (ASC)

Member, Law and Society Association (LSA)

Member, Society for the Study of Social Problems (SSSP)

Member, International AIDS Society (IAS)

EXHIBIT F

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Alexandria Division

NICHOLAS HARRISON and OUTSERVE-SLDN, INC. Plaintiffs, v. JAMES N. MATTIS, in his official capacity as Secretary of Defense; MARK ESPER, in his official capacity as the Secretary of the Army; and the UNITED STATES DEPARTMENT OF DEFENSE, Defendants.	Case No. 1:18-cv-641 (LMB/IDD)

EXPERT DECLARATION OF CRAIG W. HENDRIX, M.D., IN SUPPORT OF PLAINTIFFS' MOTION FOR PRELIMINARY INJUNCTION

I. INTRODUCTION

1. My name is Craig W. Hendrix. I have been retained by counsel for Plaintiffs as an expert in connection with this litigation.

2. I am offering this declaration to provide my expert opinions regarding the U.S. Department of Defense and U.S. Army policies with respect to people living with HIV, including the purported medical justifications for preventing individuals living with HIV from joining the United States military, from being commissioned as officers, and—if already in the military—from deploying outside the United States.

3. As detailed below, it is my opinion that there are no medical justifications for excluding individuals from serving in any capacity in the military or from being deployed outside of the United States based solely on their HIV-positive status.

4. The opinions I express are my own and do not reflect the official policy of any organization with which I am affiliated. I am not receiving any compensation for my work.

5. I am knowledgeable about the matters set forth below based upon my own knowledge and experience, as well as my review of various materials that are cited herein. I have reviewed and concur with the opinions expressed by Dr. Carlos del Rio in the declaration he has submitted in support of this motion.

II. PROFESSIONAL BACKGROUND & QUALIFICATIONS

6. Currently, I am a Professor of Medicine and Pharmacology and Molecular Sciences at the Johns Hopkins University School of Medicine. I have 28 years of experience in the design and conduct of translational clinical pharmacology studies, mostly of antiretroviral drugs for HIV treatment and prevention. In 2015, I was appointed as the Wellcome Professor

and Director, Division of Clinical Pharmacology and Director of the Drug Development Unit in the Division.

7. Before joining the Johns Hopkins medical school faculty, I served on active duty for 10 years in the U.S. Air Force (USAF). During that time, after completing my medical training, I was the Director of the HIV Medical Evaluation Unit (MEU) and HIV Program at the Wilford Hall USAF Medical Center in San Antonio, Texas, from July 1989 to June 1994. As Director of the HIV MEU, my responsibilities included screening service members for HIV, monitoring the condition of HIV-positive service members, studying behavioral risk factors associated with HIV, and educating service members about the prevention and treatment of HIV.

8. I received my undergraduate degree in Applied Biology at the Massachusetts Institute of Technology in 1978, and I received my medical degree from Georgetown University, *magna cum laude*, in 1984. I completed internship and residency in internal medicine on the Osler Medical Service, and fellowships in Infectious Diseases and Clinical Pharmacology at The Johns Hopkins Hospital.

9. For nearly 30 years, I have evaluated, treated, and/or conducted research with thousands of individuals living with HIV. I have authored or co-authored over 190 papers in peer-reviewed journals on topics related to HIV treatment, prevention, and education. My current research focuses on development of antiretroviral drugs to prevent HIV infection. This involves oral, topical, and injectable HIV microbicide development. I conduct small, intensive sampling studies of pharmacokinetics (PK)[1] and pharmacodynamics (PD) of drugs for HIV

[1] Pharmacokinetics describes the drug concentration-time courses in body fluids resulting from administration of a certain drug dose, while pharmacodynamics describes the observed effect resulting from a certain drug concentration.

prevention with a focus on developing methods to better understand HIV and drug distribution in the male genital tract, female genital tract, and lower gastrointestinal tract. I also support numerous HIV pre-exposure prophylaxis development studies from phase I to phase III, largely as the leader of the Pharmacology Core Laboratory of both the Microbicide Trial Network and HIV Prevention Trials Network.

10. My curriculum vitae is attached, which describes my education, work experience, and publications. *See* Attach. 1 (Hendrix CV).

III. MEDICAL JUSTIFICATIONS FOR EXCLUDING PEOPLE LIVING WITH HIV FROM MILITARY SERVICE, INCLUDING DEPLOYMENT OUTSIDE THE UNITED STATES, ARE UNFOUNDED

11. Being HIV positive is entirely compatible with military service. The Department of Defense has recognized this for many years by permitting people who seroconvert (i.e., acquire HIV and develop HIV antibodies) after entering service to continue to serve. Moreover, I understand the Navy has allowed service members with HIV to deploy for selected overseas missions since 2012, while the Air Force has granted some waivers for overseas assignments for its members living with HIV who are otherwise medically fit for deployment. As I discuss below, the articulated reasons the DoD and Army have advanced for the disparate treatment of people living with HIV simply do not justify excluding them from or restricting their military service.

A. Military Policies Regarding People Living with HIV

1. Accession Ban

12. I understand that, under Department of Defense (DoD) Instruction 6485.01 (Human Immunodeficiency Virus (HIV) in Military Service Members),[2] it is the U.S. military's policy to deny eligibility for military service to persons with HIV for "appointment, enlistment, pre-appointment, or initial entry training for military service" pursuant to DoD Instruction ("DoDI") 6130.03. In other words, people living with HIV are barred from entering the military or from being appointed an officer if they seroconvert after joining the military, as Mr. Harrison did.

13. Despite this general policy prohibiting people living with HIV from joining the military or being appointed as an officer, DoDI 6485.01 states that an active duty service member with HIV who it has been determined is otherwise "fit for duty will be allowed to serve in a manner that ensures appropriate medical care."[3] Only service members with HIV who are determined to be unfit for duty are to be separated.[4]

14. Department of Defense Instruction 6130.03 (Medical Standards for Appointment, Enlistment, and Induction into the Military Services) sets forth guidance regarding the physical and medical standards required for military service.[5] These standards state that individuals who are considered for appointment, enlistment, or induction into the Medical Services must be:

(1) Free of contagious diseases that may endanger the health of other personnel.

---

[2] U.S. Department of Defense Instruction 6485.01, at ¶3.a. (June 7, 2013), available at http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/648501p.pdf.
[3] *Id.* at Enclosure 3: Procedures, ¶3.c.
[4] *Id.* at Enclosure 3: Procedures, ¶3.e.
[5] U.S. Department of Defense Instruction 6130.03 (May 6, 2018), available at http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/613003p.pdf.

> (2) Free of medical conditions or physical defects that may reasonably be expected to require excessive time lost from duty for necessary treatment or hospitalization, or may result in separation from the Military Service for medical unfitness.
>
> (3) Medically capable of satisfactorily completing required training and initial period of contracted service.
>
> (4) Medically adaptable to the military environment without geographical area limitations.
>
> (5) Medically capable of performing duties without aggravating existing physical defects or medical conditions.[6]

15. HIV is among the specified "disqualifying conditions" under DoDI 6130.03.[7]

16. I also understand that Army Regulation 600-110 (Identification, Surveillance, and Administration of Personnel Infected with Human Immunodeficiency Virus)[8] implements DoDI 6485.01 and describes various policies and responsibilities related to HIV with respect to Army personnel. Specifically, the Army indicates its policies are meant to reflect: [1] the risks incident to military service for the person with HIV; [2] the risk of transmission to other personnel; [3] the overall impact of people living with HIV in Army units and on readiness posture; and [4] the safety of military blood supplies.[9] Similar to DoDI 6485.01, AR 600-110 states that personnel with HIV are not eligible for appointment on enlistment into the active Army, the Army National Guard, or the U.S. Active Reserve.[10] Again, however, the Army regulation states that active duty soldiers with HIV who do not demonstrate progressive clinical illness or immunological

---

[6] *Id.* at ¶1.2.c.
[7] *Id.* at 5.23.b. ("Presence of human immunodeficiency virus or laboratory evidence of infection or false-positive screening test(s) with ambiguous results by supplemental confirmation test(s).").
[8] U.S. Army Regulation 600-110 (Apr. 22, 2014), available at https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/r600_110.pdf.
[9] *Id.* at Section III, ¶1-15.
[10] *Id.* at Section III, ¶1-16.a.

deficiency during periodic evaluations will not be involuntarily separated solely because they have HIV.[11]

2. Conditions for Deployment and Deployment Restrictions

17. I further understand that Department of Defense Instruction 6490.07 (Deployment-Limiting Medical Conditions for Service Members and DoD Civilian Employees) provides guidance on medical conditions that limit deployment. DoDI 6490.07 indicates that it is DOD policy that service members with existing medical conditions may deploy only when the following conditions are met:

> (1) The condition is not of such a nature or duration that an unexpected worsening or physical trauma is likely to have a grave medical outcome or negative impact on mission execution.
>
> (2) The condition is stable and reasonably anticipated by the pre-deployment medical evaluator not to worsen during the deployment in light of physical, physiological, psychological, and nutritional effects of the duties and location.
>
> (3) Any required, ongoing health care or medications anticipated to be needed for the duration of the deployment are available in theater within the Military Health System. Medication must have no special handling, storage, or other requirements (e.g., refrigeration, cold chain, or electrical power requirements). Medication must be well tolerated within hard environmental conditions (e.g. heat or cold stress, sunlight) and should not cause significant side effects in the setting of moderate dehydration.
>
> (4) There is no need for routine evacuation out of theater for continuing diagnostics or other evaluations. (All such evaluations should be accomplished before deployment.)[12]

18. DoDI 6490.07 specifically identifies HIV as a medical condition that precludes a service member's deployment outside of the United States.[13] DoDI 6490.07 provides that a

---

[11] *Id.* at Section III, ¶1-16.e.
[12] *Id.* at ¶4.b.
[13] Department of Defense Instruction 6490.07, Encl. 3 (Medical Conditions Usually Precluding Contingency Deployment) at ¶e(2) (Feb. 5, 2010), available at http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/649007p.pdf.

service member living with HIV shall not be deployed on a "contingency deployment" (*i.e.*, a deployment of over 30 days located outside the continental United States in a location with medical support from only temporary military medical treatment facilities) unless a medical waiver is granted.[14]

B. Policies Underlying the Physical and Medical Standards for Military Service and Deployment Do Not Justify the Exclusion of People Living with HIV

1. There is No Danger to the Health of Other Personnel

19. People living with HIV in the military pose no cognizable danger to the health of other personnel in the military. HIV cannot be transmitted by working alongside or having casual contact with someone who is living with HIV, including sharing bathroom facilities; sharing equipment, utensils, and tableware; or exercising or engaging in physical activities. This fact is borne out by the military's policy that allows people living with HIV to continue to serve in the military, as long as they are medically fit for duty. AR 600-110 explicitly acknowledges that "[t]here is no basis for civilian employees to refuse to work with fellow employees, Soldiers, or agency clients who have . . . HIV or AIDS. The concerns of such employees will be addressed with education and counseling."[15]

20. Similarly, there is no basis for any service member to refuse to serve with people living with HIV. As stated above, the Navy has already taken steps to allow service members

---

[14] *Id.* at ¶4.c ("Individuals with the conditions in Enclosure 3, based on medical assessments in accordance with Enclosure 2 and Reference (l), shall not deploy unless a waiver can be granted according to the procedures in section 3 of Enclosure 2."); *id.*, Encl. 2 (Procedures) at ¶2.a ("In general, DoD personnel with any of the medical conditions in Enclosure 3, and based on a medical assessment, shall not deploy unless a waiver is granted. Consideration should be made for the nature of the disability and if it would put the individual at increased risk of injury or illness, or if the condition is likely to significantly worsen in the deployed environment.").

[15] U.S. Army Regulation 600-110, Section III, at ¶1-16.p.

living with HIV to serve overseas on a case-by-case basis.[16] That decision was based on the explicit recognition that: "There is no demonstrated risk of transmission of infection in normal daily activities."[17]

21. Furthermore, there is no risk—beyond a hypothetical one—of battlefield transmission of HIV. Transmission via the types of exposure that may take place on the battlefield—such as "blood splashes" or those experienced while one soldier is providing care to a wounded soldier with HIV—are not well documented routes of transmission. The risk of an exposure that could result in transmission under such circumstances is at most a theoretical risk. In addition, recent research has established that a person with HIV who is adherent to their medications, and therefore has a suppressed or undetectable viral load, is incapable of transmitting HIV through the most intimate forms of contact. It is reasonable to conclude the risk of transmission through battlefield activities that present at most a theoretical risk of transmission is also effectively zero if the person with HIV has a suppressed or undetectable viral load.

---

[16] U.S. Navy, Secretary of the Navy Instruction 5300.30E (Management of Human Immunodeficiency Virus, Hepatitis B Virus and Hepatitis C Virus Infection in the Navy and Marine Corps), ¶ 3.c.(2) (Aug. 13, 2012) ("Selected AC members on a case-by-case basis in consultation with the treating HIV Evaluation and Treatment Unit (HETU), Navy Bloodborne Infection Management Center (NBIMC), and PERS-82 (for sailors) or United States Marine Corp (USMC) Manpower & Reserve Affairs (M&RA) (for Marines) may be assigned to selected ships and Outside the contiguous United States (OCUNUS) commands, as agreed on by all three consultants and the receiving command; the receiving command has the final say on acceptance.").

[17] Department of Defense, *Report to Congressional Defense Committees on Department of Defense Personnel Policies Regarding Members of the Armed Forces with HIV or Hepatitis B*, at 7 (Sept. 2014), available at https://health.mil/Reference-Center/Reports/2014/09/22/DoD-Personnel-Policies-Regarding-Members-of-the-Armed-Forces-with-HIV-or-Hepatitis-B.

22. Finally, in the exceedingly rare event that a battlefield exposure were to occur that presented anything more than a theoretical risk of transmission, post-exposure prophylaxis could be provided to the person exposed, thereby further decreasing whatever minimal hypothetical risk of transmission existed. There is simply no support for the idea that a soldier living with HIV would present a danger to the health and safety of other military personnel, including comrades on the battlefield.

2. Adhering to an ART Regimen Does Not Require "Excessive Time"

23. Adherence to an effective ART regimen does not require much time—it is as simple as taking medication every day. The HIV medications commonly prescribed today have no special handling, storage or other requirements. These medications generally tolerate hard conditions, such as hot or cold stress and sunlight, well. Taking medication once or twice a day, as people living with HIV do, requires very minimal time, especially if that person is on a single tablet regimen (STR), which is literally one pill taken once a day. The time and effort required is similar to that expended by service members deployed overseas who are prescribed daily medication for prophylaxis of malaria.[18] I understand that Mr. Harrison, for example, took a daily dose of doxycycline when he was deployed in Afghanistan.

24. The medical monitoring of a person living with HIV is also limited. According to U.S. HIV treatment guidelines, viral load typically should be measured every 3-4 months, although that period may be extended to once every 6 months for individuals whose viral load

[18] Army Public Health Center, *Malaria Field Guide: The Prevention, Diagnosis and Treatment of Malaria in U.S. Africa Command* (May 2016), available at https://phc.amedd.army.mil/PHC%20Resource%20Library/TG336_MalariaFieldGuide_May2016.pdf.

has been suppressed for more than 2 years and whose clinical and immunologic status is stable.[19] Viral load testing is routine and requires only drawing and testing a blood sample. Where such testing is not immediately available in theater, a blood sample may easily be shipped to a lab that engages in the type of testing required. Moreover, point-of-care viral load testing that returns results within 90 minutes is becoming increasingly prevalent and cost efficient.

25. General practitioner physicians are capable of engaging in the type of medical monitoring and care required for people living with HIV. In the U.S., primary care physicians are expected and often called upon to provide care to a person living with HIV. In fact, physicians' assistants and nurse practitioners also often provide HIV-related care in the United States. The physicians of the Armed Forces are more than capable of providing necessary care to a person living with HIV, alongside other types of health care provided to all members of the military, regardless of where they are stationed. If additional provider training is required in some instances, such training would be easy for the Armed Services to provide to its healthcare professionals. In the rare event that the expertise of an infectious disease doctor was required to care for a deployed service member, the on-site medical staff could consult with the many qualified infectious disease doctors employed by the Armed Services or a telemedicine session could be arranged between the infectious disease specialist and the service member with HIV.

3. People with HIV Can Complete Training and Serve Full Terms

26. People living with HIV who adhere to their prescribed ART regimen are physically able to complete training and serve full contract terms in the Armed Forces. As far

---

[19] *See* U.S. Department of Health and Human Services, *Guidelines for the Use of Antiretroviral Agents in Adults and Adolescents Living with HIV, ,* available at https://aidsinfo.nih.gov/guidelines/html/1/adult-and-adolescent-arv/458/plasma-hiv-1-rna--viral-load--and-cd4-count-monitoring.

back as 2004, when DoD mandated universal two-year interval HIV testing, the DoD's Armed Forces Epidemiology Board explained that "There is no evidence that HIV infection, per se, affects physical fitness."[20] The same remains true today. As explained in a 2015 article in the *Medical Surveillance Monthly Report*: "In the past 30 years, HIV-1 infection has gone from an untreatable disease marked by inexorable clinical progression through extreme debility to death to a treatable disease that is compatible with active service throughout a full career in the U.S. military."[21] As an example, I understand that Mr. Harrison, who was diagnosed with HIV in 2012, received a PULHES[22] score in 2014 of 1 for each of the six factors that are considered, reflecting a "high level of medical fitness" under Army Regulation 40-501 (Standards of Medical Fitness).[23] There should be no effect on the physical fitness and capabilities of any person with HIV who is adhering to their prescribed ART regimen

27. Similarly, any person with HIV who is adhering to their prescribed ART regimen will be able to serve without aggravating their condition. People living with HIV who are virally suppressed should not experience any HIV-related symptoms or complications of any kind related to their HIV. Provided they are able to continue taking their medications, inhospitable

---

[20] Office of the Assistant Secretary of Defense, Health Affairs Policy Memorandum – Human Immunodeficiency Virus Interval Testing (Mar. 29, 2004), available at https://www.health.mil/Reference-Center/Policies/2004/03/29/Policy-Memorandum---Human-Immunodeficiency-Virus-Interval-Testing.

[21] J. Brundage, D. Hunt & L. Clark, *Durations of Military Service after Diagnoses of HIV-1 Infections Among Active Component Members of the U.S. Armed Forces 1990-2013*, Armed Forces Health Surveillance Center, *Medical Surveillance Monthly Report*, Vol. 22, No. 8 (Aug. 2015), available at https://health.mil/Reference-Center/Reports/2015/01/01/Medical-Surveillance-Monthly-Report-Volume-22-Number-8.

[22] PULHES is an acronym for Physical stamina, Upper extremities, Lower extremities, Hearing/ears, Eyes, and Psychiatric.

[23] U.S. Army Regulation 40-501 (Standards of Medical Fitness), Chapter 7, ¶7-3.d(1) ("An individual having a numerical designation of '1' under all factors is considered to possess a high level of medical fitness.").

environmental conditions and/or challenging work conditions should have no effect on the person living with HIV's health or their ability to serve.

4. People with HIV Are Adaptable to the Military Environment Without Geographical Area Limitations

28. People living with HIV are adaptable to the military environment and can deploy worldwide without geographical limitations. As described above, the military environment—regardless of the geographic specifics of that environment—should have no effect on a person with HIV's health or ability to serve. And because it is relatively easy to provide the health care necessary to a person living with HIV (also described in detail above)—and has been for more than a decade—there should be no geographic limitations on an HIV-positive person's service. Again, I understand the Navy has already adopted policies to allow service members living with HIV to serve overseas. Due to this policy, as of September 2017, approximately 55 sailors have been assigned to various overseas and/or operational assignments without any adverse events.[24] There are no geographic locations that would pose an issue for a person living with HIV, as long as that individual adheres to their ART regimen.

5. There is No Impact on Medical Readiness

29. Individuals living with HIV can serve without any adverse impact on medical readiness.[25] In the medical context, Department of Defense Instruction 6025.19 (Individual

---

[24] J. Okulicz, C. Beckett, J. Blaylock, S. Hakre, B. Agan, N. Michael, S. Peel, P. Scott, and S. Cersovsky, *Review of the U.S. Military's Human Immunodeficiency Virus Program: A Legacy of Progress and a Future of Promise*, Armed Forces Health Surveillance Center, *Medical Surveillance Monthly Report*, Vol. 24, No. 9 (Sept. 2017), available at https://health.mil/Reference-Center/Reports/2017/01/01/Medical-Surveillance-Monthly-Report-Volume-24-Number-9.

[25] U.S. Department of Defense Instruction 6025.19 (Individual Medical Readiness), at ¶ 3 (June 9, 2014), available at http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/602519p.pdf (explaining that

Medical Readiness) establishes medical readiness standards for deployment for individuals as follows: (1) a current periodic health assessment (every 12 months); (2) the absence of deployment-limiting medical conditions; (3) dental readiness to specified standards; (4) immunization standards germane to the theater of operation; (5) current medical readiness laboratory tests; and (6) possession of appropriate individual medical equipment.[26] As discussed above, there is no basis for including HIV as a deployment-limiting medical condition, and individuals living with HIV can otherwise satisfy the other elements of medical readiness.

6. There is No Danger to the Safety of Military Blood Supplies

30. Allowing people living with HIV to serve poses no danger to the safety of military blood supplies. Since 1962, the Armed Services Blood Program has provided blood products for all service members, working to collect, process, store, distribute, and transfuse blood worldwide.[27] People who have been diagnosed with HIV are informed that they can no longer donate blood—and there is no evidence that they attempt to do so. Any risk to the blood supply would arise from those who are unaware they are living with HIV. The military, however has protocols in place to prevent donations from those who are unaware they are HIV positive, has screened service members for decades and closely monitors which service members are living with HIV as part of its plan to protect the battlefield blood supply.[28] These efforts have

---

it is DoD policy "to promote a healthy and fit fighting force that is medically prepared to provide the Military Departments with the maximum ability to accomplish their deployment missions throughout the spectrum of military operation.).

[26] U.S. Department of Defense Instruction 6025.19 (Individual Medical Readiness), Encl. 3 (June 9, 2014), available at http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/602519p.pdf.

[27] Armed Services Blood Program, About Us, available at http://www.militaryblood.dod.mil/About/default.aspx

[28] J. Okulicz, C. Beckett, J. Blaylock, S. Hakre, B. Agan, N. Michael, S. Peel, P. Scott, and S. Cersovsky, *Review of the U.S. Military's Human Immunodeficiency Virus Program: A Legacy of*

been successful. For example, one study of HIV among U.S. Army soldiers found that, of service members who seroconverted while deployed in Afghanistan or Iraq over the period 2001-2007, "[n]one were emergency blood transfusion donors or recipients."[29] Indeed, in the general public, the National Institute of Health has stated: "Your risk of getting HIV from a blood transfusion is lower than your risk of getting killed by lightning. Only 1 in 2 million donations might carry HIV and transmit HIV if given to a patient."[30] Allowing people living with HIV to serve will not change the screening measures already in place to protect the blood supply, which are primarily aimed at preventing transmission from those who are undiagnosed.

31. In the context of battlefield emergency transfusions, i.e., the "walking blood bank," the safety of the blood supply may be ensured by continuing to screen service members for HIV and informing individuals who test HIV positive that they cannot act as emergency blood transfusion donors. This will have negligible impact on the overall blood supply. Not only are battlefield transfusions relatively rare,[31] the percentage of service members living with HIV is and would continue to be relatively low (i.e., people living with HIV comprise

---

Progress and a Future of Promise, Armed Forces Health Surveillance Center, *Medical Surveillance Monthly Report*, Vol. 24, No. 9 (Sept. 2017), available at https://health.mil/Reference-Center/Reports/2017/01/01/Medical-Surveillance-Monthly-Report-Volume-24-Number-9

[29] P. Scott et al., *Short Communication: Investigation of Incident HIV Infections Among U.S. Army Soldiers Deployed to Afghanistan and Iraq, 2001-2007,*

[30] U.S. Department of Health & Human Services, National Heart, Lung, and Blood Institute, Blood Transfusion, available at https://www.nhlbi.nih.gov/health-topics/blood-transfusion.

[31] *See* T. Ballard, P. Rohrbeck, M. Kania, & L. Johnson, *Transfusion-Transmissible Infections Among U.S. Military Recipients of Emergently Transfused Blood Products, June 2006-December 2012*, Medical Surveillance Monthly Report, Vol. 21, No. 11 (Nov. 2014) (stating that "According to the Armed Services Blood Program (AFBP), the U.S. military transfused 237,100 units of blood products between June 2006 and December 2012. Thurs, the 4,857 non-FDA-compliant units represented approximately 2% of the total blood products" and indicating that "[n]o cases of HIV" resulted from these transfusions).

approximately one-third of one percent of the population of the United States, and just .027% of active duty service members).[32] Furthermore, there are various other factors that often disqualify individuals as emergency blood donors, such as blood type[33]—making people living with HIV no different from these other groups who are allowed to serve and deploy. Finally, the use of blood substitutes is on the rise, which should result in even less need for emergency battlefield transfusions from other service members.

IV. CONCLUSION

In my opinion, there is no medical justification for preventing or restricting the military service and overseas deployment of people living with HIV.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this 18th day of July, 2018

Craig W. Hendrix, M.D.

---

[32] United States Census Bureau. *American Factfinder: Monthly Population Estimates for the United States: April 1, 2010 to December 1, 2016*, https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=PEP_2017_PEPMONTHN&prodType=table (last visited July 18, 2018); Armed Forces Health Surveillance Center (AFHSC), *Update: Routine Screening for Antibodies to Human Immunodeficiency Virus, Civilian Applicants for U.S. Military Service and U.S. Armed Forces, Active and Reserve Components, January 2010–June 2015*, Medical Surveillance Monthly Report, Aug. 2015, 2-8.

[33] *Emergency War Surgery*, 4th ed. (2014), Chapter 33 (Blood Transfusions), available at http://www.cs.amedd.army.mil/FileDownloadpublic.aspx?docid=189c4a13-522f-4d91-9236-a109d7b5ee4d.

Attachment

CURRICULUM VITAE

The Johns Hopkins University School of Medicine

10 JUL 18

Craig W. Hendrix (Date of this version)

DEMOGRAPHIC AND PERSONAL INFORMATION

Current Appointments

University

Wellcome Professor and Director, Division of Clinical Pharmacology
Appointment effective 1/1/2015

Professor of Medicine, Division of Clinical Pharmacology (Primary)
Appointment effective 1/1/2009

Professor of Medicine, Division of Infectious Diseases (Secondary)
Appointment effective 1/1/2009

Professor of Pharmacology and Molecular Sciences (Secondary)
Appointment effective 1/1/2009

Professor of Epidemiology (Secondary)
Appointment effective 1/1/2009

Director, Drug Development Unit, Division of Clinical Pharmacology
Appointment effective 7/1/1998

Director, Division of Clinical Pharmacology
Appointment effective 1/1/2015

Hospital

Medical Staff, The Johns Hopkins Hospital
Appointment effective 8/1/1994.

Personal Data

Blalock 569
600 North Wolfe Street
Baltimore, Maryland 21287
Voice 410-955-9707
Facsimile 410-955-9708
E-mail chendrix@jhmi.edu

EDUCATION AND TRAINING

Year	*Degree/Cert.*	*Institution*	*Discipline*
1978	S.B.	Massachusetts Institute of Technology	Applied Biology
1984	M.D.	Georgetown University	Medicine
7/84-6/85	Intern	The Johns Hopkins Hospital	Internal Medicine
7/85-6/87	Resident	The Johns Hopkins Hospital	Internal Medicine
9/86-7/89	Post-Doctoral Fellow	Johns Hopkins University	Infectious Diseases
7/87-7/89	Post-Doctoral Fellow	Johns Hopkins University	Clinical Pharmacology Mentor: Paul S. Lietman

PROFESSIONAL EXPERIENCE

Dates	*Position*	*Institutions*
1989-1994	Clinical Assistant Professor	Department of Medicine University of Texas Health Sciences Center San Antonio, TX
1989-1994	Staff Physician	Department of Infectious Diseases Division of Medicine Wilford Hall USAF Medical Center Lackland AFB, TX
1989-1994	Director	Human Immunodeficiency Virus Unit Department of Infectious Diseases Wilford Hall USAF Medical Center Lackland AFB, TX
1993-1994	Director	Human Immunodeficiency Virus Research & Education Program Department of Infectious Diseases Wilford Hall USAF Medical Center Lackland AFB, TX
1990-1993	Assistant Professor	Department of Medicine Uniformed Services University of Health Sciences Bethesda, MD

PROFESSIONAL EXPERIENCE

Dates	*Position*	*Institutions*
1992-1994	Associate Scientist (Adjunct)	Southwest Foundation for Biomedical Research and Education San Antonio, TX
1993-1996	Associate Professor	Department of Medicine Uniformed Services University of Health Sciences Bethesda, MD
1994-2000	Senior Scientist	Department of Prevention Research, Division of Retrovirology Walter Reed Army Institute of Research Rockville, MD
1994-1996	Associate Professor (Part-Time)	Division of Clinical Pharmacology, Department of Medicine Johns Hopkins University School of Medicine (JHUSOM) Baltimore, MD
1997-1999	Ind. Mobilization Augmentee	U.S. Air Force Reserve Preventive Medicine Division Office of the Surgeon General Bolling AFB, DC
1997- 2008	Associate Professor	Division of Clinical Pharmacology Department of Medicine, JHUSOM Baltimore, MD
1997-1998	Clinical Director	Drug Development Unit Division of Clinical Pharmacology Department of Medicine, JHUSOM Baltimore, MD
1998-2001	Director (Acting)	Division of Clinical Pharmacology Department of Medicine, JHUSOM Baltimore, MD
1998-2008	Associate Professor	Division of Infectious Diseases Department of Medicine, JHUSOM Baltimore, MD

PROFESSIONAL EXPERIENCE

Dates	*Position*	*Institutions*
1998-present	Director	Drug Development Unit Division of Clinical Pharmacology Department of Medicine, JHUSOM Baltimore, MD
1999-2008	Associate Professor	Department of Pharmacology and Molecular Sciences, JHUSOM Baltimore, MD
1999-2008	Associate Professor	Department of Epidemiology Johns Hopkins University Bloomberg School of Public Health Baltimore, MD
1998-2008	Associate Professor	Division of Infectious Diseases Department of Medicine, JHUSOM Baltimore, MD
2007-2013	Co-Director	Drug Development Core Institute for Clinical and Translational Research Johns Hopkins University Baltimore, MD
2007-2014	Director (Interim)	Division of Clinical Pharmacology Department of Medicine, JHUSOM Baltimore, MD
2007-2014	Director (Interim)	Clinical Pharmacology Analytical Laboratory Division of Clinical Pharmacology Department of Medicine, JHUSOM Baltimore, MD
2009-present	Professor	Division of Clinical Pharmacology Department of Medicine Johns Hopkins University School of Medicine Baltimore, MD
2009-present	Professor	Department of Pharmacology and Molecular Sciences Johns Hopkins University School of Medicine Baltimore, MD

PROFESSIONAL EXPERIENCE

Dates	*Position*	*Institutions*
2009-present	Professor	Department of Epidemiology Johns Hopkins University Bloomberg School of Public Health Baltimore, MD
2012-2014	Co-Director	Behavioral Science Core Center for AIDS Research Johns Hopkins University Baltimore, MD
2014-present	Deputy Director Director	Institute for Clinical and Translational Research Translational Sciences Core Johns Hopkins University School of Medicine Baltimore, MD
2014-present	Director Member	Laboratory Core Executive Committee Center for AIDS Research Johns Hopkins University Baltimore, MD
2014-present	Affiliated Faculty Member	Center for Nanomedicine Wilmer Eye Institute, JHUSOM Baltimore, MD
2015-present	Director	Division of Clinical Pharmacology Wellcome Professor of Clinical Pharmacology Department of Medicine, JHUSOM Baltimore, MD
2016-present	Director (Contact)	Clinical Pharmacology Training Program Division of Clinical Pharmacology, JHUSOM Baltimore, MD

PUBLICATIONS

Original Research

1. Smith CR, Petty BG, **Hendrix CW**, Kernan WN, Garver PL, Fox K, Beamer A, Carbone K, Threlkeld M, Lietman PS. Ceftriaxone Compared with Cefotaxime for Serious Bacterial Infections. J Infect Dis 1989;160(3):442-7.

2. Kornhauser DM, Petty BG, **Hendrix CW**, Woods AS, Nerhood LJ, Bartlett JG, Lietman PS. Probenecid and Zidovudine Metabolism. Lancet 1989;2(8661):473-5.

3. Lorentsen KJ, **Hendrix CW**, Collins JM, Kornhauser D, Petty BG, Klecker RW, Flexner C, Eckel RH, Lietman PS. Dextran Sulfate is Poorly Absorbed after Oral Administration. Ann Intern Med 1989;111(7):561-6.

4. Lucey DR, **Hendrix CW**, Andrzejewski C, McGlasson D, Ward WW, Melcher GP, Zajac RA, Boswell RN. Hepatitis C Antibody in a Non-Hemophiliac Cohort Infected with the Human Immunodeficiency Virus. Viral Immunol 1990;3(4):295-301.

5. Lucey DR, McGuire SA, Clerici M, Hall K, Benton J, Clifford AB, Ward WW, Shearer G, Boswell RN, **Hendrix CW**. Comparison of Spinal Fluid Beta 2-Microglobulin Levels with CD4+ T lancet Count, In Vitro T Helper Cell Function, and Spinal Fluid IgG Parameters in 163 Neurologically Normal Adults Infected with the Human Immunodeficiency Virus Type 1. J Infect Dis 1991;163(5):971-5.

6. **Hendrix CW**, Volberding PA, Chaisson RE. HIV Antigen Variability in ARC/AIDS. J Acquir Immun Defic Syndr 1991;4(9):847-850.

7. Lucey DR, Melcher GP, **Hendrix CW**, Zajac RA, Goetz DW, Butzin CA, Clerici M, Warner RD, Abbadessa S, Hall K, Jaso R, Woolford B, Miller S, Stocks NI, Salinas CM, Wolfe WH, Shearer GM, Boswell RN. Human Immunodeficiency Virus (HIV-1) Infection in the U.S. Air Force: Seroconversions, Clinical Staging, and Assessment of a T-Helper Cell Functional Assay to Predict Change in CD4+ T Cell Counts. J Infect Dis 1991;164(4): 631-7.

8. De Groot AS, Clerici M, Hosmalin A, Hughes SH, Brand D, **Hendrix CW**, Houghten R, Shearer GM, Berzofsky JA. Human Immunodeficiency Virus Reverse Transcriptase T Helper Epitopes Identified in Mice and Humans: Correlation with a Cytotoxic T Cell Epitope. J Infect Dis 1991;164(6):1058-65.

9. Flexner C, Barditch-Crovo PA, Kornhauser DM, Farzadegan H, Nerhood LJ, Chaisson RE, Bell KM, Lorentsen KJ, **Hendrix CW**, Petty BG, Lietman PS. Pharmacokinetics, Toxicity, and Activity of Intravenous Dextran Sulfate in Human Immunodeficiency Virus Infection. Antimicrob Agents Chemother 1991;35(12):2544-50.

PUBLICATIONS

Original Research - continued

10. Warren RQ, Nkya WM, Shao JF, Anderson SA, Wolf H, **Hendrix CW**, Kanda P, Wabuke M, Boswell RN, Redfield RR, Kennedy RC. Comparison of Antibody Reactivity to Human Immunodeficiency Virus Type 1 (HIV-1) gp160 Epitopes in Sera from HIV-1-Infected Individuals from Tanzania and from the United States. J Clin Microbiol 1992;30(1):126-31.

11. Nyka WM, Warren RQ, Wolf H, **Hendrix CW**, Tesha J, Redfield RR, Melcher GP, Burke DS, Kanda P, Kennedy RC. Fine Specificity of the Humoral Immune Response to HIV-1 GP 160 in HIV-1 Infected Individuals from Tanzania. J Med Virol 1992;37(1):61-6.

12. Lucey DR, **Hendrix CW**, Andrzejewski C, Melcher GP, Butzin CA, Henry R, Wians F, Boswell RN. Comparison by Race of Total Serum IgG, IgA, IgM with CD4+ T-Cell Counts in North American Persons Infected with the Human Immunodeficiency Virus type 1. J Acquir Immune Defic Syndr 1992;5:325-32.

13. Warren RQ, Anderson SA, Nyka WM, Shao JF, **Hendrix CW**, Melcher GP, Redfield RR, Kennedy RC. Examination of Sera from HIV-1 Infected Individuals for Antibodies Reactive with Peptides Corresponding to the Principal Neutralizing Determinant of HIV-1 gp120 and In Vitro Neutralizing Activity. J Virology 1992;66(9):5210-5.

14. Blay R, Hernandez D, Betts M, Clerici M, Lucey DR, **Hendrix CW**, Hoffman T, Golding B. Brucella abortus Stimulates Human T Cells from Uninfected and HIV-Infected Individuals to Secrete IFN-gamma: Implications for use of Brucella abortus as a Carrier in Development of Human Vaccines. AIDS Res and Human Retroviruses 1992;8(4):479-86.

15. Clerici M, Landay AL, Kessler HA, Venzon DJ, **Hendrix CW**, Lucey DR, Shearer GM. Reconstitution of Long-Term T Helper Cell Function Following Zidovudine Therapy in HIV-infected Patients. J Infect Dis 1992;166(4):723-30.

16. Blatt S, Lucey CR, Butzin CA, **Hendrix CW**, Lucey DP. Total Lymphocyte Count as a Predictor of Absolute CD4+ Count and CD4+ Percentage in HIV-Infected Persons. JAMA 1993;269(5):622-6.

17. **Hendrix CW**, Margolick JB, Petty BG, Markham RB, Nerhood L, Farzadegan H, Ts'o POP, Lietman PS. Biologic Effects After Single Dose poly I:poly C12U (Mismatched Double-Stranded RNA, Atvogen) in Healthy Volunteers. Antimicrob Agents Chemother 1993;37 (3):429-435.

18. Clerici M, Hakim FT, Venzon DJ, Blatt S, **Hendrix CW**, Shearer GM. Changes in Interleukin-2 and Interleukin-4 Production in Asymptomatic, Human Immunodeficiency Virus-Seropositive Individuals. J Clin Invest 1993;91(3):759-65.

PUBLICATIONS

Original Research – continued

19. Warner RD, Mathis RE, Weston ME, Bigbee LR, **Hendrix CW**, Lucey DR. Estimates of Human Immunodeficiency Virus (HIV) Incidence and Trends in the US Air Force. Vaccine 1993;11(5):534-37.

20. Dolan MJ, Lucey DR, **Hendrix CW**, Melcher GP, Spencer GA, Boswell RN. Early Markers of HIV Infection and Subclinical Disease Progression. Vaccine 1993;11(5):548-51.

21. Lucey DR, McCarthy WF, Blatt SP, Melcher GP, **Hendrix CW**. Racial Differences in Serum Beta$_2$- microglobulin in Persons with Human Immunodeficiency Virus Infection. J Infect Dis 1993;167(5):1259-60.

22. Blatt SP, **Hendrix CW**, Butzin CA, Freeman TM, Ward WW, Hensley RE, Melcher GP, Donovan DJ, Boswell RN. Delayed-type Hypersensitivity Skin Testing Predicts Progression to AIDS in HIV-Infected Patients. Ann Intern Med 1993;119:117-84.

23. Lucey DR, Van Cott TC, Loomis LD, Bethke FR, **Hendrix CW**, Melcher GP, Redfield RR, Birx DL. Measurement of Cerebrospinal Fluid Antibody to the HIV-1 Principal Neutralizing Determinant (V3 Loop). J Acquir Immune Defic Syndr 1993;6(9):994-1001.

24. Clerici M, Yarchoan R, Blatt S, **Hendrix CW**, Ammann AJ, Broder S, Shearer GM. Effect of Recombinant CD4-IgG on In Vitro T Helper Cell Function: Data from a Phase I/II Study of Patients with the Acquired Immunodeficiency Syndrome (AIDS). J Infect Dis 1993;168(4):1012-6.

25. Wong MT, Warren RQ, Anderson SA, Dolan MJ, **Hendrix CW**, Blatt SP, Melcher GP, Boswell RN, Kennedy RC. Longitudinal Analysis of the Humoral Immune Response to Human Immunodeficiency Virus, Type-1 (HIV-1) gp160 Epitopes in Rapid and Nonprogressing HIV-1-Infected Subjects. J Infect Dis 1993;168(6):1523-7.

26. Clerici M, Lucey DR, Berzofsky JA, Pinto LA, Wynn TA, Blatt SP, Dolan MJ, **Hendrix CW**, Wolf SF, Shearer GM. Restoration of HIV-Specific Cell-Mediated Immune Responses by Interleukin-12 In Vitro. Science 1993;262(5140):1721-4.

27. Lucey DR, McGuire SA, Abbadessa S, Hall K, Woolford B, Valtier S, Butzin CA, Melcher GP, **Hendrix CW**. Cerebrospinal Fluid Neopterin Levels in 159 Neurologically Asymptomatic Persons Infected with the Human Immunodeficiency Virus (HIV-1). Relationship to Immune Status. Viral Immunol 1993;6(4):267-72.

28. Musser JM, Kapur V, Peters JE, **Hendrix CW**, Drehner D, Gackstetter GD, Skalka DR, Fort PL, Maffei JT, Li LL, Melcher GP. Real-time Molecular Epidemiologic Analysis of an Outbreak of Streptococcus pyogenes Invasive Disease in US Air Force Trainees. Arch Pathol Lab Med 1994;118(2):128-36.

PUBLICATIONS

Original Research - continued

29. Clerici M, Wynn TA, Berzofsky JA, Blatt SP, **Hendrix CW**, Sher A, Coffman RL, Shearer GM. Role of Interleukin-10 in T Helper Cell Dysfunction in Asymptomatic Individuals Infected with the Human Immunodeficiency Virus. J Clin Invest 1994;93(2):768-75.

30. **Hendrix CW**, Flexner C, Szebeni J, Kuwahara S, Pennypacker S, Weinstein J, Lietman P. Dipyridamole's Effect on Zidovudine Pharmacokinetics and Tolerance in Asymptomatic HIV-Infected Subjects. Antimicrob Agents Chemother 1994;38(5):1036-40.

31. Ascher DP, Blatt SP, **Hendrix CW**, Roberts C, Fowler CB. Validation of Post-Acidification P24 Antigen as a Prognostic Marker for HIV Disease Progression. AIDS Patient Care 1994;8(5):251-253.

32. Sarin A, Clerici M, Blatt SP, **Hendrix CW**, Shearer GM, Henkart PA. Inhibition of Activation-Induced Programmed Cell Death and Restoration of Defective Immune Responses of HIV+ Donors by Cysteine Protease Inhibitors. J Immunol 1994;153(2):862-72.

33. Clerici M, Sarin A, Coffman RL, Wynn TA, Blatt SP, **Hendrix CW**, Wolf SF, Shearer GM, Henkart PA. Type 1/type 2 Cytokine Modulation of T Cell Programmed Cell Death as a Model for HIV Pathogenesis. Proc Natl Acad Sci USA 1994;91(25):11811-5.

34. Blatt SP, McCarthy WF, Bucko-Krasnicka B, Melcher GP, Boswell RN, Dolan MJ, Freeman TM, Rusnak JM, Hensley RE, Ward WW, Barnes D, **Hendrix CW**. Multivariate Models for Predicting Progression to AIDS and Survival in HIV-Infected Persons. J Infect Dis 1995;171(4):837.

35. Dolan MJ, Clerici M, Blatt SP, **Hendrix CW**, Melcher GP, Boswell RN, Freeman TM, Ward W, Hensley R, Shearer GM. In vitro T cell function, delayed-type hypersensitivity skin testing, and CD4+ T cell subset phenotyping independently predict survival time in patients infected with Human Immunodeficiency Virus. J Infect Dis 1995 ;172(1):79-87.

36. Epstein LJ, Strollo PJ, Jr., Donegan RB, Delmar J, **Hendrix CW**, Westbrook PR. Obstructive Sleep Apnea in Patients with Human Immunodeficiency Virus (HIV) Disease. Sleep 1995;18(5):368-76.

37. **Hendrix CW**, Petty BG, Woods A, Kuwahara SK, Witter FR, Soo W, Griffin DE, Lietman PS. Modulation of alpha interferon's antiviral and clinical effects by aspirin, acetaminophen, and prednisone in healthy volunteers. Antiviral Research 1995;28(2):121-131.

38. Clerici M, Sarin A, Berzofsky, JA, Landay AL, Kessler HA, Hashemi F, **Hendrix CW**, Blatt SP, Rusnak J, Dolan MJ, Coffman RL, Henkart PA, Shearer GM. Antigen-stimulated apoptotic T cell death in HIV infection is selective for CD4+ T cells, modulated by cytokines and lymphotoxin. AIDS 1996;10(6):603-611.

PUBLICATIONS

Original Research - continued

39. Barditch-Crovo P, Toole J, **Hendrix CW**, Cundy KC, Ebeling D, Jaffe HS, Lietman PS. Anti-human immunodeficiency virus (HIV) activity, safety, and pharmacokinetics of adefovir dipivoxil (9-[2-(bispivaloyloxymethyl) phosphonylmethoxyethyl] adenine) in HIV-infected patients. J Infect Dis 1997;176(2):406-413.

40. Chien S-C, Chow AT, Williams R, Wong F, Nayak RK, **Hendrix CW**. The pharmacokinetics and safety of oral levofloxacin in HIV-infected individuals receiving concomitant zidovudine. Antimicrob Agents Chemother 1997;41(8):1765-1769.

41. Gardner LI, Harrison SH, **Hendrix CW**, Blatt SP, Wagner KF, Chung RCY, Harris RW, Cohn DL, Burke DS, Mayers DL. Size and duration of zidovudine benefit in 1003 HIV-infected patients: U.S. Army, Navy and Air Force Natural History Data. J Acq Immundef Synd 1998 ;17(4):345-53.

42. Barditch-Crovo P, Trapnell CB, Ette E, Zacur H, **Hendrix CW**, Flexner CW. Effects of Rifampin and Rifabutin on Combination Oral Contraceptive Pharmacodynamics. Clin Pharmacol Ther 1999;65(4):428-38.

43. Petty B, Black J, **Hendrix CW**, Bassiakos Y, Feinberg J, Hafner R. Escalating Multiple-Dose Safety and Tolerance of WR 6026 in HIV-Infected Subjects. J Acq Immundef Synd 1999 ;21(1):26-32.

44. **Hendrix CW**, Daniell FD. HIV Prevention Education: Utilization of Evaluation to Inform Policy Evolution in the Military. AIDS & Public Policy 1999;14(2):80-91.

45. Turchin A, Lehmann HP, Flexner CW, **Hendrix CW**, Shatzer JH, Merz WG. Active Learning Center: Potential uses and efficacy of an interactive Internet-based teaching tool. Medical Teacher. 2000;22(3):271-275.

46. Yeager RD, **Hendrix CW**, Kingma S. International military human immunodeficiency virus/acquired immunodeficiency syndrome policies and programs: strengths and limitations in current practice. Mil Med. 2000;165(2):87-92.

47. Michelson AD, Furman MI, Coleman L, Hamlington J, Goldschmidt-Clermont P, **Hendrix CW**, Mascelli MA, Barnard MR, Kickler T, Christie DJ, Kundu S, Bray PF. Integrin $Beta_3$ (GPIIIa) Pl^A Polymorphisms on Platelets Display Different Sensitivity to Agonists and Antagonists. Circulation 2000;101(9):1013-8.

48. **Hendrix CW**, Flexner C, MacFarland RT, Giandomenico C, Fuchs EJ, Redpath E, Bridger G, Henson GW. Pharmacokinetics and Safety of AMD-3100, a Novel Antagonist of the CXCR-4 Chemokine Receptor, in Human Volunteers. Antimicrob Agents Chemother 2000;44(6);1667-1673.

49. **Collaborative Group** on AIDS Incubation and HIV Survival including the CASCADE EU Concerted Action. Time from HIV-1 seroconversion to AIDS and death before widespread use of highly active antiretroviral therapy: a collaborative reanalysis. Lancet 2000;355(9210):1131-1137.

PUBLICATIONS

Original Research – continued

50. Pelz RK, Lipsett PA, Swoboda SM, Diener-West M, Powe NR, Brower RG, Perl TM, Hammond JMJ, **Hendrix CW**. Candida Infections: Outcome and Attributable ICU costs in critically ill patients. J Intensive Care Med 2000;15:255-261.

51. Pelz RK, Lipsett PA, Swoboda SM, Diener-West M, Hammond JMJ, **Hendrix CW**. The diagnostic value of fungal surveillance cultures in critically ill patients. Surgical Infections (Larchmt) 2000;1(4):273-281.

52. **Hendrix CW**, Hammond JMJ, Swoboda SM, Merz WG, Harrington SM, Perl TM, Dick JD, Borschel DM, Halczenko PW, Pelz RK, Rocco LE, Conway JE, Brower RG, Lipsett PA. Surveillance Strategies and Impact of Vancomycin-Resistant Enterococcal (VRE) Colonization and Infection in Critically Ill Patients. Ann Surg 2001;233(2):259-265.

53. Dimick JB, Pelz RK, Consunji R, Swoboda SM, **Hendrix CW**, Lipsett PA. Increased Resource Use Associated With Catheter-Related Bloodstream Infection in the Surgical Intensive Care Unit. Arch Surg. 2001;136(2):229-234.

54. Pelz R, **Hendrix CW**, Swoboda S, Diener-West M, Merz, W, Hammond JMJ, Lipsett PA. A double blind placebo controlled trial of prophylactic fluconazole to prevent Candida infections in critically ill surgical patients. Ann Surg 2001;233(4):542-548.

55. Pelz R, Lipsett PA, Swoboda SM, Merz W, **Hendrix CW**. Enteral fluconazole is well absorbed in critically ill surgical patients. Surgery 2002;131(5):534-40.

56. Pelz RK, Lipsett PA, Swoboda SM, Diener-West M, Powe NR, Brower RG, Perl TM, Hammond JMJ, **Hendrix CW**. Vancomycin-sensitive and vancomycin-resistant enterococcal infections in the ICU: attributable costs and outcomes. Intensive Care Med 2002;28(6):692-7.

57. Jackson JB, Barnett S, Piwowar-Manning E, Apuzzo L, Raines C, **Hendrix C**, Hamzeh F, Gallant J. A Phase I/II Study To Evaluate The Safety And Efficacy Of Pre-Exposure Nevirapine Prophylaxis For The Prevention Of HIV-1 Transmission In HIV-1 Uninfected Participants At High Risk. AIDS 2003;17(4):547-553.

58. Rajagopalan P, Pelz RK, Lipsett PA, Swoboda SS, **Hendrix CW**. Population pharmacokinetics of enteral fluconazole in surgical ICU patients. Pharmacotherapy 2003;23(5):592-602.

59. Dimick JB, Swoboda S, Talamini MA, Pelz RK, **Hendrix CW**, Lipsett PA. Risk of colonization of central venous catheters: catheters for total parenteral nutrition vs. other catheters. Am J Crit Care. 2003 Jul;12(4):328-35.

PUBLICATIONS

Original Research - continued

60. Wire MB, Ballow C, Preston SL, **Hendrix CW**, Piliero PJ, Lou Y, Stein DS. Pharmacokinetics and safety of GW433908 and ritonavir, with and without efavirenz, in healthy volunteers. AIDS 2004;18(6):897-907.

61. **Hendrix CW**, Jackson KA, Whitmore E, Guidos A, Kretzer R, Liss CR, Patel-Shah L, McLane J, Trapnell CB. The Effect of Isotretinoin on the Pharmacokinetics and Pharmacodynamics of Ethinyl Estradiol and Norethindrone. Clin Pharm Ther 2004;75(5):464-475.

62. Magill S, Puthanakit T, Swoboda S, Carson K, Salvatori R, Lipsett P, **Hendrix CW**. Impact of fluconazole prophylaxis on cortisol levels in critically ill surgical patients. Antimicrob Agents Chemother 2004;48(7):2471-2476.

63. **Hendrix CW**, Wakeford J, Wire MB, Bigelow G, Cornell E, Christopher J, Fuchs E, Snidow J. Pharmacokinetics and pharmacodynamics of methadone enantiomers after co-administration with amprenavir in opioid-dependent subjects. Pharmacotherapy 2004;24(9):1110-1121.

64. **Hendrix CW**, Collier AC, Lederman MM, Schols D, Pollard RB, Brown S, Jackson JB, Coombs RW, Glesby MJ, Flexner CW, Bridger GJ, Badel K, MacFarland RT, Henson GW, Calandra G, AMD3100 HIV Study Group. Safety, Pharmacokinetics, and Antiviral activity of AMD3100, a selective CXCR4 Receptor Inhibitor, in HIV-1 Infection. J Acquir Immune Defic Syndr 2004;37(2):1253-1262.

65. Mayer KH, Maslankowski L, Gai F, El-Sadr W, Justman J, Kwiecien A, Masse B, Eshleman S, **Hendrix CW**, Morrow K, Absalon J, Rooney J, Soto-Torres L. Tenofovir vaginal gel: Safety and tolerability in low-risk HIV-uninfected women and HIV-infected women (HPTN 050). AIDS 2006;20(4):543-551.

66. Magill SS, Swoboda S, Johnson E, Merz WG, Pelz RK, Lipsett PA, **Hendrix CW**. The impact of anatomical site of *Candida* colonization on the development of invasive candidiasis and mortality in critically ill surgical patients. Diagn Microbiol Infect Dis 2006;55(4):293-301. Epub 2006 May 15.

67. Ndovi TT, Choi L, Caffo B, Parsons T, Baker S, Zhao M, Rohde C, **Hendrix CW**. Quantitative assessment of seminal vesicle and prostate drug concentrations by use of a non-invasive method. Clin Pharmacol Ther 2006;80(2):146-158.

68. Ndovi TT, Parsons T, Choi L, Caffo B, Rohde C, **Hendrix CW.** A New Method to Quantitatively Estimate Seminal Vesicle and Prostate Gland Contributions to Ejaculate. Br J Clin Pharmacol 2007;63(4):404-20. Epub 2006 Oct 31.

PUBLICATIONS

Original Research – continued

69. Fuchs EJ, Lee LA, Torbenson MS, Parsons TL, Bakshi RP, Guidos AM, Wahl RL, **Hendrix CW**. Hyperosmolar Sexual Lubricant Causes Epithelial Damage in the Distal Colon: Potential Implication for HIV Transmission. J Infect Dis 2007;195(5):703-710. Epub 2007 Jan 23.

70. Stone, ND, Dunaway, SB, Flexner, CW, Tierney, C, Calandra, GB, Becker, S, Cao, Y, Wiggins, IP, Conley, J, MacFarland, RT, Park, J, Lalama, C, Snyder, S, Kallungal, B, Klingman, K, **Hendrix, CW**. Multiple Dose Escalation Study of the Safety, Pharmacokinetics, and Biologic Activity of Oral AMD070, a selective CXCR4 Receptor Inhibitor, in Human Subjects (ACTG A5191). Antimicrob Agents Chemother 2007;51(7):2351-8. Epub 2007 Apr 23.

71. Pham P, **Hendrix CW**, Barditch-Crovo P, Parsons T , Khan W, Parrish M, Radebaugh C, Carson KA, Pakes GE, Qaquish R, Flexner C. Amprenavir and lopinavir pharmacokinetics following coadministration of amprenavir or fosamprenavir with lopinavir/ritonavir, with or without efavirenz. Antivir Ther 2007;12(6):963-9.

72. Ndovi TT, Cao YJ, Fuchs EJ, Fletcher CV, Guidos A, **Hendrix CW**. Food affects zidovudine concentration independent of effects on gastrointestinal absorption. J Clin Pharmacol 2007;47(11):1366-73.

73. **Hendrix CW**, Fuchs EJ, Macura KJ, Lee LA, Parsons TL, Bakshi RP, Khan WA, Guidos A, Leal JP, Wahl R. Quantitative imaging and sigmoidoscopy to assess distribution of rectal microbicide surrogates. Clin Pharmacol Ther 2008 Jan;83(1):97-105. Epub 2007 May 16.

74. Choi L, Caffo BS, Rohde C, Ndovi TT, **Hendrix CW**. A Mechanistic Latent Variable Model for Estimating Drug Concentrations in the Male Genital Tract: A Case Study in Drug Kinetics. Stat Med 2008 Jun 30;27(14):2697-714.

75. Cao YJ, Ndovi TT, Parsons TL, Guidos A, Caffo B, **Hendrix CW**. Effect of semen sampling frequency on seminal antiretroviral drug concentration. Clin Pharmacol Ther. 2008 Jun;83(6):848-56.

76. Cao YJ, Caffo B, Choi L, Radebaugh C, Fuchs EJ, **Hendrix CW**. Noninvasive quantitation of drug concentration in prostate and seminal vesicles: improvement and validation with desipramine and aspirin. J Clin Pharmacol. 2008 Feb;48(2):176-83. Epub 2007 Dec 19.

77. Nyunt M, Becker S, MacFarland R, Everts S, Chee P, Scarborough R, **Hendrix CW.** Pharmacokinetic Interaction between AMD11070 and Substrates of CYP3A4 and 2D6 Enzymes in Healthy Volunteers. J Acquir Immune Defic Syndr 2008 Apr 15;47(5):559-565.

PUBLICATIONS

Original Research – continued

78. Cao YJ, Smith PF, Wire MB, Lou Y, Lancaster CT, Causon RC, Bigelow G, Martinez E, Fuchs EJ, McCabe S, **Hendrix CW**. Pharmacokinetics and Pharmacodynamics of Methadone Enantiomers Following Coadministration with Fosamprenavir and Ritonavir in Opioid-Dependent Subjects. Pharmacotherapy 2008 Jul;28(7):863-74.

79. Cao YJ, Flexner C, Dunaway S, Park JG, Klingman K, Wiggins I, Conley J, Radebaugh C, Kashuba AD, MacFarland R, Becker S, **Hendrix CW**. Effect of Low-dose Ritonavir on the Pharmacokinetics of the CXCR4 Antagonist AMD070 in Healthy Volunteers. Antimicrob Agents Chemother 2008 May;52(5):1630-4.

80. Andrade AS, **Hendrix CW**, Parsons TL, Caballero BH, Yuan C, Flexner C, Dobs AS, Brown T. Pharmacokinetic and Metabolic Effects of American Ginseng (Panax quinquefolius) in Healthy Volunteers Receiving the HIV Protease Inhibitor Indinavir. BMC Complementary and Alternative Medicine 2008, 8:50 (19 Aug 2008).

81. Caffo B, Crainiceanu C, Deng L, **Hendrix CW**. A Case Study in Pharmacologic Imaging Using Principal Curves in Single Photon Emission Computed Tomography. J American Statistical Assoc 2008, 103(484):1470-1480. PMC2794148

82. Agthe AG, Kim GR, Mathias KB, **Hendrix CW**, Chavez-Valdez R, Jansson L, Lewis TR, Yaster M, Gauda EB. Clonidine as an adjunct therapy to opioids for neonatal abstinence syndrome: a randomized, controlled trial. Pediatrics. 2009 May;123(5):e849-56. PMC2746902

83. Magill SS, Swoboda SM, Shields CE, Johnson EA, Fothergill AW, Merz WG, Lipsett PA, **Hendrix CW**. The epidemiology of *Candida* colonization and invasive candidiasis in critically ill surgical patients before and after implementation of routine fluconazole prophylaxis. Ann Surg 2009;249(4):657-665.

84. Nyunt M, **Hendrix CW**, Bakshi R, Kumar N, Shapiro TA. Phase I/II evaluation of the prophylactic antimalarial activity of pafuramidine in healthy volunteers challenged with plasmodium falciparum sporozoites. Am J Trop Med Hyg 2009;80(4):528-35. PMC2763313

85. Xie HG, Cao YJ, Gauda EB, Agthe AG, **Hendrix CW**, Lee H. Clonidine Clearance Matures Rapidly during the Early Postnatal Period: A Population Pharmacokinetic Analysis in Newborns with Neonatal Abstinence Syndrome. J Clin Pharmacol 2011 51(4):502-511

86. Keller MJ, Madan RP, Torres NM, Fazzari MJ, Cho S, Kalyoussef S, Shust G, Mesquita PM, Louissaint N, Chen J, Cohen HW, Diament EC, Lee AC, Soto-Torres L, **Hendrix CW**, Herold BC. A randomized trial to assess anti-HIV activity in female genital tract secretions and soluble mucosal immunity following application of 1% tenofovir gel. PLoS One. 2011 Jan 25;6(1):e16475. PMC3026837

PUBLICATIONS

Original Research – continued

87. Goldsmith J, Caffo B, Crainiceanu C, Reich D, Chen Y, **Hendrix CW**. Non-linear Tube Fitting for the Analysis of Anatomical and Functional Structures. Ann Appl Stat. 2011 Jan 1;5(1):337-363. PMC3119905

88. Avery LB, Bakshi RP, Cao YJ, **Hendrix CW**. The male genital tract is not a pharmacological sanctuary from efavirenz. Clin Pharm Ther 2011 Jul;90(1):151-6. PMC3215581

89. Krauss GL, Davit BM, Caffo B, Palamakula A, Chang YT, **Hendrix CW**, Cheung K. Assessing bioequivalence of generic antiepilepsy drug formulations. Ann Neuro 2011 Aug;70(2):221-8.

90. Cohen MS, Chen YQ, McCauley M, Gamble T, Hosseinipour MC, Kumarasamy N, Hakim JG, Kumwenda J, Grinsztejn B, Pilotto JH, Godbole SV, Mehendale S, Chariyalertsak S, Santos BR, Mayer KH, Hoffman IF, Eshleman SH, Piwowar-Manning E, Wang L, Makhema J, Mills LA, de Bruyn G, Sanne I, Eron J, Gallant J, Havlir D, Swindells S, Ribaudo H, Elharrar V, Burns D, Taha TE, Nielsen-Saines K, Celentano D, Essex M, Fleming TR; **HPTN 052 Study Team**. Prevention of HIV-1 infection with early antiretroviral therapy. N Engl J Med. 2011 Aug 11;365(6):493-505. Epub 2011 Jul 18. PMC3200068

91. Dezzutti CS, **Hendrix CW**, Marrazzo J, Pan Z, Wang L, Louissaint N, Kalyoussef S, Torres NM, Hladik F, Parikh U, Mellors J, Hillier SL, Herold BC Comparing Swabs, Lavage, and Diluents to Quantify Biomarkers of Female Genital Tract Soluble Mucosal Mediators. 2011 PloS One 2011;6(8):e23136. PMC3155537

92. Beigi R, Noguchi L, Parsons T, Macio I, Kunjara Na Ayudhya RP, Chen J, **Hendrix CW**, Mâsse B, Valentine M, Piper J, Watts DH. Pharmacokinetics and Placental Transfer of Single Dose Tenofovir 1% Vaginal Gel in Term Pregnancy. J Infect Dis 2011 2011 Nov;204(10):1527-31. PMC3192189

93. Louissaint NA, Nimmagadda S, Fuchs EJ, Bakshi RP, Cao Y, Lee L, Goldsmith AJ, Caffo B, Du Y, King KE, Menendez FA, Torbenson MS, **Hendrix CW**. Distribution of Cell-free and Cell-associated HIV surrogates in the Colon Following Simulated Receptive Anal Intercourse in Men. J Acquir Immune Defic Syndr 2012 Jan 1;59(1):10-17. PMC3237874

94. Louissaint NA, Fuchs EJ, Bakshi RP, Nimmagadda S, Du Y, Macura K, King KE, Goldsmith AJ, Caffo B, Cao Y, Anderson JR, **Hendrix CW**. Distribution of Cell-free and Cell-associated HIV Surrogates in the Female Genital Tract following Simulated Vaginal Intercourse. J Infect Dis 2012 Mar;205(5):725-32. PMC pending

PUBLICATIONS

Original Research – continued

95. Lu Y, Celum C, Wald A, Baeten JM, Cowan F, Delany-Moretlwe S, Reid SE, Hughes JP, Wilcox E, Corey L, **Hendrix CW**. Acyclovir achieves lower concentration in African HIV-seronegative, HSV-2 seropositive women compared to non-African populations. Antimicrob Agents Chemother 2012 May;56(5): 2777-2779. PMC 3346629

96. Nyunt MM, Lu Y, Yu Q, El-Gasim M, Parsons TL, Petty BG, **Hendrix CW**. Effects of ritonavir-boosted lopinavir on the pharmacokinetics of quinine. Clin Pharmacol Ther. 2012 May;91(5):889-95.

97. Baeten JM, Donnell D, Ndase P, Mugo NR, Campbell JD, Wangisi J, Jordan W. Tappero JW, Bukusi EA, Cohen CR, Katabira E, Ronald A, Tumwesigye E, Were E, Fife KH, Kiarie J, Farquhar C, John-Stewart G, Kakia A , Odoyo J, Mucunguzi A, Nakku-Joloba E, Twesigye R, Ngure K, Apaka C, Tamooh H, Gabona F, Mujugira A, Panteleeff D, Thomas KK, Kidoguchi L, Krows M, Revall J, Morrison S, Haugen H, Emmanuel-Ogier M, Ondrejcek L, Coombs RW, Frenkel L, **Hendrix CW**, Bumpus N, Bangsberg D, Haberer J, Stevens WS, Lingappa JR, Celum C. Antiretroviral Prophylaxis for HIV-1 Prevention among Heterosexual Men and Women. N Engl J Med 2012 Aug 2;367(5):399-410.

98. Thigpen MC, Kebaabetswe PM, Paxton LA, Smith DK, Segolodi TM, Soud FA, Henderson FL, Pathak SR, Rose CE, Chillag KL, Mutanhaurwa R, Chirwa LI, Kasonde K, Abebe D. Buliva E, Gvetadze RJ, Johnson S, Sukalac T, Thomas VT, Hart C, Johnson JA, Malotte CK, **Hendrix CW**, Brooks JT. Safety and Efficacy of Daily Oral Antiretroviral Use for the Prevention of HIV Infection in Heterosexually Active Young Adults in Botswana: the TDF2 Study. N Engl J Med 2012 Aug 2;367(5):423-34.

99. Cao YJ, Caffo BS, Fuchs EJ, Lee LA, Du Y, Li L, Bakshi RP, Macura K, Khan WA, Wahl RL, Grohskopf LA, **Hendrix CW**. Quantification of the Spatial Distribution of Rectally Applied Surrogates for Microbicide and Semen in Colon with SPECT Imaging. Br J Clin Pharmacol 2012 Dec;74(6):1013-22 PMC3522815

100. Fogel J, Taha TE, Sun J, Hoover DR, Parsons TL,Kumwenda JJ, Mofenson LM, Fowler MG, **Hendrix CW**, Kumwenda NI, Eshleman SH, Mirochnick M. Stavudine (d4T) concentrations in women receiving post-partum antiretroviral treatment and their breastfeeding infants. JAIDS 2012 Aug 15;60(5):462-5. PMC3404155

PUBLICATIONS

Original Research – continued

101. Chen J, Flexner C, Liberman RG, Skipper PL, Louissaint NA, Tannenbaum SR, **Hendrix CW**, Fuchs E. Phase 0 Study of Intracellular Drug Concentrations: Accelerator Mass Spectrometry Measurement of Phosphorylated Tenofovir and Zidovudine. J Acq Immuno Defic Syndr 2012 Dec 15;61(5):593-9. PMC3509498

102. Lu, Y, **Hendrix CW**, Bumpus NN. Cytochrome P450 3A5 Plays a Prominent Role in the Oxidative Metabolism of the Anti-HIV Drug Maraviroc. Drug Metabol Disp 2012 Dec;40(12):2221-30. doi: 10.1124/dmd.112.048298. Epub 2012 Aug 24. PMC3500548

103. Anton PA, Cranston RD, Kashuba A, **Hendrix CW**, Bumpus NN, Richardson-Harman N, Elliott J, Janocko L, Khanukhova E, Dennis R, Cumberland WG, Ju C, Carballo-Diéguez A, Mauck C, McGowan I. RMP-02/MTN-006: A Phase 1 Rectal Safety, Acceptability, Pharmacokinetic and Pharmacodynamic Study of Tenofovir 1% Gel Compared to Oral Tenofovir DF. AIDS Res Hum Retroviruses. 2012 Nov;28(11):1412-21. doi: 10.1089/AID.2012.0262. Epub 2012 Oct 9. PMC3484811

104. Minnis AM, Gandham S, Richardson BA, Guddera V, Riddler S, Salata R, Nakabiito C, Hoesley C, Justman J, Soto-Torres L, Patterson K, Gomez K, **Hendrix CW**. Adherence and acceptability in MTN 001: A randomized cross-over trial of daily oral and topical tenofovir for HIV prevention in women. AIDS Behav 2012 Feb;17(2):737-47. PMC 3562423

105. Avery LB, VanAusdall JL, **Hendrix CW**, Bumpus NN. Compartmentalization and Antiviral Effect of Efavirenz Metabolites in Blood Plasma, Seminal Plasma and Cerebrospinal Fluid. Drug Metabo Disp 2012 Nov 19. [Epub ahead of print] PMCID: PMC 3558859

106. **Hendrix CW**, Chen BA, Guddera V, Hoesley C, Justman J, Nakabiito C, Salata R, Soto-Torres L, Patterson K, Minnis AM, Gandham S, Gomez K, Richardson BA, Bumpus N. Pharmacokinetic cross-over study in women comparing tenofovir vaginal gel and oral tablets in vaginal tissue and other anatomic compartments (MTN-001) PLoS One. 2013;8(1):e55013. PMC3559346

107. Fuchs EJ, Grohskopf LA, Lee LA, Bakshi RP, **Hendrix CW**. Quantitative Assessment of Altered Rectal Mucosal Permeability Due to Rectally Applied Nonoxynol-9, Biopsy, and Simulated Intercourse. J Infect Dis 2013 May 1;207(9):1389-96 PMC3693591

108. Avery LB, Sacktor N, McArthur JC, **Hendrix CW**. Protein-free Efavirenz is Equivalent in Cerebrospinal Fluid & Blood Plasma: Applying the Law of Mass Action to Predict Protein-Free Drug Concentration. Antimicrob Agents Chemother 2013 Jan:57(3):1409-1414. Jan 7 [Epub ahead of print]. PMCID: PMC3591913

PUBLICATIONS

Original Research – continued

109. Louissaint NA, Cao YJ, Skipper PL, Liberman RG, Tannenbaum SR, Nimmagadda S, Anderson JR, Everts S, Bakshi R, Fuchs EJ, **Hendrix CW**. Single Dose Pharmacokinetics of Oral Tenofovir in Plasma, Peripheral Blood Mononuclear Cells, Colonic and Vaginal Tissue. AIDS Res Hum Retroviruses 2013 Nov: 29(11): 1443-1450. PMC3809387

110. Avery LB, Zarr M, Bakshi RP, Siliciano R, **Hendrix CW**. Increasing Extracellular Protein Concentration Reduces Intracellular Antiretroviral Drug Concentration and Antiviral Effect. AIDS Res Hum Retroviruses 2013 Nov;29(11): 1434-1442. PMC3809607

111. Choopanya K, Martin M, Suntharasamai P, Sangkum U, Mock PA, Leethochawalit M, Chiamwongpaet S, Kitisin P, Natrujirote P, Kittimunkong S, Chuachoowong R, Gvetadze R, McNicholl J, Paxton L, Curlin M, **Hendrix CW**, Vanichseni S, for the Bangkok Tenofovir Study Group. Antiretroviral Prophylaxis for HIV Infection among People Who Inject Drugs in Bangkok, Thailand: a randomized, double-blind, placebo-controlled trial. Lancet 2013 Jun 15;381(9883):2083-90.

112. Fogel JM, Wang L, Parsons TL, Ou S-S, Piwowar-Manning E, Chen Y, Mudhune VB, Hosseinipour MC, Kumwenda J, Hakim JG, Chariyalertsak S, Panchia R, Sanne I, Kumarasamy N, Grinsztejn B, Makhema J, Pilotto J, Santos BR, Mayer KH, McCauley M, Gamble T, Bumpus NN, **Hendrix CW**, Cohen MS, and Eshleman SH. Undisclosed antiretroviral drug use in a multi-national clinical trial (HPTN 052). J Infect Dis 2013. PMC 3805242

113. Leyva FJ, Bakshi R, Fuchs EJ, Li L, Caffo BS, Goldsmith AJ, Carballo-Dieguez A, Ventuneac A, Du Y, Leal J, Lee LA, Torbenson MT, **Hendrix CW**. Iso-osmolar enemas demonstrate preferential gastrointestinal distribution, safety, and acceptability compared with hyper- and hypo-osmolar enemas as a potential delivery vehicle for rectal microbicides. AIDS Res Hum Retroviruses 2013 Nov:29(11): 1487-1495. PMC3809953

114. To E, **Hendrix CW**, Bumpus NN. Dissimilarities in the Metabolism of Antiretroviral Drugs used in HIV Pre-exposure Prophylaxis in Colon and Vagina Tissues. Biochem Pharmacol 2013 Oct 1;86(7):979-90. PMC3807636.

115. Seserko L, Emory JF, **Hendrix CW**, Marzinke M. The Development and Validation of an Ultra Performance-Liquid Chromatography-Tandem Mass Spectrometric (LC-MS/MS) Method for the Rapid Quantitation of the Antiretroviral Agent Dapivirine in Human Plasma. Bioanalysis 2013 Nov;5(22):2771-2783. PMCID in process

PUBLICATIONS

Original Research – continued

116. Murnane PM, Celum C, Mugo N, Campbell JD, Donnell D, Bukusi E, Mujugira A, Tappero J, Kahle EM, Thomas KK, Baeten JM; **Partners PrEP Study Team**. Efficacy of preexposure prophylaxis for HIV-1 prevention among high-risk heterosexuals: subgroup analyses from a randomized trial. AIDS. 2013 Aug 24;27(13):2155-60.

117. Chaturvedula A, Fossler M, **Hendrix CW**. Estimation of tenofovir's population pharmacokinetic parameters without reliable dosing histories and application to tracing dosing history using simulation strategies. J Clin Pharmacol 2013 Nov 6; 54(2): 150-60. PMC5001555

118. Cranston RD, Hoesley C, Carballo-Diéguez A, **Hendrix CW**, Husnik M, Levy L, Hall W, Soto-Torres L, Nel AM. A Randomized Male Tolerance Study of Dapivirine Gel Following Multiple Topical Penile Exposures (MTN 012/IPM 010) AIDS Res Hum Retroviruses. 2014 Feb;30(2):184-9. PMC3910451

119. Kayentao K, Guirou EA, Doumbo OK, Venkatesan M, Plowe CV, Parsons TL, **Hendrix CW**, Nyunt MM. Preliminary Study of Quinine Pharmacokinetics in Pregnant Women with Malaria-HIV Co-Infection. Am J Trop Med Hyg. 2014 Mar;90(3):530-4. PMC3945700

120. Herold BC, Dezzutti CS, Richardson BA, Marrazzo J, Mesquita PM, Carpenter C, Huber A, Louissaint N, Marzinke MA, Hillier SL, **Hendrix CW**. Antiviral Activity of Genital Tract Secretions following Oral or Topical Tenofovir Pre-exposure Prophylaxis for HIV-1. J Acquir Immune Defic Syndr. 2014 May 1; 66(1):65-73. PMC3981887

121. Martin M, Vanichseni S, Suntharasamai P, Sangkum U, Mock PA, Leethochawalit M, Chiamwongpaet S, Gvetadze RJ, Kittimunkong S, Curlin ME, Worrajittanon D, McNicholl JM, Paxton LA, Choopanya K; **Bangkok Tenofovir Study Group**. Risk behaviors and risk factors for HIV infection among participants in the Bangkok tenofovir study, an HIV pre-exposure prophylaxis trial among people who inject drugs. PLoS One. 2014 Mar 25;9(3):e92809. PMC3965466

122. Celum C, Morrow RA, Donnell D, Hong T, **Hendrix CW**, Thomas KK, Fife KH, Nakku-Joloba E, Mujugira A, Baeten JM, Partners PrEP Study Team. Daily oral tenofovir and emtricitabine/tenofovir pre-exposure prophylaxis reduces herpes simplex virus type 2 acquisition among heterosexual HIV-1 uninfected men and women: a subgroup analysis of a randomized trial. Ann In Med 2014;161:11-19. PMCID in progress.

123. Donnell D, Baeten J, Bumpus NN, Brantley J, Bangsberg D, Haberer JE, Mujugira A, **Hendrix CW**, Celum C. HIV Protective Efficacy and correlates of Tenofovir Blood Concentrations in a Clinical Trial of PrEP for HIV Prevention. J Acquir Immune Defic Syndr. 2014 Apr 29 [Epub ahead of print]. PMC4059553

PUBLICATIONS

Original Research – continued

124. Martin M, Vanichseni S, Suntharasamai P, Sangkum U, Mock PA, Gvetadze RJ, Curlin ME, Leethochawalit M, Chiamwongpaet S, Cherdtrakulkiat T, Anekvorapong R, Leelawiwat W, Chantharojwong N, McNicholl JM, Paxton LA, Kittimunkong S, Choopanya K; for the **Bangkok Tenofovir Study Group**. Renal function of participants in the Bangkok Tenofovir Study, Thailand, 2005-2012. Clin Infect Dis. 2014 Sep 1;59(5):716-24. PMCID in progress.

125. Murnane PM, Heffron R, Ronald A, Bukusi EA, Donnell D, Mugo NR, Were E, Mujugira A, Kiarie J, Celum C, Baeten JM; **Partners PrEP Study Team**. Pre-exposure prophylaxis for HIV-1 prevention does not diminish the pregnancy prevention effectiveness of hormonal contraception. AIDS. 2014 Jul 31;28(12):1825-30. PMCID in progress.

126. Matthews LT, Heffron R, Mugo NR, Cohen CR, **Hendrix CW**, Celum C, Bangsberg DR, Baeten JM. High medication adherence during periconception periods among HIV-1-uninfected women participating in a clinical trial of antiretroviral pre-exposure prophylaxis. J Acq Immuno Defic Syndr 2014 Sep 1;67(1):91-7. PMC4149628

127. Mugo NR, Hong T, Celum C, Donnell D, Bukusi EA, John-Stewart G, Wangisi J, Were E, Heffron R, Matthews LT, Morrison S, Ngure K, Baeten JM; **Partners PrEP Study Team**. Pregnancy incidence and outcomes among women receiving preexposure prophylaxis for HIV prevention: a randomized clinical trial. JAMA. 2014 Jul 23-30;312(4):362-71. PMCID in progress.

128. Mujugira A, Celum C, Thomas KK, Farquhar C, Mugo N, Katabira E, Bukusi EA, Tumwesigye E, Baeten JM; **Partners PrEP Study Team**. Delay of antiretroviral therapy initiation is common in East African HIV-infected individuals in serodiscordant partnerships. J Acquir Immune Defic Syndr. 2014 Aug 1;66(4):436-42. PMCID in progress.

129. Lu Y., Fuchs EJ, **Hendrix CW**, Bumpus NN. Cytochrome P450 3A5 Genotype Impacts Maraviroc Concentrations in Healthy Volunteers. Drug Metabol Disp 2014 Aug 12. pii: dmd.114.060194. [Epub ahead of print] PMCID in progress.

130. Were EO, Heffron R, Mugo NR, Celum C, Mujugira A, Bukusi EA, Baeten JM; **Partners PrEP Study Team**. Pre-exposure prophylaxis does not affect the fertility of HIV-1-uninfected men. AIDS. 2014 Aug 24;28(13):1977-82.

131. Nayak SU, Griffiss JM, McKenzie R, Fuchs EJ, Jurao RA, An AT, Ahene A, Tomic M, **Hendrix CW**, Zenilman JM. Safety and Pharmacokinetics of XOMA 3AB, a Novel Mixture of Three Monoclonal Antibodies Against Botulinum Neurotoxin A: A Randomized Placebo Controlled Trial in Healthy Subjects. Antimicrob Agents Chemother 2014 Sep;58(9):5047-53. PMC4135817

PUBLICATIONS

Original Research – continued

132. Baeten JM, Donnell D, Mugo NR, Ndase P, Thomas KK, Campbell JD, Wangisi J, Tappero JW, Bukusi EA, Cohen CR, Katabira E, Ronald A, Tumwesigye E, Were E, Fife KH, Kiarie J, Farquhar C, John-Stewart G, Kidoguchi L, Coombs RW, **Hendrix CW**, Marzinke MA, Frenkel L, Haberer JE, Bangsberg D, Celum C, Partners PrEP Study Team. Single-Agent Tenofovir versus Combination Emtricitabine/Tenofovir for Pre-Exposure Prophylaxis against HIV-1 Acquisition: A Randomized Trial. Lancet Infectious Diseases 2014 Oct 6. pii: S1473-3099(14)70937-5.

133. Yang K, **Hendrix CW**, Bumpus N, Elliott J, Tanner K, Mauck C, Cranston R, McGowan I, Richardson-Harman N, Anton PA, Kashuba AD. A Multi-Compartment Single and Multiple Dose Pharmacokinetic Comparison of Rectally Applied Tenofovir 1% Gel and Oral Tenofovir Disoproxil Fumarate. PLoS One. 2014 Oct 28;9(10):e106196.

134. Richardson-Harman N, **Hendrix CW**, Bumpus NN, Mauck C, Cranston RD, Yang K, Elliott J, Tanner K, McGowan I, Kashuba ADM, Anton PA. Correlation between compartmental tenofovir concentrations and an ex vivo rectal biopsy model of tissue infectibility in the RMP-02/MTN-006 Phase 1 study. PLoS One. 2014 Oct 28;9(10):e111507.

135. Madrasi K, Burns R, **Hendrix CW**, Fossler M, Chaturvedula A. Linking the population pharmacokinetics of tenofovir and its metabolites with its cellular uptake and metabolism. CPT: Pharmacometrics & Systems Pharmacology 2014 Nov 12;3:e147.

136. Heffron R, Mugo N, Were E, Kiarie J, Bukusi EA, Mujugira A, Frenkel LM, Donnell D, Ronald A, Celum C, Baeten JM; **Partners PrEP Study Team**. Preexposure prophylaxis is efficacious for HIV-1 prevention among women using depot medroxyprogesterone acetate for contraception. AIDS. 2014 Nov 28;28(18):2771-6.

137. Pintye J, Baeten JM, Manhart LE, Celum C, Ronald A, Mugo N, Mujugira A, Cohen C, Were E, Bukusi E, Kiarie J, Heffron R; **Partners PrEP Study Team**. Association between male circumcision and incidence of syphilis in men and women: a prospective study in HIV-1 serodiscordant heterosexual African couples. Lancet Glob Health. 2014 Nov;2(11):e664-71. PMC4271270

138. Baxi SM, Liu A, Bacchetti P, Mutua G, Sanders EJ, Kibengo FM, Haberer JE, Rooney J, **Hendrix CW**, Anderson PL, Huang Y, PriddyY F, Gandhi M. Comparing the Novel Method of Assessing PrEP Adherence/Exposure using Hair Samples to other Pharmacologic and Traditional Measures. J Acquir Immune Defic Syndr. Jan 1, 2015; 68(1): 13–20. PMC4262724

PUBLICATIONS

Original Research – continued

139. Lehman DA, Baeten JA, McCoy CO, Weis JF, Peterson D, Mbara G, Donnell D, Thomas KK, **Hendrix CW**, Marzinke MA, Frenkel L, Ndase P, Mugo NR, Celum C, Overbaugh JO, Matsen FA, Partners PrEP Study Team. Risk of Drug Resistance Among Persons Acquiring HIV Within a Randomized Clinical Trial of Single- or Dual-Agent Preexposure Prophylaxis. J Infect Dis 2015 Apr 15;211:1211–8. PMC4402339

140. Burns RN, **Hendrix CW**, Fossler MJ, Chaturvedula A. Population Pharmacokinetics of Tenofovir and Tenofovir-diphosphate in healthy women. J Clin Pharmacol 2015 Jun;55(6):629-38 PMC 5008110

141. Marrazzo JM, Ramjee G, Richardson B, Gomez K, Mgodi N, Nair G, Palanee T, Nakabito C, van der Straten A, Noguchi L, **Hendrix CW**, Dai JY, Ganesh S, Mkhize B, Taljaard M, ParikhU, Piper J, Mâsse B, Grossman C, Rooney J, Schwartz JL, Watts H, Marzinke M, Hillier SL, McGowan IM, Chirenje ZM, VOICE Study Team. Tenofovir-Based Preexposure Prophylaxis for HIV Infection among African Women. N Engl J Med 2015 Feb 5;372(6):509-18. PMC4341965

142. Mugwanya KK, Wyatt C, Celum C, Donnell D, Mugo NR, Tappero J, Kiarie J, Ronald A, Baeten JM; **Partners PrEP Study Team**. Changes in glomerular kidney function among HIV-1-uninfected men and women receiving emtricitabine-tenofovir disoproxil fumarate preexposure prophylaxis: a randomized clinical trial. JAMA Intern Med. 2015 Feb;175(2):246-54 PMC4354899

143. Ndase P, Celum C, Kidoguchi L, Ronald A, Fife KH, Bukusi E, Donnell D, Baeten JM; **Partners PrEP Study Team**. Frequency of false positive rapid HIV serologic tests in African men and women receiving PrEP for HIV prevention: implications for programmatic roll-out of biomedical interventions. PLoS One. 2015 Apr 17;10(4):e0123005 PMC4401675

144. Gunawardana M, Remedios-Chan M, Miller CS, Fanter R, Yang F, Marzinke MA, **Hendrix CW**, Beliveau M, Moss JA, Smith TJ, Baum MM. Pharmacokinetics of Long-acting Tenofovir Alafenamide (GS-7340) Subdermal Implant for HIV Prophylaxis Antimicrob Agents Chemother 2015 Jul;59(7):3913-9 PMC4468692

145. Kintu A, Hankinson SE, Balasubramanian R, Ertel K, Tumwesigye E, Bangsberg DR, Haberer JE; **Partners Ancillary Adherence Study Team**. Sexual Relationships Outside Primary Partnerships and Abstinence Are Associated With Lower Adherence and Adherence Gaps: Data From the Partners PrEP Ancillary Adherence Study. J Acquir Immune Defic Syndr. 2015 May 1;69(1):36-43. PMC4422183

146. Rahn KA, Cao YJ, **Hendrix CW**, Kaplin AI. The role of 5-HT1A receptors in mediating acute negative effects of antidepressants: Implications in pediatric depression. Nature: Translational Psychiatry 2015 May 5;5:e563. PMC4471288

PUBLICATIONS

Original Research – continued

147. McGowan I, Cranston RD, Duffill K, Siegel A, Engstrom J, Nikiforov A, Jacobson C, Rehman K, Elliott J, Khanukhova E, Abebe A, Mauck C, Spiegel H, Dezzutti C, Rohan L, Marzinke M, Hiruy H, **Hendrix CW**, Richardson-Harman N, Anton P. A Phase 1 Randomized, Open Label, Rectal Safety, Acceptability, Pharmacokinetic, and Pharmacodynamic Study of Three Formulations of Tenofovir 1% Gel (CHARM-01). PLOS One 2015 May 5;10(5):e0125363 PMC4420274

148. Maisel K, Chattopadhyay S, Moench T, **Hendrix CW**, Cone R, Ensign LM, Hanes J. Enema ion compositions for enhancing colorectal drug delivery. J Control Release. 2015 Apr 30;209:280-287. PMC4458383

149. Lade J, To E, **Hendrix CW**, Bumpus NN. Discovery of Genetic Variants of the Kinases that Activate Tenofovir in a Compartment-Specific Manner. EBioMedicine 2015 Jul 9;2(9):1145-52. PMC4588390

150. Murphy K, Richardson BA, Dezzutti CS, Marrazzo J, Hillier SL**, Hendrix CW**, Herold BC. Levels of genital tract defensins and cytokines differ between HIV negative US and African women. Am J Reprod Immunol 2015 Oct;74(4):313-22. PMC4573314

151. Chen BA, Panther L, Marzinke MA, **Hendrix CW**, Hoesley CJ, van der Straten A, Husnik MJ, Soto-Torres L, Nel A, Johnson S, Richardson-Harman N, Rabe LK, Dezzutti CS, MTN-013 Protocol Team. Phase 1 safety, pharmacokinetics, and pharmacodynamics of dapivirine and maraviroc vaginal rings: a double-blind randomized trial. J Acquir Immune Defic Syndr 2015 Nov 1;70(3):242-249. PMC4607587

152. Zenilman J, Fuchs EJ, **Hendrix CW**, Radebaugh C, Jurao RA, Nayak S, G Hamilton RG, Griffiss M. Phase 1 Clinical Trials of DAS181, an Inhaled Sialidase, in Healthy Adults. Antimicrob Agents Chemother 2015 Sep 25;123:114-119. PMC4639451

153. Leyva F, Fuchs EJ, Bakshi R, Carballo-Dieguez A, Ventuneac A, Yue C, Caffo B, Du Y, Torbenson M, Li L, Mullin G, Lee L, Rohan L, Anton PA, **Hendrix CW**. Simultaneous evaluation of safety, acceptability, peri-coital kinetics, and ex vivo pharmacodynamics comparing four rectal microbicide vehicle candidates. AIDS Res Hum Retrovir 2015 November 31(11):1089-1097. PMC4651043

154. Fuchs EJ, Schwartz J, Memon MA, Bakshi RP, Coleman J, **Hendrix CW**. A Pilot Study to Measure the Distribution and Permeability of a Vaginal HIV Microbicide Gel Vehicle using MRI, SPECT/CT, and Radiolabeled Small Molecule. AIDS Res Hum Retrovir 2015 November 31(11):1109-1115. PMC4651045

PUBLICATIONS

Original Research – continued

155. Hiruy H, Fuchs EJ, Marzinke MA, Yue C, Caffo B, Spiegel HML, Rohan LC, McGowan I, **Hendrix CW**. A Phase 1 Randomized, Blinded Comparison of the Pharmacokinetics and Colonic Distribution of Three Candidate Rectal Microbicide Formulations of Tenofovir 1% Gel with Simulated Unprotected Sex (CHARM-02). AIDS Res Hum Retrovir 2015 November 31(11):1098-1108. PMC4651050

156. Murnane PM, Brown ER, Donnell D, Coley RY, Mugo N, Mujugira A, Celum C, Baeten JM; **Partners PrEP Study Team**. Estimating Efficacy in a Randomized Trial With Product Nonadherence: Application of Multiple Methods to a Trial of Preexposure Prophylaxis for HIV Prevention. Am J Epidemiol. 2015 Nov 15;182(10):848-56. PMC4634306

157. Minnis AM, van der Straten A, Salee P, **Hendrix CW**. Pre-exposure Prophylaxis adherence measured by plasma drug level in MTN-001: comparison between vaginal gel and oral tablets in two geographic regions. AIDS Behav 2016 Jul;20(7):1541-8. PMC4957649

158. **Hendrix CW**, Andrade A, Bumpus NN, Kashuba AD, Marzinke M, Moore A, Anderson PL, Bushman LR, Fuchs E, Wiggins I, Radebaugh C, Prince HA, Bakshi R, Wang R, Richardson P, Shieh E, McKinstry L, Li X, Donnell D. Elharrar V, Mayer K, Patterson KB. Dose Frequency Ranging Pharmacokinetic Study of Tenofovir-Emtricitabine after Directly Observed Dosing in Healthy Volunteers to establish Adherence Benchmarks (HPTN 066). AIDS Res Hum Retrovir 2016 Jan 32(1):32-43. PMC4692123

159. Dai JY, **Hendrix CW**, Richardson BA, Kelly C, Marzinke MA, Chirenje ZM, Marrazzo JM, Brown ER. Pharmacological measures of adherence and risk of HIV acquisition in the VOICE study. J Infect. Dis 2016 Feb 1;213(3):335-42. PMC4704663

160. Weis JF, Baeten JM, McCoy CO, Warth C, Donnell D, Thomas KK, **Hendrix CW**, Marzinke MA, Mugo N, Matsen FA, Celum C, Lehman DA, Partners PrEP Study Team. Preexposure prophylaxis-selected drug resistance decays rapidly after drug cessation. AIDS AIDS 2016, 30:31–35. PMC4704103

161. Herold BC, Chen BA, Salata RA, Marzinke MA, Kelly C, Dezzutti CS, McGowan I, Galaska B, Levy L, Piper JM, Hillier S, **Hendrix CW**; MTN-011 Study Team. Impact of Sex on the Pharmacokinetics and Pharmacodynamics of 1% Tenofovir Gel. Clin Infect Dis 2016 Feb 1;62(3):375-382. PMC4706638

162. Keller MJ, Mesquita PM, Marzinke MA, Teller R, Espinoza L, Atrio JM, Lo Y, Frank B, Srinivasan S, Fredricks DN, Rabe L, Anderson PL, **Hendrix CW**, Kiser PF, Herold BC. Phase 1 Randomized Placebo-Controlled Safety and Pharmacokinetic Trial of a Tenofovir Disoproxil Fumarate Vaginal Ring. AIDS 2016 Mar 13;30(5):743-51. PMC4767579

PUBLICATIONS

Original Research – continued

163. Bunge KE, Dezzutti CS, Rohan LC, **Hendrix CW**, Marzinke MA, Richardson-Harman N, Moncla BJ, Devlin B, Meyn LA, Spiegel HM, Hillier SL. A Phase 1 trial to assess the safety, acceptability, pharmacokinetics and pharmacodynamics of a novel dapivirine vaginal film. J Acquir Immune Defic Syndr. 2016 Apr 15;71(5):498-505. PMC5040830

164. van der Straten A, Brown ER, Marrazzo JM, Chirenje MZ, Liu K, Gomez K, Marzinke MA, Piper JM, **Hendrix CW**, MTN-003 VOICE Protocol Team. Divergent Adherence Estimates with Pharmacokinetic and Behavioral Measures in the MTN-003 (VOICE) Study. J Internat AIDS Soc 2016 Feb 4;19(1):20642. PMC4744323

165. Musinguzi N, Muganzi CD, Boum Y, Ronald A, Celum C, Baeten J, Bangsberg DR, Haberer JE, **Partners PrEP Ancillary Adherence Study Team**. Comparison of Subjective and Objective Adherence Measures for Pre-Exposure Prophylaxis against HIV Infection among Serodiscordant Couples in East Africa: An Analysis from the Partners PrEP Ancillary Adherence Study. AIDS 2016 Apr 24;30(7):1121-9. *PMCID Pending*

166. Coleman J, Fuchs EJ, Aung WS, Marzinke MA, Bakshi RP, Spiegel HML, Robinson JR, **Hendrix CW**. Feasibility of radiolabeled small molecule permeability as a quantitative measure of microbicide candidate toxicity. Contraception 2016 Apr;93(4):331-6. PMC4783221

167. Fuchs EJ, Kiser J, **Hendrix CW**, Sulkowski M, Radebaugh C, Bushman L, Ray M, Andrade A. Plasma and Intracellular Ribavirin Concentrations are not Significantly Altered by Abacavir in Hepatitis C Virus-Infected Patients". J Antimicrob Chemother 2016 Feb 10. Jun;71(6):1597-600. PMC4867100

168. Baeten JM, Palanee-Phillips T, Brown ER, Schwartz K, Soto-Torres LE, Govender V, Mgodi NM, Matovu Kiweewa F, Nair G, Mhlanga F, Siva S, Bekker LG, Jeenarain N, Gaffoor Z, Martinson F, Makanani B, Pather A, Naidoo L, Husnik M, Richardson BA, Parikh UM, Mellors JW, Marzinke MA, **Hendrix CW**, van der Straten A, Ramjee G, Chirenje ZM, Nakabiito C, Taha TE, Jones J, Mayo A, Scheckter R, Berthiaume J, Livant E, Jacobson C, Ndase P, White R, Patterson K, Germuga D, Galaska B, Bunge K, Singh D, Szydlo DW, Montgomery ET, Mensch BS, Torjesen K, Grossman CI, Chakhtoura N, Nel A, Rosenberg Z, McGowan I, Hillier S; MTN-020–ASPIRE Study Team. Use of a Vaginal Ring Containing Dapivirine for HIV-1 Prevention in Women. N Engl J Med. 2016 Dec 1;375(22):2121-2132. PMC4993693

169. Mugwanya K, Baeten J, Celum C, Donnell D, Nickolas T, Mugo N, Branch A, Tappero J, Kiarie J, Ronald A, Yin M, Wyatt C; **Partners PrEP Study Team**. Low risk of Proximal Tubular Dysfunction Associated with Emtricitabine-Tenofovir Disoproxil Fumarate Pre-Exposure Prophylaxis in Men and Women. J Infect Dis. 2016 Oct 1;214(7):1050-7. PMC5021224

PUBLICATIONS

Original Research – continued

170. Mujugira A, Coombs RW, Heffron R, Celum C, Ronald A, Mugo N, Baeten JM; **Partners PrEP Study Team**. Seminal HIV-1 RNA Detection in Heterosexual African Men Initiating Antiretroviral Therapy. J Infect Dis. 2016 Aug 15;72(5): 465-584. PMC4918825

171. Moss JA, Butkyavichene I, Churchman SA, Gunawardana M, Fanter R, Miller CS, Yang F, Easley JT, Marzinke MA, **Hendrix CW**, Smith TJ, Baum MM. Combination pod-intravaginal ring delivers antiretroviral agents for HIV prophylaxis: pharmacokinetic evaluation in an ovine model. Antimicrob Agents Chemother 2016 May 23;60(6):3759-66. PMC4879417

172. Lu Y, Goti V, Chaturvedula A, Haberer J, Fossler M, Sale M, Bangsberg D, Baeten J, Celum C, **Hendrix CW**. Population pharmacokinetics of tenofovir in HIV-1 uninfected members of sero-discordant couples and effect of dose reporting methods" Antimocrob Agen Chemother 2016 September 2016 60:5379-5386. PMC4997873

173. Baeten JM, Heffron R, Kidoguchi L, Mugo NR, Katabira E, Bukusi EA, Asiimwe S, Haberer JE, Morton J, Ngure K, Bulya N, Odoyo J, Tindimwebna E, **Hendrix CW**, Marzinke MA, Ware N, Wyatt M, Morrison S, Haugen H, Mujugira A, Donnell D, Celum C, Partners Demonstration Project Team. Integrated Delivery of Antiretroviral Treatment and Pre-Exposure Prophylaxis Results in Near Elimination of HIV-1 Transmission among African HIV-1 Serodiscordant Couples: A Prospective Implementation Study. PLOS Medicine 2016 Aug 23;13(8):e1002099. PMC4995047

174. Noguchi L, Montgomery E, Biggio J, **Hendrix CW**, Bogen D , Hillier S, Dai J, Piper J, Marzinke M, Dezzutti C, Isaacs S, Schwartz J, Watts DH, Beigi RH. Detectable tenofovir levels in breastfeeding infants of mothers exposed to topical tenofovir. Antimicrob Agent Chemother 2016 Aug 22;60(9):5616-9. PMC4997886

175. Beigi, RH, Noguchi LM, Montgomery E, Biggio J, **Hendrix CW**, Marzinke MA, Dai JY, Pan J, Kunjara R, Schwartz JL, Isaacs K, Piper JM, Watts DH. A Randomized Safety and Pharmacokinetic Trial of Daily Tenofovir 1% Gel in Term and Near-Term Pregnancy. J Internat AIDS Soc. 2016 Sep 21;19(1):20990. PMC5034095

176. Mugwanya KK, **Hendrix CW**, Mugo N, Marzinke MA, Katabira E, Ngure K, Semiyaga N, John-Stewart G, Muwonge T, Muthuri G, Stergachis A, Celum C, Jared M. Baeten JM. Pre-exposure Prophylaxis Use by Breastfeeding HIV-Uninfected Women: A Prospective Short-Term Study of Antiretroviral Excretion in Breast Milk and Infant Absorption. PLOS Med 2016 Sep 27;13(9):e1002132. PMC5038971

177. Heffron R, Parikh UM, Penrose KJ, Mugo N, Donnell D, Celum C, Mellors JW, Baeten JM; **Partners PrEP Study Team**. Objective Measurement of Inaccurate Condom Use Reporting Among Women Using Depot Medroxyprogesterone Acetate for Contraception. AIDS Behav. 2016 Oct 3. [Epub ahead of print] PMC5378697

PUBLICATIONS

Original Research – continued

178. Irungu EM, Heffron R, Mugo N, Ngure K, Katabira E, Bulya N, Bukusi E, Odoyo J, Asiimwe S, Tindimwebwa E, Celum C, Baeten JM; **Partners Demonstration Project Team**. Use of a risk scoring tool to identify higher-risk HIV-1 serodiscordant couples for an antiretroviral-based HIV-1 prevention intervention. BMC Infect Dis. 2016 Oct 17;16(1):571. PMC5067880

179. Dalesio NM, **Hendrix CW**, McMichael DH, Thompson CB, Lee CKK, Pho H, Arias RS, Lynn RR, Galinkin J, Yaster M, Brown RH, Schwartz AR. Effects of Obesity and Leptin Deficiency on Morphine Pharmacokinetics in a Mouse Model. Anesth Analg. 2016 Dec;123(6):1611-1617. *PMCID Pending*

180. Madrasi K, Chaturvedula A, Haberer JE, Sale M, Fossler MJ, Bangsberg D, Baeten J, Celum C, **Hendrix CW**. Markov mixed effects modeling using electronic adherence monitoring records identifies influential covariates to HIV pre-exposure prophylaxis. J Clin Pharm 2017 May;57(5):606-615. *PMCID pending*

181. Gulick RM, Wilkin TJ, Chen YQ, Landovitz RJ, Amico KR, Young AM, Richardson P, Marzinke MA, **Hendrix CW**, Eshleman SH, McGowan I, Cottle LM, Andrade A, Marcus C, Klingman KL, Chege W, Rinehart AR, Rooney JF, Andrew P, Salata RA, Magnus M, Farley JE, Liu A, Frank I, Ho K, Santana J, Stekler JD, McCauley M, Mayer KH. Phase 2 Study of the Safety and Tolerability of Maraviroc-Containing Regimens to Prevent HIV Infection in Men Who Have Sex with Men (MSM) (HPTN 069/ACTG A5305) J Infect Dis 2017 Jan 15; 215 (2): 238-246. *PMCID pending*

182. Robinson JA, Marzinke MA, Bakshi RP, Fuchs EJ, Radebaugh CL, Aung W, Spiegel HML, Coleman JC, Rohan LC, **Hendrix CW**. Comparison of dapivirine vaginal gel and film formulation pharmacokinetics and pharmacodynamics (FAME 02B). AIDS Res Hum Retrovir 2017 Apr;33(4):339-346. PMC5372771

183. Weld EW*, Hiruy H*, Guthrie KM, Fava JL, Vargas SE, Buckheit K, Buckheit R, Spiegel H, Breakey J, Fuchs EJ, **Hendrix CW**. A Comparative Pre-Phase I Study of the Impact of Gel Vehicle Volume on Distal Colon Distribution, User Experience, and Acceptability. AIDS Res Hum Retrovir 2017 May;33(5):440-447. **Co-first authors.* PMC5439405

184. Mayer KH, Safren SA, Elsesser SA, Psaros C, Tinsley J, Marzinke MA, Clarke W, **Hendrix CW**, Taylor SW, Haberer J, Mimiaga MJ. Optimizing Pre-Exposure Antiretroviral Prophylaxis Adherence in Men Who Have Sex with Men: Results of a Pilot Randomized Controlled Trial of "Life-Steps for PrEP". AIDS Behav 2017 May;21(5):1350-1360. PMC5380582

PUBLICATIONS

Original Research – continued

185. Cranston RD, Lama JR, Richardson BA, Carballo-Diéguez A, Kunjara RP, Liu K, Leu C-S, Galaska B, Jacobson CE, Parikh U, Marzinke MA, **Hendrix CW**, Johnson S, Piper JM, Grossman C, Ho KS, Lucas J, Pickett J, Bekker L-G, Chariyalertsak S, Chitwarakorn A, Gonzales P, Holtz TH, Liu AY, Mayer KH, Zorrilla C, McGowan I, and the MTN-017 Protocol Team. MTN-017: A Rectal Phase 2 Extended Safety and Acceptability Study of Tenofovir Reduced-Glycerin 1% Gel. Clin Infect Dis 2017 Mar 1;64(5):614-620. PMC5850518

186. Haaland RE, Holder A, Pau CP, Swaims-Kohlmeier A, Dawson C, Smith DK, Segolodi TM, Thigpen MC, Paxton LA, Parsons TL, **Hendrix CW**, Hart CE. Levels of Intracellular Phosphorylated Tenofovir and Emtricitabine Correlate With Natural Substrate Concentrations in Peripheral Blood Mononuclear Cells of Persons Prescribed Daily Oral Truvada for HIV Pre-exposure Prophylaxis. J Acquir Immune Defic Syndr. 2017 Jul 1;75(3):e86-e88. PMC5472483

187. Thomson KA, Haberer JE, Marzinke MA, Mujugira A, **Hendrix CW**, Celum C, Ndase P, Ronald A, Bangsberg DR, Baeten JM; Partners PrEP Study Team. Medication Sharing is Rare among African HIV-1 Serodiscordant Couples Using Oral Pre-exposure Prophylaxis (PrEP) for HIV-1 Prevention. J Acquir Immune Defic Syndr. 2017 Jun 1;75(2):184-189. PMC5432041

188. Sivay MV, Li M, Piwowar-Manning E, Zhang Y, Hudelson SE, Marzinke MA, Amico RK, Redd A, **Hendrix CW**, Anderson PL, Bokoch K, Bekker LG, van Griensven F, Mannheimer S, Hughes JP, Grant R, Eshleman SH; HPTN 067/ADAPT Study Team. Characterization of HIV Seroconverters in a TDF/FTC PrEP Study: HPTN 067/ADAPT. J Acquir Immune Defic Syndr. 2017 Jul 1;75(3):271-279. PMC5472493

189. Bochner AF, Baeten JM, Rustagi AS, Nakku-Joloba E, Lingappa JR, Mugo NR, Bukusi EA, Kapiga S, Delany-Moretlwe S, Celum C, Barnabas RV; Partners in Prevention HSV/HIV Transmission Study and **Partners PrEP Study Teams**. A cross-sectional analysis of Trichomonas vaginalis infection among heterosexual HIV-1 serodiscordant African couples. Sex Transm Infect. 2017 Nov;93(7):520-529. *PMCID pending*

190. Zhang Y, Clarke W, Marzinke MA, Piwowar-Manning E, Beauchamp G, Breaud A, **Hendrix CW**, Cloherty GA, Emel L, Rose S, Hightow-Weidman L, Siegel M, Shoptaw S, Fields SD, Wheeler D, Eshleman SH. Evaluation of a multi-drug assay for monitoring adherence to a regimen for HIV pre-exposure prophylaxis in a clinical study (HIV Prevention Trials Network 073). Antimicrob Agents Chemother. 2017 Apr 24. pii: AAC.02743-16. doi: 10.1128/AAC.02743-16. PMC5487665

PUBLICATIONS

Original Research – continued

191. Gulick RM, Wilkin TJ, Chen YQ, Landovitz RJ, Amico KR, Young AM, Richardson P, Marzinke MA, Hendrix CW, Eshleman SH, McGowan I, Cottle LM, Andrade A, Marcus C, Klingman KL, Chege W, Rinehart AR, Rooney JF, Andrew P, Salata RA, Siegel M, Manabe YC, Frank I, Ho K, Santana J, Stekler JD, Swaminathan S, McCauley M, Hodder S, Mayer KH. Safety and Tolerability of Maraviroc-Containing Regimens to Prevent HIV Infection in Women: A Phase 2 Randomized Trial. Ann Intern Med 2017 Sep 19;167(6):384-393. PMC5667908

192. Velloza J, Celum C, Haberer JE, Ngure K, Irungu E, Mugo N, Baeten JM, Heffron R; **Partners Demonstration Project Team**. Depression and ART Initiation Among HIV Serodiscordant Couples in Kenya and Uganda. AIDS Behav. 2017 Aug;21(8):2509-2518. PMC5552192

193. Shieh EC*, Weld ED*, Fuchs EJ, Hiruy H, Buckheit KW, Buckheit RW, Breakey JC, **Hendrix CW**. Lubricant Provides Poor Rectal Mucosal HIV Coverage. AIDS Res Hum Retroviruses. 2017 Aug;33(8):784-787. *Co-First Authors. PMC5564025

194. Husnik MJ, Brown ER, Marzinke M, Livant E, Palanee-Phillips T, **Hendrix CW**, Kiweewa FM, Nair G, Soto-Torres LE, Schwartz K, Hillier SL, Baeten J. Implementation of a Novel Adherence Monitoring Strategy in a Phase III, Blinded, Placebo-Controlled, HIV-1 Prevention Clinical Trial. J Acquir Immune Defic Syndr. 2017 Nov 1;76(3):330-337. PMC5634926

195. Heffron R, Parikh UM, Penrose KJ, Mugo N, Donnell D, Celum C, Mellors JW, Baeten JM; **Partners PrEP Study Team**. Objective Measurement of Inaccurate Condom Use Reporting Among Women Using Depot Medroxyprogesterone Acetate for Contraception. AIDS Behav. 2017 Jul;21(7):2173-2179. PMC5378697

196. Heffron R, McClelland RS, Balkus JE, Celum C, Cohen CR, Mugo N, Bukusi E, Donnell D, Lingappa J, Kiarie J, Fiedler T, Munch M, Fredricks DN, Baeten JM; **Partners PrEP Study Team**. Efficacy of oral pre-exposure prophylaxis (PrEP) for HIV among women with abnormal vaginal microbiota: a post-hoc analysis of the randomised, placebo-controlled Partners PrEP Study. Lancet HIV. 2017 Oct;4(10):e449-e456. PMC5649365

197. Carballo-Diéguez A, Balán IC, Brown W 3rd, Giguere R, Dolezal C, Leu CS, Marzinke MA, **Hendrix CW**, Piper JM, Richardson BA, Grossman C, Johnson S, Gomez K, Horn S, Kunjara Na Ayudhya RP, Patterson K, Jacobson C, Bekker LG, Chariyalertsak S, Chitwarakorn A, Gonzales P, Holtz TH, Liu A, Mayer KH, Zorrilla C, Lama J, McGowan I, Cranston RD. High levels of adherence to a rectal microbicide gel and to oral Pre-Exposure Prophylaxis (PrEP) achieved in MTN-017 among men who have sex with men (MSM) and transgender women. PLoS One. 2017 Jul 27;12(7):e0181607. PMC5531503

PUBLICATIONS

Original Research – continued

198. Heffron R, Thomson K, Celum C, Haberer J, Ngure K, Mugo N, Bukusi E, Katabira E, Odoyo J, Bulya N, Asiimwe S, Tindimwebwa E, Baeten JM; **Partners Demonstration Project Team.** Fertility Intentions, Pregnancy, and Use of PrEP and ART for Safer Conception Among East African HIV Serodiscordant Couples. AIDS Behav. 2017 Sep 11. doi: 10.1007/s10461-017-1902-7. PMC5845763

199. Montgomery ET, Noguchi LM, Dai JY, Pan J, Biggio J, **Hendrix C**W, Isaacs K, Watts DH, Schwartz JL, Piper J, Beigi R. Acceptability of and Adherence to an Antiretroviral-Based Vaginal Microbicide among Pregnant Women in the United States. AIDS Behav 2018 Feb; 22(2): 402–411. PMC5702586

200. Bekker LG, Roux S, Sebastien E, Yola N, Amico KR, Hughes JP, Marzinke MA, **Hendrix CW**, Anderson PL, Elharrar V, Stirratt M, Rooney JF, Piwowar-Manning E, Eshleman SH, McKinstry L, Li M, Dye BJ, Grant RM, HPTN 067 (ADAPT) study team. Daily and non-daily pre-exposure prophylaxis in African women (HPTN 067/ADAPT Cape Town Trial): a randomised, open-label, phase 2 trial. Lancet HIV. 2018 Feb;5(2):e68-e78. doi: 10.1016/S2352-3018(17)30156-X. *PMCID Pending*

201. Robinson JA, Marzinke MA, Fuchs EJ, Bakshi RP, Radebaugh CL, Spiegel HML, Coleman JS, Rohan LC, **Hendrix CW**. Comparison of the pharmacokinetics and pharmacodynamics of single-dose tenofovir vaginal film and gel formulation (FAME-05). JAIDS 2018 Feb 1;77(2):175-182. PMC5821271

202. Smith J, Moss J, Srinivasan P, Butkyavichene I, Gunawardana M, Fanter R, Miller C, Sanchez D, Yang F, Ellis S; Zhang J, Marzinke M, **Hendrix CW**, Kapoor A, Baum M. Novel multipurpose pod-intravaginal ring for the prevention of HIV, HSV, and unintended pregnancy: Pharmacokinetic evaluation in a macaque model. PLOS One 2017 Oct 5;12(10):e0185946. PMC5628903

203. Xiao P, Gumber S, Marzinke M, Date A, Hoang T, Hanes J, Ensign L, Wang L, Rohan L, Fuchs E, **Hendrix CW**, Villinger F. Hypo-osmolar formulation of TFV enema promotes uptake and metabolism of TFV in tissues leading to prevention of SHIV/SIV infection. Antimicrob Agents Chemother 2017 Dec 21;62(1). pii: e01644-17. PMC5740373

204. Abaasa A, **Hendrix CW**, Gandhi M, Anderson P, Kamali A, Kibengo F, Sanders E, Mutua G, Priddy F, Haberer JE. Utility of Different Adherence Measures for Prep: Patterns and Incremental Value. AIDS Behav 2018 Apr;22(4):1165-1173. PMC5878836

PUBLICATIONS

Original Articles (continued)

205. Balán IC, Giguere R, Brown W 3rd, Carballo-Diéguez A, Horn S, **Hendrix CW**, Marzinke MA, Ayudhya RPKN, Patterson K, Piper JM, McGowan I, Lama JR, Cranston RD; MTN-017 Protocol Team. Brief Participant-Centered Convergence Interviews Integrate Self-Reports, Product Returns, and Pharmacokinetic Results to Improve Adherence Measurement in MTN-017. AIDS Behav. 2017 Oct 26. doi: 10.1007/s10461-017-1955-7. *PMCID Pending*

206. Figueroa D, Madeen E, Tillotson J, Richardson P, Cottle L, McCauley M, Landovitz R, Andrade A, **Hendrix CW**, Mayer KH, Wilkin TJ, Gulick R, Bumpus NN. Genetic Variation of the Kinases that Phosphorylate Tenofovir and Emtricitabine in Peripheral Blood Mononuclear Cells. AIDS Res Hum Retroviruses. 2018 May;34(5):421-429. *PMCID Pending*

207. Grant RM, Mannheimer S, Hughes JP, Hirsch-Moverman Y, Loquere A, Chitwarakorn A, Curlin ME, Li M, Amico KR, **Hendrix CW**, Anderson PL, Dye BJ, Marzinke MA, Piwowar-Manning E, McKinstry L, Elharrar V, Stirratt M, Rooney JF, Eshleman SH, McNicholl JM, van Griensven F, Holtz TH. Daily and Nondaily Oral Preexposure Prophylaxis in Men and Transgender Women Who Have Sex With Men: The Human Immunodeficiency Virus Prevention Trials Network 067/ADAPT Study. Clin Infect Dis. 2018 Feb 6. doi: 10.1093/cid/cix1086. [Epub ahead of print] *PMCID Pending*

208. Figueroa DB, Tillotson J, Li M, Piwowar-Manning E, **Hendrix CW**, Holtz TH, Bokoch K, Bekker LG, van Griensven F, Mannheimer S, Hughes JP, Grant RM, Bumpus NN. Discovery of genetic variants of the kinases that activate tenofovir among individuals in the United States, Thailand, and South Africa: HPTN067. PLoS One. 2018 Apr 11;13(4):e0195764. PMC5895070

209. Heffron R, Thomson K, Celum C, Haberer J, Ngure K, Mugo N, Bukusi E, Katabira E, Odoyo J, Bulya N, Asiimwe S, Tindimwebwa E, Baeten JM; **Partners Demonstration Project Team**. Fertility Intentions, Pregnancy, and Use of PrEP and ART for Safer Conception Among East African HIV Serodiscordant Couples. AIDS Behav. 2018 Jun;22(6):1758-1765. PMC5845763

210. Justman JE, Nair G, **Hendrix CW**, Piper JM, Marzinke MA, Dai JY, Pan Z, Galaska B, Levy L, Schwartz JL, Balar B, Kunjara Na Ayudhya RP, Mushamiri I, McGowan I, Dezzutti CS, MTN-014 Study Team. Pharmacokinetics and Pharmacodynamics of Tenofovir Reduced-Glycerin 1% Gel in the Rectal and Vaginal Compartments in Women: A Cross-Compartmental Study with Directly Observed Dosing. J Acquir Immune Defic Syndr. 2018 Jun 1;78(2):175-182. PMC5963717

211. Hoang T, Date AA, Ortiz JO, Young TW, Bensouda S, Xiao P, Marzinke MA, Rohan LC, Fuchs EJ, **Hendrix CW**, Gumber S, Villinger F, Cone RA, Hanes J, Ensign LM. Development of rectal enema as microbicide (DREAM): Preclinical progressive selection of a tenofovir prodrug enema. Eur J Pharm Biopharm 2018 May 23. pii: S0939-6411(18)30476-4. doi: 10.1016/j.ejpb.2018.05.030. [Epub ahead of print] PMCID Pending

PUBLICATIONS

Original Articles

212. Pyra M, Anderson PL, **Hendrix CW**, Heffron R, Mugwanya K, Haberer JE, Thomas KK, Celum C, Donnell D, Marzinke MA, Bukusi EA, Mugo NR, Asiimwe S, Katabira E, Baeten JM; Partners Demonstration Study Team. Tenofovir and tenofovir-diphosphate concentrations during pregnancy among HIV-uninfected women using oral pre-exposure prophylaxis. AIDS. 2018 Jun 11. doi: 10.1097/QAD.0000000000001922. [Epub ahead of print] PMCID in progress

213. Bunge KE, Dezzutti CS, **Hendrix CW**, Marzinke MA, Spiegel HML, Moncla BJ, Schwartz JL, Meyn LA, Richardson-Harman N, Rohan LC, Hillier SL. FAME-04: A Phase 1 trial to assess the safety, acceptability, pharmacokinetics and pharmacodynamics of film and gel formulations of tenofovir J Internat AIDS Soc 2018 [In Press] PMCID pending

214. Aung W, Bakshi RP, Breakey J, Johnson JE, **Hendrix CW**, Weld ED, Fuchs EJ, Marzinke MA. Fecal Coliform Bacterial Detection to Assess Enema Adherence in HIV Prevention Clinical Studies. AIDS Behav 2018 Jul 3. doi: 10.1007/s10461-018-2211-5. [Epub ahead of print] PMCID pending

Review Articles

1. Cao Y-J, **Hendrix CW**. Male Genital Tract Pharmacology: Developments in Quantitative Methods to Better Understand a Complex Peripheral Compartment. Clin Pharmacol Ther . 2008 Mar;83(3):401-12.

2. **Hendrix CW**, Cao YJ, Fuchs EJ. Topical Microbicides to Prevent HIV: Clinical Drug Development Challenges. Ann Rev Pharmacol Toxicol 2009; 49:349–75.

3. Morrow KM, **Hendrix CW**. Clinical evaluation of microbicide formulations. J Antiviral Res 2010;88S:S40-S46. PMCID: PMC3053029

4. **Hendrix CW**. The Clinical Pharmacology of Antiretrovirals for HIV Prevention. Curr Opin HIV AIDS 2012 Nov;7(6):498-504.

5. **Hendrix CW**. Exploring concentration-response in HIV Pre-Exposure Prophylaxis to optimize clinical care and trial design. Cell 2013 Oct 24;155(3):515-8.

6. Carballo-Diéguez A, Lentz C, Giguere R, Fuchs EJ, **Hendrix CW**. Rectal Douching Associated with Receptive Anal Intercourse: A Literature Review. AIDS Behav. 2017 Nov 2. doi: 10.1007/s10461-017-1959-3. PMC5878987

Case Reports

1. Blatt SP, Dolan MJ, **Hendrix CW**, Melcher GP. Legionnaires' Disease in HIV-Infected Patients - 8 Cases and Review. Clin Infect Dis 1994;18(2):227-32.

PUBLICATIONS

Book Chapters, Monographs

1. Flexner CF and **Hendrix CW**. Pharmacology of Antiretroviral Agents. In: DeVita VT, Hellman S, Rosenberg SA, AIDS: biology, diagnosis, treatment and prevention. 4th ed. Philadelphia: Lippincott-Raven, 1997.

2. **Hendrix CW**, Sulkowski MS. Hepatotoxicity of antiretroviral therapy and drug-drug interactions with antiviral therapies for hepatitis C infection. In: Strategies for the Management of HIV/HCV Co-infection. Seacaucus: Projects in Knowledge, 2002.

Proceedings Reports

1. Committee on the role of institutional review boards in health services research data privacy protection. Institutional Review Boards and Health Services Research Data Privacy. A Workshop Summary. Institute of Medicine, Washington, D.C. May 2000.

2. Committee on the Role of institutional review boards in health services research data privacy protection. Protecting Data Privacy in Health Services Research. A Workshop Summary. Division of Health Care Services. Institute of Medicine, National Academy Press. Washington, D.C. 2000.

3. Veronese F, Anton P, Fletcher CV, DeGruttola V, McGowan I, Becker S, Zwerski S, Burns D; **Workshop Organizing Committee**. Implications of HIV PrEP trials results. AIDS Res Hum Retroviruses. 2011 Jan;27(1):81-90.

Editorials (Invited)

1. **Hendrix CW**. When is a PrEP candidate ready for phase 3? Lancet HIV DOI: http://dx.doi.org/10.1016/S2352-3018(16)30162-X

Letters, Correspondence

1. Blatt SP, **Hendrix CW**. Delayed-Type Hypersensitivity and AIDS. Ann Intern Med 1994;120(4):343-44. (Letter)

2. **Hendrix CW**. Consideration of the prevalence of CMV retinitis alters the assessment of a serum cytomegalovirus DNA test. J Infect Dis 1995;171(6):1688. (Letter)

3. Bray PF, Goldschmidt-Clermont P, Furman MI, Michelson AD, Barnard MR, Mascelli MA, **Hendrix CW**, Coleman L, Hamlington J, Kickler T, Christie DJ, Kundu S. Platelet glycoprotein IIIa PIA polymorphism and effects of aspirin on thrombin generation - Response Circulation 103(6):E33-E34 FEB 13 2001 (Letter)

4. **Hendrix CW**. Seizing the Opportunity. HIV Prevention in Military Communities. Civil-Military Alliance Newsletter. 1995;1(4):9.

5. Kingma SJ, **Hendrix CW**, Yeager R, Miller NN, D'Amelio R, Wouters R, "Analysis of global questionnaire on HIV/AIDS prevention, testing and care in current military medical practice." Occasional Paper, Civil-Military Alliance to Combat HIV and AIDS, 1996.

6. Yeager R, **Hendrix CW**. Global survey of military HIV/AIDS policies and programs. Civil-Military Alliance Newsletter. 1997;3(1): S1.

PUBLICATIONS

Letters, Correspondence

7. **Hendrix CW**. Behavioral surveillance and intervention in the military environment. Civil-Military Alliance Newsletter. 1997;3(4):5.

8. **Hendrix CW**. AIDS in the Public Eye: AIDS Fatigue or Healthy Maturation. Lutheran AIDS Network Newsletter. 9(2);4-5;2000.

9. Lu Y, Fuchs EJ, **Hendrix CW**, Bumpus NN. Response to "Clinical Relevance of CYP3A5 Genotype on Maraviroc Exposures". Drug Metab Dispos. 2015 May;43(5):773

10. Dalesio NM, Lee CKK, **Hendrix CW**. In Response. Anesth Analg. 2017 Jul;125(1):362-363

FUNDING

Extramural Funding (current, pending, previous)

Current

Dates:	01/09/2017-01/01/2019
Title:	A Phase I Multi-Compartment Pharamcokinetic Study of Cabotegravir Long-Acting in Healthy Adult Volunteers
Grant Number:	GSK Protocol 201767
Sponsor:	ViiV/GSK
Total Direct Costs:	$729,798
Principal Investigator:	**C. Hendrix**
Role:	**PI**. Provide protocol development/execution and PK/PD data analysis and interpretation for clinical development of long-acting implantable HIV prevention strategy.
Effort:	10%

Dates:	07/07/2015-06/30/2020
Title:	Sustained Long Acting Prevention Against HIV Program Operation
Grant Number:	UM1 AI120184-01 (Program Project Grant)
Sponsor:	NIH
Total Direct Costs:	$72,770
Principal Investigator:	Thomas Hope (Northwestern University)
Role:	**Project Co-Leader, Site PI**. Provide protocol development/execution and PK/PD data analysis and interpretation for clinical development of long-acting implantable HIV prevention strategy.
Effort:	20%

Dates:	07/01/2014 - 06/30/2019
Title:	Development of Rectal Enema As Microbicide (DREAM)
Grant Number:	U19 AI113127-01 (Program Project Grant)
Sponsor:	NIH
Total Direct Costs:	$ 16,323,328
Total Costs:	$ 20,677,877
Principal Investigator:	**C. Hendrix**
Effort:	20%

Dates:	07/01/2014 - 06/30/2019
Title:	Systemic development of microbicide Intravaginal rings for HIV prevention
Grant Number:	U19AI113048-01
Sponsor:	NIH
Total Direct Costs:	$ 16,662,549
Principal Investigator:	Marc Baum (Oak Crest Institute of Science)
Effort:	5%
Role:	**Project PI**. Design, conduct, and data analysis of clinical studies to develop a combination vaginal microbicide ring.

FUNDING

Extramural Funding (current, pending, previous)

Current

Dates:	04/01/2014-03/31/2019
Title:	HIV-1 reservoir dynamics in the female genital tract
Grant Number:	R01 AI08538091-02
Sponsor:	NIH
Total Direct Costs:	$43,580
Principal Investigator:	Athe Tsibris (University of Washington)
Role:	Pharmacologist. Relationship between antiretroviral (ARV) drug concentrations in the blood and female genital tract is a key component of understanding HIV persistence and decay in anatomic reservoirs.
Effort:	2%

Dates:	01/01/2014-11/30/2020
Title:	Pharmacology Network Lab, HIV Prevention Trials Network (HPTN)
Grant Number:	UM1AI068613-08
Sponsor:	NIH
Total Direct Costs:	$ 2,577,018 (Pharmacology Network Lab)
Principal Investigator:	**C. Hendrix**
Role:	Principal Investigator Pharmacology Group. Design and analysis of pharmacology studies and coordination of analytical laboratory to support HPTN clinical studies of HIV pre-exp[osure prophylaxis.
Effort:	10%

Dates:	01/01/2014-11/30/2020
Title:	Pharmacology Network Laboratory, Microbicide Trials Network (MTN)
Grant Number:	UM1AI106707 (Laboratory Center [LC]), UM1AI068633 (Leadership & Operations Center [LOC])
Sponsor:	NIH
Total Direct Costs:	$1,832,004 (Pharmacology Network Lab)
Principal Investigator:	**C. Hendrix**
Role:	Director, Rectal Microbicide Program (LOC), Pharmacology Core Leader Laboratory Center; Principal Investigator for design, execution, and analysis of MTN clinical trials.
Effort:	15%

Dates:	07/01/2013 - 06/30/2018 (NCE)
Title:	The effect of Depo-Provera on HIV susceptibility, immune activation, and PrEP PK
Grant Number:	1R01HD077887-01
Sponsor:	NIH
Total Direct Costs:	1,749,106
Principal Investigator**:**	**C. Hendrix** (Multi-PI with Jenell Coleman). Clinical studies to describe interaction between tenofovir and depo-medroxyprogesteron and impact on pharamcology, immunology, endocrinology, and virology.
Effort:	20%

FUNDING

Extramural Funding (current, pending, previous)

Current

Dates:	07/01/2011-06/30/2018 (NCE)
Title:	Mucus Penetrating Particles For Rectal Microbicides
Grant Number:	R33 AI094519-03
Sponsor:	NIH
Total Direct Costs:	$ 282,000
Principal Investigator:	Justin Hanes
Role:	Pharmacologist. This project will develop mucus penetrating particles for colorectal drug delivery of rectal microbicides for protection against HIV and other STDs. Role is to provide clinical pharmacology for product development to maintain feasibility for future human use of the products.
Effort:	5%

Dates:	09/17/2007-05/31/2018
Title:	Institutional Clinical and Translational Science Award (CTSA)
Grant Number:	NCATS 1UL1TR001079-01
Sponsor:	NIH
Total Direct Costs:	$ 7,485,218
Principal Investigator:	D. Ford
Role:	**Deputy Director ICTR, Translational Science Core Director**
Effort:	10%

Dates:	08/01/2012-07/31/2019 (NCE)
Title:	Development and Evaluation of Dual Compartment Microbicides
Grant Number:	1U19AI101961
Sponsor:	NIH/NIAID
Total Direct Costs:	$3,224,012
Principal Investigator:	Buckheit (ImQuest Pharmaceuticals, Inc.)
Role:	**Project PI**. Design, conduct, and analysis of clinical studies to develop a combination rectal microbicide IQP-0528/tenofovir.
Effort:	21%

Dates:	09/01/2012-08/31/2018 (NCE)
Title:	Efficacy & Safety of Multitargeted Combination Microbicides to Prevent HIV & HSV
Grant Number:	5U19AI076980
Sponsor:	NIH/NIAID
Total Direct Costs:	$ 2,874,915
Principal Investigator:	Herold (Albert Einstein College of Medicine)
Role:	**Core PI**. Design, sample analysis, PK/PD analysis, vaginal microbicide
Effort:	5%

FUNDING

Extramural Funding (current, pending, previous)

Previous

Dates:	04/01/2014 - 03/31/2018
Title:	Pharmacostatistical Modeling and Simulation of Randomized Clinical PrEP Trials
Grant Number:	ID OPP1099837
Sponsor:	Bill and Melinda Gates Foundation
Total Direct Costs:	$925,281
Principal Investigator:	**C. Hendrix.** Pooled data from 5 RCTs to estimate concentration-response within and among PrEP RCTS. Development and integration of PK, PD, and disease response models to perform clinical trial simulation.
Effort:	5%

Dates:	07/01/10-05/31/15 (NCE)
Title:	Exploratory pharmacokinetics of UC781 and Tenofovir vaginal microbicide gel v film
Grant Number:	1U19AI082639
Sponsor:	NIH
Total Direct Costs:	$1,599,703
Principal Investigator:	Hillier (Magee Women's – University of Pittsburgh)
Role:	**Project PI**. Develop combination antiretroviral vaginal microbicide formulation, in both a gel and film formulation.
Effort:	18%

Dates:	9/23/09-8/31/14 (NCE)
Title:	Combination HIV Antiretroviral Rectal Microbicide Program (CHARM)
Grant Number:	1U19AI082637
Sponsor:	NIH/NIAID
Total Direct Costs:	$2,240,713 year 1
Principal Investigator:	McGowan (Magee Women's Research Institute, Univ Pittsburgh)
Role:	**Site PI**. Design, conduct, and analysis of clinical studies and laboratory operations to develop a combination rectal microbicide.
Effort:	18%

Dates:	06/04/08-06/03/15
Title:	Provision and management of a Phase 1 Clinical Trial Unit for Therapeutics Against Infectious Diseases.
Grant Number:	HHSN272200800026C
Sponsor:	NIH-NIAID-DMID
Total Direct costs:	$886,965
Principal Investigator:	Zenilman
Role:	**Site PI.** Management of Johns Hopkins East Baltimore Phase I site; study design, execution, data analysis
Effort :	10%

FUNDING

Extramural Funding (current, pending, previous)

Dates:	07/01/06 - 12/31/13
Title:	Pharmacology Network Lab, HIV Prevention Trials Network (HPTN)
Grant Number:	UM1 AI 068613
Sponsor:	NIH
Total Direct Costs:	$ 1,599,150 (Pharmacology Network Lab)
Principal Investigator:	**C. Hendrix**
Role:	Principal Investigator Pharmacology Core Lab. Design and analysis of pharmacology studies and co-supervision of analytical laboratory to support HPTN clinical studies to investigate the use of anti-retroviral drugs for the prevention of transmission of HIV.
Effort:	5%

Dates:	07/01/06 - 12/31/13
Title:	Pharmacology Network Laboratory, Microbicide Trials Network (MTN)
Grant Number:	U01 AI 068633 subaward 26-3301-4221
Sponsor:	NIH
Total Direct Costs:	$1,777,370 (Pharmacology Network Lab)
Principal Investigator:	**C. Hendrix**
Role:	Principal Investigator for design, execution, and analysis of MTN clinical trials; Supervision of Pharmacology Network Laboratory providing analytical support to the MTN; Scientific leadership at the Executive Committee and Biomedical Science Committee
Effort:	20%

Dates:	02/01/10-01/31/14
Title:	Impact of maternal HAART on HIV-infected breastfeeding infants: Malawi
Grant Number:	1R01AI087139-01A1
Sponsor:	NIH/NIAID/DAIDS
Total Direct Costs:	$373,102
Principal Investigator:	Eshleman
Role:	Co-Investigator – Pharmacologist responsible for PK data analysis
Effort:	1%

Dates:	12/01/09-11/30/13
Title:	Origin and evolution of HIV-1 drug resistance in the RT-SHIVmne Macaque Model
Grant Number:	1R01AI080290-01A2
Sponsor:	NIH
Total Direct Costs:	$42,684(total direct, JHU project)
Principal Investigator:	Ambrose (Univ of Pittsburgh)
Role:	Site PI. Pharmacology design, assay development, and PK data analysis
Effort:	3%

FUNDING

Extramural Funding (current, pending, previous)

Previous

Dates:	09/01/09-08/31/13
Title:	Safety, Efficacy, Mechanisms of Ginseng in HIV-related Fatigue
Grant Number:	R01 AT005526-01
Sponsor:	NCCAM
Total Direct Costs:	$1,330,311
Principal Investigator:	Andrade
Role:	Director of clinical research unit, PK data analysis.
Effort:	4%

Dates:	09/01/09-12/31/12
Title:	Pre-exposure HIV prophylaxis adherence in rural Uganda
Grant Number:	Partners PrEP Study (Bangsberg at MGH)-JHU subaward
Sponsor:	Bill and Melinda Gates Foundation
Total Direct costs:	$400,000
Principal Investigator:	Bangsberg
Role:	Design/analysis of the pharmacokinetic aspects of the study and laboratory assays to examine the relationship between drug level, adherence, and product sharing.
Effort:	5%

Dates:	09/01/09-12/31/12
Title:	Pre-exposure HIV prophylaxis adherence in rural Uganda
Grant Number:	Partners PrEP Study (Bangsberg at MGH)-JHU subaward
Sponsor:	Bill and Melinda Gates Foundation
Total Direct costs:	$400,000
Principal Investigator:	Bangsberg
Role:	Design/analysis of the pharmacokinetic aspects of the study and laboratory assays to examine the relationship between drug level, adherence, and product sharing.
Effort:	5%

Dates:	11/01/09-04/30/12
Title:	A pilot study of Pre-Exposure Prophylaxis (PrEP) to evaluate safety, acceptability, and adherence in at-risk populations in Kenya, Africa
Grant Number:	JHURSA0901
Sponsor:	International AIDS Vaccine Initiative
Total Direct Costs:	$72,326
Principal Investigator:	**Hendrix**
Role:	Pharmacological sub-study design and analysis. Supervision of lab assay of samples for drug concentration.
Effort:	2%

FUNDING

Extramural Funding (current, pending, previous)

Previous

Dates:	09/01/09-08/28/11
Title:	Pharmacokinetic interactions of Ribavirin and Abacavir in healthy volunteers
Grant Number:	Contract
Sponsor:	GlaxoSmithKline
Total Direct costs:	$367,185
Principal Investigator:	Andrade
Role:	**Pharmacologist.** Support in design and analysis of investigator initiated Ribavirin-Abacavir drug-drug interaction study.
Effort:	1%

Dates:	05/01/09-04/30/10
Title:	Distribution of orally-administered Tenofovir into colon and vaginal tissue for the prevention of sexual HIV transmission.
Grant Number:	Contract
Sponsor:	Gilead
Total Direct costs:	$78,358
Principal Investigator:	**C. Hendrix**
Role:	Design, execution, analysis of study of tenofovir to evaluate the PK of the drug and phosphorylated moieties in blood, tissue (colon and vaginal) and cells using LC/MS/MS and accelerator mass spectrometry.
Effort:	1%

Dates:	01/01/07 – 12/31/08
Title:	Epithelial Injury and HIV Penetration after Simulated Ejaculation
Grant Number:	106755-41-RGMT
Sponsor:	amfAR (American Foundation for AIDS Research)
Total Direct Costs:	$ 100,000
Principal Investigator:	**C. Hendrix**
Role:	Principal Investigator (design, execution, and analysis) of study is to evaluate the effect of anal sexual practices on the rectum and distal colon which might affect the study and development of effective HIV microbicides for rectal use.
Effort:	4%

FUNDING

Extramural Funding (current, pending, previous)

Previous

Dates:	09/01/06-09/01/07
Title:	Prophylactic Antimalarial Activity of DB289 in Volunteers Challenged with *Plasmodium falciparum*
Grant Number:	C06-015
Sponsor:	Immtech Pharmaceuticals
Total Direct Costs:	$ 466,548
Principal Investigator:	T. Shapiro
Role:	Contribute to design and pharmacokinetics data analysis. Investigator-initiated prophylactic antimalarial activity of DB289 in volunteers challenged with plasmodium falciparum.
Effort:	10%

Dates:	8/01/06 - 7/31/09
Title:	Microbicide Development Program.
Grant Number:	NIH U19 AI060614
Sponsor:	NIH
Total Direct Costs:	$ 1,429,670
Principal Investigator:	P. Anton (UCLA)
Role:	Project PI. Project 5 to evaluate pharmacokinetics, toxicity, and acceptability of enema and gel as drug delivery device for UC781, a non-nucleoside reverse transcriptase inhibitor, as topical HIV microbicides.
Effort:	30%

Dates:	04/01/06 – 03/31/07
Title:	CV-N Microbicide Program: A Phase I Study to Determine the Safety, Tolerance, and Acceptability of the Vaginal Distribution of Cyanovirin.
Grant Number:	U19 AI051650 Program Project Grant (R. Bax, Biosyn, PI)
Sponsor:	NIH
Total Direct Costs:	$ 237,747
Principal Investigator:	**C. Hendrix** (Project)
Role:	Project PI responsible for design, execution, analysis of phase I Cyanovirin vaginal microbicide safety and pharmacokinetics.
Effort:	10%

FUNDING

Extramural Funding (current, pending, previous)

Previous

Dates:	1/1/06-12/31/07
Title:	The Distribution of CD4 Cells and HIV-sized Particles Following Simulated Vaginal Intercourse.
Grant Number:	GPOA 0005004100
Sponsor:	US Agency for International Development (through International Partnership for Microbicides)
Total Direct Costs:	$ 157,896
Principal Investigator:	**C. Hendrix**
Role:	Principal investigator for design and conduct of a clinical study to image T-cell and HIV-sized particle migration in the female genital tract lumen and tissue following exogenous administration of radiolabeled autologous lymphocytes using simulated coitus.
Effort:	5%

Dates:	01/18/06-01/17/07
Title:	Correlation of Free and Total Indinavir Concentrations in Seminal Plasma with the Concentrations in Blood Plasma in HIV-Infected Patients
Grant Number:	Medical School Project
Sponsor:	Merck Pharmaceuticals
Total Direct Costs:	$ 20,816
Principal Investigator:	**C. Hendrix**
Role:	Phase I study of HIV infected and healthy volunteers to explore the exposure of protein free indinavir in blood and semen. Principal investigator supervising post-doctoral fellow on the project.
Effort:	1%

Dates:	11/04/05-11/03/06
Title:	A Study of the Pharmacokinetic Interaction between AMD11070 and Substrates of CYP 3A4 and 2D6 Enzymes in Healthy Volunteers
Grant Number:	C-308 CTA
Sponsor:	AnorMED
Total Direct Costs:	$ 211,050
Principal Investigator:	**C. Hendrix**
Role:	An investigator-initiated phase I study of the pharmacokinetic interaction of AMD11070 and two CYP 450 probe drugs, midazolam (CYP 3A4) and dextromethorphan (CYP 2D6). Principal investigator responsible for protocol design, execution, data analysis.
Effort:	10%

FUNDING

Extramural Funding (current, pending, previous)

Previous

Dates:	07/1/05-06/30/08
Title:	Safety and Efficacy of Tenofovir as Pre-Exposure Prophylaxis of HIV infection in Heterosexually Active Young Adults in Botswana and Injection Drug Using Adults in Thailand.
Grant Number:	GAB-05-C-0459
Sponsor:	Centers for Disease Control
Total Direct Costs:	$ 178,565
Principal Investigator:	**C. Hendrix**
Role:	Design and analysis of pharmacokinetic-pharmacodynamic sub-study of daily Tenofovir Disoproxil Fumarate for the prevention of HIV infection in heterosexually active young adults in Botswana; supervision of laboratory sample analysis for tenofovir drug levels in study.
Effort:	5%

Dates:	04/01/05-03/31/08
Title:	Distribution of HIV in the Distal Gastrointestinal Tract
Grant Number:	P30 AI042855
Sponsor:	NIH (Hopkins Center for AIDS Research [CFAR])
Project Direct:	$ 59,792
Principal Investigator:	**C. Hendrix** (Project)
Role:	Principal Investigator of Developmental Pilot Grant from CFAR to describe the distribution of HIV and CD4 cells in the distal gastrointestinal tract following simulated coitus in order to establish the distribution of infectious material following receptive anal intercourse.
Effort:	1%

Dates:	12/04/04-12/03/06
Title:	A Phase I, drug interaction study to assess steady-state plasma methadone enantiomer pharmacokinetics following co-administration of methadone qd with Fosamprenavir 700 mg bid + RTV 100 mg bid in opiate-dependent, HIV-adult subjects.
Grant Number:	COL 012577 CTA
Sponsor:	GlaxoSmithKline
Total Direct Costs:	$ 383,729
Principal Investigator:	**C. Hendrix**
Role:	PI, design, execution, data analysis of investigator-initiated phase II study of the PK/PD methadone and fosamprenavir.
Effort:	1%

FUNDING

Extramural Funding (current, pending, previous)

Previous

Dates:	7/23/04-4/23/07
Title:	Pharmacokinetics of Efavirenz during treatment of HIV-1 infected subjects with hepatic impairment.
Grant Number:	M01 RR000052; AI266-917
Sponsor:	NIH; Bristol Myers Squibb
Total Direct Costs:	$ 128,843
Principal Investigator:	**C. Hendrix**
Role:	Site principal investigator, a multi-center phase I study of the pharmacokinetics of Efavirenz in HIV infected persons.
Effort:	1%

Dates:	11/01/02 – 04/30/07
Title:	Candida Ecology in the Intensive Care Unit.
Grant Number:	M01 RR00052
Sponsor:	NIH
Total Direct Costs:	GCRC Clinical Study Support
Principal Investigator:	**C. Hendrix**
Role:	Study Candida in ICU following several years of antifungal prophylaxis.
Effort:	1%

Dates:	11/01/02 – 10/30/03
Title:	Sampling Frequency Limitations of Drugs in Whole Semen Ejaculates.
Grant Number:	M01 RR00052
Sponsor:	NIH
Total Direct Costs:	GCRC Clinical Study Support
Principal Investigator:	**C. Hendrix**
Role:	Design/execution of study to determine the sampling interval for semen that does not interfere with local drug permeability.
Effort:	1%

Dates:	1/1/02 – 06/30/06
Title:	A Phase I First in Human Dose Escalation Study of the Pharmacokinetics and Safety of AMD070 in Healthy Volunteers
Grant Number:	U01AI 27668-18S1 Adult AIDS Clinical Trials Unit (Flexner, PI)
Sponsor:	NIH
Total Direct Costs:	$ 4,527,600 (full U19, not project)
Principal Investigator:	**C. Hendrix** (Project)
Role:	Protocol Chair for Multi-center phase I first-in-human, pharmacokinetic study, responsible for protocol design and coordinating study execution.
Effort:	*10%*

FUNDING

Extramural Funding (current, pending, previous)

Previous

Dates:	10/01/01 – 12/31/07
Title:	A U.S. Clinical Trial Site to Conduct Evaluations of Topical Microbicides in Men Who Have Sex with Men (MSM).
Grant Number:	200-2001-08015
Sponsor:	Centers for Disease Control
Total Direct Costs:	$ 1,748,272
Principal Investigator:	**C. Hendrix**
Role:	Design and execution of clinical studies to develop methods for the assessment of distribution and clearance of candidate microbicides.
Effort:	10%

Dates:	10/01/01- 9/30/03
Title:	Prevention of Adenoviral Infection in Basic Military Trainees
Grant Number:	DAMD17-02-1-0213
Sponsor:	US Army Medical Research and Materiel Command
Total Direct Costs:	$243,452
Principal Investigator:	**C. Hendrix**
Role:	Design, execution, and analysis of In vitro and clinical evaluation of nucleoside analogues to prevent adenoviral infection in military trainees.
Effort:	10%

Dates:	07/01/01 – 06/30/02
Title:	The Ecological Impact of Antifungal Prophylaxis in the ICU.
Grant Number:	M01 RR00052
Sponsor:	NIH
Total Direct Costs:	GCRC Clinical Trial Support
Principal Investigator:	**C. Hendrix**
Role:	PI, epidemiology of SICU Candida following fluconazole prophylaxis.
Effort:	1%

Dates:	02/01/01-01/01/02.
Title:	Antiretroviral pharmacodynamics in the male genital tract. (Developmental Pilot Project) Hopkins Center for AIDS Research
Grant Number:	P30 AI042855 (Bartlett, PI)
Sponsor:	NIH (Hopkins Center for AIDS Research [CFAR])
Total Direct Costs:	$ 55,000.
Principal Investigator:	**C. Hendrix** (Project)
Role:	Design, execution, and analysis of clinical studies to localize drugs within the male genital tract.
Effort:	10%

FUNDING

Extramural Funding (current, pending, previous)

Previous

Dates:	09/01/00-06/30/05
Title:	Pharmacology of Antiretroviral Drugs in the Genital Tract to prevent HIV Transmission.
Total Direct Costs:	$ 533,040.
Grant Number:	K24 AI 01825
Sponsor:	NIH
Principal Investigator:	**C. Hendrix**
Role:	Midcareer Investigator Award for Patient-Oriented Research is to support academic career development and mentoring of fellows
Effort:	50%

Dates:	09/29/00 – 02/28/04
Title:	HIV-HCV Coinfection: Antiviral therapy and fibrosis.
Grant Number:	R01 DA13806-01
Sponsor:	NIH
Total Direct Costs:	$ 1,696,615
Principal Investigator:	D. Thomas
Role:	Pharmacokinetic/pharmacodynamic study of HIV/HCV treatment.
Effort:	10%

Dates:	10/01/99 – 09/30/02
Title:	Tuberculosis Treatment Consortium Grant.
Sponsor:	CDC
Principal Investigator:	R. Chaisson
Role:	Site investigator; development of clinical protocols for pharmacokinetic studies of anti-TB drugs.
Effort:	10%

Dates:	06/1/99 – 08/31/04
Title:	Graduate Training Program in Clinical Investigation.
Grant Number:	T32 HL04141
Sponsor:	NIH
Principal Investigator:	F. Adkinson
Role:	Course director, lecturer “Principles of Drug Development”; Research Committee.
Effort:	3%

FUNDING

Extramural Funding (current, pending, previous)

Previous

Dates:	03/01/99 - 02/28/06
Title:	Pharmacology Core Laboratory, HIV Prevention Treatment Network (HPTN)
Grant Number:	U01AI46745-05
Sponsor:	NIH
Total Direct Costs:	$ 627,980
Principal Investigator:	**C. Hendrix** (B. Jackson, HPTN Laboratory, PI)
Role:	Pharmacologist for HPTN drug studies. Develop of novel methods to assess pharmacology of drugs in the male genital tract.
Effort:	10%

Dates:	02/01/99-01/31/02
Title:	Effect of AMD-3100 on HIV positive Patients.
Grant Number:	M01 RR000052; AMD3100-2001
Sponsor:	NIH; AnorMED
Total Direct Costs:	$ 207,659
Principal Investigator:	**C. Hendrix**
Role:	PI, design and analysis for 6-site phase II PK-PD study of novel antiretroviral chemokine receptor blocker.
Effort:	10%

Dates:	02/0l/99 - 01/31/00
Title:	The Effect of Accutane on the Pharmacokinetics and Pharmacodynamics of Oral Contraceptive Tablets in Healthy Pre-menopausal Women with Severe Recalcitrant Nodular Acne.
Grant Number:	M01 RR000052; NR15888/M01508
Sponsor:	NIH; Roche
Total Direct Costs:	$ 328,832
Principal Investigator:	**C. Hendrix**
Role:	Principal investigator of investigator-initiated single site pharmacokinetic-pharmacodynamic drug interaction study; developed protocol collaboratively with sponsor; responsible execution, analysis.
Effort:	10%

FUNDING

Extramural Funding (current, pending, previous)

Previous

Dates:	02/01/99-01/31/00
Title:	Methadone in combination with amprenavir in opiate abusers.
Grant Number:	M01 RR000052; COL30330
Sponsor:	NIH; Glaxo
Total Direct Costs:	$ 252,561
Principal Investigator:	**C. Hendrix**
Role:	Protocol design, single site principal investigator, and data analysis for investigator-initiated drug interaction study with pharmacokinetic and pharmacodynamic endpoints.
Effort:	10%

Dates:	09/01/98-08/31/99
Title:	Phase I/II study of the pharmacokinetic of efavirenz when added to a ritonavir-saquinavir-containing an antiretroviral regimen in HIV.
Grant Number:	NIH M01 RR000052; DMP 266-046
Sponsor:	NIH; DuPont-Merck
Total Direct Costs:	$ 284,618
Principal Investigator:	**C. Hendrix**
Role:	Principal investigator, protocol design, execution, and data analysis of investigator-initiated single site of antiretroviral drug interactions.
Effort:	10%

Dates:	09/01/98-07/01/99
Title:	Safety, pharmacokinetics, and tolerability of intravenously administered AMD 3100 in normal healthy volunteers.
Grant Number:	M01 RR000052; 98-01
Sponsor:	NIH; AnorMED
Total Direct Costs:	$ 72,644
Principal Investigator:	**C. Hendrix**
Role:	Principal investigator responsible for study design, execution, and data analysis of first-in-human study of novel CXCR-4 receptor inhibitor.
Effort:	10%

Dates:	07/0l/98 – 06/30/99
Title:	Phosphorylation of Nucleoside Analogs: Treatment-Experienced
Total Direct Costs:	$ 259,211
Grant Number:	M01 RR000052; Glaxo Contract
Sponsor:	NIH; Glaxo
Principal Investigator:	C. Flexner
Role:	Analysis for clinical study of antiretroviral intracellular phosphorylation.
Effort:	5%

FUNDING

Extramural Funding (current, pending, previous)

Previous

Dates:	06/01/98-12/31/98
Title:	Safety of orally administered SP303 for the treatment of AIDS diarrhea.
Grant Number:	M01 RR000052; 37,554-210
Sponsor:	NIH; Shaman Pharmaceuticals
Total Direct Costs:	$ 173,995
Principal Investigator:	**C. Hendrix**
Role:	Site principal investigator of multi-center, industry-sponsored study of novel natural product to reduce AIDS-related diarrhea.
Effort:	1%

Dates:	01/01/98-06/30/99
Title:	Fluconazole prophylaxis in the surgical intensive care unit.
Grant Number:	Unrestricted Educational Grant
Sponsor:	Pfizer
Total Direct Costs:	$ 825,104
Principal Investigator:	**C. Hendrix**
Role:	Principal investigator, clinical trial design, study management, execution, data analysis for phase III randomized clinical trial.
Effort:	35%

Dates:	01/0l/98 – 02/28/99
Title:	A Phase I/II Study of the Potential Interaction Between S-1153 and the Protease Inhibitors Nelfinavir and Indinavir in HIV-1 Infected Adults Treated with 3TC and ZDV or D4T.
Grant Number:	M01 RR000052; AG1549-535
Sponsor:	NIH; Agouron Pharmaceuticals
Total Direct Costs:	$ 186,127
Principal Investigator:	**C. Hendrix**
Role:	Protocol development and site principal investigator for 3 site dose escalation study of novel antiretroviral agent (capravirine).
Effort:	10%

Dates:	01/01/98-12/31/98
Title:	A phase I trial to evaluate the intravitreal penetration of 1263W94 after multiple-dose oral administration in AIDS patients with CMV retinitis
Grant Number:	M01 RR000052; CMAA1004
Sponsor:	NIH; Glaxo
Total Direct Costs:	$ 56,651
Principal Investigator:	**C. Hendrix**
Role:	Protocol design assistance, site principal investigator, data analysis, intravitreal and blood pharmacokinetics of anti-CMV drug.
Effort:	10%

FUNDING

Extramural Funding (current, pending, previous)

Previous

Dates:	01/01/98-02/28/98
Title:	Utilization of PK/PD model to optimize 1263W94 dosing against CMV.
Grant Number:	Contract
Sponsor:	Glaxo
Total Direct Costs:	$ 33,714
Principal Investigator:	F. Hamzeh
Role:	Surrogates of blood contamination of sampling in vitrectomy.
Effort:	1%

Dates:	07/01/97-06/30/00
Title:	Faculty Development Award
Sponsor:	Pharmaceutical Research and Manufacturer's Association.
Total Direct Costs:	$ 120,000
Principal Investigator:	**C. Hendrix**
Role:	Leadership and management of reorganized Drug Development Unit to provide complete phase I study services as a core faculty resource.
Effort:	10%

Dates:	01/01/97-12/31/01
Title:	International Military Prevention Research.
Grant Number:	Contract
Sponsor:	Department of Defense (through Henry M. Jackson Foundation)
Total Direct Costs:	$ 191,000
Principal Investigator:	**C. Hendrix**
Role:	HIV prevention program development and process research among foreign military leadership in coordination with the UNAIDS, UNDPKO, and the Civil-Military Alliance to Combat HIV/AIDS.
Effort:	35%

Dates:	01/01/97 - 12/31/00
Title:	AIDS Clinical Trials Group Advanced Technology Laboratory, Pharmacology Research Resource Unit.
Grant Number:	U01 AI27668-PP003
Sponsor:	NIH
Total Direct Costs:	$ 66,964
Principal Investigator:	C. Flexner
Role:	Clinical trial design, execution, and data analysis for antiretroviral drug development studies, principal investigator for multi-center studies.
Effort:	10%

FUNDING

Extramural Funding (current, pending, previous)

Previous

Dates:	01/01/97-12/31/97
Title:	Candida/VRE Surveillance in the Intensive Care Unit.
Grant Number:	Unrestricted Educational Grant.
Sponsor:	Pfizer
Total Direct Costs:	$ 100,000
Principal Investigator:	**C. Hendrix**
Role:	Principal Investigator, study management, data analysis of pilot study to develop sample size estimates for prophylactic interventions in the ICU
Effort:	10%

Dates:	01/01/97-12/31/97
Title:	Pharmacokinetics and safety of lobucavir in subjects with hepatic impairment.
Grant Number:	M01 RR000052
Sponsor:	NIH; Bristol-Myers Squibb
Total Direct Costs:	$ 400,319
Principal Investigator:	**C. Hendrix**
Role:	Site principal investigator of multi-center pharmacokinetic study.
Effort:	10%

Dates:	01/01/97 - 12/31/97
Title:	Phase I/II randomized double blind placebo controlled study of the safety, tolerance and pharmacokinetics and antiretroviral activity of PMPA Prodrug in HIV-infected patients.
Grant Number:	NIH M01 RR000052; Gilead contract
Sponsor:	NIH; Gilead Pharmaceuticals
Total Direct Costs:	$ 268,239
Principal Investigator:	P. Barditch-Crovo
Role:	Data analysis of single center antiretroviral pharmacokinetic study.
Effort:	1%

Dates:	01/01/97 - 10/30/97
Title:	Clinical Pharmacology of generic and antiviral drugs.
Grant Number:	Cooperative Agreement
Sponsor:	FDA
Total Direct Costs:	$ 1,981,673
Principal Investigator:	P. Lietman
Role:	Data analysis of several investigator-initiated clinical studies of drug interactions and toxicity.
Effort:	10%

CLINICAL ACTIVITIES

Certification

Medical Licensure
State of Maryland, issued 10/1/94, # D46682 (current)
Commonwealth of Pennsylvania, issued 12/2/92, MD 043514 L, (inactive 12/31/94)

Medical Boards or Other Specialty Certification
National Board of Medical Examiners, Parts I-III, 6/85
American Board of Internal Medicine, 9/87
American Board of Internal Medicine, Infectious Diseases, 11/1990-11/2000, #116631
American Board of Clinical Pharmacology, 10/2016

Membership in or Examiner for Specialty Board
2018-present Board of Directors, American Board of Clinical Pharmacology

EDUCATIONAL ACTIVITIES

Teaching

Classroom Instruction

School of Medicine

Physician and Society (medical student curriculum)
"Scientific Misconduct" 2001

Medical Pharmacology (medical student curriculum)
Lectures
"Pharmacokinetics I: Introduction, Membranes, Bioavailability" 1995-present
"Pharmacokinetics II: Volume, Clearance, Half-life" 1995-present
"Pharmacokinetics III: Dosing Regimens" 1995-present
"Pharmacokinetics IV: Mixed Order Kinetics, Applications" 2000-present
"Pharmacokinetic Clinical Problem Solving I and II" eLectures 2015-present
"Introduction to Antibiotics" 1998-present
"Cell wall active antibiotics I: Penicillins" 1998-present
"Cell wall active antibiotics I: Cephalosporins, Vancomycin" 1998-present
"Ribosomal inhibiting antibiotics I: Aminoglycosides" 1998-present
"Ribosomal inhibiting antibiotics II: Others" 1998-present
"Antifungal Drugs" 2001
"Pharmacokinetics of anti-seizure drugs" 1995-1999
"Pharmacology of immunotherapeutics in neurology" 2000
"Aspirin and NSAIDs" 1998-2004, 2017
"Opiates" 1994-2004
"Quinolones" 2007

Small group/tutorials
Intersession Small Group Co-Leader (Clinical-Basic Science correlations) 2011-present
Pharmacokinetics problem-solving (2, 2-hour sessions) 1995-present
Infectious Diseases small group discussion (4, 2-hour sessions) 1994-2003
Pharmacology tutorial "Clinical Investigation" (5, 2-hour sessions) 1994-2012
Vaccine small group discussion (1, 2-hour session) 1997-2000
Metabolism small group 2012-2015
Pharmacology medical student jornal club 2012-2015
Tutorial "My Favorite Drug (Drug Develolpment)" 2016

Rational Therapeutics (created course; required 4th year medical student course)
"Practical Pharmacokinetics" 1995-2004
"Drug Interactions" 2004
"Rational Use of Antibiotics" 2005-2006

Pharmacology (Pharmacology Graduate Students):
"Pharmacokinetics I: Introduction, Membranes, Bioavailability" 2000-present
"Pharmacokinetics II: Volume, Clearance, Half-life" 2000-present
"Pharmacokinetics III: Mixed Order Kinetics" 2000-present
"Antibiotics" 2000-2006
"Aspirin and NSAIDs" 2000-2004
Pharmacology tutorial "Clinical Investigation" (5, 2-hour sessions) 2010-present

EDUCATIONAL ACTIVITIES

Teaching

Classroom Instruction- continued

Analytical Methods of Clinical Pharmacology (Fellowship 24-hour curriculum) 2000-present
- "Principles of PK/PD in Drug Development"
- "Curve Stripping"
- "Non-Compartmental Analysis"
- "Compartmental Analysis"
- "Pharmacodynamic Studies"
- "Pharmacodynamic Data Analysis"
- "PK/PD Linkage Analysis"
- "Population PK Analysis Overview"
- "Clinical Trial Simulation Overview"

Laboratory Science of rthe Clinical Investigator – Short Course 2017-present
- Coruse creator and co-director with S. Nimmagadda

Osler House Staff Noon Teaching Conference 2004 - 2012
- "Practical Pharmacokinetics for the House Officer" 2004-2012
- "Pharmacokinetics in Special Populations" 2004-2012
- "Rational Therapeutics of COX-2 Selective and Non-selective NSAIDs" 2004-2010
- "Making Drugs Safer" 2005-2012
- "Aminoglycoside Dosing Strategies" 2007-2012
- "Integrating HIV Prevention into an Internal Medicine Practice", 2011-2012

School of Nursing

"Pharmacology of Immune Suppressive Drugs", Graduate Student Curriculum, 1998-9

School of Public Health

Principles of Drug Development, (required GTPCI Course) 1994-2003
- "Overview of the drug development process" 1999-2003
- "Pharmacokinetics for Drug Development" 1999-2003
- "Pharmacokinetic and Safety Studies" 1994-2003
- "Pharmacokinetic and Safety Studies - practicum" 1999-2003
- "Pharmacokinetic and Safety Studies – student project critique" 1999-2003
- "Learning vs. Confirming Studies" 1999-2003
- "Learning vs. Confirming Studies - practicum" 1999-2003
- "Learning vs. Confirming Studies - student project critique" 1999-2003
- "Clinical Trial Simulation" 2001-2003

EDUCATIONAL ACTIVITIES

Teaching

Classroom Instruction - continued

Analytical Methods in Clinical Investigation (required GTPCI Course),
"Databases: How to use and abuse them I: Principles" 1997-2002
"Databases: How to use and abuse them II: Applications" 1997-2002

Topics in Clinical Investigation (required GTPCI Course)
"Scientific Misconduct" 1995-present

Epidemiology and Natural History of Human Viral Infections
"Antiviral Therapy" 1997 - present

Epidemiology and Public Health Impact of HIV and AIDS
"Antiretroviral Therapy" 2004 - present

Graduate Summer Institute of Epidemiology and Biostatistics, Advanced Issues in HIV/AIDS Course, "HIV Chemoprevention Drug Development Issues", 2005 – present

Advanced Topics on the Control and Prevention of HIV/ AIDS
"HIV Chemoprevention" 2006 - present

Epidemiology of Infectious Disease Journal Club, Faculty discussant, 2007

Doctoral Seminar in International Health, "Pharmacology in Public Health", 2009-2011

Clinical Instruction

Clinical Skills (required 2nd year Course), Preceptor, 1997

Internal Medicine Inpatient Service, Teaching Attending, 1995-1996

PerdanaUniversity Graduate School of Medicine (Kuala Lumpur, Malaysia)

Scientific Foundations of Medicine Course
Introduction to Pharmacology Section (2013-present)
"Receptors and Enzymes"
"Drug Metabolism"
"Pharmacokinetics I-IV"
"Pharmacokinetic Case Studies – Problem Solving"
"Autonomic Pharmacology I-II"
"Drug Safety"
"Drug Development"
"Complementary and Alternative Medicine"
"Drug Resistance"

EDUCATIONAL ACTIVITIES

Teaching

Continuing Medical Education – Military

US Air Force Annual HIV/AIDS Train-the-trainer Short Course 1991-1999
Course Director, Instructor 1991-1999

International Military HIV/AIDS Education (in collaboration with UNAIDS)

Harare, Zimbabwe, Regional Training Seminar, 6 East and Southern African National Delegations, Speaker/Facilitator, 1995

Cha-Am, Thailand, Regional Training Seminar, 7 South and Southeast Asian National Delegations, Speaker/Facilitator, 1995

Kampala, Uganda, Regional Training Seminar, West African National Delegations, Presentation provided, 1996

Windhoek, Namibia, Regional Training Seminar, 14 East and Southern African National Delegations, Speaker/Facilitator, 1997

Hanoi, Republic of Vietnam, Country Site Visit Team, Speaker, Military Consultant, 1998

Moscow/Saint Petersburg, Russian Federation, Country Site Visit, Speaker, Military Consultant, 1998

"HIV Military Threat Assessment and Response." Annual HIV Prevention Education Train-the-Trainer Course, San Antonio, Texas. May 1999.

Continuing Medical Education- Civilian

"Clinical Pharmacology of Antiretroviral Drugs." Curriculum Review Course, American Society of Clinical Pharmacology and Therapeutics, New Orleans, Louisiana. March 1998. International. Audience: Clinical Pharmacologists faculty and post-doctoral trainees.

"Clinical Pharmacology of Antiretroviral Drugs." Curriculum Review Course, American Society of Clinical Pharmacology and Therapeutics, San Antonio, Texas. March 1999. International. Audience: Clinical Pharmacologists faculty and post-doctoral trainees.

"New Antibacterial Drugs." Pediatric Trends Course, Johns Hopkins University School of Medicine, Office of Continuing Medical Education. Baltimore, Maryland. April 1999. JHMI. Clinical faculty and post-doctoral trainees.

"New Antiviral Drugs". Pediatric Trends Course. Johns Hopkins University School of Medicine, Office of Continuing Medical Education. Baltimore, Maryland. April 1999. JHMI. Clinical faculty and post-doctoral trainees.

EDUCATIONAL ACTIVITIES

Teaching

Continuing Medical Education – Civilian continued

"COX-2 Inhibitors: New NSAIDs on the Block." Conjoint Clinic, Johns Hopkins University School of Medicine, Office of Continuing Medical Education. Baltimore, Maryland. May 1999. JHMI. Clinical faculty and post-doctoral trainees.

"New Drugs for HIV Infection." Clinical Care of the Patient with HIV Infection. Baltimore, Maryland. April 1999. JHMI. Clinical faculty and post-doctoral trainees.

"New Drugs for HIV." The Johns Hopkins AIDS Service HIV Management Preceptorship Program, Baltimore, Maryland. April 1999. JHMI. Clinical faculty and post-doctoral trainees.

"Databases and Clinical Research: How to Use and Abuse Them." Johns Hopkins University School of Medicine, Office of Continuing Medical Education, Baltimore, Maryland. May 1999. JHMI. Clinical faculty and post-doctoral trainees.

"New Drugs for HIV Infection." Clinical Care of the Patient with HIV Infection. Baltimore, Maryland. April 2000. JHMI. Clinical faculty and post-doctoral trainees.

"Databases and Clinical Research: How to Use and Abuse Them." Johns Hopkins University School of Medicine, Office of Continuing Medical Education, Baltimore, Maryland. May 2000. JHMI. Clinical faculty and post-doctoral trainees.

"NSAIDS and COX-2 Inhibitors: Current Status." Conjoint Clinic, Johns Hopkins University School of Medicine, Office of Continuing Medical Education. Baltimore, Maryland. February 2001. JHMI/Regional. Clinical faculty and post-doctoral trainees.

"Databases and Clinical Research: How to Use and Abuse Them." Johns Hopkins University School of Medicine, Office of Continuing Medical Education, Baltimore, Maryland. April 2001. JHMI. Clinical faculty and post-doctoral trainees.

"Tools for Pre-Approval Drug Safety Evaluation", Academics to CDER Series: Annual Continuing Medical Education Course May 2003. Regional. FDA Professional Staff Development.

"Aminoglycoside and Vancomycin Therapeutic Drug Monitoring." Johns Hopkins Distance Learning (Bermuda Site), Office Of Continuing Medical Education, Baltimore, Maryland. May 2005. JHMI/Regional. Clinical faculty and post-doctoral trainees.

"Practical Pharmacokinetics for Primary Care." Anne Arundel Community College, Physician Assistant Curriculum, Arnold, Maryland, 2005. Regional. Physician Assistant candidates.

EDUCATIONAL ACTIVITIES

Teaching

Continuing Medical Education – Civilian continued

"Relationships between Academia and the Pharmaceutical Industry." American Medical Student Association (Johns Hopkins University Chapter), November 2006.JHMI. Medical Students.

"Development of Topical HIV Microbicides." Division of Infectious Diseases, Fellows' Conference, December 2006. JHMI. Clinical faculty and post-doctoral trainees.

"Clinical Pharmacology of Antiretroviral Drugs." Curriculum Review Course, American Society of Clinical Pharmacology and Therapeutics, Anaheim, California. March 2007. International. Audience: Clinical Pharmacologists faculty and post-doctoral trainees.

"Pharmacodynamics of Antibiotics." Division of Infectious Diseases, Fellows' Conference, November 2007. JHMI. ID faculty and post-doctoral fellows.

"Pharmacological Principles of Antiretroviral Drugs" Curriculum Review Course. ASCPT, March 2009. International. Audience: Clinical Pharmacologists faculty and post-doctoral trainees.

"Pharmacological Principles of Antiretroviral Drugs" Curriculum Review Course. ASCPT, March 2013. International. Audience: Clinical Pharmacologists faculty and post-doctoral trainees.

"Pharmacogenomics: One Aspect of Precision Medicine in Primary Care" Curriculum Review Course. American Medical Forum. Washington, DC. November 2017. National. Audience: Internal Medicine & Primary Care Physicians.

"Pharmacogenomics: One Aspect of Precision Medicine in Primary Care" Curriculum Review Course. American Medical Forum. Washington, DC. June 2018. National. Audience: Internal Medicine & Primary Care Physicians.

"HIV Prevention with Drugs: Pre-Exposure Prophylaxis (PrEP) in Primary Care." Curriculum Review Course. American Medical Forum. Washington, DC. June 2018. National. Audience: Internal Medicine & Primary Care Physicians.

"HIV Prevention with Drugs: Pre-Exposure Prophylaxis (PrEP) in Primary Care." Curriculum Review Course. American Medical Forum. Washington, DC. November 2017. National. Audience: Internal Medicine & Primary Care Physicians.

EDUCATIONAL ACTIVITIES

Mentoring

Principal Mentor

Stephen P. Blatt, M.D., 1990-1991
Infectious Disease Fellow, Wilford Hall USAF Medical Center
Current position: Private Practice, Dayton, OH (1994-present)

Janet M. J. Hammond, M.D., Ph.D., 1995-1998
Clinical Pharmacology Fellow; Graduate Training Program in Clinical Investigation, Johns Hopkins University School of Hygiene and Public Health
Thesis "Emerging Pathogens in Intensive Care"; Sc.M. granted 5/25/99.
Current Position: Vice President of Infectious Diseases Development, AbbVie, Lake Forest, IL.

Robert Pelz, M.D., 1997-2000
Infectious Diseases Fellow
Graduate Training Program in Clinical Investigation, Ph.D. 2000
Research: Epidemiology and treatment of ICU infections
Awards: Infectious Diseases Society of America 1998 Fellows Award for Scientific Excellence. "Do surveillance cultures predict fungal infection in critically ill pts?"
Society of Critical Care Medicine 2000 In-training Fellow Award. "A double blind placebo controlled trial of prophylactic fluconazole to prevent Candida infections in critically ill surgical patients"
Society of Critical Care Medicine 2000 Educational Scholarship Award "Fluconazole blood concentrations after enteral administration in critically ill surgical patients exceed most Candida minimal inhibitory concentrations in a double-blind, placebo-controlled trial in which fluconazole prevented Candidal infections."
Johns Hopkins University Helen B. Taussig Young Investigators Award. "Nosocomial Fungal Infections in the Critically Ill: Dx and Prevention."
Current Position: Clinical Assistant Professor of Medicine, Oregon Health and Science University, School of Medicine, Portland, OR

Thomas Ndovi, M.D., 1999-2005
Clinical Pharmacology Fellow
Graduate Training Program in Clinical Investigation, 1999-2005, Ph.D. 2005
Fogarty International Fellow 1999-2001, 2003-2004
Merck International Fellow in Clinical Pharmacology 2001-2003
Research: Pharmacology of antiretroviral drugs in genital compartments
Awards: Department of Medicine Research Retreat Clinical Fellow Poster Finalist 2005
British Journal of Clinical Pharmacology Prize 2007
Last Position: Assistant Professor of Medicine, University of Malawi; Director, Johns Hopkins-Malawi Clinical Research Unit, Blantyre, Malawi (Deceased 2007)

EDUCATIONAL ACTIVITIES

Mentoring

Principal Mentor - continued

Shelley Sylvester Magill, M.D., 2000-2007
Infectious Diseases Fellow/Assistant Professor
Graduate Training Program in Clinical Investigation, Ph.D. 2007
Awards: Pfizer Mycology Fellowship Award Recipient 2001-2003;
Clinical Scientist Award 2003 (Johns Hopkins University, declined)
Research: Ecology and prevention of fungal infections in the ICU
Position: Assistant Professor, Division of Infectious Diseases, Johns Hopkins University School of Medicine 2004 - 2007
Current Position: Medical Officer, Mycotic Diseases Branch, CDC, Atlanta, GA (2007-present)

Lewis Radonovich, M.D., 2000-2002
Clinical Pharmacology Fellow
Graduate Training Program in Clinical Investigation, Ph.D. Candidate
PhRMA Fellowship in Pharmacology 2001-2002
Research: Chemoprophylaxis of adenoviral infections
Previous Position: Assistant Professor of Medicine, University of Florida, Gainesville FL (2002-2015
Current Position: Centers for Disease Control, NIOSH, Pittsburgh, PA (2015-present)

Thanyawee Puthanakit, M.D., 2001-2002
International Fogarty Fellow; Clinical Pharmacology Fellow
Graduate Training Program in Clinical Investigation; MHS degree 2002
Research: Pharmacokinetics of Antiretroviral Drugs, Drug interactions in the ICU
Assistant Professor, Chiang Mai University Medical Faculty, 2002-2005
Current Position: Associate Professor, Department of Pediatrics, Chulalongkorn University, Bangkok, Thailand; The HIV Netherlands Australia Thailand Research Collaborative.(2002-present)

Nimalie Stone, M.D., 2003-2004
Clinical Pharmacology Fellow
Research: Chemokine receptor inhibition phase I studies; Anti-infective drug utilization
Current Position: Medical Officer, CDC, Atlanta, Georgia

Wasif Khan, M.D., 2003-2005
Clinical Pharmacology Fellow
Graduate Training Program in Clinical Investigation, M.H.S. 2005
Merck International Fellow in Clinical Pharmacology 2003-2005
Research: Pharmacology of antiretroviral drugs, microbicide distribution
Current Position: Research Physician, International Center for Diarrheal Disease Research, Dhaka, Bangladesh. (2005-present)

EDUCATIONAL ACTIVITIES

Mentoring

Principal Mentor – continued

Ying-Jun Cao, M.D., 2004-2007
Clinical Pharmacology Fellow
Graduate Training Program in Clinical Investigation, Ph.D. 2007
Research in Progress: Development of methods to describe pharmacokinetics in the male genital tract; Quantitative methods to assess colon microbicide and HIV distribution
Awards: Department of Medicine Research Retreat Clinical Fellow Poster Finalist 2005;
American Society for Clinical Pharmacology and Therapeutics Young Investigator Award 2006-7;
Conference Retroviruses and Opportunistic Infections, Young Investigator Award 2007
British Journal of Clinical Pharmacology Prize 2012
Positions: Assistant Professor of Medicine, Division of Clinical Pharmacology, Johns Hopkins University School of Medicine. 2007-2008; 2008-present (Adjunct).
Director Science, Global Clinical Pharmacology & Exploratory Development, Astellas Pharmaceuticals, 2008-present.

Sridhar Nimmagadda, Ph.D., 2005-2008
Post-doctoral Fellow in Pharmacology and Radiology (Martin Pomper co-mentor)
Research: Quantitative luminal and tissue distribution of HIV and CD4 cells in the human vagina and colon following simulated receptive intercourse
Positions: Associate Professor of Radiology, Johns Hopkins University School of Medicine, 2009-present.

Kelly Brungardt Stein, MD, 2006-2007
Joint Clinical Pharmacology – Infectious Diseases Fellow
Graduate Training Program in Clinical Investigation, ScM 2009
Research: Protein binding of antiretrovirals in semen; vaginal distribution of HIV & CD4 cells.
Current Position: Instructor, Rush University Medical Center 2008-present

Nicolette Louissaint, PhD, 2006-2013
Pharmacology Training Program, Department of Pharmacology (2006 – 2010)
Ph.D. Candidate (PhD conferred May 2010), Post-doctoral fellow (May 2010-present)
Research in Progress: Quantitative luminal and tissue distribution of HIV and CD4 cells in the human vagina and colon following simulated receptive intercourse
Awards: Keystone Symposia Minority Scholarship, 2008
Department of Medicine Research Retreat Clinical Research Fellow Poster Finalist, 2009
American Society for Clinical Pharmacology and Therapeutics (ASCPT) Presidential Trainee Award 2010
ASPET Integrative Research in Pharmacology Awards 2012
AAAS Fellow – US Department of State 2013-2014
Current Position: Director of Healthcare Ready, AAAS Science and Technology Policy Fellow, Foreign Affairs Officer, US Department of State, 2014 - present

EDUCATIONAL ACTIVITIES

Mentoring

Principal Mentor - continued

Lindsay Brooke Avery, BS, 2008-2012
Pharmacology Training Program, Department of Pharmacology
Ph.D. Candidate; PhD conferred August 2012
Research: Efavirenz protein binding, compartmental distribution, and antiviral effect
Awards: American Society for Clinical Pharmacology and Therapeutics (ASCPT) Presidential Trainee Award 2010
Young Investigator Award. 20th Conference on Retroviruses and Opportunistic Infections 2013
Positions: Post-doctoral fellow, Namandje Bumpus Lab, Johns Hopkins University 2012-2014;
Current position: Pharmaceutical Development, Pfizer, Inc. Boston, MA, 2014-present

Liye Li, MD, PhD. 2009-2010
Clinical Pharmacology Fellow
Research: Development of candidate topical rectal microbicides.
Current Position: Nuclear Medicine private practice 2010 - present

Francisco Leyva, Md. PhD, 2009-2013
Clinical Pharmacology Fellow
Graduate Training Program in Clinical Investigation, M.H.S. 2012
Research: Development of candidate topical rectal microbicides.
Current Position: National Institutes of Health, Division of Microbiology and Infectious Diseases

Yanhui Lu, BS, 2010-2014
Pharmacology Training Program, Department of Pharmacology
Ph.D. Candidate; PhD conferred March 2014
Research: Identification of Novel Phase I and Phase II Metabolites of Maraviroc
Awards:
Junghea Park Memorial Travel Award 2012
Scheinberg Travel Award for spring 2011
Graduate Student Travel Award, ASPET Annual Meeting 2012
2012 Chinese Government Award for Outstanding Self-financed Students Abroad (China Scholarship Council)
2014 Bae Gyo Jung Young Investigator Day Award. Johns Hopkins University
Current Position: Office of Clinical Pharmacology, FDA 2015-present

Jenell Fenell Coleman, MD, 2010 – 2014
Assistant Professor, Department of Obstetrics and Gynecology
Harold Amos Medical Faculty Development Award
Research: Contraceptive – Antiretroviral drug interactions
Current Position: Associate Professor, Obstetrics & Gynecology, Johns Hopkins University

EDUCATIONAL ACTIVITIES

Mentoring

Principal Mentor - continued

Salee Parichat, MD, M.P.H. 2011-2012
International Fogarty Fellow, Thailand; Epidemiology, Masters of Public Health 2012, Bloomberg School of Public Health,
Research: Pre-exposure Prophylaxis adherence measured by plasma drug levels in MTN-001: comparison between vaginal gel and oral tablets in two geographic regions.
Current Position: RIHES, Chiang Mai University, Thailand

Hiwot Hiruy, MD, 2011-2015
Joint Clinical Pharmacology – Pediatric Infectious Diseases Fellow
Graduate Training Program in Clinical Investigation, PhD 2015
Research: Gastrointestinal tract pharmacology of topical HIV microbicides
Current Position: Medical Officer, FDA 2015-present

Jenny Robinson, MD, 2012-2014
Clinical Pharmacology Fellow
Graduate Training Program in Clinical Investigation, PhD Candidate
Research in progress: Female Genital tract pharmacology of topical HIV microbicides
Current Position: Assistant Professor, Obsetetrics & Gynecology, Johns Hopkins University 2014-present

Ethel Weld, MD, 2013-2016
Joint Clinical Pharmacology –Infectious Diseases Fellow
Graduate Training Program in Clinical Investigation, PhD Candidate
Research in progress: Gastrointestinal tract pharmacology of topical HIV microbicides
Awards:
The Pearl M. Stetler Research Fund for Women Physicians Award 2015-2016
Research Scholars Junior Faculty Award (KL2) 2017-2018
Current Position: Assistant Professor, Department of Medicine (Clinical Pharmacology), Johns Hopkins University, 2016-present
Funding: KL2 NCTS Johns Hopkins ICTR

Jackson Mukonzo, PhD, 2014
Fulbright Faculty Scholar
Research in progress: Polymorphisms uniquely impacting HIV treatment in African populations
Current Position: Director (Acting), Department of Pharmacology & Therapeutics, Makerere University, College of Health Science, Kampala, Uganda

Eugenie Shieh, MD, 2014-2017
Joint Clinical Pharmacology–Gastroenterology Fellow
Graduate Training Program in Clinical Investigation, PhD Candidate
Research in progress: Gastrointestinal tract pharmacology of topical HIV microbicides
Private practice gastroenterology, CA 2017-present

EDUCATIONAL ACTIVITIES

Mentoring

Principal Mentor - continued

Victoria Ojeda, 2015-present
Assocaite Professor, University of California, San Diego
HIV Prevention Trials Network Scholar
Research in Progress: Impact of staff-particpant relationships on adherence in randomized controlled PrEP trials
Current Position: Associate Professor, University of California at San Diego, School of Public Health, San Diego, CA

Rachel Scott, MD, 2016-present
Assistant Professor, Georgetown University
Mid Atlantic CFAR Mentoring
Research in progress: ARV & PrEP PK in pregnancy and post-partum
Current Position: Assistant Professor of Medicine, Georgetown University, Washington, DC
Funding: K23 NIMH

Zachary Janik, 2016-present
Medical Student, Research Mentor
Research in Progress: Quantiative assessment of White Coart Adherence in HIV Pre-Exposure Prophylaxis.

Katherine Huether, 2017-2018
Medical Student, Drug Development Research Rotation

Secondary Sub-Specialty Mentoring

Normalynn Garrett, PhD candidate, Nursing; Pharmacology mentoring, 1998-1999
Andre Agthe, Neonatal Fellow, GTPCI; Pharmacology mentor, 2000-2004
Amy Ginsberg, Infectious Diseases Fellow; Pharmacology mentor, 2002-2003

Advisor (when not Primary Mentor) – GTPCI - continued

Rodney Willoughby, MD, Pediatrics Faculty, GTPCI; Pharmacology mentor, 1999-2004

Lawrence Lee, Clinical Pharmacology Fellow; Pharmacokinetics mentor, 2003-2004

Devi Chittineni, Clinical Pharmacology Fellow; Pharmacokinetics mentor, 2004 – 2006

Myaing Nyunt, Clinical Pharmacology Fellow, GTPCI; Pharmacokinetics mentor, 2005 - 2008
Current Position: Assistant Professor of Medicine, University of Maryland Medical Center

EDUCATIONAL ACTIVITIES

Advisor (when not Primary Mentor) – GTPCI - continued

Kelly Dooley, MD, Joint Clinical Pharmacology – Infectious Diseases Fellow, GTPCI;
Pharmacokinetics Mentor, 2006 – 2010
Current Position: Associate Professor of Medicine, Johns Hopkins University

Sofia Perea, Pharm.D., Ph.D., 2002-2004
Oncology Post-Doctoral Fellow
Graduate Training Program in Clinical Investigation, Ph.D. Candidate

Kai Zhang, M.D., 2003-2004
Post-Doctoral Fellow
Graduate Training Program in Clinical Investigation, Ph.D. Candidate

Victor Crentsil, M.D., 2005 – 2007
Division of Geriatric Medicine
Graduate Training Program in Clinical Investigation, M.H.S. Degree 2007
Current Position: FDA Medical Officer

Romanee Chaiwarith, M.D. 2006 - 2007
Post-Doctoral Fellow
Graduate Training Program in Clinical Investigation, M.H.S. Candidate
Current Position: Assistant Professor, Medicine, Chiang Mai University

Tamorah Lewis, MD, Joint Clinical Pharmacology – Neonatology Fellow, GTPCI;
Pharmacokinetics Mentor, 2010 – 2014, Fellowship Advisory Committee, 2010-2014
Current Position: Assistant Professor, Pediatrics, Mercy Children's Hospital, Kansas City (2014-present)

Pranita Tamma, M.D. 2010-2011
Post-Doctoral Fellow Pediatric Infectious Diseases
Graduate Training Program in Clinical Investigation, M.H.S. Candidate
Current Position: Assistant Professor, Pediatrics (Infectious Diseases), Johns Hopkins University (2011-present)

Berkley Limketkai MD 2011 – 2017
Post-Doctoral Fellow Gastroenterology
Graduate Training Program in Clinical Investigation, Ph.D. 2017
Current Position: Assistant Professor, Medicine (Gastroenterology) Stanford University (2014-present)

Erica Shelton MD 2012 – 2014
Instructor, Emergency Medicine
Graduate Training Program in Clinical Investigation, Ph.D. Candidate

Current Position: Assistant Professor, Emergency Medicine, Johns Hopkins University (2014-present)

Omamah Alfarisi PharmD 2012 – present
Post-Doctoral Fellow Clinical Pharmacology
Graduate Training Program in Clinical Investigation, Ph.D. Candidate, pharmacokinietics mentor

Kattayoun Kordy MD, 2014-2016
Clinical Pharmacology UCLA, F32, Pharmacokinetics mentor
Current Position: Assistant Professor, Medicine (Gastroenterology) University of Southern California (2016-present)

EDUCATIONAL ACTIVITIES

Mentoring Committees

Adriana Andrade, MD 2007-2018
Associate Professor of Medicine (Infectious Diseases)
Research in Progress: HIV Clinical Pharmacology, Drug interactions with complementary medicine products and antiretroviral drugs, Adherence to therapeutic regimens.

Myaing Nyunt, MD, PhD 2008-2013
Assistant Professor of International Health (School of Public Health)
Research in Progress: Clinical pharmacology of malaria therapeutics and prevention
Previous Position: Assistant Professor, Medicine, University of Maryland, Baltimore, MD (2014-2017)
Current Position: Assitant Professor, Medicine, Duke University, Durham, NC (2017-present)

Mentoring

Thesis/Oral Examination Committees

Janet Hammond, "Emerging Pathogens in Intensive Care", M.H.S. thesis, Graduate Training Program in Clinical Investigation, School of Hygiene and Public Health, Thesis advisor, Thesis Committee Member 1996-1999.

Normalynn Garrett, "Effects of LY235959 on surgery-induced immunosuppression and increased metastasis in rats", Ph.D. thesis, School of Nursing, Thesis Committee Member, 1998-9.

Robert Pelz, "Prophylaxis of invasive fungal infections in the Surgical Intensive Care Unit: Efficacy, Pharmacology, and Cost Analysis", Ph.D. thesis, Graduate Training Program in Clinical Investigation, School of Hygiene and Public Health, Thesis advisor, Thesis Committee Member, 1997-2001.

Rodney Willoughby, "Developmental Kinetics of Cytokines in Cerebral Palsy", Ph.D. thesis, Graduate Training Program in Clinical Investigation, School of Hygiene and Public Health, Thesis Committee Member, 1999-2008.

Claudine Woo, "Subgroup analyses in clinical trials", PhD thesis; Ph.D. 2006, Clinical Trials Program, Department of Epidemiology. School of Public Health, Preliminary Oral Examination Committee Member, 2001; Thesis Committee Member, 2003 - 2006.

Leena Choi, "Modeling biomedical data and the foundations of bioequivalence", Ph.D. Thesis, Department of Biostatistics, School of Public Health, Preliminary Oral Examination Committee Chairman, 2001; Thesis Committee Chairman, 2005.

Elizabeth Lowe, "Phase I and Pharmacokinetic Study of Liposomal Doxorubicin (TLC D-99) in Pediatric Patients with Refractory Solid Tumors", M.H.S. thesis, Graduate Training Program in Clinical Investigation, School of Public Health, Thesis Reader, 2002.

Melanie Rusch, "Were Sexual Risk Behaviors Changing in Injection Drug Users in the ALIVE Cohort Before HAART was Readily Available in this Population", M.H.S. Candidate, Department of Epidemiology, School of Public Health, Thesis reader, 2002.

EDUCATIONAL ACTIVITIES

Mentoring

Thesis*/Oral Examination *Committees – continued

Alex Agthe, "Clonidine and opiates in the treatment of neonatal abstinence syndrome", Ph.D. candidate, Graduate Training Program in Clinical Investigation, School of Public Health, Preliminary Oral Examination Committee, 2002 Thesis Committee Member, 2007-2008.

Thomas Ndovi, "Compartmental Kinetics of Antiretroviral Drugs (ARVs) in the human Male Genital Tract", PhD Thesis, Graduate Training Program in Clinical Investigation, School of Public Health, Preliminary Oral Examination Committee Member, 2003; Thesis Committee Member, 2003-2005.

Michael Gibson, Ph.D. candidate, Department of Oncology, Graduate Training Program in Clinical Investigation, School of Public Health, Thesis Committee Member, 2002-2007.

Ricardo Carvalho, "Unidirectional Transscleral Delivery from Episcleral Implants", Sc.M. Thesis, Graduate Training Program in Clinical Investigation, School of Public Health, Thesis Committee Member, 2003-2006, Thesis Reader 2006.

Shelley Sylvester Magill, PhD Candidate, Department of Medicine, Graduate Training Program in Clinical Investigation, School of Public Health, Preliminary Oral Examination Committee Member 2004, Thesis Committee member, 2004-2007.

Courtney Silverthorn, Ph.D. Candidate, Department of Pharmacology, School of Medicine, Preliminary Oral Exam Committee Member, 2004.

Lawrence Soon-U Lee, "Antioxidant and phase 2 enzyme induction activity of ginseng in humans", PhD Candidate, Graduate Training Program in Clinical Investigation, School of Public Health, Oral Examination Committee, 2005; Thesis Committee, 2007.

Moira McMahon, Ph.D. Candidate, Department of Pharmacology, School of Medicine, Preliminary Oral Exam Committee Member, 2006.

Ying-Jun Cao, "Antiretroviral Drug Penetration into the Male Genital Tract," PhD Candidate, Graduate Training Program in Clinical Investigation, School of Public Health, Preliminary Oral Examination Committee Member, 2006; Thesis Defense Committee, 2007.

Lijuan Deng, "Spline Based Curve Fitting with Application to Kinetic Imaging M.S." Candidate, Department of Biostatistics, Bloomberg School of Public Health, Thesis Reader 2006.

AeRang Kim, Ph.D. candidate, Department of Oncology, Graduate Training Program in Clinical Investigation, School of Public Health, Thesis Committee Member, 2006-2009.

Michael Yu, Ph.D. candidate, Department of Oncology, Graduate Training Program in Clinical Investigation, School of Public Health, Thesis Committee Member, 2006-2010.

Susanna Nazarian, PhD candidate, Graduate Training Program in Clinical Investigation, School of Public Health, Thesis Committee Member, 2008-2009.

EDUCATIONAL ACTIVITIES

Mentoring

Thesis/Oral Examination Committees – continued

Jean Wang, "Predicting Cancer in Barrett's Esophagus", PhD candidate, Graduate Training Program in Clinical Investigation, School of Public Health, Thesis Committee Member, 2008-2009.

Nicolette Louissaint, PhD candidate, Pharmacology and Molecular Sciences, School of Medicine, Thesis Committee Member, 2008-2010.

Benjamin Jilek, PhD candidate, Biochemistry, Cellular and Molecular Biology (BCMB) Graduate Program, School of Medicine, Thesis Committee Member, 2008-2011.

Jonathan Neiswinger, PhD candidate, Pharmacology and Molecular Sciences, School of Medicine, Oral Examination Committee Member, 2009.

Ying-Chun Lo, PhD candidate, Pharmacology and Molecular Sciences, School of Medicine, Oral Examination Committee Member, 2009.

Meng-Jung Chiang, PhD candidate, Pharmacology and Molecular Sciences, School of Medicine, Oral Examination Committee Member (Alternate), 2009.

Jeff Goldsmith, PhD candidate, Biostatistics, Bloomberg School of Public Health, Oral Examination Committee member. 2010. Thesis Committee member, 2011-2012.

Lindsay B. Avery, PhD Candidate. Pharmacology and Molecular Sciences, School of Medicine, Thesis Committee Member, 2011-2012.

Salee Parichat, MD, M.P.H. Candidate. Epidemiology, Bloomberg School of Public Health, Thesis Committee, 2011-2012.

Ryan Westergaard, PhD candidate, Graduate Training Program in Clinical Investigation, School of Public Health, Thesis Committee Member, 2012.

Melissa Zarr, PhD Candidate. Pharmacology and Molecular Sciences, School of Medicine, Thesis Committee Member, 2012 – 2014. Thesis Reader 2014.

Laura Ensign, PhD candidate, Chemical and Biomolecular Engineering, School of Engineering, Thesis Committee, 2012.

Tamara Lewis, PhD candidate, Graduate Training Program in Clinical Investigation, School of Public Health, Thesis Committee Member, 2012-2015.

Jenny Robinson, PhD candidate, Graduate Training Program in Clinical Investigation, School of Public Health, Thesis Committee Member, 2013-present.

Yanhui Lu, PhD Candidate, Pharmacology and Molecular Sciences, School of Medicine, Thesis Committee Member, Thesis Advisor, 2012-2014.

Berkeley Limetkai, PhD candidate, Graduate Training Program in Clinical Investigation, School of Public Health, Preliminary Oral Exam Committee Member, 2013; Thesis Committee Member, 2013-2017.

EDUCATIONAL ACTIVITIES

Mentoring

Thesis/Oral Examination Committees – continued

Elaine To, PhD candidate, Department of Pharmacology and Molecular Sciences, School of Medicine, Thesis Committee, 2013-2014.

Chen Yue, PhD candidate, Biostatistics, Bloomberg School of Public Health, Oral Examination Committee member. 2013. Thesis Committee member, 2013-2016.

Evelyn Eisele, PhD Candidate, Pharmacology and Molecular Sciences, School of Medicine, Thesis Committee Member, 2013-2016.

Katharina Maisel, PhD Candidate, Biomedical Engineering, School of Engineering, Thesis Committee Member, 2013-2014.

Kai Deng, PhD Candidate, Biochemistry, Cellular and Molecular Biology (BCMB) Graduate Program, Thesis Committee Member, 2013-2014.

Christopher Saeui, PhD candidate, Biomedical Engineering. Oral exam committee. 2014

Julie Lade, PhD Candidate, Pharmacology and Molecular Sciences. Thesis Committee. 2014-2016

Ethel Weld, PhD Candidate, Graduate Training Program in Clinical Investigation, School of Public Health, Preliminary Oral Exam Committee Member, 2015; Thesis Committee Member, 2015-present

Dominique Figueroa, PhD Candidate, Pharmacology and Molecular Sciences. Thesis Committee. 2015-2016

Clare Ruberman, PhD Candidate, Biostatistics. Oral Examination Committee, Member 2015. Thesis Committee Chair 2015-2018

Hugh Giovinazzo, PhD Candidate, Pharmacology and Molecular Sciences. Oral Examination Committee. 2015

Eugenie Shieh, PhD Candidate, Graduate Training Program in Clinical Investigation, School of Public Health, Preliminary Oral Exam Committee Member, 2016; Thesis Committee Member, 2015-present

Thuy Huang, PhD Candidate, Pharmacology and Molecular Sciences. Oral Examination Committee. 2015-present

Matthew Ippolito, PhD Candidate, Graduate Training Program in Clinical Investigation, School of Public Health, Preliminary Oral Exam Committee Member, 2016; Thesis Committee Member, 2017-present

Taarika Babu, PhD Candidate, Pharmacology and Molecular Sciences. Thesis Committee Member. 2017-present

Omamah Alfarisi, PhD Candidate, Graduate Training Program in Clinical Investigation, School of Public Health, Thesis Committee Member, 2018-present

EDUCATIONAL ACTIVITIES

Mentoring

Thesis/Oral Examination Committees – continued

Huilei Wang, PhD Candidate, Biomedical Engineering. Oral Exam Committee (Alternate) 2018.

Christy Pickering, PhD Candidate, Biomedical Engineering. Oral Exam Committee Chair 2018.

Inez Lam, PhD Candidate, Biomedical Engineering. Oral Exam Committee Chair 2018.

EDUCATIONAL ACTIVITIES

Mentoring

Training Grant Participation

Grant #: 4T32GM066691
Title: Clinical Pharmacology Training Program
Principal Investigator: C. Hendrix (as of 2016 multi-PI with K. Dooley)
Date: 07/01/08-06/30/2023
Award: $196,485 current year direct costs
Role: Mentor Clinical Pharmacology Fellows in clinical research; pharmacokinetics teaching

Grant #: 1UL1TR001079-01
Title: Institutional Clinical and Translational Science Award
Principal Investigator: D. Ford
Dates: 9/17/07 – 4/30/18
Award: $$7,485,218
Role: Mentor post-doctoral fellows in Graduate Training Program in Clinical Investigation

Grant #: 5T32GM08763-14
Title: Pharmacology Training Grant
Principal Investigator: J. Liu
Date: 07/01/00 – 06/30/20
Award: $312,004
Role: Train graduate students in clinical pharmacology teaching and research.

Grant #: 2T32AI007291-21
Title: Research Training in Microbial Diseases
Principal Investigator: K. Gebo
Date: 08/01/01 – 08/31/16
Award: $267,125 current year direct costs
Role: Mentor Infectious Diseases Fellows in clinical research

Grant #: 5R25DA021630
Title: Pediatric Training Grant: Immersion in Drug Abuse Research
Principal Investigator: E. Gauda
Dates: 07/01/07-04/30/13
Award: $301,715
Role: Johns Hopkins/Morgan State University research training aspects of illicit drug use.

Grant #: 5D43TW00010
Title: Fogarty AIDS International Training & Research Program
Principal Investigator: C. Beyrer
Dates: 07/01/07-05/31/13
Award: $695,000
Role: Mentoring of international post-doctoral clinical research fellows.

EDUCATIONAL ACTIVITIES

Educational Program Building / Leadership / Administration

School of Medicine

Educational Policy and Curriculum Committee (EPCC), Student Assessment and Program Evaluation (SAPE) Subcommittee, member 2015-present

Medical Pharmacology (2nd year medical school)
- Course Co-Director 1997-2001
- Sectional Focus Group Leader (Introduction, Infectious Diseases, Rheumatology, Hepatology, Pain) 1997- 2003

Rational Therapeutics (4th year medical school, required course)
- Initial Course Developer 1995
- Course Director 1995-2004
- Sessions jointly taught by experienced clinician and clinical pharmacologist to emphasize rational approach to therapeutic problems; focus on topics of keen interest to soon-to-be interns.

Analytical Methods in Clinical Pharmacology (Fellowship training curriculum, required course)
- Initial Course Developer 2000
- Course Director 2000-present
- Cognitive and skill-based curriculum introduces quantitative aspects of clinical pharmacology in small-group problem-solving sessions.

Laboratory Science for the Clinical Investigator (Fellowship training curriculum, required coruse)
- Initial Course developer 2017
- Designed to provide an overview to clinical post-doctoral fellows and junior faculty planning clinical research studiesthat will rely on laboratory collaboration to support the clinical research. Curriculum covers a broad array of laboratory methods that describe quantitative laboratory methods, process of validation, quality control, and culture of laboratory-clinical interactions.

School of Public Health

Principles of Drug Development, (required GTPCI Course)
- Course Director 1999-2003
- Curriculum oriented around small-group “pharmaceutical team” skill-building exercises supplemented by didactic sessions (course director, industry and FDA medical reviewers) to provide fundamentals of the drug development process. Final exam includes visiting senior leadership from FDA to hear fully developed drug development plans designed by student teams.

EDUCATIONAL ACTIVITIES

Educational Program Building / Leadership - continued

US Air Force

US Air Force HIV Force wide Base Level Prevention & Education Program
Initial Program Development 1991
Course director1991-1999
Lecturer/ Small Group leader 1991-1999
US Air Force wide HIV prevention program implemented based on identification and training of small multi-disciplinary base-level HIV prevention teams comprised of physician, nurse educator, public health officer and other health professionals who develop a local prevention plan tailored to meet local needs. Team building and training carried out initially and sustained over time at annual HIV/AIDS Train-the-trainer Short Course (24 hour CME units).

National

"Principles and Practice of Drug Development"
Sanctioned by Institute of Medicine, concept developed at Institute of Medicine Forum
Sponsored by Stanford University, The Burroughs Wellcome Fund, and The Doris Duke Charitable Foundation
2006 - Curriculum development consultant
2006 - Lectures (delivered at Stanford University and internet broadcast to dozens of registered U.S. university campuses via the Stanford University Center for Professional Development)
"Role of pharmacokinetics-pharmacodynamics in drug development"
"Pharmacokinetics bridging process and practice in drug development"
"Pharmacokinetic-Pharmacodynamic models in drug development"

Food and Drug Administration

"Academics to CDER" Annual CME Curriculum Development
Jointly developed curriculum between FDA Center for Drug Evaluation and Research Office of Training and Communication staff and Baltimore-Washington area academics
Target audience Baltimore-Washington Clinical Pharmacology Programs and FDA staff
2001-2004 Curriculum Development Committee
2003 "Tools for Pre-Approval Drug Safety Evaluation", Course Director, Session Moderator, Lecturer

RESEARCH ACTIVITIES

Research Program Building / Leadership

Dates, name of research / basic science program, role

1989 – 1994	US Air Force/Henry M. Jackson Foundation HIV Research Program. Transitioned and substantially expanded existing observational database focused research program to integrated interventional clinical research organization collaborating in tri-service military medical consortium. Provided leadership and management of program during growth from initial staff of 4 to over 50 FTEs in clinical research program. Served initially as Research and Evaluation Unit Director (1989-1992), then Program Director (1992-1994).
1997 – Present	Drug Development Unit (Division of Clinical Pharmacology) Reorganization. Reorganized existing clinical research unit, which focused on internal pharmaceutical industry-funded studies, to expand capacity to support investigator-initiated studies for faculty throughout the School of Medicine and refocused internal research portfolio to a primarily federally-funded clinical research enterprise. Served initially as Clinical Director (1997-1998), then overall Director (1998-Present).

ORGANIZATIONAL ACTIVITIES

Institutional Administrative Appointments (committees, dates)

Johns Hopkins University School of Medicine Committees:

Johns Hopkins Medicine Institutional Review Board (JHM IRB)
Member 2001- present
Co-Chairman IRB #2 – 2001 - 2007
Pharmacy & Therapeutics Liaison to JHM IRB 2001-present

Selection Committee, David S. Levine Award for Excellence in Mentoring, Department of Medicine, 2008

Department of Medicine, Appointment and Promotion Committee, 2009-present

Student Promotions Committee – Third and Fourth Years, 1996-2004

Student Promotions Committee – Second Year, 2000-2001

Joint Committee on Clinical Investigations, 1998-2001
Subcommittee (Pharmacy & Therapeutics Representative) 1998-2001

Graduate Training Program in Clinical Investigation,
Research Review Committee, 2/00-9/2006

Search Committee, Chief, Division of Infectious Diseases, Department of Medicine, 2004-2005

Search Committee, Clinical Pharmacology Faculty, Department of Medicine, 2004-2005

Search Committee, Pharmacology Faculty, Department of Pharmacology, 2004

The Johns Hopkins Hospital Committees:

Pharmacy and Therapeutics Committee, 1995-present
Joint Antibiotic Subcommittee, Chairman, 1998-2002

Editorial Activities

Journal Editorial Board
Clinical Pharmacology and Therapeutics (2005 – 2008)

Clinical and Translational Science (2007 – 2015)

Pharmacology Research & Perspectives (2017-present)

ORGANIZATIONAL ACTIVITIES

Journal Peer Review Activities

AIDS Research and Human Retroviruses (2006 – present)
Antiviral Research (2001 – present)
Clinical Drug Investigation (2006 – present)
Clinical Infectious Diseases (2006 – present)
Clinical Pharmacokinetics (2014-present)
Clinical Pharmacology and Therapeutics (2002 – present)
Clinical and Translational Science (2007 – present)
Contraception (2006 – present)
International Journal of STD & AIDS (2014-present)
Journal of Acquired Immune Deficiency Syndromes (2003 – present)
Journal of Antimicrobial Chemotherapy (2014-present)
Journal of Clinical Pharamcology (2014-present)
Journal of Infectious Diseases (2006 – present)
Journal of Pharmacology and Experimental Therapeutics (2002 – present)
Lancet HIV (2016 – present)
Medicine (2009 – present)
Neurology (2011 – present)
PLOS One (2014 – present)

Advisory Committees, Review Groups/Study Sections (sponsor, role, date)

Office of AIDS Research Advisory Committee, National Institutes of Health, *ex officio* member Department of Defense, 1995-1999

AIDS Clinical Trials Group IBT RAC, General Immune Modulation Subcommittee, National Institutes of Health, 1997-1998

General Clinical Research Centers, Division of Research Resources, National Institutes of Health; Study Section, Site Reviewer, 1998

Therapeutics Research Working Group, Office of AIDS Research Advisory Committee, National Institutes of Health, 1999-present

General Clinical Research Centers, Division of Research Resources, National Institutes of Health; Study Section, Site Reviewer, 2002

Institute of Medicine, Panel Member, Panel on “Institutional Review Boards: Health Services Research Data Privacy Protection”, 2000

U.S. Dept. of Agriculture, National Organic Standards Board, Technology Advisory Panel, Reviewer, 2002

ORGANIZATIONAL ACTIVITIES

Advisory Committees, Review Groups (sponsor, role, date) – continued

Centers for Disease Control and Prevention, Chairman, Special Grant Review Panel, PA "Clinical Evaluation and Testing of Vaginal Microbicide Candidates." August 2003

National Institutes of Health, NIAID special review meeting PAR 03-138 entitled "Novel HIV Therapies: Integrated Preclinical/Clinical Program" March 2004

National Institutes of Health, NIGMS, Clinical Pharmacology Training Grant (T32), Special Emphasis Panel; Site Visit team. July 2004

National Institutes of Health, NIAID Special Emphasis Panel RFA-AI 04-047 "Partnership for Topical Microbicides" Review Committee, April 2005

National Institutes of Health, NIGMS, Clinical Pharmacology Training Grant (T32), Special Emphasis Panel. June 2005

Centers for Disease Control and Prevention (CDC), Board of Scientific Counselors, National Center for Infectious Diseases, March 2005 – 2007

Medical Research Council of Ireland, Clinical Research Infrastructure Grant Reviewer, 2006

American Foundation for AIDS Research (amfAR), Rectal HIV Transmission Targeted RFP, Scientific Reviewer, August 2006

SyNCH Trial (Single and Multiple Dose Escalation Phase I Study to Evaluate the Safety, Tolerability, and Pharmacokinetics of Orally Administered Silymarin (Legalon®) in Non-Cirrhotic Subjects with Chronic Hepatitis C or Non-Alcoholic Fatty Liver Disease), Safety Monitor, 2006

Food and Drug Administration (FDA),
Antiviral Drugs Advisory Committee, 2007 – 2010
Oncology Drugs Advisory Committee 2017

National Institutes of Health, NIAID Special Emphasis Panel RFA-AI-07-019 "Novel HIV Therapies: Integrated Preclinical/Clinical Program (U19)" Review Committee, October 2007

Population Council Microbicides Scientific Advisory Board, 2009 – present

National Institutes of Health, NIGMS, Clinical Pharmacology Training Grant (T32), Special Emphasis Panel; Study Section, Site Visit team. July 2014, July 2015

PREVENT U19 Program Project Grant, University of Louisville, KY, Scientific Advisory Board (2017-present)

UNC Chapel Hill Center for AIDS Research Scientific Advisory Board (2016-present)

ORGANIZATIONAL ACTIVITIES

Professional Societies (membership, committees, dates, role)

Alpha Omega Alpha Honor Medical Society 1983-present

Infectious Diseases Society of America 1989-1998

Civil-Military Alliance to Combat HIV/AIDS, 1996-2002; Steering Committee, 1999-2002

Armed Forces Infectious Diseases Society, 1997-1999

International Society of Antiviral Research
- Scientific Program Committee Reviewer 2001

International AIDS Society 1997 - present
- Industry Liaison Forum 2005

American Society for Clinical Pharmacology and Therapeutics (ASCPT) 1997 – present
- Board of Directors, 2010 – 2012
- Coordinating Committee on Scientific Sections, 2004-2010
  - Chairman 2010-2012
  - Vice Chairman 2008 – 2010
- Infectious Diseases and Antimicrobial Agents Section, 1997-present
  - Chairman 2005 – 2008
  - Vice Chairman 2004 – 2005
  - Steering Committee 2018-present
- Scientific Program Committee, 1998-2002, 2005-2008
- ASCPT Nominating Committee, 2004-2005, 2014-2015
- Education Committee-1999-2002, 2015-present
- Social Media Task Force 2014-2015
- Mentor Task Force 2015-present
- Career Development Committee 2016-present
- Webinar Committee 2017

International Society of Pharmacometrics 2011 – 2015

American College of Clinical Pharmacology 2018-present

ORGANIZATIONAL ACTIVITIES

Conference Organizer, Session Chair (sponsor, date, role) - continued

Thirty-First International Congress of Military Medicine, "Medical Response to Chemical Warfare", Beijing, People's Republic of China, Symposium Co-Chair, December 1996.

Third Congress on AIDS in Asia and the Pacific, "Military AIDS Symposium", Manila, Philippines, December 1997, Symposium Co-chair.

American Society for Clinical Pharmacology and Therapeutics, "Post-Marketing Surveillance", San Antonio, Texas March 1999, Symposium Co-Chair.

American Society for Clinical Pharmacology and Therapeutics, "Novel Pharmacokinetic Methods for Developing HIV Chemoprevention Strategies", Orlando, Florida March 2005, Workshop Organizer, Co-Chair.

American Society for Clinical Pharmacology and Therapeutics, "Pharmacokinetics and Clinical Applications", Baltimore, Maryland, March 2006, Session Co-Chair.

Microbicides 2012, "Can we determine who uses? Self reports and objective measures of adherence in microbicide & PrEP trials". Sydney. April 2012. Symposium committee.

American College of Clinical Pharmacology. "Symposium VII: Adherence: Missing Link in the Puzzle of Clinical Pharmacology". Bethesda, MD. September 2013. Session Co-Chair.

HIV Research for Prevention (HIVR4P). "Long-acting Drug Release Systems for PrEP and Treatment." Chicago, IL. October 2016. Session Co-Chair.

HIV Research for Prevention (HIVR4P). "Choosing ARVs for Prevention: Ensuring and Measuring Effective Tissue Delivery" Chicago, IL. October 2016. Session Co-Chair.

Conference on Retroviruses and Opportunistic Infections (CROI). "Of Mice, Monkeys, and Men: Prep from Preclinical to Population Level Impact". Boston, MA. March 2018. Session Co-Chair.

RECOGNITION

Awards, Honors

Distinguished Military Graduate, Massachusetts Institute of Technology, AFROTC, 1978

Air Force Commendation Medal (USAF), 1980

Alpha Omega Alpha Honor Medical Society, 1983

Department of Medicine Award for Outstanding Academic Performance, Georgetown University, School of Medicine, 1984

Cahill Award for Academic Excellence in Surgery, Georgetown Univ., School of Medicine, 1984

Magna cum Laude Graduate, Georgetown University, School of Medicine, 1984

Meritorious Service Medal (USAF), 1994

Meritorious Service Medal, First Oak Leaf Cluster (USAF), 1997

Pharmaceutical Research and Manufacturers Association Faculty Development Award, 1997

Outstanding Pharmacology Professor (Basic Sciences), Medical Student Association, 2001-2002

Student Marshal, Medical School Graduation, Class of 2002

Johns Hopkins Alumni Association Excellence in Teaching Award, 2003

David M. Levine Faculty Mentoring Award (Department of Medicine) 2007

PhRMA Foundation Award in Excellence 2017

Ammerican College of Clinical Pharmacology, Distinguished Investigator Award 2018

RECOGNITION

Invited Talks, Panels

1. "A Risk-Benefit Perspective on Universal HIV Screening in the United States Air Force." 1991, Buenos Aires, Argentina. Invited Talk, 17th Meeting of the Committee on Medicine in the Air Forces in the Americas. Sponsor: Committee on Medicine in the Air Forces in the Americas.

2. "International Security Impact of the HIV/AIDS Epidemic". 1995. Kampala, Uganda. Invited Talk, Africa Regional AIDS Conference, Military AIDS Symposium. Sponsor: UNAIDS.

3. "HIV Prevention Policy in Military Organizations". December 1996. Beijing, People's Republic of China. Invited Talk, Thirty-First International Congress of Military Medicine, Beijing, China. Sponsor: Peoples Liberation Army, People's Republic of China.

4. "Planning Effective HIV Prevention Interventions in the Military". October 1998. St. Petersburg, Russian Federation. Invited Talk, Kirov Military Medical Academy. Sponsor: Russian Federation Ministry of Defense.

5. "Drug Interaction Research Issues in Heavily Treated HIV-infected Patients". May 1999. Toronto, Canada. Invited Talk, International AIDS Society – Industrial Liaison Forum: The Challenge of Clinical Trial Design in Evaluating HIV Antiretroviral Use in Heavily-Pre-Treated Patients (Conference). Sponsor: International AIDS Society.

6. "Pharmacology of Antiretroviral Drugs in the Genital Tract". August 1999. Atlanta, Georgia. Invited Talk, National HIV Prevention Conference. Sponsor: CDC.

7. "COX-2 Inhibitors: Evaluation of New NSAIDs". September 1999. Towson, Maryland. Invited Talk, Arthritis Foundation of Maryland (Sponsor).

8. "Potential Drug Interactions in Antiviral Therapy". May 2000. Madrid, Spain. Invited Talk, European Congress on Chemotherapy-3 (Sponsor).

9. "Clinical Pharmacology of Rectal Microbicides". Atlanta, February 2001. Invited Talk, Centers for Disease Control (CDC) Conference on Rectal Microbicides, Sponsor: CDC.

10. "Preventing Fungal Infections". May 2001. Baltimore. Medical Grand Rounds, Johns Hopkins University School of Medicine. Sponsor: Department of Medicine.

11. "Pharmacologic Studies in the Development of Rectal Microbicides", June 2001. Baltimore. Invited Talk, Rectal Microbicide Workshop. Sponsor: NIH Office of AIDS Research.

12. "Development of Beta-Cyclodextrin as a Topical HIV Microbicide Candidate", August 2001. Rockville. Invited Talk, NIH Division of Antiviral Drug Products. Sponsor: FDA.

13. "Drug Interactions in Combined Hepatitis C-HIV Chemotherapy", April 2002. Aspen. Strategies for the Management of HIV/HCV Coinfection. Sponsor: Perspectives in Medicine.

RECOGNITION

Invited Talks, Panels – continued

14. "Quantitative Safety Assessment in Microbicide Development", May 2002. Antwerp, Belgium. Invited Talk, Microbicides 2002. (Cancelled)

15. "Distribution of Candidate Microbicide Gel and Simulated Ejaculate in the Lower Gastrointestinal Tract", June 2003. Los Angeles. Invited Talk, UCLA Center for HIV and Digestive Diseases (Sponsor).

16. "Clinical Development of a CXCR4 Chemokine Inhibitor", June 2003. New York City. Invited Talk, Entry Inhibitor Special Issue Advisory Board. Sponsor: Glaxo-Smith-Kline.

17. "Rational Development of Rectal Microbicides: Pharmacology, Toxicity, and Acceptability", July 2003. Atlanta. Invited Talk, National HIV Prevention Conference. Sponsor: CDC.

18. "Development of a CXCR4 Chemokine Receptor Inhibitor for HIV Infection", December 2003. Towson. Invited Talk, Towson University. Sponsor: Towson University.

19. "Distribution of Rectal Microbicide Vehicle and Simulated Ejaculate following Simulated Coital Activity" January 2004. New York City. Invited Talk, Columbia University. Sponsor: Columbia University, School of Medicine.

20. "Delivery of Microbicide to "At Risk" Intestinal Mucosa" March 2004. London. Invited Talk, Challenges to Rectal Microbicide Development (Satellite): Microbicides 2004.

21. "Critical Pharmacologic Issues in Vaginal and Rectal Microbicide Development" October 2004. Providence. Visiting Professor. Sponsor: Tufts University - Brown University Center for AIDS Research.

22. "Pharmacologic Issues in HIV Chemoprevention." February 2005. Boston. Invited Talk, International AIDS Society - Industry Liaison Forum, 12th National Conference on Retroviruses and Opportunistic Infections. Sponsor: International AIDS Society.

23. "Clinical Pharmacokinetics and Pharmacodynamics of Chemokine Inhibitors." February 2005. Boston. Invited Talk, 12th National Conference on Retroviruses and Opportunistic Infections. Sponsor: International AIDS Society.

24. "Adaptations of Radiologic Methods With Coital Simulations To Assess The Pharmacokinetics Of Topical Microbicides In The Vagina And Rectum", March 2005. Orlando. Invited Talk, Workshop on "Novel Pharmacokinetic Methods for Developing HIV Chemoprevention Strategies" Sponsor: American Society for Clinical Pharmacology and Therapeutics.

25. "Microbicides for HIV Prevention: Development Challenges for Clinical Pharmacology". April 2005. Quebec City. Invited Talk, 6th International Workshop on Clinical Pharmacology of HIV Therapy (Sponsor).

RECOGNITION

Invited Talks, Panels – continued

26. "Pharmacological Aspects of Microbicide Development". July 2005. Rio de Janeiro. Invited Talk, Challenges in HIV Microbicide Development. UCLA AIDS Institute and Brazilian STD/AIDS Program (Satellite Meeting): 3rd International AIDS Society Conference on HIV Pathogenesis and Treatment. Sponsor: International AIDS Society

27. "Clinical Pharmacology Challenges in Topical HIV Microbicide Development". September 2005. Buffalo. Visiting Professor. University of Buffalo School of Pharmacy and Pharmaceutical Sciences and School of Medicine/VA Medical Center.

28. "Making Drugs Safer" November 2005. Baltimore. Invited Talk, A Woman's Journey. Sponsor: Johns Hopkins University.

29. "HIV Chemoprevention: Evolving Approaches to Prevent HIV Infection with Drugs" Baltimore, January 2006. Invited Talk, Department of Medicine Grand Rounds (Sponsor).

30. "Rectal Microbicide Development: Measuring Gel & Virus Distribution" Web-Cast Teleconference, March 2006. Invited Talk, International Rectal Microbicides Working Group

31. "Drug Distribution & Formulation Issues in Rectal Microbicide Development" Cape Town, April 2006. Invited Talk, Rectal Microbicide Satellite Meeting. Microbicides 2006. Sponsor: UCLA AIDS Institute.

32. "Role of pharmacokinetics-pharmacodynamics in drug development"; "Pharmacokinetics bridging process and practice in drug development"; "Pharmacokinetic-Pharmacodynamic models in drug development". Palo Alto, National Webcast, April 2006. Invited talks, Principles and Practice of Drug Development Course. Sponsor: Stanford University and Institute of Medicine

33. "Rectal Microbicide Development: Contrasts to Traditional Drug and Vaginal Microbicide Development", Washington, D.C., May 2006. Invited Talk, Department of Health Policy, School of Public Health, George Washington University (Sponsor)

34. "Rectal HIV Microbicide Pharmacology & Drug Development" Raleigh-Durham, June 2006. Visiting Professor, Duke University Pratt School of Engineering, Department of Biomedical Engineering (Sponsor).

35. "Debate: Why Microbicides Will Fail" Arlington, September 2006. Invited Talk, Biomedical Interventions for HIV Prevention Working Group Meeting. Sponsor: Forum for Collaborative HIV Research Workshop.

36. "Topical HIV Microbicide Development: Evolving Challenges", Baltimore, November 2006. Invited Talk, Department of Pathology Grand Rounds (Sponsor).

RECOGNITION

Invited Talks, Panels – continued

37. "A Phase I, Dose-Rising Study of AMD11070 in HIV-Seronegative Men to Assess the Safety and Pharmacokinetics after Single or Multiple Doses," Baltimore, December 2006. Invited Talk, Plenary session, AIDS Clinical Trials Group. Sponsor: NIH.

38. “Reporting Scientific Misconduct – Deciding When and How to Act.” Washington, D.C., December 2006. Invited Talk, Panel Member. Compliance and Investigator Fraud in Clinical Trials. Sponsor: CBI.

39. “Topical HIV Microbicide Development.” Philadelphia. March 2007. Visiting Professor, Thomas Jefferson University, Division of Clinical Pharmacology (Sponsor).

40. “How Does Clinical Pharmacology Enhance HIV Microbicide Development?” Boston. April 2007. Visiting Professor, Tufts University, Division of Infectious Diseases (Sponsor).

41. “Pharmacology and Comparative Properties of NSAIDs.” Miami, May 2007. Invited Talk, Panel member, Osteoarthritis and NSAIDs: Scientific Expert Panel Meeting. Sponsor: MDG

43. “HIV Microbicide Development from a Clinical Pharmacology Perspective.” Seattle, July 2007. Invited Talk. Center for AIDS Research Pathogenesis Seminar Series, University of Washington.

44. “Clinical Study Design in Drug Development.” Chicago, September 2007. Invited Talk. Science for Managers, Kellogg School of Management, Northwestern University.

45. “Distribution of Microbicide and HIV Surrogates in the Rectum and Distal Colon to Inform Rational Rectal Microbicide Development”. Durban, South Africa., October 2007. Invited Talk. Nelson R. Mandela School of Medicine, University of KwaZulu-Natal, South Africa.

46. “Sparse Sampling Strategies in the Development of Vaginal Microbicide Candidates to Relationships Between Drug Exposure and Seroconversion Outcomes”. Durban, South Africa, October 2007. Invited Talk: South Africa Medical Research Council, HIV/AIDS Lead Programme and HIV Prevention Research Unit.

47. “Pharmacokinetic Issues in ARV Microbicide Resistance”. New Delhi, February 2008. Invited Talk, Microbicides 2008.

48. “Methods to Develop a Rectal-Specific Microbicide”. New Delhi, February 2008. Invited Talk. Microbicides 2008.

49. “New Methods in Prevention of HIV Infection”. Ames, March 2008. Invited Talk. Stupka Symposium, Iowa State University.

RECOGNITION

Invited Talks, Panels – continued

50. "Antiretroviral -based Microbicides Pharmacokinetics-Pharmacodynamics and Resistance". Cape Town, September 2008. Invited Talk. International Partnership for Microbicides Annual Meeting.

51. "Unique Contributions of MTN-001 to Microbicide Development Methodology". Cape Town, September 2008. Invited Talk. Microbicide Trial Network, Regional Investigator's Meeting.

52. "Pharmacokinetics & Future Pharmacodynamic Links". Cape Town, September 2008. Invited Talk. Microbicide Trial Network, Regional Investigator's Meeting.

53. "Microbicide Development Pipeline: Candidates, Mechanisms, Formulations, Clinical Phase" Cape Town September 2008. International Partnership for Microbicides Annual Meeting.

54. "Clinical Study Design in Drug Development" Chicago, September 2007. Invited Talk. Science for Managers, Kellogg School of Management, Northwestern University.

55. "Academic Contributions to Translational Drug Development". Shanghai, September 2008. International Clinical Research and Translational Medicine Symposium, Fudan University.

56. "Clinical Pharmacology Approach to HIV Chemoprevention Drug Development". Rochester, MN, October 2008. Invited Talk. Mayo Clinic.

57. "PK-PD in HIV Chemoprevention Studies" Atlanta. December 2008. AIDS Vaccine Advocacy Coalition (AVAC) sponsored meeting on Intermittent PrEP Development.

58. "Three-dimensional Problems in Imaging Drugs for HIV Chemoprevention" Baltimore 2008. Department of Biostatistics Grand Rounds, Johns Hopkins University School of Public Health.

59. "Drug Concentrations as an adherence biomarker in HIV prevention" New York January 2009. Quick Clinical Trials Working Group meeting on measuring adherence in HIV prevention trials.

60. "HIV Prevention with Drugs: Using Clinical Pharmacology to Put "Rational "Back in Drug Development." Baltimore March 2009. Department of Medicine, Grand Rounds.

61. "HIV Prevention with Topical Microbicides: Using Clinical Pharmacology to Put 'Rational' Back in Drug Development" Amsterdam April 2009. 10th HIV Clinical Pharmacology Workshop.

62. "Quantitative Pharmacokinetics of the Male Genital Tract and Applications in Drug Development". Invited Lecture. Atlanta March 2010. 111th Annual meeting of the American Society for Clinical Pharmacology and Therapeutics.

RECOGNITION

Invited Talks, Panels – continued

63. "HIV Prevention with Drugs". Invited plenary speaker. Hopkins-Brazil HIV Conference, Rio de Janeiro, April 2010.

64. "Pharmacology methods in prevention trials: assessing compartments and adherence". Invited talk, Laboratory Plenary Session, HIV Prevention Trials Network Annual Meeting. Washington, DC. April 2010.

65. "Pharmacokinetic Assessment of Adherence". Invited Talk. Microbicides 2010, May 2010, Pittsburgh.

66. "What Role Pharmacokinetics-Pharmacodynamics?" Invited Talk. Cape Town October 2010. Africa Regional Meeting of Microbicide Trial Network.

67. "Pharmacokinetics and Adherence in PrEP Development". Invited Talk. San Francisco. November 12, 2011 Forum for Collaborative HIV Research: 5th PrEP Working Group.

68. "The Role of Clinical Pharmacology in the Development of Topical HIV Microbicides" Visiting Professor. Pittsburgh. January 2011.University of Pittsburgh.

69. "MTN-001 Phase 2 Adherence and Pharmacokinetic Study of Oral and Vaginal Preparations of Tenofovir." Invited Talk. Microbicide Trial Network Annual Meeting. Arlington. March 2011.

70. "Use of Pharmacokinetics for Understanding Outcomes in HIV Prevention Trials" Invited Talk. Lab Plenary HIV Prevention Trials Network Annual Meeting, Washington, DC. June 2011.

71. Pharmacological assessment of medication adherence – Oral PrEP and Microbicides". Invited Talk. 19th International Society for STD Research. Quebec City. July 2011.

72. "Pharmacokinetics and Tissue Concentrations of Tenofovir and Emtricitabine: What is Needed to Prevent Transmission?" Invited Talk. Plenary HIV Vaccine Trials Network Annual Meeting. Seattle. November 2011.

73. "Clinical Pharmacology in HIV Pre-Exposure Prophylaxis Drug Development: Developing and Applying Tools when the Train has left the Station." Invited Talk. FDA Office of Translational Science. Silver Spring. January 2012.

74. "Attempts to Improve the Rational Development of HIV Pre-Exposure Prophylaxis through Clinical Pharmacology". Invited Talk. Mercer University. School of Pharmacy. Atlanta. February 2012

RECOGNITION

Invited Talks, Panels – continued

75. "Clinical Pharmacology in PrEP Development: Can small intensive studies inform RCTs?" Invited Talk. Microbicide Trials Network Annual Meeting. Bethesda, February 2012.

76. "Exploring Outcome Variability Across HIV Pre-Exposure Prophylaxis (PrEP) Trials", Anti-infective Section, ASCPT Annual Meeting. National Harbor, MD March 2012.

77. "Antiretroviral Pharmacology for PrEP: Enhancing RCT Understanding with Small Intensive Studies", Treatment as Prevention/Pre-Exposure Prophylaxis Summit. London, June 2012.

78. "Making Sense of Oral PrEP trials: Little Studies Informing Big Studies", Plenary Session, HPTN Annual Meeting. Washington, DC, June 2012.

79. "Oral & Topical PrEP: Unifying RCT Outcomes", Invited Talk, 7th HIV Transmission Workshop, Washington, DC. June 2012.

80. "Pharmacokinetic Assessment of PrEP Adherence", Invited talk, NIH DAIDS Behavioral Science Working Group Data Capture Technologies Focus Group, 11 October 2012.

81. "A Pharmacological Perspective on HIV Explant Challenge", invited talk, Biopsy Challenge meeting, NIH-Bill and Melinda Gates Foundation, Washington, DC, 29 November 2012.

82. "Genital and Anal Tract PrEP Pharmacokinetics", Office of AIDS Research Advisory Council Annual Meeting, Washington, DC, 8 November 2012.

83. "Measuring PK & Adherence in PrEP Trials: Explanation & Prediction", invited talk, RIHES, Chiang Mai University, Chiang Mai, Thailand, 7 January 2013.

84. "Clinical Pharmacology Approach to Rational Rectal Microbicide Development", Invited talk, Thai Red Cross/HIV-NAT, Chulalongkorn Univ, Bangkok, Thailand, 10 January 2013.

85. "Measuring PK & Adherence in PrEP Trials: Explanation & Prediction", Invited talk, Department of Medicine, University of Malaya, Kuala Lumpur, Malaysia, 15 January 2013.

86. "Pharmacological Approach to Monitoring Drug Adherence", Plenary Lecture, Microbicide Trials Network Annual Meeting. Bethesda, MD. February 2013.

87. "Enriching the design of clinical PK/PD studies of novel drug delivery systems", Invited Talk, Bill & Melinda Gates Foundation – NIH Think Tank on HIV Prevention Drug Delivery Systems. Washington, DC. February 2013.

88. "PK Assessment of Adherence in PrEP Trials" Pharmacometrics in Antiviral Drug Development Symposium, Annual Meeting of ASCPT, Indianapolis, 8 March 2013.

RECOGNITION

Invited Talks, Panels – continued

89. "Pharmacometric approaches to adherence assessment in HIV prevention trials." Mercer University Invited talk. Atlanta, 5 March 2013.

90. "How PK (could) inform PrEP Trials". Invited Talk, NIH, Division of AIDS Seminar, Bethesda, 15 March 2013.

91. "Pharmacological Aspects of PrEP", Invited Talk, Hopkins-Brazil HIV conference, Rio de Janeiro, Brazil 19 April 2013.

92. "Pharmacological Challenges for Next Generation PrEP", Invited Talk, 14th International Workshop on Clinical Pharmacology of HIV Therapy, Amsterdam, Netherlands, 23 APR 2013.

93. "Making sense out of oral and topical PrEP trials: Using little studies to understand big studies," Invited Talk, Annual Meeting of HIV Prevention Trials Network, Washington, DC, 6 May 2013.

94. "Scientific Misconduct". Invited Talk. FDA Office of Criminal Investigations. Charleston, SC, 18 June 2013.

95. "Exploring concentration-response in HIV Pre-Exposure Prophylaxis to optimize clinical care and trial design." Cell-Lancet Conference "What will it take for an AIDS Free World". San Francisco, 4 November 2013.

96. "HIV Pre-Exposure Prophylaxis: Clinical Pharmacology Insights". Invited Talk, 21st Conference on Retroviruses and Opportunistic Infections, Boston, Mar 4, 2014.

97. "Adherence : Impact on Study Results" CONRAD/AVAC Adaptive Trial Designs Conference. Washington, DC. June 23, 2014.

98. "The Role of Pharmacokinetics in selecting PrEP strategies". Invited Talk, 54th Interscience Conference on Antibiotics and Antimicrobical Therapy. Washington, D.C. September 9, 2014.

99. "HIV Pre-exposure Prophylaxis (PrEP) Trials: Making the Complex Simpler through Clinical Pharmacology". Invited Talk, Medical Grand Rounds, Western Ontario University, London, Ontario, September 17, 2014.

100. "Combining Pharmacology and Behavioral Science to Develop a Rectal Microbicide for HIV PrEP that People will Enjoy Using". Invited talk, Columbia University. Sponsor: Columbia University, School of Medicine. December 18, 2014.

RECOGNITION

Invited Talks, Panels – continued

101. "HIV Pre-Exposure Prophylaxis: Clinical Pharmacology Enriching Drug Development". Invited Talk, Dartmouth University, Division of Clinical Pharmacology. Lebanon, NH 23 June 2015.

102. "Pharmacokinetics in Microbicide Development". Invited Talk. NIH/DAIDS MTN Conference, "The Use of Mucosal Assays in Microbicide Trials" Arlington, VA 25-26 August 2015.

103. "Real-Time" Pharmacologically-based Adherence Testing". Invited Talk. NIH/DAIDS Conference "Optimizing Adherence Post-VOICE", Rockville, MD 2-3 September 2015.

104. "HIV Pre-Exposure Prophylaxis (PrEP) & Development of Microbicides". Invited Talk. American College of Clinical Pharmacology Annual Meeting, "An Update on HIV Treatment, Prevention and Drug Development Symposium", San Francisco, CA 28 September 2015.

105. "HIV Pre-Exposure Prophylaxis (PrEP) & Development of Microbicides". Invited Talk. University of California at San Diego Center for AIDS Research, San Diego, CA 23 October 2015.

106. "HIV Pre-Exposure Prophylaxis Drug Development". Invited Talk. Medical Grand Rounds, General Hospital, Tijuana, Mexico, 26 October 2015.

107. "Pharmacologic Adherence Assessment & Application in PrEP". Invited Talk. 2015 Center for AIDS Research (CFAR) Social and Behavioral Sciences Research Network Conference, Baltimore, MD 29 October 2015.

108. "Developing Behaviorally-Congruent Rectal Microbicides: A Clinical Pharmacology Approach". US-Japan Conference USAID, Bethesda, MD. 12 January 2016.

109. "Lessons Learned from Antiretroviral Testing". Invited Talk . UCLA CFAR-Sponsored Substance Use Meeting: Advancing the Field of Biobehavioral Substance Use Measurement for HIV Positive and At-risk Populations. Los Angeles, CA. 1 February 2016.

110. "Development of HIV Pre-exposure Prophylaxis: A Clinical Pharmacologist's Inside View". Invited Talk. University of North Texas Health Science Center. Fort Worth, TX. 8 April 2016

111. "Building on Oral PrEP Success: Rectal Microbicide Development". Invited Talk. DC Center for AIDS Research, Howard University, Washington, DC. 4 May 2016.

112. "HIV Pre-Exposure Prophylaxis Development: A Clinical Pharmacologist's Inside View". Invited Talk. KU Leuven, Leuven, Belgium. 17 May 2016.

RECOGNITION

Invited Talks, Panels – continued

113. "PK-PD Data to Advance Topical PrEP Products to Phase III". Invited Talk. Clinical Trial Evaluation Workshop for MPTs. Initiative for Multipurpose Prevention Technologies (IMPT). Washington, DC. 13 September 2016.

114. "Rectal vs. Vaginal Compartment Pharmacology." Invited talk. Contribution of Sexual Behaviour in the Global Heterosexual HIV Epidemic Workshop. NIH/DAIDS. Bethesda, MD. 15 September 2016.

115. "Pharmacologic Considerations for HIV Prevention Strategies". Invited talk.Western New York HIV Prevention Network Meeting. University of Buffalo, Buffalo, NY. 19 September 2016

116. "HIV Pre-exposure Prophylaxis Development:
A Clinical Pharmacologist's Inside View". Invited talk. Combating HIV/AIDS: Tx, PGx and PrEP Workshop, ACCP Annual Meeting. HIV symposium. San Diego, CA. 24 September 2016.

117. "Quantitative Assessment of Adherence: Experiences in HIV Prevention". Invited Talk. National Institute of Drug Abuse, Baltimore, MD 20 December 2016.

118. "Rectal Microbicide Development & DREAM Progress". Invited talk. Tenofovir Development Meeting, MTN Annual Meeting. Bethesda, MD. 20 March 2017.

119. "Developing Alternatives to Oral HIV PrEP: Rectal Microbicides & Long-Acting Formulations". Invited Talk. University of Texas Health Science Center, Galveston. April 2017.

120. "For Something Completely Different: Development of a Rectal Enema as Microbicide". Invited Talk. Oak Crest Institute of Science, Monroeville, CA May 2017.

121. "Rectal Microbicide Development: How Did We Get Here? What Have we Learned?" Invited webnar talk. Sponsored by AIDS Vacine Advocacy Coalition (AVAC) and International Rectal Microbicide Advocates (iRMA). August 2017.

122. "Rectal Microbicides: Where We're Heading". Invited webinar talk. Sponsored by AIDS Vacine Advocacy Coalition (AVAC) and International Rectal Microbicide Advocates (iRMA). August 2017.

123. "Impact of adherence on the development of HIV Pre-exposure Prophylaxis" Invited Symposium Talk (delivered Mark Sales), American College of Clinical Pharmacology Annual Meeting. San Diego, CA. September 2017.

RECOGNITION

Invited Talks, Panels – continued

124. "Advances in Formulations in HIV PrEP: Topical Products - Rings, Gels, Implants, etc." Invited Symposium talk (delivered Marc Baum), American College of Clinical Pharmacology Annual Meeting. San Diego, CA. September 2017.

125. "Review of the Current Rectal Microbicide Context". Invited Talk. Reboot the Booty Think Tank. Sponsored by AIDS Vacine Advocacy Coalition (AVAC) and International Rectal Microbicide Advocates (iRMA). New York, NY. September 2017.

126. "Lube Safety 101". Symposium on Lubricant Safety, US Conference on AIDS. Washington, DC. September 2017.

127. "Next Generation PrEP? Injectable & Implantable ARVs". Plenary Talk. Microbicide Trial Network Regional Meeting, Cape Town, RSA. September 2017.

128. "The Path Ahead for Rectal Microbicides". Plenary Talk. Microbicide Trials Network Regional Meeting, Cape Town, RSA. September 2017.

129. "DREAM Program for Rectal Microbicide Prevention". Invited talk. PREVENT Program Project Annual Meeting. Louisville, KY. October 2017.

130. "Promise & Progress of Rectal Microbicides for HIV Pre-Exposure Prophylaxis". Invited Talk. Center for AIDS Research. University of Alabama, Birmingham, AL. November 2017.

131. "Microbicides: Where We're Heading" Invited Talk. Second Annual Biomedical HIV Prevention Summit (NMAC). New Orleans, LA. December 2017

132. "Clinical Pharmacology of HIV Pre-Exposure Prophylaxis (PrEP) – Where are we now?" Visiting Professor. University of Liverpool. Liverpool, UK. February 2018.

133. "Beyond Oral PrEP: Promise and Challenges of Alternative Antiviral Dosing Methods for PrEP". Invited Lecture. Office of AIDS Research Brown Bag Seminar. Brockville, MD. February 2018.

134. "Beyond Oral PrEP: Promise and Challenges of Alternative Antiviral Dosing Methods for PrEP" Invited Talk. 8th International Workshop on HIV & Women. Boston, MA. March 2018.

135. "Proof-of-Concept for On Demand, Behaviorally-Congruent Rectal Microbicide Douche". Plenary Lecture. MTN Annual Meeting. Bethesda, MD March 2018.

136. "Success, Disappointment, *& Hope* in the Development of HIV Pre-Exposure Prophylaxis". Invited Talk. Walter Reed Army Institute of Research, Silver Spring, MD. April 2018.

RECOGNITION

Invited Talks, Panels – continued

137. "Rectal Microbicide Product Development". Invited talk. Oak Crest Institute of Science Program Project Annual Meeting. Monrovia, CA. May 2018.

138. "Pharmacology Lab Contributions to PrEP Product Development". Invited Talk. HPTN Annual Meeting. Washington, DC. May 2018.

139. "Clinical Pharmacology of HIV Pre-Exposure Prophylaxis (PrEP) – Where are we now?" Invited Talk. International Workshop on Clinical Pharmacology of Antiviral Therapy. Baltimore, MD. May 2018.

140. "DREAM Program: On Demand, Behaviorally-Congruent Rectal Microbicide Douche". Invited webinar talk. Sponsored by AIDS Vacine Advocacy Coalition (AVAC) and International Rectal Microbicide Advocates (iRMA). June 2018.

EXHIBIT G

BY ORDER OF THE SECRETARY OF THE AIR FORCE

AIR FORCE INSTRUCTION 44-178

4 MARCH 2014
Certified Current 28 June 2016
Medical

HUMAN IMMUNODEFICIENCY VIRUS PROGRAM

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

ACCESSIBILITY: Publications and forms are available on the e-Publishing website at **www.e-Publishing.af.mil** for downloading or ordering.

RELEASABILITY: There are no releasability restrictions on this publication.

OPR: AFMOA/SGHM

Certified by: HQ USAF/SG3
(Brig Gen Charles E. Potter)

Pages: 44

Supersedes: AFI48-135, 7 August 2006

This instruction implements AFPD 44-1, *Medical Operations*, and Department of Defense (DoD) Instruction 6485.01, *Human Immunodeficiency Virus*, June 7, 2013. It outlines the Air Force Human Immunodeficiency Virus (HIV) Program including responsibilities and procedures for identification, surveillance, and administration of Active Duty Air Force personnel. The Air National Guard (ANG) and Headquarters Air Force Reserve Command (HQ AFRC) utilize this instruction along with supplements to provide specific guidelines for the administration of Air Reserve Component (ARC) personnel infected with HIV. Headquarters Air Reserve Personnel Center (HQ ARPC) utilizes AFI 44-175 as guidance for Individual Mobilization Augmentees (IMAs), with local MTFs as the notifying agent. This instruction requires collecting and maintaining information protected by the Privacy Act of 1974. This is authorized by 10 U.S.C., Chapter 55, *Medical and Dental Care*, 10 U.S.C., Sec. 8013, *Power and Duties of the Secretary of the Air Force*, and Executive Order 9397 (SSN) as amended by Executive Order 13478, Amendments to Executive Order 9397 Relating to Federal Agency Use of Social Security Numbers, November 18, 2008. Systems Record Notices F044 AF SG E, *Electronic Medical Records System*, and R, *Reporting of Medical Conditions of Public Health and Military Significance*, apply. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW Air Force Manual (AFMAN) 33-363, Management of Records, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS).

Send comments and suggested improvements on AF Form 847, **Recommendation for Change of Publication**, through channels, to AFMSA/SG3PM. See **Attachment 1** for a glossary of

references, abbreviations, acronyms, and terms. This publication may be supplemented at any level, but all direct Supplements must be routed to the OPR of this publication for coordination prior to certification and approval. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See AFI 33-360, Publications and Forms Management, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the Publication OPR for non-tiered compliance items.

SUMMARY OF CHANGES

This document has been substantially revised and must be completely reviewed. Major changes include condensed sections describing the requirements for a positive HIV test and algorithms for determining HIV infection which reference current guidelines by the American Public Health Laboratories (APHL) and Centers for Disease Control (CDC). The location of the USAF HIV Medical Evaluation Unit was updated to San Antonio Military Medical Center (SAMMC) and the location of HIV laboratory testing was updated to the USAF School of Aerospace Medicine (USAFSAM) HIV Testing Services, Wright-Patterson Air Force Base. The clinical evaluation visit structure was modified, with HIV evaluations performed at SAMMC for initial visits, followed by a second visit in 6 months, then yearly thereafter while the patient remains on active duty (AD) status. Interim clinical visits will be performed as necessary in the local area based on recommendations from the USAF HIV Medical Evaluation Unit. The sections detailing the components of HIV clinical evaluations have been condensed with all elements of HIV clinical evaluations to be performed according to current clinical guidelines.

Chapter 1

ROLES AND RESPONSIBILITIES

1.1. HQ USAF/SG. Provides facilities, manpower, and funds to collect HIV testing specimens of Air Force (AF) personnel, to medically evaluate all HIV positive AD members including IMAs, and to ensure spouses and contacts of HIV infected AD members are notified, counseled, and tested appropriately.

1.2. HQ AFRC/SG. Ensures reserve personnel are HIV tested and spouses and contacts of HIV infected reserve personnel are notified appropriately.

1.3. HQ ANG/SG. Ensures ANG personnel are HIV tested and spouses and contacts of HIV infected ANG personnel are notified appropriately.

1.4. HQ AFMC/SG. Provides facilities, funds, and manpower to the USAFSAM HIV Testing Services to perform HIV testing and epidemiological analysis of all HIV tests performed on ADAF personnel and their dependents. Provides support to the DoD Serum Repository.

1.5. HQ AETC/SG. Provides facilities, funds, and manpower to medically evaluate all HIV positive ADAF members.

1.6. USAF HIV MEDICAL EVALUATION UNIT. Located in the Joint Infectious Disease Service at SAMMC, medically evaluates all ADAF HIV positive members initially, at 6 months, and then every 12 months thereafter while on active duty. (T-1)

Chapter 2

HIV PROGRAM

2.1. General. The AF tests all members for human immunodeficiency virus, medically evaluates all AD infected members, and educates members on means of prevention.

2.2. Populations Tested.

2.2.1. Accessions. All applicants for enlistment or appointment to the ADAF or ARC are screened for evidence of HIV infection (**Attachment 3**). Applicants infected with HIV are ineligible for enlistment or appointment to the ADAF and the ARC. Waiver for HIV infection is not authorized.

2.2.2. ADAF personnel. All ADAF personnel are screened for serological evidence of HIV infection every two years, preferably as part of their Preventive Health Assessment (PHA). They are also tested for clinically indicated reasons, when newly diagnosed with active tuberculosis, during pregnancy, when diagnosed with a sexually transmitted infection (STI), upon entry to drug or alcohol treatment programs, or prior to incarceration. HIV testing is conducted IAW **Attachment 3**. (T-1)

2.2.3. ARC personnel. Air Force Reserve personnel are screened for serological evidence of HIV infection every two years, preferably during their PHA (Preventive Health Assessment). ARC members will have a current HIV test within two years of the date on which they are called to active duty for 30 days or more.HIV testing is conducted IAW **Attachment 3**. (T-1)

2.2.4. DoD Civilians. DoD Civilian employees are tested for serological evidence of HIV to comply with host nation requirements for screening of DoD employees (**Attachment 6**) and after occupationally related exposures. (T-1)

2.3. Initial Procedures for Positive Tests. All ADAF personnel testing positive are counseled by a physician regarding the significance of a positive test. They are given information on modes of transmission, appropriate precautions to mitigate transmission, and prognosis. ADAF members are administered an order to follow preventive medicine requirements as described in **Attachment 7**. ARC members will also be administered this order. The preventive medicine requirements/order will not be delayed pending any administrative action. All eligible beneficiaries are offered counseling. Contacts of HIV-infected members are notified of potential exposure to HIV infection according to state or local law. (T-0)

2.4. Clinical Evaluation, to Include Evaluation for Continued Military Service. All ADAF members, as well as ARC members on extended active duty, who test positive for HIV are referred to SAMMC for medical evaluation. Per AFI 48-123 and AFI 41-210, HIV-positive personnel must undergo medical evaluation for the purpose of determining status for continued military service. ARC members who are not on extended active duty or who are not on full-time National Guard duty, and who show serologic evidence of HIV infection, will be referred for a medical evaluation of fitness for continued service in the same manner as service members with other chronic or progressive illnesses in accordance with DoDI 1332.38. In the case of an ANG member, it is only required if the state identifies a nonmobility, nondeployable position in which the member can be retained. All ADAF members will have an initial evaluation at SAMMC, followed by a visit at 6 months, then yearly thereafter while remaining on AD status. ARC and

ANG members whose condition is determined to meet Line of Duty requirements may have initial and/or annual HIV evaluations performed at regional military facilities. ARC and ANG members not meeting Line of Duty requirements will have an initial evaluation by a civilian HIV specialist. The medical evaluation follows the standard clinical protocol outlined in **Attachment 8** and utilizes procedures for evaluating T-helper cell counts described in **Attachment 12**. ARC members not on extended active duty must obtain a medical evaluation that meets the requirements of **Attachment 8** from their civilian healthcare provider (in the case of the ANG, only if the state identifies a nonmobility, nondeployable position in which the member can be retained). An epidemiological assessment (including sexual contacts and history of blood transfusions or donations) is conducted to determine potential risk of HIV transmission (see **Attachment 11**). (T-1)

2.4.1. Outcome of Evaluation for Continued Military Service. HIV seropositivity alone is not grounds for medical separation or retirement for ADAF members. Members shall be retained or separated as outlined in **Attachment 9**. (T-1)

2.4.2. Periodic Re-evaluation. HIV infected ADAF members retained on active duty and ARC members retained in the Selected Reserve must be medically evaluated annually at SAMMC. Such personnel must be assigned within the continental United States (CONUS). Alaska, Hawaii, and Puerto Rico are also acceptable. ARC HIV infected members may not be deployed outside of CONUS (except for Alaska, Hawaii, and Puerto Rico). HIV-infected members shall not be assigned to OCONUS mobility positions, and those on flying status must be placed on Duty Not Including Flying (DNIF) status pending medical evaluation/waiver determination. Waivers are considered using normal procedures established for chronic diseases. Aeromedical waivers are considered according to the Aerospace Medicine Waiver Guide. Members on the Personnel Reliability Program (PRP) or other security sensitive positions shall evaluated for suspension or temporary decertification during medical evaluation, as determined by their Certifying Official/Unit Commander on the advice of a Competent Medical Authority. The Secretary of the Air Force may, on a case-by-case basis, further limit duties and assignment of members to protect the health and safety of the HIV-infected member or other members. Submit such requests to Office of the Secretary of the Air Force, Air Force Pentagon,Washington, DC 20330-1670. (T-1)

2.5. Limitations of Use of Information. Commanders and other personnel comply with limitations on the use of information obtained during the epidemiological assessment of HIV-infected members as outlined in **Attachment 10**. (T-1)

2.6. Public Health. Provides HIV education to all ADAF members, offers education to other eligible beneficiaries, maintains a list of HIV positive personnel to be gained, reports to gaining bases departing HIV positive personnel, and educates HIV positive members and their dependents. (T-1)

2.7. USAFSAM. USAFSAM performs HIV testing (PHE) of submitted specimens and conducts epidemiological surveillance (PHR) of HIV infection in Air Force members and dependents. (T-1)

2.8. AF Blood Centers. AF Blood Centers follow policies of the Armed Services Blood Program Office, Food and Drug Administration (FDA), and the accreditation requirements of the American Association of Blood Banks (AABB). (T-0)

2.9. Combat Zone Procedures. Routine HIV testing is suspended in declared combat zones, defined as those areas where hostile pay is authorized.

2.10. Work Restrictions. Force-wide, HIV-infected employees are allowed to continue working as long as they are able to maintain acceptable performance and do not pose a safety or health threat to themselves or others in the workplace. If performance or safety problems arise, managers and supervisors address such problems using existing personnel policies and instructions. HIV-infected healthcare workers, however, should be relieved from patient care responsibilities until an expert review panel has met to advise the healthcare worker on work restrictions. Recommendations to the panel will be made by HIV treatment experts during the individual's initial HIV evaluation at SAMMC in accordance with the most recent guidelines from the Centers for Disease Control and Society for Health Care Epidemiology of America. The panel should be encouraged to contact SAMMC for advice (via telephone conference call) to ensure organizational consistency. (T-1)

Chapter 3

HIV TESTING MEASUREMENT

3.1. HIV Testing Measurement. The AF's goal is to reduce the incidence of HIV infection in its personnel. USAFSAM tracks trends of HIV incidence in AF members. AF labs that do their own HIV testing must communicate test results and ship corresponding serum specimens to USAFSAM so they may ship samples to the DoD serum repository, and track trends. (T-1)

Chapter 4

FORMS

4.1. Forms. AF Form 1762, *HIV Log/Specimen Transmittal*, will be used for requesting HIV testing and specimen transmittal for those sites that do not have CHCS access (see **Attachment 4**). AF Form 3844, *HIV Testing Notification Form*, will be used to notify personnel of required HIV testing. AF Form 3845, *Preventive Medicine Counseling Record*, will be used to record counseling provided for HIV positive individuals. AF Form 74, *Communication Status Notice/Request*, is sent to MTF/CCs and Reserve Medical Unit (RMU)/CCs along with a copy of the patient's positive HIV testing screen and confirmation testing results. The MTF/CC and RMU/CC will document on AF Form 74 that the patient has been notified of the positive HIV results, then return the form to USAFSAM. Positive HIV results will not be finalized until USAFSAM/PHE receives the AF Form 74. (T-1)

THOMAS W. TRAVIS
Lieutenant General, USAF, MC, CFS
Surgeon General

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References.

Title 29, United States Code, Section 794, *Non-Discrimination Under Federal Grants and Programs*, current edition

DoD Directive 1332.18, *Separation or Retirement for Physical Disability*, 4 November 1996

DoD Instruction 1332.38, *Physical Disability Evaluation*, *CH 2*, 10 April 2013

DoD Instruction 6485.01, *Human Immunodeficiency Virus,* 7 June 2012

DoD Regulation 5210.42, *Nuclear Weapons Personnel Reliability Program,* 16 July 2012.

AFPD 48-1, *Aerospace Medicinel Enterprise*, 23 August 2011.

AFI 36-3212, *Physical Evaluation for Retention, Retirement, and Separation, IC 2,* 27 November 2009 AFI 48-123, *Medical Examination and Standards*, *GM1*, 31 January 2011

AFI-41-210, *Tricare Operations and Patient Administration Functions,* 6 June 2012

AFI 44-108, *Infection Control Program*, 1 March 2012

CDC. HIV Prevention through Early Detection and Treatment of Other Sexually Transmitted Diseases--United States Recommendation of the Advisory Committee for HIV and STD Prevention. *MMWR.* 1998;47(RR12):1-24.

CDC. Recommendations for Preventing Transmission of Human Immunodeficiency Virus and Hepatitis B Virus to Patients During Exposure-Prone Invasive Procedures. *MMWR.* 1991;40(RR08).

CDC. Revised Recommendations for HIV Testing of Adults, Adolescents, and Pregnant Women in Health-Care Settings. *MMWR.* 2006;55(RR14):1-17.

CDC. Sexually Transmitted Diseases Treatment Guidelines, 2010. *MMWR.* 2010;59(RR12):1-116.

Updated US Public Health Service Guidelines for the Management of Occupational Exposures to Human Immunodeficiency Virus and Recommendations for Postexposure Prophylaxis, 2013. Infect Control Hosp Epidemiol. 2013;34(9):875-92.

Panel on Antiretroviral Guidelines for Adults and Adolescents. Guidelines for the use of antiretroviral agents in HIV-1 infected adults and adolescents. Department of Health and Human Services. January 10, 2011;1-66. Available at **http://www.aidsinfo.nih.gov/ContentFiles**/ AdultandAdolescentGL.pdf. Accessed May 27, 2011.

SHEA. Guideline for Management of Healthcare Workers Who Are Infected with Hepatitis B Virus, Hepatitis C Virus,and/or Human Immunodeficiency Virus Infection Control and Hospital Epidemiology 2010;. 31, no. 3.

APHL. HIV Testing Algorithms A Status Report: aPublication from the Association of Public Health Laboratories and the Centers for Disease Control & Prevention. April 2009 with update January 2011.

Adopted Forms.

AF Form 1762, HIV Log/Specimen Transmittal

AF Form 3844, HIV Testing Notification Form

AF Form 3845, Preventive Medicine Counseling Record

AF Form 74, Communication Status Notice/Request

Abbreviations and Acronyms.

AABB—American Association of Blood Banks

ADAF—Active Duty Air Force

AETC—Air Education and Training Command

AFMC—Air Force Materiel Command

AFMOA—Air Force Medical Operations Agency

AFMOA/SGOC—Air Force Medical Operations Agency, Surgeon General's Office of Consultants

AFPC—Air Force Personnel Center

AFPC/DPANM—Air Force Personnel Center/Medical Retention Standards Branch

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AIDS—Acquired Immunodeficiency Syndrome

ANGB—Air National Guard Bureau

APHL—American Public Health Laboratories

ARC—Air Reserve Component (Air Force Reserve and Air National Guard)

ASD—Assistant Secretary of Defense

CDC—Centers for Disease Control and Prevention

CHCS—Composite Healthcare System

CHN—Community Health Nurse

CONUS—Continental United States

COT—Consecutive Overseas Tour

CPO—Civilian Personnel Office

DAF—Department of the Air Force

DBMS—Director, Base Medical Services

DoD—Department of Defense

DoDSR—Department of Defense Serum Repository

DNIF—Duty Not Including Flying

DSN—Defense Switched Network

FDA—Food and Drug Administration

FM—Flight Medicine

FM & P—Force Management and Personnel

FMP—Family Member Prefix

HBV—Hepatitis B virus

HIV—Human Immunodeficiency Virus (the virus that causes AIDS)

HQ AETC—Headquarters Air Education and Training Command

HQ AFRC/SG—Headquarters Air Force Reserve Command Surgeon

HQ ANG/SG—Headquarters Air National Guard Command Surgeon

HQ USAF—Headquarters US Air Force

ICD-9—International Classification of Diseases, Revision 9

IMA—Individual Mobilization Augmentee

I-RILO—Initial Review in Lieu of Medical Board

MAJCOM—Major Command

MEB—Medical Evaluation Board

MTF/CC—Medical Treatment Facility Commander

MPF—Military Personnel Flight

MTF—Medical Treatment Facility

NGB—National Guard Bureau

OB—Obstetrics

OI—Opportunistic Infection

OS—Overseas

OSHA—Occupational Safety and Health Association

OTS—Officer Training School

PCS—Permanent Change of Station

PE—Physical Examination

PES—Physical Examination Section

PH—Public Health

PQAM—Program Quality Assurance Monitor

PRP—Personnel Reliability Program

ROTC—Reserve Officer Training Corps

SAF—Secretary of the Air Force

SAMMC—San Antonio Military Medical Center

SF—Standard Form

SG—Surgeon General

SHEA—Society for Healthcare Epidemiology of America

SSN—Social Security Number

STI—Sexually Transmitted Infection

TDY—Temporary Duty

USA—United States Army

USCG—United States Coast Guard

USMC—United States Marine Corps

USN—United States Navy

UCMJ—Uniform Code of Military Justice

USAFSAM—United States Air Force School of Aerospace Medicine

USUHS—Uniformed Services University of the Health Sciences

Terms.

Air Reserve Component—Air Force Reserve and Air National Guard components of the Air Force

Department of Defense Civilian Employees—Current and prospective DoD US civilian employees. Does not include members of the family of DoD civilian employees, employees of, or applicants for, positions with contractors performing work for DoD, or their families.

Enzyme Linked Immunosorbent Assay—A screening test read as ‘reactive’ if the results are above a calculated cutoff.

Epidemiological Assessment—The process by which personal and confidential information on the possible modes of transmission of HIV are obtained from an HIV-infected person. This information is used to determine if previous, present, or future contacts of the infected individual are at risk for infection with HIV and to prevent further transmission of HIV.

Host Nation—A foreign nation to which DoD US civilian employees are assigned to perform their official duties.

Human Immunodeficiency Virus—The virus that causes AIDS.

Positive—A true positive test is an indicator of a condition being present

Reactive—Reacts with the reagent antibody test to produce a visible result

Serologic Evidence of HIV Infection—A reactive result given by a FDA approved serologic test for HIV detection, such as an enzyme-linked immunosorbent assay (ELISA) or

Chemiluminescent Immunoassay (ChLIA) that is confirmed in by additional testing in a validated testing algorithm, for example by a diagnostic HIV Western Blot immunoelectrophoresis. For Western Blot tests with indeterminate results, an alternative FDA approved test can be used to resolve indeterminates such as a viral load-based assay (APTIMA).

Western Blot Test—A qualitative assay for the detection and identification of antibodies of HIV-1 contained in human serum. It is intended for use with persons of unknown risk as an additional more specific test on human serum specimens found to be repeatedly reactive using a screening procedure such as ELISA.

Attachment 2

PROCEDURES FOR SCREENING APPLICANTS

A2.1. Screen applicants to the USAF or ARC for serologic evidence of HIV infection. Test and interpret results, using the procedures in **Attachment 3**. Counsel applicants on the significance of test results and the need to seek treatment from a civilian physician. (T-1)

A2.2. Screen applicants for enlisted service at the Military Entrance Processing Stations (MEPS) or the initial point of entry to military service. Applicants who enlist under a delayed enlistment program who exhibit serologic evidence of HIV infection before entry on active duty may be discharged due to erroneous enlistment. (T-1)

A2.3. Screen applicants accepted for the Air Force Academy as part of the processing for entry into the Academy and again as part of their medical screening prior to appointment as officers. Screen other officer candidates during their preappointment or precontracting physical examination. (T-1)

A2.4. Screen applicants for ARC during the normal entry physical examinations or in the preappointment programs established for officers. Those individuals with serologic evidence of HIV infection, who must meet accession medical fitness standards to enlist or be appointed, are not eligible for service with the ARC. (T-1)

A2.5. Take the following actions on officer applicants who are ineligible for appointment due to serologic evidence of HIV infection:

A2.5.1. Disenroll enlisted members who are candidates for appointment through Officer Training School (OTS) programs immediately from the program. If OTS is the individual's initial entry training, discharge the individual. If the sole basis for discharge is serologic evidence of HIV infection, issue an honorable or entry-level discharge, as appropriate. A candidate who has completed initial entry training during the current period of service before entry into candidate status shall be administered in accordance with Service directives for enlisted personnel. (T-1)

A2.5.2. Disenroll individuals in preappointment programs, such as Reserve Officer Training Corps (ROTC) and Health Professions Scholarship Program (HPSP) participants. The head of the Military Service concerned, or the designated representative, may delay disenrollment until the end of the academic term in which serologic evidence of HIV infection is confirmed. Disenrolled participants retain any financial support through the end of the academic term in which the disenrollment takes place. Financial assistance received in these programs is not subject to recoupment, if the sole basis for dis-enrollment is serologic evidence of HIV infection. (T-1)

A2.5.3. Separate Air Force Academy cadets and personnel attending the Uniformed Services University of the Health Sciences (USUHS) from the Academy or USUHS and discharge them. The superintendent of the Academy may delay separation to the end of the current academic year. A cadet granted such a delay in the final academic year, who is otherwise qualified, may graduate without commission and then is discharged. If the sole basis for discharge is serologic evidence of HIV infection, issue an honorable discharge. (T-1)

A2.5.4. Disenroll commissioned officers in DoD-sponsored professional education programs leading to appointment in a professional military specialty (including medical, dental, chaplain, and legal or judge advocate) from the program at the end of the academic term in which serologic evidence of HIV infection is confirmed. Except when laws specifically prohibit it, waive any additional service obligation incurred by participation in such programs; do not recoup any financial assistance received in these programs. Apply the time spent by the officers in these programs towards satisfaction of any preexisting service obligation. (T-1)

A2.5.5. Counsel people disenrolled from officer programs who are to be separated; include preventive medicine counseling and advise the individual to seek treatment from a civilian physician. (T-1)

Attachment 3

AIR FORCE HIV TESTING PROCEDURES

A3.1. Responsibilities:

A3.1.1. Medical Treatment Facility Commander (MTF/CC). Is responsible for the HIV testing program. Appoints an HIV designated physician (and one or more alternates, if alternates are desired); ensures HIV positive individuals are notified and counseled as soon as possible following receipt of the positive test result; and ensures AD members are referred to SAMMC within 60 days of receipt of the HIV positive results notification from the USAFSAM HIV Testing Services to the base. Reserve medical unit commanders will immediately notify wing/unit commanders of any positive HIV test results. (T-1)

A3.1.2. Clinical Laboratory Manager**.** Draws, processes, and ships specimens for HIV testing. All specimens for HIV testing should be sent to USAFSAM HIV Testing Services, Epidemiology Laboratory Service, USAFSAM/PHE, 2510 Fifth Street, Bldg 20840, Wright-Patterson, OH 45433-7951 (DSN 798-4140). If, because of time considerations, local contract HIV testing is done for needlestick exposure, the laboratory manager must also ship a corresponding serum specimen, with HIV test request, to USAFSAM HIV Testing Services. If testing is done by an approved USAF laboratory, the laboratory manager must also ship corresponding serum specimen and results to USAFSAM HIV Testing Services. Upon completion of testing, USAFSAM HIV Testing Service will ship AD, Guard and Reserve samples to the Department of Defense Serum Repository (DoDSR). (T-1)

A3.1.3. Primary Care Management Team**.** Ensures HIV testing is accomplished in conjunction with appropriate Preventive Health Assessment or physical examinations (as described in paragraph **A3.2**). (T-1)

A3.1.4. Public Health (PH). Coordinates with MTF/CC's designee to ensure proper notification of the individual member. Is responsible for monitoring HIV positive ADAF members. Receives and reports to gaining public health personnel when HIV positive personnel are transferred. Informs the requesting laboratory of positive results so they can close out the test status in the computer system. The SAMMC HIV community liaison nurse performs additional case contact interviews, epidemiological follow-ups, and disease reporting procedures during SAMMC HIV evaluation visits. (T-1)

A3.1.5. HIV Testing Point of Contact. MTF shipping and receiving technician is responsible for shipping specimens; identifying supply deficiencies; maintaining results; and acting as the liaison with USAFSAM HIV Testing Services. (T-1)

A3.1.6. Civilian Personnel Office (CPO). Notifies by letter the clinical laboratory manager of any Department of the Air Force civilian employee requiring HIV testing. (T-1)

A3.1.7. Major Commands (MAJCOM). Deputy Command Surgeon (MAJCOM/SGP) or designee acts as liaison between USAFSAM HIV Testing Services and MTFs within the command.

A3.1.8. **USAFSAM**. Monitors and ensures that all active duty, guard and reserve positive HIV tests, as well as positive tests on dependants in the San Antonio area are reported to the HIV Program at SAMMC. Ensures that DoD mandated epidemiological studies are

accomplished on a periodic basis. The USAF HIV Medical Evaluation Unit Director or designee ensures that referred personnel on active orders are scheduled for evaluation within 30 days after being contacted by the referring base. (T-1)

A3.1.9. Reserve Medical Unit**.** Contacts the epidemiology lab to confirm positive test results before release of information, conducting counseling, or determining need for spousal or contact notification. (T-1)

A3.2. Preventive Health Assessment (PHA): Primary Care Manager ensures HIV testing is accomplished per the clinical testing requirements in the PHA for AD members or ARC members. (T-1)

A3.3. Sexually Transmitted Infection (STI) Clinic Testing:

A3.3.1. Providers counsel all STI patients regarding the need for HIV testing. Immediate HIV testing and follow-up testing IAW the most recent CDC recommendations. Informed consent laws are followed for dependents and civilians. (T-1)

A3.3.2. Providers refer all STI patients to PH for case contact interviews as soon as identified. (T-1)

A3.3.3. Test specimens IAW **A3.1.2** (T-1)

A3.3.4. MTF/CC or designee ensures all HIV positive individuals are properly notified and counseled, and all ADAF members are referred to the HIV Medical Evaluation Unit at SAMMC for medical evaluation. RMU/CC or designee ensures all HIV positive Reservists are properly notified and counseled, and all Reservists eligible for evaluation at the HIV Medical Evaluation Unit at SAMMC for medical evaluation are referred to the Unit for evaluation. (T-1)

A3.4. Drug and/or Alcohol Treatment Testing:

A3.4.1. The Alcohol and Drug Abuse Prevention and Treatment (ADAPT) Program Manager or designee notifies all AD members entering treatment programs of required HIV testing and provides the member with AF Form 3844. Local and state laws dictate availability of testing for family members and use of informed consent. Their testing is not mandatory. Individuals who are not DoD military health care beneficiaries (for example, civilian employees) are not HIV tested. (T-1)

A3.4.2. The treatment entrant reports to the MTF laboratory with AF Form 3844.

A3.4.3. Laboratory personnel obtain an HIV specimen and complete Part 2 of AF Form 3844.

A3.4.4. Accomplish the HIV testing IAW **A3.1.2** (T-1)

A3.4.5. The clinical laboratory manager forwards the completed AF Form 3844 to the ADAPT Program Manager or designee who ensures all AD members entering treatment have been HIV tested.

A3.4.6. MTF/CC or designee ensures all HIV positive individuals are properly notified and counseled, and all AD members are referred to the HIV Medical Evaluation Unit at SAMMC for medical evaluation. (T-1)

A3.5. Clinical Testing:

A3.5.1. All health care providers order HIV testing for those patients with clinical indications of HIV related diseases (e.g. active tuberculosis, incident HBV and HCV cases) and for patients with potential exposure to the virus. A confirmed positive result on a urinalysis drug test is a clinical indication for HIV testing. Providers inform patients of HIV testing for clinical indications. Local state informed consent laws are followed for family members and other beneficiaries (for example, retirees). Informed consent is not required for AD members. (T-0)

A3.5.2. Providers ordering HIV testing ensure test results are reviewed, HIV positive patients are counseled, and HIV positive AD members are referred to the HIV Medical Evaluation Unit at SAMMC for medical evaluation. Normally, the HIV designated physician in conjunction with public health personnel, provide counseling and referral services. (T-1)

A3.5.3. Providers will not routinely order HIV testing on all patients. (T-1)

A3.5.4. Clinical testing is accomplished IAW **A3.1.2** (T-1)

A3.6. Occupational Exposure Testing.

A3.6.1. Employees report to PH for occupational exposure testing and follow up IAW OSHA Blood-borne Pathogen Final Rule as implemented in the facility Infection Control Program/Employee Health Program. (T-0)

A3.6.2. Follow the latest CDC guidelines for blood and body fluid exposures to bloodborne pathogens as stated in the facility Infection Control Program/ Employee Health Program/Bloodborne Pathogen Program. Refer to AFI 44-108, *Infection Control Program*. (T-0)

A3.6.3. Personnel who perform exposure-prone procedures (to include, but not limited to, surgeons, pathologists, dentists, dental technicians, phlebotomists, emergency medical technicians, and physicians, nurses and technicians working in the emergency room, intensive care, surgery, and labor/ delivery) should know their HIV antibody status.

A3.6.4. Follow local state laws on HIV testing and informed consent for non-active duty individuals, including employees and patients. Informed consent is not required for active duty personnel. (T-0)

A3.6.5. Personnel testing is accomplished IAW **A3.1.2** (T-1)

A3.7. Prenatal Testing:

A3.7.1. Screen all AD obstetrics (OB) patients for evidence of HIV infection regardless of previous testing. (T-1)

A3.7.2. Encourage nonactive duty OB patients to be tested. Follow local state laws on informed consent for nonactive duty patients.

A3.7.3. Submit additional specimens as clinical specimens, not as OB specimens.

A3.7.4. Accomplish testing IAW **A4.1.2** (T-1)

A3.8. Results Reporting:

A3.8.1. Active Duty. The USAFSAM HIV Testing Services reports negative test results usually electronically to the submitting MTF within three workdays. First time positive notification letters are sent via FedEx Priority Overnight or by encrypted e-mail to the MTF/CC and base PH. Enclosed in each notification letter is an AF Form 74. The MTF/CC and PH officer write on their respective cards the date results were received, complete blocks (phone number, date and sign/organization/installation), document notification of the patient, and return to USAFSAM HIV Testing Services either by mail or by encrypted e-mail. Once the signed AF Form 74 is returned to the USAFSAM HIV Testing Service, the result will be certified in CHCS. Known positive patient's results are made available within 7 working days. (T-1)

A3.8.2. Air National Guard and Air Force Reserve. USAFSAM HIV Testing Services results for Air National Guard and Air Force Reserve units are reported the same as for Active Duty except that units not attached to an MTF with CHCS lab interoperability must log into the Wright-Patterson CHCS platform remotely to retrieve their results. (T-1)

A3.8.3. Clinical and Civilian Employee Samples. The USAFSAM HIV Testing Services report negative test results to the submitting MTF Laboratory Services within 3 working days. If positive, a notification letter is sent via FedEx Priority Overnight within seven workdays to PH. The letter has an AF Form 74 enclosed. The PH officer will write on AF Form 74 the date results were received, complete blocks (phone number, date and sign/organization/installation), document notification of the patient, and return to USAFSAM HIV Testing Services. (T-1)

A3.8.4. Results of HIV Testing Performed at DoD Labs Other Than Air Force**.** Occasionally, HIV testing will be done at Army or Navy laboratories on active duty Air Force personnel. When USAFSAM HIV Testing Services obtain first time positive results from other services, notification on AF members, USAFSAM HIV Testing Service will contact the submitting MTF's PH to ensure that notification has been performed. If notification has not been accomplished, USAFSAM HIV Testing Service will initiate notification as outlined in **A3.9.1**. (T-1)

A3.9. Blood Bank Testing. If a military member is identified as HIV positive through blood donation or other blood bank or outside laboratory testing, a specimen must be sent to USAFSAM HIV Testing Services for confirmation. (T-1)

A3.9.1. All military members with a positive HIV screening test should be referred to public health for appropriate counseling and follow-up instructions regarding further testing. (T-0)

A3.10. Problem Resolution:

A3.10.1. Inform USAFSAM HIV Testing Services of difficulties obtaining supplies or test results.

A3.10.2. The USAFSAM HIV Testing Services handles all test inquiries.

NOTE: Assess HIV risk at every preventive health assessment (PHA) and screen for serologic evidence of HIV infection during their PHA as required (minimum testing every 2 years). ARC personnel are screened during their periodic long flying physical every three years or nonflying physical every five years or as per the PHA clinical testing requirements. DoD mandated testing continues to include sexually transmitted disease (STI) clinic patients, drug and alcohol treatment entrants, prior to PCS OS assignments, prenatal patients, and host country requirements before deployment. (T-1)

Attachment 4

COMPLETION OF FORMS FOR REQUESTING HIV TESTING AND SPECIMEN TRANSMITTAL

A4.1. Composite Healthcare System.

A4.1.1. Submitting labs with Composite Healthcare System (CHCS) have the capability to create and send a list of specimens which can be sent to the receiving lab.

A4.1.1.1. Create a shipping/transmittal list in Composite Healthcare System (CHCS).

A4.1.1.2. Include a copy of the shipping/transmittal list in each specimen package sent to the receiving lab.

A4.1.1.3. Send the shipping/transmittal list electronically (if applicable) to the receiving lab through CHCS.

A4.2. AF FORM 1762 Completion (to be used ONLY by sites without CHCS access):

A4.2.1. AF Form 1762 is used to request HIV Screen Testing when CHCS is not available. The following information is mandatory: the facility/organization and address at the top of each form submitted. If not, specimens will be processed as NBI (no base identification) which will delay results until submitting activity can be ascertained. (T-1)

A4.2.2. For each request**,** the Full Name (last name, first name, middle initial) not nick-names, Full SSN (not last 4) with an FMP, Date of Birth (dates are to be entered as DD-MMM-YY, e.g., October 19, 1948 = 19 Oct 48), Duty Code (see **A5.3**) and Source Code (see **A5.4**). [Force Testing no longer exists. All periodic testing is done in conjunction with **"**P" (physicals) unless meeting one of the other source codes. See **A5.4** Source Codes.] (T-1)

A4.2.3. Testing will not proceed until all information is provided. Additionally, the individual being tested will not receive a test date in the master AFPC records if the name, FMP/SSN, or date of birth, do not match. (T-1)

A4.2.4. Fill out forms LEGIBLY. If entered by hand, the individual responsible for verifying the identity of personnel being screened, not the person being drawn, will print the information. Typewritten or computer generated forms are preferred. If you have computer support, call USAFSAM HIV Testing Services for available software programs to help produce a computer generated AF Form 1762. The AF Form 1762 is available through e-Publishing (**http://www.e-publishing.af.mil/shared/media/epubs/af1762.xfd**).

A4.2.5. At the bottom of the form, fill in date shipped, name of shipping person, or someone USAFSAM HIV Testing Services can contact if there are problems, and a DSN phone number or commercial number only if DSN is unavailable.

A4.2.6. MTF's that use the Composite Healthcare System (CHCS), refer to ADHOC A98 1011, Automated HIV Shipping Form, which can be downloaded from the Brooks web site: **http://www.tmssc.brooks.af.mil**.

A4.2.7. Guard and Reserve bases not utilizing CHCS can use developed software from US AFI HIV Testing Service (phone number DSN 240-8934). Guard and Reserve sites that access the Wright-Patterson CHCS remotely will use the CHCS ad hoc "ASL" (USAFSAM (Epi) Lab Referral Shipping List) function to generate their shipping list(s). This ad hoc

function is given to all Guard and Reserve users who request CHCS access through the Epidemiology Laboratory Information Systems Department.

A4.2.8. Common Errors in filing out AF Form 1762:

A4.2.8.1. Not putting Base ID/Submitting Activity at the top of each form

A4.2.8.2. Name - incomplete or not legible. Has name recently changed or is there a suffix (e.g. "Jr." or "III") after the name?

A4.2.8.3. SSN - more or less than 9 digits; not legible. Failure to include FMP with SSN.

A4.2.8.4. No Duty Code, no Source Code, or entry of unauthorized code.

A4.2.8.5. No Date or Shipping official to contact in case of problems.

A4.2.8.6. No DSN phone or commercial number if DSN unavailable.

A4.2.8.7. Failure to retain copy of AF Form 1762. A4.2.9. Forward the first two copies of the AF Form 1762 to USAFSAM HIV Testing Services along with the specimens. Keep the third copy in the laboratory for MTF record keeping purposes to track timely return of results. If test results have not been received within three days, contact USAFSAM HIV Testing Services for assistance.

A4.2.8.8. The MTF/CC reviews the reports and provides copies of positive results to the physician designated to advise and counsel HIV antibody positive individuals. (T-1)

A4.2.8.9. DoD laboratories authorized to perform HIV antibody clinical screening in-house use AF Form 1762 as a log for all HIV antibody ELISA screenings performed. All five items of information are to be completed. By the fifth working day of the month, forward all results from the previous month electronically or by floppy disc to USAFSAM HIV Testing Services. Forward specimens tested negative to USAFSAM HIV Testing Services marked “DoDSR” for placement in the DoDSR. Forward a specimen from each individual who screens positive for HIV in local testing to USAFSAM HIV Testing Services for confirmatory testing. (T-1)

A4.3. AF Form 4 is used only to request Western Blot Confirmation Testing. Do not use this form for HIV screening requests; use an AF Form 1762 as required in section **A5.1.1** For bases who perform local clinical testing and MTF Blood Banks that screen donors, all specimens that screen positive must be sent to the HIV Testing Services for FDA confirmation algorithm testing. Complete the form as follows: Fill out the top of the form with **all** required information. Blocks 13 and 14 must be completed with Duty Code and Source Code or testing will delayed until information is obtained.

A4.4. Duty Codes: To obtain the most accurate information possible, submitting laboratories must use the patient category code (pat cat code) from CHCS for duty codes on the AF Form 1762 to identify the status of the individual being tested. This is an Alpha, two numeric code which is a mandatory field when registering members into CHCS. Therefore, this information should be available to download to an ADHOC report when computer generating the CHCS AF Form 1762. These codes closely emulate the DEERS codes for status of individual member being tested. For submitting activities not on CHCS, use the Pat Cat that closely defines the status of the individual. The following are the most commonly used:

PAT CATs DEFINITION.

A11 Army, Active Duty A12 Army, Reserve A13 Army, Recruits A14 Army, Academy Cadet A15 Army, National Guard

PAT CATs DEFINITION.

A21 Army, ROTC A23 Army National Guard A26 Army, Applicants-Enlistment's A31 Army, Retired A41 Army, Dependent of Active Duty A43 Army, Dependent of Retiree A45 Army, Dependent of Deceased Active Duty A47 Army, Dependent of Deceased Retiree A48 Army, Unmarried former Spouse

F11 Air Force, Active Duty F12 Air Force, Reserve F13 Air Force, Recruits F14 Air Force, Academy Cadet F15 Air Force, National Guard F21 Air Force, ROTC F23 Air Force National Guard F26 Air Force, Applicants-Enlistment's F31 Air Force, Retired F41 Air Force, Dependent of Active Duty F43 Air Force, Dependent of Retiree F45 Air Force, Dependent of Deceased Active Duty F47 Air Force, Dependent of Deceased Retiree F48 Air Force, Unmarried former Spouse M11 Marine Corps, Active Duty M12 Marine Corps, Reserve M13 Marine Corps, Recruits M14 Marine Corps, Academy-midshipmen M21 Marine Corps, ROTC M26 Marine Corps, Applicants-Enlistment's M31 Marine Corps, Retired M41 Marine Corps, Dependent of Active Duty M43 Marine Corps, Dependent of Retiree M45 Marine Corps, Dependent of Deceased Active Duty M47 Marine Corps, Dependent of Deceased Retiree M48 Marine Corps, Unmarried former Spouse

N11 Navy, Active Duty N12 Navy, Reserve N13 Navy, Recruits N14 Navy, Academy-Midshipmen N21 Navy, ROTC N26 Navy, Applicants-Enlistment's N31 Navy, Retired N41 Navy, Dependent of Active Duty N43 Navy, Dependent of Retiree N45 Navy, Dependent of Deceased Active Duty N47 Navy, Dependent of Deceased Retiree N48 Navy, Unmarried former Spouse

C11 Coast Guard, Active Duty C12 Coast Guard, Reserve

PAT CATs DEFINITION

C31 Coast Guard, Retired C41 Coast Guard, Dependent of Active Duty C43 Coast Guard, Dependent of Retiree

P11 Public Health Svs, Active Duty P12 Public Health Svs, Reserve P31 Public Health Svs, Retired P41 Public Health Svs, Dependent of Active Duty P43 Public Health Svs, Dependent of Retiree

K53 Civil Service Employee/Other Federal Agencies K57 Civilian Employee, Occupational

Health K59 Federal Government Employees, Overseas K61 VA Sharing Agreement/VA beneficiary K64 Other Federal Agency (DAF employee) K66 Federal Prisoners

Table A4.1. PAT CATs Definition.

A11	Army, Active Duty
A12	Army, Reserve
A13	Army, Recruits
A14	Army, Academy Cadet
A15	Army, National Guard
A21	Army, ROTC
A23	Army National Guard
A26	Army, Applicants-Enlistment's
A31	Army, Retired
A41	Army, Dependent of Active Duty
A43	Army, Dependent of Retiree
A45	Army, Dependent of Deceased Active Duty
A47	Army, Dependent of Deceased Retiree
A48	Army, Unmarried former Spouse

F11	Air Force, Active Duty
F12	Air Force, Reserve
F13	Air Force, Recruits
F14	Air Force, Academy Cadet
F15	Air Force, National Guard
F21	Air Force, ROTC
F23	Air Force National Guard
F26	Air Force, Applicants-Enlistment's
F31	Air Force, Retired
F41	Air Force, Dependent of Active Duty
F43	Air Force, Dependent of Retiree
F45	Air Force, Dependent of Deceased Active Duty
F47	Air Force, Dependent of Deceased Retiree
F48	Air Force, Unmarried former Spouse

M11	Marine Corps, Active Duty
M12	Marine Corps, Reserve
M13	Marine Corps, Recruits
M14	Marine Corps, Academy -midshipmen
M15	Marine Corps, National Guard
M21	Marine Corps, ROTC
M23	Marine Corps National Guard
M26	Marine Corps, Applicants-Enlistment's
M31	Marine Corps, Retired
M41	Marine Corps, Dependent of Active Duty
M43	Marine Corps, Dependent of Retiree
M45	Marine Corps, Dependent of Deceased Active Duty
M47	Marine Corps, Dependent of Deceased Retiree
M48	Marine Corps, Unmarried former Spouse

N11	Navy, Active Duty
N12	Navy, Reserve
N13	Navy, Recruits
N14	Navy, Academy Cadet
N15	Navy, National Guard
N21	Navy, ROTC
N23	Navy National Guard
N26	Navy, Applicants-Enlistment's
N31	Navy, Retired
N41	Navy, Dependent of Active Duty
N43	Navy, Dependent of Retiree
N45	Navy, Dependent of Deceased Active Duty
N47	Navy, Dependent of Deceased Retiree
N48	Navy, Unmarried former Spouse

C11	Coast Guard, Active Duty
C12	Coast Guard, Reserve
C31	Coast Guard, Retired
C41	Coast Guard, Dependent of Active Duty
C43	Coast Guard, Dependent of Retiree

P11	Public Health Svs, Active Duty
P12	Public Health Svs, Reserve
P31	Public Health Svs, Retired

K53	Civil Service Employee/Other Federal Agencies
K57	Civilian Employee, Occupational Health
K59	Federal Government Employees, Overseas
K61	VA Sharing Agreement/VA beneficiary
K64	Other Federal Agency (DAF employee)
K66	Federal Prisoners

P41	Public Health Svs, Dependent of Active Duty
P43	Public Health Svs, Dependent of Retiree

A4.5. Source Code. The only authorized codes used in the appropriate block on the AF Form 1762 are listed below. These codes identify the reason that the individual is being screened. They were adopted for use throughout DoD by the Reportable Disease Data Base (RDDB) Working Group. A single code is entered on the AF Form 1762. Multiple codes for an individual are not authorized:

Table A4.2. Source Codes.

A	Alcohol and Drug Treatment
B	Blood Donor (Authorized for use on specimens or confirmation specimens)
C	Contact Testing (Referral)
F	Force Screening (routine screening of personnel)
I	Indicated for Clinical Reasons
J	Prisoners or Detained Persons
M	Medical Admissions (Including Psychiatric)
N	Pre-deployment
O	OB Clinic/Pregnancy Related
P	Physical Examinations
R	Requested by Individual
S	Surgical Admission (Including Invasive Procedures and ER)
T	Post-deployment
V	STI Clinic Visit
X	Any Other Source (used only in extremely rare cases)

A4.6. Shipment of Specimen Requirements.

A4.6.1. Ship specimens using instructions provided by USAFSAM HIV Testing Services. It is very important that the MTFs follow these instructions. Deviation could cause rejection of a shipment and necessitate redrawing each individual.

A4.6.2. USAFSAM HIV Testing Services will only accept 12x75 mm polypropylene tubes. If the whole shipment arrives in anything other than these type tubes, the shipment will be returned to the submitting MTF at their expense to process in the correct tubes. Single specimens will have to be redrawn. Tubes and caps can be ordered from most laboratory supply catalogues (see below) or can be obtained by completing a supply order form and submitting to our Customer Service Team via email at **usafsam.phe.cst@wpafb.af.mil.** This order form can be found on our website at **https://kx.afms.mil/epi.calling** the Epidemiology Laboratory Services at DSN 240-8751 or 8378. If the submitting MTF's stock runs out, it will have to hold specimens until a supply of the correct tubes are received.

Test Tubes, 12x75 mm, polypropylene, round bottom

FSN 6640-01-264-2362

Curtin-Matheseon Scientific (CMS) #289-657

S/P-Baxter T-1226-12

Plug Cap for 12x75 test tubes

FSN 6640-01-2222963

CMS #148-346

S/P-Baxter T1226-32

Tubes and caps in one order

S/P-Baxter T1226-42

Double sided Plastic Bags

Fisher Cat #01-824 Lab Safety Supply Cat #TL-23805

VWR Cat #11216-783

A4.6.3. Label tubes with a CHCS generated label. If CHCS is unavailable, write FULL NAME **(**Last name, first name, middle initial), and the FULL SSN with FMP, and collection date on label, then place label long-wise without covering the bottom of tube. (Pre/Post deployment specimens need draw date). Secure with a plastic plug cap. DO NOT USE PARAFILM.

A4.6.4. Place patient samples in a foam tube rack in the order listed on the shipping/transmittal list or AF Form 1762. Wrap foam tube rack containing specimens in absorbent material and place in a large plastic shipping bag. Place patient samples (amount for 1 AF Form 1762/no more than 22) with absorbent material in large portion of plastic shipping bag. Place one copy of the shipping/transmittal list or one copy and original of AF Form 1762. Place original and one copy of AF Form 1762 inside the outer pouch of the shipping bag corresponding to samples and tear off plastic strip covering the adhesive and to SEAL THE BAG. If foam tube racks are not available, place no more than 10 specimens in a small plastic shipping bag containing absorbent material. Place one copy of the shipping/transmittal list or one copy and original of AF Form 1762 in the outer pouch of the shipping bag and SEAL THE BAG. Repeat for each batch of 10 specimens. In shipping

HIVs specimens with other EPI specimens, place HIV specimens in a separate ziplock plastic shipping bag marked: "HIV"

A4.6.5. The following common errors could be avoided if a quality control program exists.

A4.6.6. Common errors in Specimen Preparation:

A4.6.6.1. Not spinning specimen down causing hemolyzed specimens

A4.6.6.2. Putting specimens in the wrong tubes; only polypropylene 12x75 mm will be accepted.

A4.6.6.3. Over-filling tubes, causing tube cap to come off when the specimen is frozen.

A4.6.6.4. Not putting tube caps on tightly.

A4.6.6.5. Tape or parafilm around the cap of the tube.

A4.6.6.6. Omitting the individual's full name/full SSN on tube

A4.6.6.7. Only last four of SSN on the transport tube.

A4.6.6.8. Name on tube does not match name on shipping/paperwork transmittal list or AF Form 1762.

A4.6.6.9. No shipping/transmittal list or AF Form 1762 accompanying the specimen tube.

A4.6.7. Common Errors in Specimen Packaging:

A4.6.7.1. Not wrapping tubes with absorbent paper material.

A4.6.7.2. Not maintaining a cold environment (use ice, cold packs, or dry ice as appropriate).

A4.6.7.3. Not separating shipping/transmittal lists or AF Forms 1762 from specimens, causing forms to get wet if leakage occurs.

A4.6.7.4. Not sealing the shipping bag completely causing specimens to be lost in transit.

A4.6.7.5. Not packing specimens in foam shipping rack or separating them into batches of ten.

Attachment 5

HIV TESTING AND INTERPRETATION OF RESULTS

A5.1. Laboratories:

A5.1.1. Use only approved MTF laboratories or the USAFSAM HIV Testing Services to perform the initial screening test on specimens collected from Service members. (T-1)

A5.1.2. All approved Air Force MTF laboratories that perform in-house HIV testing must send a serum sample for testing to USAFSAM HIV Testing Services IAW **A3.1.2** This sample will be forwarded to the DoD serum repository after testing by the USAF HIV Testing Service. (T-1)

A5.1.3. The USAFSAM HIV Testing Services, USAFSAM, Wright-Patterson Air Force Base, maintains specimens for seven days after testing then discarded. Specimens from Reserve and Guard units are sent to the DoD serum repository. (T-1)

A5.2. Specimen Collection and Handling:

A5.2.1. Collect blood samples with appropriate vacutainer tubes.

A5.2.2. Label tubes with a CHCS generated label. As a minimum, each sample is labeled with three unique patient identifiers such as; the individual's full name, FMP/SSN, date of birth or a laboratory assigned number. Also include the date and time of collection.

A5.2.3. Samples are centrifuged and serum separated within six hours of collection.

A5.2.4. Specimens should be refrigerated before the initial test. If the initial test is cannot be conducted within seven days, or the date at which the sample was collected is unknown, the specimen must be frozen (≤ -20°C).

A5.2.5. Use cold packs to keep specimens at refrigerated temperatures (2 – 8°C) or shipped on dry ice if the samples are frozen (≤ -20°C) during transit between laboratories.

A5.2.6. Ship specimens according to US (or foreign) biological agent shipping requirements.

A5.3. Initial Test:

A5.3.1. Conduct the initial test using a FDA-approved screening test. Interpret results according to the manufacturer's package insert.

A5.3.2. The laboratory establishes an internal quality control program.

A5.3.3. All controls will be 100 percent correct before the entire batch results are considered acceptable.

A5.4. Supplemental/Confirmatory Tests:

A5.4.1. All HIV testing will follow an APHL/CDC-approved algorithm. (T-0)

A5.4.2. Perform a FDA-approved confirmatory test, such as a Western Blot (WB) test. For Western Blot tests with indeterminate results, an alternative FDA approved test can be used to resolve indeterminates such as a viral load-based assay (APTIMA) or other FDA approved testing platform. (T-0)

A5.4.3. The laboratory validates its procedure using a protocol that establishes accuracy, precision, and reproducibility.

Attachment 6

HIV TESTING OF DOD CIVILIAN EMPLOYEES

A6.1. Direct requests for authority to screen DoD civilian employees for HIV to the Assistant Secretary of Defense (ASD)/Force Management and Personnel (FM&P). Only requests that are based on a host nation HIV screening requirement are accepted. Requests based on other concerns, such as sensitive foreign policy or medical health care issues, are not considered under this instruction. Approvals are provided in writing by the ASD/FM&P and apply to all the DoD Components that may have activities located in the host nation. (T-0)

A6.2. Specific HIV screening requirements may apply to DoD civilian employees currently assigned to positions in the host nation and to prospective employees. When applied to prospective employees, HIV screening is considered a requirement imposed by another nation, that must be met before the final decision to select the individual for a position, or before approving temporary duty or detail to the host nation. Individuals who refuse to cooperate with HIV screening requirements or those who cooperate and are diagnosed as HIV seropositive, may not be considered further for employment in host nations with HIV screening requirements. (T-0)

A6.3. DoD civilian employees who refuse to cooperate with the screening requirements are treated, as follows:

A6.3.1. Those who volunteered for the assignment, whether permanent or temporary, are retained in their official position without further action and without prejudice to employee benefits, career progression opportunities, or other personnel actions to which those employees are entitled under applicable law or instruction.

A6.3.2. Those who are obligated to accept assignment to the host nation under the terms of an employment agreement, regularly scheduled tour of duty, or similar and/or prior obligation may be subjected to an appropriate adverse personnel action under the specific terms of the employment agreement or other authorities that may apply.

A6.3.3. Host nation screening requirements, which apply to DoD civilian employees currently located in that country, must be observed. Appropriate personnel actions may be taken, without prejudice to employee rights and privileges to comply with the requirements. (T-0)

A6.4. Individuals who are not employed in the host nation, who accept the screening, and who are evaluated as HIV seropositive shall be denied the assignment on the basis that evidence of seronegativity is required by the host nation. If denied the assignment, such DoD employees shall be retained in their current positions without prejudice. Appropriate personnel actions may be taken, without prejudice to employee rights and privileges, on DoD civilian employees currently located in the host nation. In all cases, employees shall be given proper counseling and shall retain all the rights and benefits to which they are entitled, including accommodations for the handicapped as in the applicable ASD/FM&P Memorandum, and for employees in the United States (29 U.S.C. 794). Non-DoD employees are referred to appropriate support service organizations. (T-0)

A6.5. Some host nations may not bar entry to HIV seropositive DoD civilian employees, but may require reporting of such individuals to host nation authorities. In such cases, DoD civilian employees who are evaluated as HIV seropositive shall be informed of the reporting

requirements. They shall be counseled and given the option of declining the assignment and retaining their official positions without prejudice or notification to the host nation. If assignment is accepted, the requesting authority shall release the HIV seropositive result, as required. Employees currently located in the host nation may also decline to have seropositive results released. In such cases, they may request and shall be granted early return at government expense or other appropriate personnel action without prejudice to employee rights and privileges. (T-0)

A6.6. A positive HIV screening test must be confirmed by an FDA approved confirmatory test according to an APHL/CDC approved algorithm. A civilian employee may not be identified as HIV antibody positive, unless the confirmatory test is positive. The clinical standards in this instruction shall be observed during initial and confirmatory testing. (T-0)

A6.7. Provide tests at no cost to the DoD civilian employees, including applicants. (T-0)

A6.8. Counsel DoD civilian employees infected with HIV. (T-0)

Attachment 7

GUIDELINES FOR ADMINISTERING THE ORDER TO FOLLOW PREVENTIVE MEDICINE REQUIREMENTS TO INDIVIDUALS INFECTED WITH HIV

A7.1. After the member is notified by a health care provider that he or she has tested positive for HIV infection, and the significance of such a test, the MTF/CC expeditiously notifies the member's unit commander of the positive test results. For active duty members, the member's unit commander issues an order to follow preventive medicine requirements. For unit assigned reservists, this order is issued only after their immediate commander determines the member will be retained in the Selected Reserve. When the order is given, a credentialed provider is present to answer any medical concerns of the member. Use the order at **Attachment 13**. It is signed and dated by the commander and member. If the member refuses to sign, the commander notes that the member refused to sign in the acknowledgment section. The order is securely stored to protect the member's privacy and confidentiality. A copy of the order is provided to the member. Upon the individual's reassignment, the unit commander forwards the order in a sealed envelope to the gaining commander. The envelope is marked "To Be Opened By Addressee Only." Upon the individual's separation from the Air Force, the order is destroyed. (T-1)

A7.2. AD members testing positive for HIV infection undergo a complete medical evaluation at SAMMC. Upon arrival, all HIV positive members are counseled by a health care provider or by the HIV Community Health Nurse (CHN) assigned to the HIV Medical Evaluation Unit at SAMMC. Use AF Form 3845, **Preventive Medicine Counseling Record,** or similar form. The CHN signs the form. The member signs the counseling record acknowledging receipt of the counseling. One copy of the record is given the member and one copy filed in the records of the HIV CHN. (T-1)

A7.3. If the member is returned to duty from the HIV Medical Evaluation Unit to a different unit from which he or she came, the gaining unit commander issues an additional order to follow preventive medicine requirements to the member. A copy of this order is given to the member. Use the order at **Attachment 13**. The commander may request the MTF/CC or other health care provider is present when the order is administered to answer any medical concerns of the member. The commander and member sign and date the order. If the member refuses to sign, the commander notes the member refused to sign in the acknowledgment section. Securely store the order to protect the member's privacy and confidentiality. (T-1)

A7.4. It is unnecessary to recall members issued orders under former procedures. HIV seropositive members, who have not been previously issued preventive medicine requirement orders, must be counseled by a health care provider assigned to the local medical facility on AF Form 3845 and issued an order (**Attachment 13**) by his or her unit commander. (T-1)

NOTE: DoD requested the Military Departments standardize the administration of the order to follow preventive medicine requirements to individuals infected with HIV. The guidelines above standardize and simplify procedures.

Attachment 8

STANDARD CLINICAL PROTOCOL

A8.1. Medical Evaluation:

A8.1.1. Accomplish a complete medical evaluation of AF personnel with HIV infection with an initial visit, a second visit at 6 months, and subsequent visits every 12 months at SAMMC as long as the member is retained on active duty. HIV disease will be staged according to current CDC guidelines for every clinical visit. Interim medical visits will be performed as necessary in the member's local area in accordance with current DHHS Guidelines for Management of Adult HIV Infections. For unit assigned reservists not on extended active duty, this evaluation is not accomplished until after the commander's decision to retain the member. If the member is retained, the evaluation must be accomplished and documented IAW AFI 48-123, AFI 41-210, and AFRC medical guidance on nonduty related medical conditions. (T-1)

A8.1.2. Maintain a frozen serum specimen on all HIV positive individuals at a central serum bank for at least three years at -70 degrees Celsius. (T-1)

A8.1.3. Seek psychiatric consultation if there are concerns about fitness for duty or if the screening evaluation suggests more detailed psychiatric evaluation is needed. If the patient has persistent evidence of diminished intellectual skills, personality changes, and motor impairment, more specialized studies (neurologic studies, computed tomography or magnetic resonance imaging, lumbar puncture, psychiatric examination, and neuropsychiatric testing) may be required to evaluate the possible presence of a HIV-related mental or neurological syndrome. (T-1)

A8.1.4. Perform additional testing in both initial and follow-up epidemiologic/clinical assessments as indicated to maintain compliance with changes in accepted standards of care for management of HIV infection. (T-1)

A8.2. Medical Record Coding of HIV-1 Infections. Follow current ICD CM coding guidelines for medical record coding of HIV infection.

A8.3. Disposition of Members Infected:

A8.3.1. DoD Directive 1332.18, Separation From the Military Service by Reason of Physical Disability, November 4, 1996, and AFI 41-210, Medical Evaluations Boards (MEB) and Continued Military Service, provides guidelines for fitness for duty determinations. However, MEB pre-screening will occur with an Initial Review in Lieu of an MEB (I-RILO) under the guidelines of AFI 41-210, chapter 4, section 4k. This guidance provides I-RILO screening procedures for both ADAF members Air Reserve Component members. (T-0)

A8.3.2. Refer AD members infected with HIV for I-RILO in accordance with AFI 41-210, immediately following the initial evaluation. However, while I-RILOs usually require a letter from the member's Commander indicating the impact of a member's condition upon his/her duty performance, such a letter is not required in the case of HIV seropositive members because of the risk of Privacy Act violations while routing such letters through the Commander's support staff. I-RILOs will only be submitted from the HIV Medical

Evaluation Unit at SAMMC and individual home bases are not to submit I-RILOs or annual ALC-C RILOs for HIV infection. (T-1)

Attachment 9

RETENTION AND SEPARATION

A9.1. Retention:

A9.1.1. Members with laboratory evidence of HIV infection who are able to perform the duties of their office, grade, rank and/or rating, may not be separated solely on the basis of laboratory evidence of HIV infection. (T-0)

A9.1.2. HIV-infected members who have been evaluated for continued military service and are retained will receive an Assignment Limitation Code (ALC-C). Please refer to AFI 41-210 for ALC-C stratifications and for a list of waiver authorities for OCONUS TDY and/or assignment. (T-1)

A9.2. Separation:

A9.2.1. AFI 36-3212, *Physical Evaluation for Retention, Retirement, and Separation,* provides guidance for separation or retirement of AD members who are determined to be unfit for further duty.

A9.2.2. AD and Reserve members with laboratory evidence of HIV infection found not to have complied with lawfully ordered preventive medicine procedures are subject to administrative and disciplinary action, which may include separation.

A9.2.3. Separation of AD members with laboratory evidence of HIV infection under the plenary authority of the Secretary of the Air Force, if requested by the member, is permitted.

A9.2.4. The immediate commander of ARC members not on extended active duty who show serologic evidence of HIV infection will determine if the member can be utilized in the Selected Reserve. If the member cannot be utilized, he/she may be transferred involuntarily to the Standby Reserve or separated. If separated, the characterization of service shall never be less than that warranted by the member's service record. (T-1)

A9.2.5. Air Force members determined to have been infected with HIV at the time of enlistment or appointment are subject to discharge for erroneous enlistment or appointment. (T-1)

Attachment 10

LIMITATIONS ON THE USE OF INFORMATION FROM EPIDEMIOLOGICAL ASSESSMENTS

A10.1. Limitations of Results:

A10.1.1. Laboratory tests results performed under this instruction may not be used as the sole basis for separation of a member. The results may be used to support a separation based on physical disability or as specifically authorized by any section in this instruction. This instruction shall not preclude use of laboratory test results in any other manner consistent with law or instruction. (T-1)

A10.1.2. Laboratory test results confirming evidence of HIV infection may not be used as an independent basis for any adverse administrative action or any disciplinary action, including punitive actions under the Uniform Code of Military Justice (UCMJ) (10 U.S.C. 47, reference [j]). (T-1) However, such results may be used for other purposes including, but not limited to, the following:

A10.1.2.1. Separation under the accession testing program.

A10.1.2.2. Voluntary separation for the convenience of the Government.

A10.1.2.3. Other administrative separation action authorized by Air Force policy.

A10.1.2.4. In conducting authorized Armed Services Blood Program Look Back activities.

A10.1.2.5. Other purposes (such as rebuttal or impeachment) consistent with law or instruction (e.g., the Federal or Military Rules of Evidence or the Rules of Evidence of a State), including to establish the HIV seropositivity of a member when the member disregards the preventive medicine counseling or the preventive medicine order or both in an administrative or disciplinary action based on such disregard or disobedience.

A10.1.3. HIV infection is an element in any permissible administrative or disciplinary action, including any criminal prosecution (e.g., as an element of proof of an offense charged under the UCMJ or under the code of a State or the United States).

A10.1.4. HIV infection is a proper ancillary matter in an administrative or disciplinary action, including any criminal prosecution (e.g., as a matter in aggravation in a court-martial in which the HIV positive member is convicted of an act of rape committed after being informed that he or she is HIV positive).

A10.2. Limitations on the Use of Information Obtained in the Epidemiological Assessment Interview:

A10.2.1. Information obtained from a member during, or as a result of, an epidemiological assessment interview may not be used against the member in the following situations:

A10.2.1.1. A court-martial.

A10.2.1.2. Line of duty determination.

A10.2.1.3. Nonjudicial punishment.

A10.2.1.4. Involuntary separation (other than for medical reasons).

A10.2.1.5. Administrative or punitive reduction-in-grade.

A10.2.1.6. Denial of promotion.

A10.2.1.7. An unfavorable entry in a personnel record.

A10.2.1.8. A denial to reenlistment.

A10.2.1.9. Any other action considered by the Secretary of the Air Force concerned to be an adverse personnel action.

A10.2.2. The limitations in paragraph **A10.2.1** do not apply to the introduction of evidence for appropriate impeachment or rebuttal purposes in any proceeding, such as one in which the evidence of drug abuse or relevant sexual activity (or lack thereof) has been first introduced by the member or to disciplinary or other action based on independently derived evidence.

A10.2.3. The limitations in paragraph **A10.2.1** do not apply to nonadverse personnel actions on a case-by-case basis, such as: A10.2.3.1. Reassignment. A10.2.3.2. Disqualification (temporary or permanent) from a personnel reliability program. A10.2.3.3. Denial, suspension, or revocation of a security clearance. A10.2.3.4. Suspension or termination of access to classified information.

A10.2.4. Removal (temporary or permanent) from flight status or other duties requiring a high degree of stability or alertness, including explosive ordnance disposal or deep-sea diving.

A10.3. Entries in Personnel Records: Except as authorized by this instruction, if any such personnel actions are taken because of, or are supported by, serologic evidence of HIV infection or information described in paragraph **A10.1.2**, no unfavorable entry may be placed in a personnel record for such actions. Recording a personnel action is not an unfavorable entry in a personnel record. Additionally, information reflecting an individual's serologic or other evidence of infection with HIV is not grounds for an unfavorable entry in a personnel record.

Attachment 11

PERSONNEL NOTIFICATION, MEDICAL EVALUATION, AND EPIDEMIOLOGICAL INVESTIGATION

A11.1. Personnel Notification:

A11.1.1. Once a health care authority has been notified of an individual with serologic or other laboratory/clinical evidence of HIV infection, public health and or the HIV designated physician shall undertake preventive medicine intervention. The CHN and physician staff at the SAMMC HIV Medical Evaluation Unit will assist military and civilian blood bank organizations and preventive medicine authorities with blood donor look back tracing and referral and refer case-contact information to the appropriate military or civilian health authority. (T-0)

A11.1.2. All individuals with serologic evidence of HIV infection who are military healthcare beneficiaries shall be counseled by a physician or a designated healthcare provider on the significance of a positive antibody test. They shall be advised as to the mode of transmission, the appropriate precautions and personal hygiene measures required to minimize transmission through sexual activities and/ or intimate contact with blood or blood products, and of the need to advise any past or future sexual partners of their infection. Women shall be advised of the risk of perinatal transmission during past, current, and future pregnancies. The individuals shall be informed that they are ineligible to donate blood, sperm, organs or tissues and shall be placed on a permanent donor deferral list. (T-0)

A11.1.3. Service members identified to be at risk shall be counseled and tested for serologic evidence of HIV infection. Other DoD beneficiaries, such as retirees and family members, identified to be at risk, shall be informed of their risk and offered serologic testing, clinical evaluation, and counseling. The names of individuals identified to be at risk who are not eligible for military healthcare shall be referred to civilian health authorities in the local area where the index case is identified, unless prohibited by the appropriate State or host-nation civilian authority. Anonymity of the HIV index case shall be maintained, unless reporting is required by civil authorities. (T-0)

A11.1.4. Blood donors who demonstrate repeatedly reactive screening tests for HIV, but for whom confirmatory test(s) are negative or indeterminate are not eligible for blood donor pool, shall be appropriately counseled. (T-0)

A11.2. Medical Evaluation:

A11.2.1. Active duty personnel and ARC members on extended active duty who have tested positive for HIV shall be sent to the HIV Medical Evaluation Unit at SAMMC for medical evaluation. All DoD directed evaluations will be completed as an outpatient, coordinated by the HIV Evaluation Unit staff. All Active Duty HIV patients undertaking their initial evaluation will undergo mental health status screening by a SAMMC mental health provider. (T-1)

A11.2.2. Physically or mentally unstable HIV patients should have their conditions addressed and stabilized sufficiently for outpatient management prior to transport. Upon arrival, those patients exhibiting an active process requiring physician attention during non-duty hours will be admitted to the appropriate inpatient service. (T-1)

A11.2.3. SAMMC HIV Medical Evaluation Unit staff will conduct a confidential patient epidemiologic interview, repeat the contact notification process, and verify blood donation "lookback" process. The HIV Evaluation Unit CHN or designee will provide the disease education and risk reduction counseling during the patient interview, and complete two copies of the standardized medical counseling form ("Prevention Medicine Counseling Record"). One copy is given to the patient, and the other copy maintained in the HIV CHN's confidential patient files. If the patient refuses to sign, SAMMC Directorate of Medical Law will be notified. The "Order to Follow Preventive Medicine Requirements" is issued by the unit commander of an HIV infected person prior to the patient's initial evaluation by the HIV unit. (T-1)

A11.2.4. All HIV infected active duty and TDRL personnel arriving at SAMMC will receive medical evaluation and staging of their HIV disease by an assigned HIV unit staff physician. The physician will also provide disease specific patient education and appropriate treatment recommendations, and serve as liaison with consulting or inpatient services when necessary. The HIV unit physician will be available to the patient's primary care provider for ongoing patient management and any issues concerning scheduled reevaluations. (T-1)

A11.3. Epidemiological Investigation:

A11.3.1. Epidemiological investigation shall attempt to determine potential contacts of patients who have serologic or other laboratory or clinical evidence of HIV infection. The patient shall be informed of the importance of case-contact notification to interrupt disease transmission and shall be informed that contacts shall be advised of their potential exposure to HIV. Individuals at risk of infection include sexual contacts (male or female); children born to infected mothers; recipients of blood, blood products, organs, tissues, or sperm; and users of contaminated intravenous drug paraphernalia. At risk individuals who are eligible for healthcare in the military medical system shall be notified. The Secretaries of the Military Departments shall designate all spouses (regardless of the Service affiliation of the HIV infected Reservist) who are notified under this provision to receive serologic testing and counseling on a voluntary basis from MTFs under the Secretaries' of the Military Departments jurisdiction. (T-0)

A11.3.2. Communicable disease reporting procedures shall be followed consistent with this Directive through liaison between the public health authorities and the appropriate local, State, Territorial, Federal, or host-nation health jurisdiction. (T-0)

Attachment 12

PROCEDURE FOR EVALUATING T-HELPER CELL COUNT

A12.1. Analytical Procedure:

A12.1.1. Determine the percentage of CD4+ and CD3+ positive lymphocytes by immunophenotyping blood cells using flow-cytometry instrumentation per applicable CDC guidelines. Each laboratory performing T-helper cell counts maintains a current and complete standard operating procedure manual. The absolute T-helper cell count is a product of the percentage of T-helper cells (defined as CD4+ and CD3+ positive lymphocytes) and the absolute lymphocyte level.

A12.2. Internal Quality Control Program:

A12.2.1. Each laboratory maintains a comprehensive internal quality control program. Minimally, on each day of operation monitor the following flow-cytometry procedures or reagents:

A12.2.1.1. Optical focusing and alignment of all lenses and light paths for forward-angle light scatter, right-angle light scatter, red fluorescence, and green fluorescence if these functions are adjustable on the instrument.

A12.2.1.2. Standardize fluorescent intensity beads, particles, or cells with fluorescence in the range of biological samples.

A12.2.1.3. Verify fluorescent compensation beads, particles, or cells with fluorescence in the range of biological samples.

A12.2.1.4. A human blood control sample or equivalent.

A12.2.2. Each laboratory establishes tolerance limits for each of the procedures or reagents in paragraph **A12.1** Take corrective action and document when any quality control reagent exceeds established tolerance limits. Accomplish routine maintenance and function verification checks. The laboratory director regularly reviews corrective and quality control records.

A12.3. External Quality Control Program: The Army establishes and operates an external quality control program to evaluate the results reported by the flow-cytometry laboratories. The external quality control program includes a hematology survey to monitor the performance of the absolute lymphocyte count and a flow-cytometry survey to monitor the performance of each immunophenotyping procedure.

A12.4. Recording and Reporting Data: The laboratory director reviews and verifies the reported results. The laboratory report contains data from which absolute and relative values may be calculated for each lymphocyte subpopulation along with locally derived normal ranges inclusive of the fifth and ninety-fifth percentiles. The laboratory maintains permanent files of patient reports, internal and external quality control records, and instrument maintenance and performance verification checks.

A12.5. Personnel Qualifications:

A12.5.1. Properly train all personnel involved with the flow-cytometry instrumentation.

A12.5.2. Director of the flow-cytometry laboratory holds a doctoral degree in a biologic science or is a physician and possesses experience in immunology or cell biology.

A12.5.3. Technical supervisor holds a bachelor's degree in a biological science and has at least two years of experience in flow-cytometry.

A12.6. Safety: All laboratories comply with the CDC biosafety level 2 standards. All procedures having the potential to create infectious aerosols shall be conducted within the confines of a Class II biological safety cabinet. Although certain specimen processing procedures may inactivate infectious agents, all material is treated as infectious throughout all procedures. Decontaminate all material generated in the processing and evaluation of blood specimens and dispose of using established hazardous waste disposal policies.

Attachment 13

ORDER TO FOLLOW PREVENTIVE MEDICINE REQUIREMENTS

Because of the necessity to safeguard the overall health, welfare, safety, and reputation of this command and to ensure unit readiness and the ability of the unit to accomplish its mission, certain behavior and unsafe health procedures must be proscribed for members who are diagnosed as positive for HIV infection.

As a military member who has been diagnosed as positive for HIV infection, you are hereby ordered:

(1) to verbally inform sexual partners that you are HIV positive prior to engaging in sexual relations. This order extends to sexual relations with other military members, military dependents, civilian employees of DoD components or any other persons;

(2) to use proper methods to prevent the transfer of body fluids during sexual relations, including the use of condoms providing an adequate barrier for HIV (e.g. latex);

(3) in the event that you require emergency care, to inform personnel responding to your emergency that you are HIV positive as soon as you are physically able to do so.

(4) when seeking medical care, you may wish to inform the provider that you have HIV so that the provider can use that information to optimize your evaluation and treatment;

(5) not to donate blood, sperm, tissues, or other organs.

Violating the terms of this order may result in adverse administrative action or punishment under the Uniform Code of Military Justice for violation of a lawful order.

_____

Signature of Commander and Date

ACKNOWLEDGMENT

I have read and understand the terms of this order and acknowledge that I have a duty to obey this order. I understand that I must inform sexual partners, including other military members, military dependents, civilian employees of DoD components, or any other persons, that I am HIV positive prior to sexual relations; that I must use proper methods to prevent the transfer of body fluids while engaging in sexual relations, including the use of condoms providing an adequate barrier for HIV; that if I need emergency care I will inform personnel responding to my emergency that I am HIV positive as soon as I am physically able to do so; that when I seek medical or dental care I may wish to inform the provider that I have HIV in order to optimize my evaluation and treatment; and that I must not donate blood, sperm, tissues, or other organs. I understand that violations of this order may result in adverse administrative actions or punishment under the Uniform Code of Military Justice for violation of a lawful order.

_____

Signature of Member and Date

EXHIBIT H

Department of Defense

INSTRUCTION

NUMBER 6490.07
February 5, 2010

USD(P&R)

SUBJECT: Deployment-Limiting Medical Conditions for Service Members and DoD Civilian Employees

References: See Enclosure 1

1. PURPOSE. In accordance with the authority in DoD Directive (DoDD) 5124.02 (Reference (a)) and the guidance in DoDDs 6200.04 and 1400.31 (References (b) and (c)), this Instruction establishes policy, assigns responsibilities, and provides procedures for ensuring that Service members and DoD civilian employees, including Coast Guard Service members and civilian employees at all times, including when the Coast Guard is a Service in the Department of Homeland Security by agreement with that Department, (hereafter referred to collectively as "DoD personnel") deployed and deploying on contingency deployments are medically able to accomplish their duties in deployed environments.

2. APPLICABILITY. This Instruction:

a. Applies to:

(1) OSD, the Military Departments (including the Coast Guard at all times, including when it is a Service in the Department of Homeland Security by agreement with that Department), the Office of the Chairman of the Joint Chiefs of Staff and the Joint Staff, the Combatant Commands, the Office of the Inspector General of the Department of Defense, the Defense Agencies, the DoD Field Activities, and all other organizational entities within the Department of Defense (hereafter referred to collectively as the "DoD Components").

(2) DoD personnel deployed and deploying on contingency deployments consistent with DoD and Service-specific guidance, including Reference (c) and DoD Instruction (DoDI) 1400.32 (Reference (d)).

b. Does not apply to contingency contractor personnel, who shall comply with the guidance in DoDI 3020.41 (Reference (e)), or to shipboard operations that are not anticipated to involve operations ashore, which shall follow Service-specific guidance.

c. Shall be used as a minimum medical standard for all deploying and deployed DoD personnel, BUT does not alter or replace:

(1) With respect to military personnel, the accession, retention, and general fitness for duty standards previously established by the Department of Defense, including those described in DoDI 6130.4, DoDD 6130.3, Under Secretary of Defense for Personnel and Readiness (USD(P&R)) Memorandum, Assistant Secretary of Defense for Health Affairs (ASD(HA)) Memorandum, and DoDI 6485.01 (References (f) through (j), respectively).

(2) With respect to civilian employees covered by sections 791 and 794a of title 29, United States Code (also known and hereafter referred to as "The Rehabilitation Act of 1973, as amended" (Reference (k))), the legal obligations of a DoD Component as an employer pursuant to that Act.

(3) More stringent individual Military Department policy guidance or Service-specific readiness requirements.

3. DEFINITIONS. These terms and their definitions are for the purpose of this Instruction.

a. contingency. A situation requiring military operations in response to natural disasters, terrorists, subversives, or as otherwise directed by appropriate authority to protect US interests.

b. contingency deployment. A deployment that is limited to outside the continental United States, over 30 days in duration, and in a location with medical support from only non-fixed (temporary) military medical treatment facilities. It is a deployment in which the relocation of forces and materiel is to an operational area in which a contingency is or may be occurring.

c. deployment. The relocation of forces and materiel to desired operational areas. Deployment encompasses all activities from origin or home station through destination, specifically including intra-continental United States, inter-theater, and intra-theater movement legs, staging, and holding areas.

d. medical assessment. The total of the pre-deployment activities described in section 1 of Enclosure 2 of this Instruction and those listed in paragraph E4.A1.1 of DoDI 6490.03 (Reference (l)).

e. trained DoD health-care provider. A physician, physician assistant, nurse practitioner, advanced practice nurse, independent duty corpsman, independent duty medical technician, or special forces medical sergeant.

4. POLICY. It is DoD policy that:

a. The medical standards in this Instruction are mandatory for contingency deployments, and permissible for any other deployment, based on the commander's decision.

b. DoD personnel with existing medical conditions may deploy based upon a medical assessment as described in Enclosure 2 and subparagraph E4.A1.1.1. of Reference (l), which for civilian employees shall be consistent with subparagraph 4.g.(3)(c) of DoDD 1404.10 (Reference (m)), and the requirements of The Rehabilitation Act of 1973, as amended, when such civilian employees are covered by that Act, if all of these conditions are met:

(1) The condition is not of such a nature or duration that an unexpected worsening or physical trauma is likely to have a grave medical outcome or negative impact on mission execution.

(2) The condition is stable and reasonably anticipated by the pre-deployment medical evaluator not to worsen during the deployment in light of physical, physiological, psychological, and nutritional effects of the duties and location.

(3) Any required, ongoing health care or medications anticipated to be needed for the duration of the deployment are available in theater within the Military Health System. Medication must have no special handling, storage, or other requirements (e.g., refrigeration, cold chain, or electrical power requirements). Medication must be well tolerated within harsh environmental conditions (e.g. heat or cold stress, sunlight) and should not cause significant side effects in the setting of moderate dehydration.

(4) There is no need for routine evacuation out of theater for continuing diagnostics or other evaluations. (All such evaluations should be accomplished before deployment.)

(5) In the case of civilian employees covered by The Rehabilitation Act of 1973, as amended, it is determined, based upon an individualized assessment, that the employee can perform the essential functions of the position in the deployed environment, with or without a reasonable accommodation, without causing undue hardship. In evaluating undue hardship, the nature of the accommodation and the location of the deployment must be considered. Further, the employee's medical condition must not pose a significant risk of substantial harm to the employee or others taking into account the condition of the relevant deployed environment.

c. Individuals with the conditions in Enclosure 3, based on medical assessments in accordance with Enclosure 2 and Reference (l), shall not deploy unless a waiver can be granted according to the procedures in section 3 of Enclosure 2.

d. If a Service member is found qualified for retention with no limitations on assignments or deployments following evaluation of a medical condition by competent medical and personnel authority of his or her respective Service, and if the condition remains stable, a deployment waiver of that same condition is not required by this Instruction.

e. Deploying commanders may add additional medical requirements to the standards in this Instruction based upon the demands of a specific deployment. Commanders may apply these medical standards to other deployments based on the health risk, physical demands, and medical

capabilities of the deployment. These additional standards must be consistent with The Rehabilitation Act of 1973, as amended, when applied to civilian employees covered by that Act.

f. Protected health information collected, used, and released in the execution of this Instruction shall be protected as required by DoD 6025.18-R (Reference (n)) and DoD 8580.02-R (Reference (o)).

5. RESPONSIBILITIES. See Enclosure 4.

6. PROCEDURES. See Enclosure 2.

7. RELEASABILITY. UNLIMITED. This Instruction is approved for public release and is available on the Internet from the DoD Issuances Web Site at http://www.dtic.mil/whs/directives.

8. EFFECTIVE DATE. This Instruction is effective immediately.

Gail H. McGinn
Deputy Under Secretary of Defense (Plans)
Performing the Duties of the
Under Secretary of Defense for
Personnel and Readiness

Enclosures:
1. References
2. Procedures
3. Medical Conditions Usually Precluding Contingency Deployment
4. Responsibilities

TABLE OF CONTENTS

ENCLOSURE 1

REFERENCES

(a) DoD Directive 5124.02, "Under Secretary of Defense for Personnel and Readiness (USD(P&R))," June 23, 2008
(b) DoD Directive 6200.04, "Force Health Protection (FHP)," October 9, 2004
(c) DoD Directive 1400.31, "DoD Civilian Work Force Contingency and Emergency Planning and Execution," April 28, 1995
(d) DoD Instruction 1400.32, "DoD Civilian Work Force Contingency and Emergency Planning Guidelines and Procedures," April 24, 1995
(e) DoD Instruction 3020.41, "Contractor Personnel Authorized to Accompany the U.S. Armed Forces," October 3, 2005
(f) DoD Instruction 6130.4, "Medical Standards for Appointment, Enlistment, or Induction in the Armed Forces," January 18, 2005
(g) DoD Directive 6130.3, "Physical Standards for Appointment, Enlistment, and Induction," December 15, 2000
(h) Under Secretary of Defense for Personnel and Readiness Memorandum, "Policy Guidance for Medical Deferral," February 9, 2006
(i) Assistant Secretary of Defense for Health Affairs Memorandum, "Policy Guidance for Deployment-Limiting Psychiatric Conditions and Medications," November 7, 2006
(j) DoD Instruction 6485.01, "Human Immunodeficiency Virus," October 17, 2006
(k) Sections 791 and 794a of title 29, United States Code (also known as "The Rehabilitation Act of 1973, as amended")
(l) DoD Instruction 6490.03, "Deployment Health," August 11, 2006
(m) DoD Directive 1404.10, "DoD Civilian Expeditionary Workforce," January 23, 2009
(n) DoD 6025.18-R, "DoD Health Information Privacy Regulation," January 24, 2003
(o) DoD 8580.02-R, "DoD Health Information Security Regulation," July 12, 2007

ENCLOSURE 2

PROCEDURES

1. PERFORMANCE OF MEDICAL ASSESSMENTS. All DoD personnel serving in a contingency deployment as defined in section 3 of the front matter of this Instruction must undergo a medical assessment prior to deployment in accordance with subparagraph E4.A1.1.1. of Reference (l). The mandatory portions of the assessment are:

a. Completion of DD Forms 2795, "Pre-Deployment Health Assessment," and 2766, "Adult Preventive and Chronic Care Flowsheet" (available on the Internet at http://www.dtic.mil/whs/directives/infomgt/forms/formsprogram.htm). Except for Coast Guard personnel, completed copies of both of these forms must be submitted to the Defense Medical Surveillance System and included in DoD personnel deployment paperwork, and shall serve as the deployment medical record. For Coast Guard personnel, the DD Form 2766 shall be placed in the member's health record, but all other procedures for Coast Guard personnel shall be as described in this Instruction for DoD personnel.

b. Medical record review.

c. Current periodic health assessment (Service members only).

d. Physical exam within 1 year of deployment (DoD civilian employees only).

2. DETERMINATIONS OF DEPLOYABILITY. A trained DoD health-care provider must make a provisional determination on DD Form 2795 as to the deployability of DoD personnel. This decision should be based on all of the information obtained in the medical assessment described in section 1 of this enclosure.

a. In general, DoD personnel with any of the medical conditions in Enclosure 3, and based on a medical assessment, shall not deploy unless a waiver is granted. Consideration should be made for the nature of the disability and if it would put the individual at increased risk of injury or illness, or if the condition is likely to significantly worsen in the deployed environment.

(1) For civilian employees covered by The Rehabilitation Act of 1973, as amended, it must be determined, before deployment and based upon an individualized assessment, that the employee can perform the essential functions of the position in the deployed environment, with or without a reasonable accommodation, without causing undue hardship. In evaluating undue hardship, the nature of the accommodation and the location of the deployment must be considered. Further, the employee's medical condition must not pose a significant risk of substantial harm to the employee or others taking into account the condition of the relevant deployed environment.

(2) The requirement to provide reasonable accommodations for disabilities does not apply to deployment of military members, nor to civilian employees not covered by The Rehabilitation Act of 1973, as amended.

b. All individuals deemed not deployable at the deployment processing center shall be returned to their originating unit with a DD Form 2795 and a summary of their non-deployable medical condition to provide to the unit medical personnel. The civilian supervisor shall also be notified if the individual is deemed not deployable.

3. WAIVERS. If a commander or supervisor of DoD personnel (except for SOF personnel) wishes to deploy an individual with a medical condition that could be disqualifying (see Enclosure 3, the commander or supervisor must request a waiver. The waiver request shall be submitted to the applicable Combatant Commander through the individual's servicing military medical unit in the case of a Service member, or through the individual's personnel office in the case of a civilian employee, with medical input provided by the individual's medical provider.

a. Requests for a waiver shall include a summary of a detailed medical evaluation or consultation concerning the medical condition(s). Maximization of mission accomplishment and the protection of the health of personnel are the ultimate goals. Justification shall include statements indicating service experience, position to be placed in, any known specific hazards of the position, anticipated availability and need for care while deployed, the benefit expected to accrue from the waiver, the recommendation of the commander or supervisor, and the reasonable accommodations that can be provided for civilian employees covered by The Rehabilitation Act of 1973, as amended. For all DoD personnel, the factors listed in subparagraphs 4.b.(1) through 4.b.(4), (and subparagraph 4.b.(5) for civilian employees only) of the front matter shall be discussed.

b. For SOF personnel with any of the conditions listed in Enclosure 3, medical clearance may be granted by the CDRUSSOCOM, subject to the approval of the Combatant Commander under which the Service member is deployed or will deploy.

c. In the case of civilian employees covered by The Rehabilitation Act of 1973, as amended, a waiver must be granted if it is determined, based upon an individualized assessment, that the employee can perform the essential functions of the position in the deployed environment, with or without a reasonable accommodation, without causing undue hardship. In evaluating undue hardship, the nature of the accommodation and the location of the deployment must be considered. Further, the employee's medical condition must not pose a significant risk of substantial harm to the employee or others taking into account the condition of the relevant deployed environment.

4. ROLES AND RESPONSIBILITIES

a. Commanders and Supervisors. Commanders and supervisors shall:

(1) Ensure deploying DoD personnel are appropriately assessed by competent medical authority before deployment, in accordance with Reference (l).

(2) Request waivers for DoD personnel they wish to deploy who have the medical conditions described in Enclosure 3.

(3) Ensure that DoD personnel under their command meet the medical standards of the gaining commander when individuals and their leaders deploy in support of other DoD Components. As these standards may differ by assignment, they must be coordinated separately for each deployment.

b. Supervisors. Supervisors shall additionally:

(1) Identify medical and physical requirements for deployable positions designated for fill by DoD civilian employees.

(2) Ensure that such requirements are documented in position descriptions, vacancy announcements, and other appropriate sources.

(3) Ensure that DoD civilian employees meet such requirements; take appropriate action when employees no longer meet identified requirements.

c. DoD Personnel

(1) DoD personnel in deployable positions shall be responsible for meeting the medical and physical requirements of their deployment-specific tasks.

(2) DoD personnel who are civilian employees selected for deployment opportunities outside their chain of supervision shall be responsible for meeting and maintaining the medical standards identified for the deployment by the responsible commanding officer.

ENCLOSURE 3

MEDICAL CONDITIONS USUALLY PRECLUDING CONTINGENCY DEPLOYMENT

This list of conditions is not intended to be all-inclusive. A list of all possible diagnoses and their severity that may cause an individual to be potentially non-deployable, pending further evaluation, would be too extensive. Medical evaluators must consider climate, altitude, rations, housing, duty assignment, and medical services available in theater when deciding whether an individual with a specific medical condition is deployable. In general, individuals with the conditions in paragraphs a. through h. of this enclosure, based upon a medical assessment as described in Enclosure 2 and Reference (l), shall not deploy unless a waiver is granted.

a. Conditions Affecting Force Health Protection

(1) Physical or psychological conditions resulting in the inability to effectively wear personal protective equipment, including protective mask, ballistic helmet, body armor, and chemical and/or biological protective garments, regardless of the nature of the condition that causes the inability to wear the equipment if wearing such equipment may be reasonably anticipated or required in the deployed location.

(2) Conditions that prohibit immunizations or the use of force health protection prescription products (FHPPPs) required for the specific deployment. Depending on the applicable threat assessment, required FHPPPs may include atropine, epinephrine, and/or pralidoxime chloride (2-PAM chloride) auto-injectors; certain antimicrobials and antimalarials; and pyridostigmine bromide.

b. Unresolved Health Conditions Requiring Care or Affecting Performance

(1) Any chronic medical condition that requires frequent clinical visits, fails to respond to adequate conservative treatment, or necessitates significant limitation of physical activity.

(2) Absence of a dental exam within the last 12 months or presence of the likelihood that dental treatment or reevaluation for oral conditions will result in dental emergencies within 12 months. Individuals being evaluated by a non-DoD civilian dentist should use DD Form 2813, "DoD Active Duty/Reserve Forces Dental Examination," as proof of dental examination (available on the Internet at http://www.dtic.mil/whs/directives/infomgt/forms/formsprogram.htm).

(3) Pregnancy.

(4) Any medical condition that requires either durable medical equipment or appliances, or periodic evaluation or treatment by medical specialists that is not readily available in theater.

(5) Any unresolved acute or chronic illness or injury that would impair duty performance in a deployed environment during the duration of the deployment.

(6) Cancer that requires continuing treatment or specialty medical evaluations during the anticipated duration of the deployment.

(7) Precancerous lesions that have not been treated and/or evaluated and that require treatment and/or evaluation during the anticipated duration of the deployment.

(8) Any medical condition that requires surgery or for which surgery has been performed that requires rehabilitation or additional surgery to remove devices.

(9) Any musculoskeletal condition that significantly impairs performance of duties in a deployed environment.

(10) An acute exacerbation of a physical or mental health condition that could significantly affect duty performance.

c. Conditions That Could Cause Sudden Incapacitation

(1) Recurrent loss of consciousness for any reason.

(2) Any medical condition that could result in sudden incapacitation including a history of stroke within the last 24 months, seizure disorders, and diabetes mellitus type I or II treated with insulin or oral hypoglycemic agents.

d. Pulmonary Disorders. Asthma that has a forced expiratory volume-1 (FEV-1) of less than or equal to 60 percent of predicted FEV-1 despite appropriate therapy and that has required hospitalization at least 2 times in the last 12 months, or that requires daily systemic (not inhalational) steroids.

e. Infectious Disease

(1) Active tuberculosis or known blood-borne diseases that may be transmitted to others in a deployed environment.

(2) A diagnosis of human immunodeficiency (HIV) antibody positive with the presence of progressive clinical illness or immunological deficiency. The cognizant Combatant Command surgeon shall be consulted in all instances of HIV seropositivity before medical clearance for deployment.

f. Sensory Disorders

(1) Hearing Loss. The requirement for use of a hearing aid does not necessarily preclude deployment. However, the individual must have sufficient unaided hearing to perform duties safely.

(2) Vision Loss. Best corrected visual acuity must meet job requirements to perform duties safely.

g. Cardiac and Vascular Disorders

(1) Hypertension not controlled with medication or that requires frequent monitoring.

(2) Symptomatic coronary artery disease.

(3) History of myocardial infarction within 1 year of deployment.

(4) History of coronary artery bypass graft, coronary artery angioplasty, carotid endarterectomy, other arterial stenting, or aneurysm repair within 1 year of deployment.

(5) Cardiac dysrhythmias or arrhythmias, either symptomatic or requiring medical or electrophysiologic control (presence of an implanted defibrillator and/or pacemaker).

(6) Heart failure.

h. Mental Health Disorders

(1) Psychotic and/or bipolar disorders. (See Reference (i) for detailed guidance on deployment-limiting psychiatric conditions or psychotropic medications.)

(2) Psychiatric disorders under treatment with fewer than 3 months of demonstrated stability.

(3) Clinical psychiatric disorders with residual symptoms that impair duty performance.

(4) Mental health conditions that pose a substantial risk for deterioration and/or recurrence of impairing symptoms in the deployed environment.

(5) Chronic medical conditions that require ongoing treatment with antipsychotics, lithium, or anticonvulsants.

ENCLOSURE 4

RESPONSIBILITIES

1. ASD(HA). The ASD(HA), under the authority, direction, and control of the USD(P&R), shall review and issue to the Secretaries of the Military Departments and the Directors of the Defense Agencies and the DoD Field Activities technical adjustments to the deployment standards in Enclosure 3 as needed, based on changing conditions or additional unanticipated difficulties encountered in the in-theater management of medical conditions.

2. SECRETARIES OF THE MILITARY DEPARTMENTS, COMMANDANT OF THE COAST GUARD, AND DIRECTORS OF THE DEFENSE AGENCIES AND THE DoD FIELD ACTIVITIES. The Secretaries of the Military Departments, the Commandant of the Coast Guard, and the Directors of the Defense Agencies and the DoD Field Activities shall:

a. Direct their respective Components to apply and uniformly implement the standards in this Instruction.

b. Ensure that:

(1) All deploying DoD personnel assigned to their respective Service, Defense Agency, or DoD Field Activity have a medical assessment in accordance with Reference (l), including a medical record review, to evaluate their medical status before contingency deployments and other deployments pursuant to paragraph 4.a. of the front matter of this Instruction.

(2) Pre-deployment processes are in place to identify individuals with deployment-limiting medical conditions.

(3) DoD personnel who occupy deployable positions maintain a high state of pre-deployment health and medical readiness.

3. CHAIRMAN OF THE JOINT CHIEFS OF STAFF. The Chairman of the Joint Chiefs of Staff shall ensure that the Combatant Commanders:

a. Establish a minimum standard when developing medical requirements for entering the theater of operations that factors in the medical conditions described in Enclosure 3 of this Instruction.

b. Implement a medical requirements waiver process that includes waiver computerization and archival storage.

4. COMBATANT COMMANDERS. For all DoD personnel deployed or deploying to a theater within their respective Combatant Commands, the Combatant Commanders shall:

a. Establish a process for reviewing recommendations from the Services regarding the granting of exceptions to medical standards (waivers) for the conditions in Enclosure 3, including a mechanism to track and archive all approved or denied waivers and the medical conditions requiring the waivers.

b. Serve as the final approval authority for exceptions to the medical standards (waivers) made pursuant to the procedures in this Instruction.

5. COMMANDER, UNITED STATES SPECIAL OPERATIONS COMMAND (CDRUSSOCOM). The CDRUSSOCOM shall perform the responsibilities in section 2 of this enclosure for SOF personnel.

EXHIBIT I

DoD INSTRUCTION 1332.45

RETENTION DETERMINATIONS FOR NON-DEPLOYABLE SERVICE MEMBERS

Originating Component:	Office of the Under Secretary of Defense for Personnel and Readiness
Effective:	July 30, 2018
Releasability:	Cleared for public release. Available on the Directives Division Website at http://www.esd.whs.mil/DD/.
Incorporates and Cancels:	Office of the Under Secretary of Defense for Personnel and Readiness Memorandum, "DoD Retention Policy for Non-Deployable Service Members," February 14, 2018
Approved by:	Robert L. Wilkie, Under Secretary of Defense for Personnel and Readiness

Purpose: In accordance with the authority in DoD Directive 5124.02, this issuance:

- Establishes policy, assigns responsibilities, and provides direction for retention determinations for non-deployable Service members.
- Provides guidance and instructions for reporting deployability data for the Total Force.

TABLE OF CONTENTS

SECTION 1: GENERAL ISSUANCE INFORMATION

1.1. APPLICABILITY. This issuance applies to OSD, the Military Departments, the Office of the Chairman of the Joint Chiefs of Staff and the Joint Staff, the Combatant Commands, the Office of the Inspector General of the Department of Defense, the Defense Agencies, the DoD Field Activities, and all other organizational entities within the DoD (referred to collectively in this issuance as the "DoD Components").

1.2. POLICY. It is DoD policy that:

a. To maximize the lethality and readiness of the joint force, all Service members are expected to be deployable.

b. Service members who are considered non-deployable for more than 12 consecutive months will be evaluated for:

(1) A retention determination by their respective Military Departments.

(2) As appropriate, referral into the Disability Evaluation System (DES) in accordance with DoD Instruction (DoDI) 1332.18 or initiation of processing for administrative separation in accordance with DoDI 1332.14 or DoDI 1332.30. This policy on retention determinations for non-deployable Service members does not supersede the policies and processes concerning referral to the DES or the initiation of administrative separation proceedings found in these issuances.

c. Implementation for this policy is October 1, 2018.

1.3. INFORMATION COLLECTIONS. The Monthly Non-deployable Report, referred to in Paragraph 3.2. of this issuance, has been assigned report control symbol DD-P&R(M)2671 in accordance with the procedures in Volume 1 of DoD Manual 8910.01. The expiration date of this information collection is listed in the DoD Information Collections System at https://apps.sp.pentagon.mil/sites/dodiic/Pages/default.aspx.

SECTION 2: RESPONSIBILITIES

2.1. UNDER SECRETARY OF DEFENSE FOR PERSONNEL AND READINESS (USD(P&R)). The USD(P&R) establishes and oversees policy on retention determinations for non-deployable Service members.

2.2. ASSISTANT SECRETARY OF DEFENSE FOR MANPOWER AND RESERVE AFFAIRS (ASD(M&RA)). Under the authority, direction, and control of the USD(P&R), the ASD(M&RA):

a. Develops policy on the retention of non-deployable Service members.

b. Monitors the implementation of this guidance.

c. Tracks the number of non-deployable Service members and those non-deployable Service members retained in military service and the justification for such retention, in accordance with Section 3 of this issuance.

2.3. ASSISTANT SECRETARY OF DEFENSE FOR HEALTH AFFAIRS. Under the authority, direction, and control of the USD(P&R), the Assistant Secretary of Defense for Health Affairs:

a. Develops policy recommendations to the USD(P&R) for uniform retention medical standards in coordination with the Secretaries of the Military Departments.

b. Provides oversight of related medical policies and programs.

2.4. SECRETARIES OF THE MILITARY DEPARTMENTS. The Secretaries of the Military Departments:

a. Will:

(1) Determine the deployability status of Service members.

(2) Make retention determinations consistent with this issuance for Service members who have been non-deployable for more than 12 consecutive months.

(3) Submit monthly reports identifying the number of non-deployable Service members for all components within their Departments to the Office of the USD(P&R) in accordance with Paragraph 3.2. of this issuance.

(4) Monitor compliance with requirements established in DoDI 6025.19 to ensure required evaluations, assessments, and other medically related actions are accomplished to improve individual and overall unit readiness.

b. May:

(1) Retain in service those Service members whose period of non-deployability exceeds the 12 consecutive month limit in Paragraph 1.2. of this issuance if determined to be in the best interest of the Military Service.

(2) Delegate the authority in Paragraph 2.4.(b)(1) of this issuance to retain in service those Service members whose period of non-deployability exceeds the 12 consecutive month limit. Such a delegation must be in writing, and may only be made to Presidentially Appointed, Senate-Confirmed officials; Senior Executive Service members; or general/flag officers serving at the Military Department or Service headquarters.

(3) Initiate administrative separation processing, or referral to the DES, as appropriate, prior to a non-deployable Service member being in a non-deployable status for 12 months when the Military Service determines there is a reasonable expectation that the reason will not be resolved and the Service member will not become deployable.

SECTION 3: PROCEDURES FOR TRACKING AND REPORTING SERVICE MEMBERS

3.1. TRACKING.

a. The Military Departments will monitor and track the number of Service members by Military Service that are:

(1) Non-deployable in accordance with the categories established in Paragraphs 3.5. and 3.6. of this issuance.

(2) Deployable with limitations in accordance with Paragraph 3.3. of this issuance.

(3) Deployable but have individual medical readiness (IMR) deficits in accordance with Paragraph 3.7. of this issuance.

(4) In training or in a transient status in accordance with the category defined in Paragraph 3.4. of this issuance.

b. To ensure accurate and consistent accounting across the DoD, Military Services will account for Service members in only one category. If a Service member can be accounted for in more than one category, the Service member will be counted only once and in the category with the highest priority listed in accordance with Paragraph 3.8. of this issuance.

3.2. REPORTING.

a. The Secretaries of the Military Departments will report to the ASD(M&RA) the number of non-deployable personnel (and other categories as provided in this section) for all Military Services, and their respective components, on a monthly basis.

(1) The format for the Monthly Non-deployable Report can be found at https://prhome.defense.gov/M-RA/Inside-M-RA/MPP/OEPM/.

(2) Reports are due by the end of each month with data current as the last day of the previous month. For example, the June Non-deployable Report is due by June 30th with non-deployable data as of May 31st.

b. The number of non-deployable Service members is reported by categories, either temporary or permanent, and grouped into medical, legal, or administrative sub-categories. Each sub-category is further broken down to account for the specific reasons or conditions that make a Service member non-deployable.

c. The number of Service members who are deployable with limitations, in accordance with Paragraph 3.3. of this issuance, will be categorized separately on the monthly report. Such Service members are not to be counted in the non-deployable populations.

d. The number of Service members who require urgent or emergent dental treatment for dental readiness (Dental Class 3), are overdue for annual dental screening (Dental Class 4), or are overdue for a Periodic Health Assessment (PHA) are reported as IMR Deficits in accordance with Paragraph 3.7. of this issuance. Such Service members are not counted in the non-deployable populations.

e. The number of Service members who are in a training or transient status are reported in one of the four categories listed in Paragraph 3.4. of this issuance.

3.3. DEPLOYABLE WITH LIMITATIONS. Service members with a medical condition that requires additional medical screening, or Combatant Command approval prior to deployment outside the continental United States, will be categorized as Deployable with Limitations. This includes, but is not limited to, conditions referred to in DoDI 6490.07.

3.4. TRAINING AND TRANSIENT. The Training and Transient category provides a means to track the human resources necessary to maintain a healthy force, within current end strength constraints. This category contains Service members who are not immediately ready for deployment and fall into one of the following four categories:

a. Initial Entry Training. These Service members are:

(1) Enlisted Service members at recruit training, initial skill training, and other proficiency or developmental training accomplished before moving to the member's first permanent duty assignment. This includes all in-transit time commencing upon entry into active service, through completion of the final course of initial entry training that terminates enlisted trainee status.

(2) Enlisted trainees who enter officer candidate school, officer training school, and Service academy preparatory school following enlistment on active duty. These members will be considered:

(a) Enlisted trainees from initial entry on active duty until commissioning.

(b) Upon commissioning, officer accession students and will remain in the initial entry training category for any subsequent initial entry training, or until they begin travel to their first permanent duty assignment.

(3) Officers at officer basic courses, and all initial skill and proficiency training taken before travel to the Service member's first permanent duty assignment. This includes all in-transit time from entry on active duty until completion of the last initial entry course of instruction.

(4) Reserve Component (RC) Service members (enlisted and officer) who enter the Ready Reserve and are awaiting initial entry training.

b. Cadets and Midshipman. These are individuals currently attending the U.S. Military Academy, the U.S. Air Force Academy, or the U.S. Naval Academy. In accordance with Section 115 of Title 10, United States Code (U.S.C.), cadets and midshipman are counted in the active duty end strength for their respective Service, but by policy are non-deployable while attending school.

c. All Other Training. These are Service members who are attending training that is 20 weeks or more in length, and is conducted after their initial entry training. Examples include Command and Staff Colleges, Senior Service College, the United States Army Sergeants Major Academy, medical residencies, and all other post-graduate professional education opportunities.

d. Transient. These are Service members who are not available for duty while executing permanent change of station orders at the time of the report. This category does not include military personnel who are:

(1) On temporary duty for training between permanent duty stations, or;

(2) Moving between entry-level courses of instruction, specifically Service members who have departed from one duty station and are in transit but have not yet reported for duty at the next permanent duty station.

3.5. TEMPORARY NON-DEPLOYABLE CATEGORIES.

a. Medical. Service members are considered temporarily non-deployable for one of three reasons:

(1) Patient. In accordance with DoDI 1120.11, Service members who are hospitalized and are projected to heal, recover, and return to full duty in less than 12 months are temporarily non-deployable.

(2) Medical Condition That Limits Full Duty. Service members who have temporary profiles or are in limited duty status are counted as temporarily non-deployable. Light duty will not be reported as non-deployable unless the duration exceeds 30 days, with discretion given to the medical officer to extend light duty status for up to 60 days, making light duty no longer than 90 days for conditions expected to recover or stabilize within that time.

(3) Pregnancy (including post-partum). Service members who are pregnant or in the post-partum phase are temporarily non-deployable. The post-partum phase ranges from 6 to 12 months after childbirth for female Service members and is determined by individual Service policy.

b. Legal. Service members are considered temporarily non-deployable for one of two reasons:

(1) Prisoner. Service members convicted by civilian or military authorities and sentenced to confinement of more than 30 days, but for 6 months or less, are temporarily non-

deployable. Service members confined for more than 6 months are not included in end strength numbers and will not be included in the monthly non-deployability report.

(2) Legal Action. Service members who are under arrest, confined 30 days or less, pending military or civil court action, under investigation, a material witness, on commander directed hold, pending non-judicial punishment action under Section 815 of Title 10, U.S.C., also known as Article 15 of the Uniformed Code of Military Justice (UCMJ), or pending discharge based on action under the UCMJ are temporarily non-deployable.

c. Administrative. These Service members are considered temporarily non-deployable for one of eight reasons:

(1) Absent Without Leave or Unauthorized Absence. Service members who are absent without leave, as defined in Section 886 of Title 10, U.S.C., also known as Article 86 of the UCMJ, will be considered as temporarily non-deployable.

(2) Family Care Plan. In accordance with DoDI 1342.19, Service members required but failing to have a family care plan in place are temporarily non-deployable.

(3) Adoption. Service members who are single parents or one member of a dual military couple and are adopting a child are temporarily non-deployable. They are non-deployable for at least 6 months after the child is placed in the home, or longer dependent on the administrative stabilization period prescribed by the jurisdiction in which the adoption occurred.

(4) Service Member Under 18. Service members who are not yet 18 years of age are temporarily non-deployable. The Child Soldier Prevention Act of 2007 prohibits Service members under the age of 18 from taking part in hostilities as a member of governmental armed forces.

(5) Humanitarian Assignment. Service members assigned to a location to provide support to a family member are temporarily non-deployable. These Service members typically receive 12 to 24 months stabilization by Military Service policy.

(6) Service Discretion. Military Services may designate Service members temporarily non-deployable when the previous categories do not apply. Examples include:

(a) Simultaneous Membership Program or Officer Candidate School.

(b) Education stabilization; mobilization deferral for affiliation after release from Active Component.

(7) Pending Administrative Separation. Service members being processed for administrative separation are temporarily non-deployable.

(8) Unsatisfactory Participants or Administrative Action Pending (RC Only). Service members who are determined to be unsatisfactory participants, as defined in DoDI 1215.13, are temporarily non-deployable.

3.6. PERMANENT NON-DEPLOYABLE CATEGORIES.

a. Medical. Service members are considered non-deployable for one of three reasons listed below.

(1) Permanent Limited Duty. Service members with a medical condition that permanently prevents deployment are non-deployable. This includes Service members processed through the DES who are not deployable and were retained in the Military Service. In accordance with Section 1214a of Title 10, U.S.C., Service members cannot be involuntarily administratively separated or denied reenlistment due to unsuitability based solely on the medical condition considered in the evaluation unless the request to separate the Service member is approved by the Secretary of Defense. The Military Service may direct the Service member to reenter the DES process to be reconsidered for retirement or separation for disability.

(2) Enrolled in DES. In accordance with DoDI 1332.18, Service members currently enrolled in the DES process are non-deployable. That includes those pending separation or retirement after receiving a "not fit for duty" determination through the DES.

(3) Permanent Profile Non-duty Related Action Needed (RC). Those RC Service members who have a permanent profile and are pending a decision on a line of duty determination are non-deployable.

b. Administrative. These Service members are considered non-deployable for one of three reasons:

(1) Sole Survivor, Surviving Family Member, or Deferred from Hostile Fire Zone. Service members who acquired the status in accordance with DoDI 1315.15 are non-deployable.

(2) Unable to Carry a Firearm. Service members who are subject to the provisions of Section 922 of Title 18, U.S.C. are non-deployable.

(3) Conscientious Objector. Service members who are granted restriction of military duties in accordance with DoDI 1300.06 are non-deployable.

c. Approved for Retention. This category accounts for Service members who are retained by the Military Department despite being in a non-deployable status for 12 months or longer. Service members who the Military Departments retained in Service and are considered non-deployable for one of two reasons:

(1) Combat Wounded. These are Service members whose injuries were the result of hostile action, meet the criteria for awarding of the Purple Heart, and whose injuries were not the result of their own misconduct.

(2) Other. These are Service members who are not designated as combat wounded but are non-deployable and retained in the Military Service by the Secretary of the Military Department in accordance with Paragraph 2.4. of this issuance.

3.7. IMR DEFICITS. These IMR categories are not considered non-deployable conditions. Components are expected to immediately correct all IMR deficits to ensure Service members are medically ready to deploy.

a. Overdue PHA. These Service members are not compliant with the requirement to complete a PHA in accordance with DoDI 6025.19.

b. Dental Readiness (Dental Class 3). Service members who require urgent or emergent dental treatment.

c. Overdue Dental Screening (Dental Class 4). Service members who are not compliant with the requirement to complete a dental screening in accordance with DoDI 6025.19.

d. Additional IMR Categories. In addition to dental categories (Dental Classes 3 and 4) and PHAs, the Military Departments track three additional areas of IMR: immunization status, medical readiness and laboratory studies, and individual medical equipment. In accordance with DoDI 6025.19, Service members who are not current in these areas are considered partially medically ready.

3.8. PRIORITIZATION OF SERVICE MEMBERS BY CATEGORY. This paragraph sets the prioritization for the grouping of Service members into categories to provide consistent reporting among the Military Departments, in accordance with Paragraph 3.1.(b) of this issuance. Service members will be counted only once, in a single category; Service members who may fall into more than one category will be reported in the priorities established in this paragraph. These categories are listed below in descending order of priority.

a. Deployed. This category includes Service members who are currently deployed. These Service members will not be counted in any other category (including deployable with limitations or approved for retention).

b. Deployable with Limitations.

c. Approved for Retention.

(1) Combat wounded – Non-deployable but retained.

(2) Other – Non-deployable but retained.

d. Permanent Non-Deployable.

(1) Medical permanent limited duty.

(2) Administrative.

(a) Sole survivor, surviving family member, or deferred from hostile fire zone.

(b) Unable to carry a firearm (e.g., Lautenberg Amendment).

(c) Conscientious objector.

(d) Ex-prisoner of war.

(3) Medical Enrolled in DES.

(4) Permanent profile non-duty related action needed (RC).

e. Training and Transient.

(1) Initial entry training.

(2) Cadets or Midshipmen.

(3) All other training.

(4) Transient (permanent change of station).

f. Temporary Non-Deployable.

(1) Medical.

(a) Patient (assigned to “Individuals Account”).

(b) Medical condition that limits full duty.

(c) Pregnancy (including post-partum).

(2) Legal.

(a) Prisoner.

(b) Legal Action.

(3) Administrative.

(a) Absence without leave.

(b) Family Care Plan.

(c) Adoption.

(d) Service member under 18.

(e) Humanitarian assignment.

(f) Service Discretion.

(g) Pending Administrative Separation.

(h) Unsatisfactory participants or admin action pending (RC).

g. IMR Deficits.

(1) Overdue PHA.

(2) Dental readiness (Dental Class 3).

(3) Overdue dental screening (Dental Class 4).

SECTION 4: RETENTION DETERMINATION

4.1. RETENTION AUTHORITY FOR NON-DEPLOYABLE SERVICE MEMBERS. In accordance with Paragraph 2.4. of this issuance, the Secretaries of the Military Departments have retention authority.

4.2. RETENTION DETERMINATION.

a. The Secretaries of the Military Departments may retain Service members who are non-deployable in excess of 12 consecutive months, on a case-by-case basis, if determined to be in the best interest of the Service, based on:

(1) The Service member's ability to perform appropriate military duties commensurate with his or her office, grade, rank, or skill.

(2) The likelihood that the Service member will resolve the condition or reason that is the underlying cause of his or her non-deployable status.

b. The Secretaries of the Military Departments may approve retention for Service members who are non-deployable in excess of 12 consecutive months for up to:

(1) The length of time remaining on a Service member's enlistment contract; or

(2) Three years for officers, including warrant officers, and those enlisted members serving on indefinite contracts.

(3) Upon expiration of the retention period, the Secretary of the Military Department concerned may renew retention for a Service member on a case-by-case basis for periods stated in this paragraph.

c. The Secretaries of the Military Departments may establish procedures for Service members who are or will be non-deployable for 12 months or longer due to an administrative reason to request retention consideration.

d. Approval of the retention for Service members who are non-deployable for 12 months or longer will only be made for individual Service members, not an entire cohort or skill set of Service members.

e. Except as required by DoDI 1332.18, the Secretaries of the Military Departments may request from the Secretary of Defense the authority to automatically exempt Service members serving in specified positions from the requirement for a retention determinations pursuant to Paragraph 2.4.b.

f. When appropriate, Service members not recommended for further retention will be considered for processing for administrative separation in accordance with DoDI 1332.14 or DoDI 1332.30, or referral for disability separation in accordance with DoDI 1332.18.

4.3. SPECIAL CATEGORIES.

a. Pregnant and post-partum Service members, as a group, are exempt from Paragraph 2.4.a., for pregnancy-related health conditions during pregnancy through the post-partum period.

b. The Secretaries of the Military Departments have the authority to retain combat wounded Service members who have been evaluated through the DES and whose reason for non-deployability is a direct result of their combat wounds, if requested by the Service member.

(1) Disapproval of retention for non-deployable combat wounded Service members, who wish to be retained and whose reason for non-deployability is a direct result of their combat wounds, may not be delegated.

(2) Retention will be authorized in accordance with Paragraph 4.2.b.

c. Unless found unfit for duty through the DES, Service members serving in specified positions approved by the Secretary of Defense pursuant to Paragraph 4.2.e. are exempt from requiring a retention determination based solely on being in a non-deployable status for 12 months or longer. Upon reassignment, these Service members will again require a retention determination in accordance with Paragraph 4.2.a.

d. Unless sooner discharged or retired under another provision of law, or discharged due to misconduct or sub-standard performance, the Secretaries of the Military Departments may retain those Service members who are, or will be, non-deployable for 12 months or longer due to administrative reasons and who have attained such years of creditable service so as to be within 3 years of qualifying for:

(1) Regular retirement (or in the case of enlisted members of the Navy or Marine Corps, transfer to the Fleet Reserve or Fleet Marine Corps Reserve, as the case may be) pursuant to Sections 3911, 3914, 6323, 6330, 8911, or 8914 of Title 10, U.S.C.; or

(2) Non-regular retirement (but for age) pursuant to Sections 12731 and 12735 of Title 10, U.S.C., if, in the case of RC members other than RC members within 3 years of qualifying for regular retirement, they have attained at least 17 years of qualifying creditable service as computed in accordance with Section 12732 of Title 10, U.S.C., and continue to attain qualifying creditable service as computed under attains Section 12732 of Title 10, U.S.C. to become eligible for non-regular retirement within the 3-year period.

SECTION 5: AUTHORITIES FOR SEPARATIONS AND RETIREMENTS

5.1. In accordance with Paragraph 1.2. of this issuance, a Service member who has been non-deployable for an administrative reason (not medical or legal) for more than 12 consecutive months, will be processed for administrative separation in accordance with DoDI 1332.14 or DoDI 1332.30. Military Services should ensure expeditious administrative separation proceedings in accordance with Military Department and Military Service policies.

5.2. A Service member who has been non-deployable due to a physical disability that makes him or her potentially unfit for the duties of his or her office, grade, rank, or rating for more than 12 consecutive months will be referred into the DES in accordance with DoDI 1332.18.

GLOSSARY

G.1. ACRONYMS.

ASD(M&RA)	Assistant Secretary of Defense for Manpower and Reserve Affairs
DES	Disability Evaluation System
DoDI	DoD instruction
IMR	individual medical readiness
PHA	periodic health assessment
RC	Reserve Component
UCMJ	Uniformed Code of Military Justice
U.S.C.	United States Code
USD(P&R)	Under Secretary of Defense for Personnel and Readiness.

G.2. DEFINITIONS. Unless otherwise noted, these terms and their definitions are for the purpose of this issuance.

active duty. Defined in the DoD Dictionary of Military and Associated Terms.

active service. Defined in Section 101(d)(3) of Title 10, U.S.C.

active status. Defined in Section 101(d)(4) of Title 10, U.S.C.

combat wounded. Service members whose injuries were the result of hostile action, who meet the criteria for awarding of the Purple Heart, and whose injuries were not the result of their own misconduct.

deployable. A Service member who does not have a Service-determined reason that precludes him or her from deployment.

deployment. The movement of personnel into and out of an operational area or in support of operations. Deployment encompasses all activities from origin or home station through destination, specifically including inter-theater, and intra-theater movement legs, staging, and holding areas.

Military Departments. The Departments of the Army, Navy, and Air Force.

Military Service Headquarters. Headquarters, United States Army; Headquarters, United States Navy; Headquarters, United States Air Force; and Headquarters, United States Marine

Corps.

Military Services. The United States Army, the United States Navy, the United States Air Force, and the United States Marine Corps.

military specialty. A military occupational specialty in the Army and the Marine Corps; an Air Force specialty code in the Air Force; or a rating or Navy enlisted classification in the Navy.

non-deployable. A Service member who has a Service-determined reason that precludes him or her from deployment.

permanently non-deployable. A Service member who has a reason that precludes them from deployment, and there is a Service expectation that the reason will not be resolved and the Service member will never be deployable.

profile. A document used to communicate to commanders the individual medical restrictions for Soldiers and Airmen.

Ready Reserve. Defined in the DoD Dictionary of Military and Associated Terms.

reason code. The term used to define non-deployable categories.

separation. A general term that includes discharge, release from active duty, release from custody and control of the Military Services, transfer to the Individual Ready Reserve, and similar changes in Active and Reserve status.

temporarily non-deployable. A Service member who has a reason or reasons that precludes him or her from deployment, and there is a Service expectation that the reason or reasons will be resolved and the Service member will be deployable.

REFERENCES

DoD Directive 5124.02, "Under Secretary of Defense for Personnel and Readiness (USD(P&R))," June 23, 2008
DoD Instruction 1120.11, "Programming and Accounting for Active Component (AC) Military Manpower," March 17, 2015
DoD Instruction 1215.13, "Ready Reserve Member Participation Policy" May 5, 2015
DoD Instruction 1300.06, "Conscientious Objectors," July 12, 2017
DoD Instruction 1315.15, "Special Separation Policies for Survivorship," May 19, 2017
DoD Instruction 1332.14, "Enlisted Administrative Separations," January 27, 2014, as amended
DoD Instruction 1332.18, "Disability Evaluation System (DES)," August 5, 2014, as amended
DoD Instruction 1332.30, "Commissioned Officer Administrative Separations," May 11, 2018
DoD Instruction 1342.19, "Family Care Plans," May 7, 2010, as amended
DoD Instruction 6025.19, "Individual Medical Readiness (IMR)," June 9, 2014
DoD Instruction 6490.07. "Deployment-Limiting Medical Conditions for Service Members and DoD Civilian Employees" February 5, 2010
DoD Manual 8910.01, Volume 1, "DoD Information Collections Manual: Procedures for DoD Internal Information Collections," June 30, 2014, as amended
Office of the Chairman of the Joint Chiefs of Staff, "DoD Dictionary of Military and Associated Terms," current edition
The Child Soldier Prevention Act of 2007, 110th Congress, S.1175
United States Code, Title 10
United States Code, Title 18

EXHIBIT J

Department of Defense

INSTRUCTION

NUMBER 6485.01
June 7, 2013

USD(P&R)

SUBJECT: Human Immunodeficiency Virus (HIV) in Military Service Members

References: See Enclosure 1

1. PURPOSE. In accordance with the authority in DoD Directive (DoDD) 5124.02 (Reference (a)), this instruction reissues DoD Instruction (DoDI) 6485.01 (Reference (b)) to establish policy, assign responsibilities, and prescribe procedures for the identification, surveillance, and management of members of the Military Services infected with HIV and for prevention activities to control transmission of HIV.

2. APPLICABILITY. This instruction applies to OSD, the Military Departments, the Office of the Chairman of the Joint Chiefs of Staff and the Joint Staff, the Combatant Commands, the Office of the Inspector General of the Department of Defense, the Defense Agencies, the DoD Field Activities, and all other organizational entities within the DoD.

3. POLICY. It is DoD policy to:

a. Deny eligibility for military service to persons with laboratory evidence of HIV infection for appointment, enlistment, pre-appointment, or initial entry training for military service pursuant to DoDI 6130.03 (Reference (c)).

b. Periodically screen Service members for HIV infection.

4. RESPONSIBILITIES. See Enclosure 2.

5. PROCEDURES. See Enclosure 3.

6. RELEASABILITY. **Unlimited**. This instruction is approved for public release and is available on the Internet from the DoD Issuances Website at http://www.dtic.mil/whs/directives.

7. EFFECTIVE DATE. This instruction:

a. Is effective June 7, 2013.

b. Must be reissued, cancelled, or certified current within 5 years of its publication in accordance with DoDI 5025.01 (Reference (d)). If not, it will expire effective June 7, 2023 and be removed from the DoD Issuances Website.

Jessica L. Wright
Acting Under Secretary of Defense for
Personnel and Readiness

Enclosures
1. References
2. Responsibilities
3. Procedures

Glossary

TABLE OF CONTENTS

ENCLOSURE 1

REFERENCES

(a) DoD Directive 5124.02, "Under Secretary of Defense for Personnel and Readiness (USD(P&R))," June 23, 2008
(b) DoD Instruction 6485.01, "Human Immunodeficiency Virus," October 17, 2006 (hereby cancelled)
(c) DoD Instruction 6130.03, "Medical Standards for Appointment, Enlistment, or Induction in the Military Services," April 28, 2010, as amended
(d) DoD Instruction 5025.01, "DoD Directives Program," September 26, 2012
(e) DoD Directive 6490.02E, "Comprehensive Health Surveillance," February 8, 2012
(f) DoD Instruction 6025.19, "Individual Medical Readiness (IMR)," January 3, 2006
(g) DoD Instruction 6490.03, "Deployment Health," August 11, 2006
(h) DoD Instruction 6025.13, "Medical Quality Assurance (MQA) and Clinical Quality Management in the Military Health System (MHS)," February 17, 2011
(i) DoD 6025.13-R, "Military Health System (MHS) Clinical Quality Assurance Program (CQA) Regulation," June 11, 2004
(j) DoD Instruction 6490.07, "Deployment-Limiting Medical Conditions for Service Members and DoD Civilian Employees," February 5, 2010
(k) DoD Instruction 1332.38, "Physical Disability Evaluation," November 14, 1996, as amended
(l) Section 705(c) of Public Law 99-661, "National Defense Authorization Act for Fiscal Year 1987," November 14, 1986
(m) DoD 5400.11-R, "Department of Defense Privacy Program," May 14, 2007
(n) DoD 6025.18-R, "DoD Health Information Privacy Regulation," January 24, 2003

ENCLOSURE 2

RESPONSIBILITIES

1. UNDER SECRETARY OF DEFENSE FOR PERSONNEL AND READINESS (USD(P&R)). The USD(P&R) provides overall policy implementation guidance for:

a. The personnel management of Service members with laboratory evidence of HIV infection.

b. Compliance with host-nation requirements for screening and related matters for Service members.

2. ASSISTANT SECRETARY OF DEFENSE FOR HEALTH AFFAIRS (ASD(HA)). Under the authority, direction, and control of the USD(P&R), the ASD(HA) provides overall policy implementation guidance for the medical management of Service members with laboratory evidence of HIV infection and for health education programs to prevent the transmission of HIV.

3. UNDER SECRETARY OF DEFENSE FOR POLICY (USD(P)). The USD(P):

a. Identifies or confirms host-nation HIV screening and other related requirements and transmits this information to the USD(P&R).

b. Coordinates matters involving host-nation screening and other related requirements with the Department of State.

4. SECRETARIES OF THE MILITARY DEPARTMENTS. The Secretaries of the Military Departments:

a. Implement this instruction and any guidance issued under the authority of this instruction.

b. Report HIV test results to the Defense Medical Surveillance System pursuant to DoDD 6490.02E (Reference (e)).

c. Direct health care personnel providing medical care to follow the recommendations of the Centers for Disease Control and Prevention for preventing HIV transmission in health-care settings.

ENCLOSURE 3

PROCEDURES

1. TESTING AND SCREENING

a. Applicants for appointment, enlistment, or individuals being inducted into the Military Services will be screened for laboratory evidence of HIV infection in accordance with Reference (c).

b. Applicants to the U.S. Service Academies, the Uniformed Services University of the Health Sciences, and other officer candidate programs will be tested for laboratory evidence of HIV within 72 hours of arrival to the program and denied entry to the program if such test is positive. Reserve Officer Training Corps program cadets and midshipmen must be tested for laboratory evidence of HIV not later than during their commissioning physical examination, and denied a commission if they test positive.

c. All Service members will be screened periodically for laboratory evidence of HIV infection.

(1) Active duty (AD) and Reserve Component (RC) Selected Reserve (SELRES) personnel will be routinely screened every 2 years unless more frequent screenings are clinically indicated.

(2) Members of the SELRES will be screened at least once every 2 years. RC personnel will be screened when called to a period of AD greater than 30 days if they have not received an HIV test within the last 2 years.

(3) Testing for laboratory evidence of HIV for pre- and post-deployment must be conducted in accordance with DoDI 6025.19 (Reference (f)) and DoDI 6490.03 (Reference (g)).

d. A serum sample from all HIV force screenings will be forwarded to the DoD Serum Repository as directed by Reference (e).

2. MANAGEMENT

a. Clinical management of an AD Service member and an RC Service member on AD for a period of more than 30 days with laboratory evidence of HIV infection will be conducted consistent with standard of care, evidence-based HIV clinical practice standards, and medical management guidelines, as described in DoDI 6025.13 and DoD 6025.13-R (References (h) and (i)).

b. In accordance with DoDI 6490.07 (Reference (j)), the cognizant Combatant Command surgeon will be consulted in all instances of HIV seropositivity before medical clearance for deployment.

c. An AD Service member with laboratory evidence of HIV infection will be referred for appropriate treatment and a medical evaluation of fitness for continued service in the same manner as a Service member with other chronic or progressive illnesses in accordance with DoDI 1332.38 (Reference (k)). An AD Service member with laboratory evidence of HIV infection determined to be fit for duty will be allowed to serve in a manner that ensures access to appropriate medical care.

d. An RC Service member with laboratory evidence of HIV infection will be referred for a medical evaluation of fitness for continued service in accordance with Service regulations, and in the same manner as an RC Service member with other chronic or progressive illnesses. Eligibility for active duty for a period of more than 30 days will be denied to those RC Service members with laboratory evidence of HIV infection (except under conditions of mobilization and on the decision of the Secretary of the Military Department concerned). RC Service members who are not on active duty for a period of more than 30 days or who are not on full-time National Guard duty, and who show laboratory evidence of HIV infection, will be transferred involuntarily to the Standby Reserve only if they cannot be used in the SELRES.

e. AD and RC Service members with laboratory evidence of HIV infection who are determined to be unfit for further duty will be separated or retired pursuant to Reference (k).

3. TRANSMISSION CONTROL. Transmission of HIV will be controlled through aggressive disease surveillance and health education programs for Service members. A Service member with laboratory evidence of HIV infection will receive training on the prevention of further transmission of HIV infection to others and the legal consequences of exposing others to HIV infection.

4. ADVERSE PERSONNEL ACTION. Information obtained during or primarily as a result of an epidemiologic assessment interview will not be used to support any adverse personnel action against the Service member in accordance with section 705(c) of Public Law 99-661 (Reference (l)). This prohibition does not apply to the use of such information for otherwise authorized rebuttal or impeachment purposes.

5. PRIVACY. The privacy of a Service member with laboratory evidence of HIV infection will be protected consistent with DoD 5400.11-R and DoD 6025.18-R (References (m) and (n)).

GLOSSARY

PART I. ABBREVIATIONS AND ACRONYMS

AD	active duty
ASD(HA)	Assistant Secretary of Defense for Health Affairs
DoDD	DoD Directive
DoDI	DoD Instruction
HIV	human immunodeficiency virus
RC	Reserve Component
SELRES	Selected Reserves
USD(P&R)	Under Secretary of Defense for Personnel and Readiness
USD(P)	Under Secretary of Defense for Policy

PART II. DEFINITIONS

These terms and their definitions are for the purposes of this instruction.

adverse personnel action. A court-martial, non-judicial punishment, involuntary separation for other than medical reasons, administrative or punitive reduction in grade, denial of promotion, an unfavorable entry in a personnel record (other than an accurate entry concerning an action that is not an adverse personnel action), or a bar to reenlistment other than for medical reasons.

epidemiologic assessment interview. Questioning of a Service member who has been confirmed by DoD to have laboratory evidence of HIV infection for purposes of medical treatment or counseling or for epidemiologic or statistical purposes.

HIV. The virus(es) associated with the acquired immune deficiency syndrome (commonly referred to as "AIDS").

laboratory evidence of HIV infection. A reactive and confirmed serologic result, and/or, reactive or quantitative nucleic acid result for HIV infection according to a Food and Drug Administration-approved test.