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8 **UNITED STATES DISTRICT COURT**  
9 **FOR THE DISTRICT OF ARIZONA**  
10 **TUCSON DIVISION**

10 Jane Doe, by her next friend and parents  
11 Helen Doe and James Doe; and Megan Roe,  
12 by her next friend and parents, Kate Roe and  
13 Robert Roe,

Plaintiffs,

13 v.

14 Thomas C. Horne in his official capacity as  
15 State Superintendent of Public Instruction;  
16 Laura Toenjes, in her official capacity as  
17 Superintendent of the Kyrene School  
18 District; Kyrene School District; The  
19 Gregory School; and Arizona Interscholastic  
20 Association Inc.,

Defendants.

Case No. 4:23-cv-00185-JGZ

**PLAINTIFFS' REPLY TO DEFENDANT  
HORNE AND THE PROPOSED  
INTERVENORS IN SUPPORT OF  
PLAINTIFFS' MOTION FOR A  
PRELIMINARY INJUNCTION**

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## INTRODUCTION

1  
2 Plaintiffs Jane Doe and Megan Roe are two transgender girls who bring this as-  
3 applied challenge to Ariz. Rev. Stat. § 15-120.02 (the “Ban”) so that they can have an equal  
4 opportunity to try out for and participate on girls’ sports teams. The question in this case  
5 is simple: does the Ban, as applied to Plaintiffs, violate Plaintiffs’ constitutional and  
6 statutory rights? The answer is yes; a preliminary injunction should therefore issue.

7 Plaintiffs have demonstrated a likelihood of success on their Equal Protection  
8 claims. The Ban fails to withstand heightened scrutiny, which applies here because the  
9 Ban discriminates based on Plaintiffs’ transgender status and therefore based on sex. There  
10 is no “exceedingly persuasive” justification for excluding these Plaintiffs simply because  
11 they are transgender girls. *See United States v. Virginia*, 518 U.S. 515, 531 (1996). The  
12 record evidence and overwhelming scientific consensus establishes that Plaintiffs do not  
13 have athletic advantages over other girls, nor do they pose any safety risk, because neither  
14 Plaintiff has experienced male puberty. Indeed, on the facts here, the Ban cannot even  
15 survive rational basis review because there is no legitimate basis for excluding these  
16 Plaintiffs from girls’ sports teams. Plaintiffs have also demonstrated a likelihood of  
17 success on their Title IX claims because the Ban singles out Plaintiffs based on their  
18 transgender status and thus impermissibly discriminates against them “on the basis of sex.”

19 Defendant Horne and Proposed Intervenors try to reframe this case and focus most  
20 of their briefs on irrelevant topics. They repeatedly refer to Plaintiffs as “biological boys”  
21 and go to great lengths to discuss physiological differences between adult males and adult  
22 females, disregarding the undisputed evidence that Plaintiffs are transgender girls who  
23 have not undergone male puberty. They also raise whether sex-segregated sports are  
24 permissible at all, medical care for transgender youth in the United States and abroad,  
25 Dennis Rodman, Floyd Mayweather, college athletes, and Olympic-level competition.  
26 None of those topics arise here.

27 Enforcing the Ban against Plaintiffs will cause them irreparable harm, as courts  
28 across the country have repeatedly recognized. Defendant Horne and Proposed Intervenors

1 ignore these harms entirely. And the balance of the equities and the public interest weighs  
2 heavily in favor of an injunction in the face of the grave risk of harm to Plaintiffs.  
3 Speculation that participation by these Plaintiffs in girls' sports will cause harm to "women  
4 across Arizona" is unsupported in this as-applied challenge and cannot tip the scales in  
5 Proposed Intervenors' or Defendant Horne's favor.

6 For these reasons and those set forth below, as well as those stated in Plaintiffs'  
7 opening brief, the Court should enjoin the Ban as to Plaintiffs.

### 8 ARGUMENT

9 Plaintiffs have demonstrated that they have a likelihood of success on both their  
10 Equal Protection and Title IX claims, that they will be irreparably harmed if the Ban is not  
11 enjoined as to them, and that the balance of equities and public interest tips in their favor.  
12 *All. for the Wild Rockies v. Cottrell*, 632 F.3d 1127, 1131 (9th Cir. 2011). A preliminary  
13 injunction is therefore warranted.

#### 14 **I. THE COURT SHOULD REJECT PROPOSED INTERVENORS' AND** 15 **DEFENDANT HORNE'S ATTEMPTS TO REFRAME THE CASE.**

16 The Court should reject Proposed Intervenors' and Defendant Horne's extensive  
17 efforts to reframe the issues in this case. This case is about one thing only: the exclusion  
18 of Jane Doe and Megan Roe from girls' sports teams because they are transgender girls.

19 Proposed Intervenors and Defendant Horne devote the majority of their briefs to an  
20 entirely different question: whether sex-segregated sports are permissible, a proposition  
21 that Plaintiffs do not challenge. Indeed, Proposed Intervenors and Defendant Horne do not  
22 so much as use the word "transgender" in the introductions of their oppositions, instead  
23 merely referring to "biological males" or "pre-puberty boys." (Int. Br. at 1; Horne Br. at  
24 2.) Proposed Intervenors then devote five entire pages of their brief to irrelevant  
25 propositions regarding the "performance advantages" and "physiological differences" that  
26 "biological males" have over "females" as well as the increased risk that they may pose to  
27 females in certain sports. (Int. Br. at 2–7.) For example, they point to statistics about the  
28 velocity at which *college males* can kick soccer balls, or at which *adult men* can spike

1 volleyballs, which have no bearing on transgender Plaintiffs’ desire to play on their middle  
2 and high school girls’ teams. (Int. Br. at 3.)

3 Proposed Intervenors devote only a small portion of their argument to their assertion  
4 that transgender girls have athletic advantages over other girls. (Int. Br. at 4–5.) Moreover,  
5 Proposed Intervenors cite exclusively from articles regarding alleged advantages that  
6 transgender females *who have undergone male puberty* retain even after undergoing  
7 testosterone suppression. (*Id.*; Brown Decl. ¶¶ 135–78.) While Plaintiffs contest those  
8 articles’ findings, they need not be argued here; Plaintiffs Jane Doe and Megan Roe have  
9 not gone through male puberty. (H. Doe Decl. ¶ 11; K. Roe Decl. ¶ 6.)<sup>1</sup>

10 For his part, Defendant Horne casts his argument in terms of irrelevant and  
11 inflammatory hypotheticals such as Dennis Rodman “suddenly announc[ing] that he [is]  
12 transgender” in support of the proposition that allowing Jane Doe and Megan Roe—two  
13 young transgender girls who have not undergone male puberty—to play on girls’ teams  
14 would somehow “wipe[] out” progress in women’s sports. (Horne Br. at 3.) Defendant  
15 Horne devotes nearly four pages to a discussion of a handful of Olympic, college, and high  
16 school athletes from other states that are unrelated to this case and irrelevant.<sup>2</sup> Defendant  
17 Horne also improperly relies on an expert declaration from *another* litigation (the “prior

---

18  
19 <sup>1</sup> Defendant Horne also attaches an article related to mini-puberty, two articles  
20 discussing fitness values for children, and a survey regarding individuals who received  
21 medical and surgical treatment for gender dysphoria and subsequently detransitioned.  
(Exs B-D, O.) Plaintiffs’ expert addresses the topics discussed in the articles. (Shumer  
22 Reb. Decl. ¶¶ 11–13, 28–31, 60.) The survey (Ex. O) is plainly irrelevant to this  
23 litigation.

24 <sup>2</sup> Defendant Horne attaches a series of irrelevant exhibits (Exs. E-K; P) to his opposition.  
25 Unverified, third-party media reports purporting to attribute athletic injuries to the  
26 participation of transgender girls or women generally or discussing the alleged athletic  
27 advantage of particular transgender girls over other girls do not constitute factual or  
28 expert evidence that Plaintiffs pose a risk of injuring other girls or have an athletic  
29 advantage over other girls. Defendant Horne’s two supplemental filings exhibiting  
30 media reports relating to (i) a letter drafted by a handful of Congressional members  
31 seeking information about the conduct of a Government-funded scientific study into  
32 psychosocial outcomes for transgender youth who received hormone replacement  
33 therapy; and (ii) regulations in British cycling are also far afield of the issues before  
34 the Court. (Dkt. 42; Dkt. 58.) The Court should decline to consider these exhibits as  
35 they are irrelevant and not probative of any fact in issue in this case.

1 Brown Declaration”) in support of his argument that “pre-puberty boys” have a sports  
2 advantage over girls. The Court should not consider it. In any event, in the case in which  
3 the prior Brown Declaration was originally submitted, the court found it to be unpersuasive,  
4 noting that “the majority of the evidence Dr. Brown cites, and most of his declaration,  
5 involve the differences between male and female athletes in general, and contain no  
6 reference to, or information about, the difference between cisgender women athletes and  
7 transgender women athletes who have suppressed their testosterone.” *Hecox v. Little*, 479  
8 F. Supp. 3d 930, 980 (D. Idaho 2020).

9 **II. PLAINTIFFS ARE LIKELY TO SUCCEED ON THEIR EQUAL**  
10 **PROTECTION CLAIM.**

11 The Ban is subject to heightened scrutiny because it discriminates against  
12 transgender individuals. Neither Proposed Intervenors nor Defendant Horne have met their  
13 “demanding” burden of demonstrating an “exceedingly persuasive justification” for  
14 categorically banning all transgender girls from participating on girls’ sports teams.  
15 *Virginia*, 518 U.S. at 524. Moreover, even under rational basis review, the Ban would fail.  
16 Its effect is far too removed from any ostensible government interest of remedying past  
17 discrimination or promoting fairness or safety for girls. *Romer v. Evans*, 517 U.S. 620,  
18 635 (1996) (even under rational basis review, amendment to Colorado Constitution that  
19 prohibited antidiscrimination measures for gay and lesbian individuals violated the Equal  
20 Protection Clause).

21 **A. The Ban Is Subject to Heightened Scrutiny.**

22 Defendant Horne appears to accept that the Ban is subject to heightened scrutiny.  
23 (Horne Br. at 11.) For their part, Proposed Intervenors admit that laws that exclude  
24 transgender individuals are subject to heightened scrutiny in the Ninth Circuit. (Int. Br. at  
25 9); *Karnoski v. Trump*, 926 F.3d 1180, 1200–01 (9th Cir. 2019) (examining a law that  
26 excluded transgender people from the military under a standard of review “that is more  
27 than rational basis but less than strict scrutiny”); *D.T. v. Christ*, 552 F. Supp. 3d 888, 896  
28 (D. Ariz. 2021) (“Discrimination against transgender people is discrimination based on

1 sex; as such, heightened scrutiny applies.”). They seek to avoid this controlling precedent,  
2 however, by arguing that the Ban does not discriminate based on transgender status because  
3 it does not expressly use the term “transgender.” (Int. Br. at 8.)<sup>3</sup> This argument  
4 misconstrues the Ban and its facial discrimination against transgender girls and is wrong  
5 as a matter of law.

6 *First*, the Ban’s disparate treatment of transgender girls because they are  
7 transgender is clear on its face. The Ban discriminates “between cisgender athletes, who  
8 may compete on athletic teams consistent with their gender identity, and transgender  
9 women athletes, who may not compete on athletic teams consistent with their gender  
10 identity.” *Hecox*, 479 F. Supp. 3d at 975 (rejecting defendants’ argument that similar Idaho  
11 statute “does not ban athletes on the basis of transgender status, but rather on the basis of  
12 the innate physiological advantages males generally have over females”). Courts have  
13 routinely found that laws (like the Ban) that discriminate against individuals because their  
14 gender identity does not match their sex assigned at birth discriminate based on transgender  
15 status.<sup>4</sup> *See, e.g., A.M. v. Indianapolis Pub. Sch.*, 617 F. Supp. 3d 950, 965–66 (S.D. Ind.  
16 2022) (holding that a virtually identical Indiana statute discriminated against transgender  
17 individuals despite not using the term “transgender”); *B.P.J. v. W. Va. State Bd. of Educ.*,  
18 550 F. Supp. 3d 347, 353–54 (S.D. W. Va. 2021) (holding that a virtually identical West  
19 Virginia statute “discriminates on the basis of transgender status”).<sup>5</sup>

20  
21 <sup>3</sup> Defendant Horne admits that the Ban was enacted because of the “risks created by  
22 transgender participation in women’s sports.” (Horne Br. at 6.)

23 <sup>4</sup> Proposed Intervenor incorrectly assert that *D.T. v. Christ* can be distinguished because  
24 the challenged statute “singled out” transgender individuals (Int. Br. at 9); to the  
25 contrary, the court rejected an argument much like Proposed Intervenor advance here,  
26 stating that “[w]hile the statute and regulation do not explicitly use the phrase  
‘transgender’ or explicitly state that these laws are aimed directly at ‘transgender’  
people, any logical reading of the statute and regulation reflects that it applies nearly  
exclusively to transgender people; who else is going to voluntarily seek out a ‘sex  
change operation?’” 552 F. Supp. 3d at 895–96.

27 <sup>5</sup> While the court in *B.P.J.* later granted summary judgment to defendants and terminated  
28 the injunction, 2023 WL 111875 (S.D. W. Va. Jan. 5, 2023), the Fourth Circuit granted  
an injunction pending appeal, 2023 WL 2803113 (4th Cir. Feb. 22, 2023), and the

1           *Second*, there is no doubt that the purpose of SB 1165 was to exclude transgender  
 2 girls from girls’ sports teams. The legislative findings cite an article entitled “Transgender  
 3 Women in the Female Category of Sport,” and refer to “testosterone suppression.” In  
 4 explaining his vote for the bill, State Senator Vince Leach stated, “If we allow transgenders  
 5 to take over female sports, you will not have females participating.” *Consideration of Bills:  
 6 Hearing on S.B. 1165 Before S. Comm. on Judiciary*, Jan. 20, 2022, 55th Leg., 2nd Reg.  
 7 Sess. 1:17:32–39 (Ariz. 2022) (statement of Sen. Vince Leach, Member, S. Comm. on  
 8 Judiciary). And Proposed Intervenor Peterson repeatedly asked whether those opposing  
 9 the bill would “be opposed to having just a trans league, so they can all compete in their  
 10 own league.” *Id.* at 28:28–35 (statement of Sen. Warren Petersen, Chairman, S. Comm.  
 11 on Judiciary).

12           Adopting Proposed Intervenor’s and Defendant Horne’s argument that the Ban does  
 13 not discriminate against transgender individuals because it refers only to “biological sex”  
 14 would all but eradicate lawsuits based on discrimination against transgender individuals.  
 15 In order to survive a challenge, a legislature would merely have to avoid using the word  
 16 “transgender” in the law itself, regardless of the law’s purpose or impact. This cannot be  
 17 the law, and indeed it is not, as is made clear by the numerous courts who have found that  
 18 similar bans in other states—none of which use the word “transgender”—nevertheless  
 19 discriminate against transgender individuals. *See Hecox*, 479 F. Supp. 3d at 975; *A.M.*,  
 20 617 F. Supp. 3d at 966.<sup>6</sup>

21           **B.     The Ban Is Not Substantially Related to Any Important Government**  
 22           **Interest.**

23 \_\_\_\_\_  
 24 Supreme Court denied an application to vacate the injunction, 143 S. Ct. 889 (2023).  
 The injunction therefore remains in effect.

25 <sup>6</sup> In any event, the Ban is subject to heightened scrutiny for an additional reason: only  
 26 transgender *girls* are prohibited from playing on a team that is consistent with the  
 27 gender identity. Ariz. Rev. Stat. 15-120.02(B). Transgender *boys*, in contrast, are  
 28 subject to no such exclusion. This is unquestionably a sex-based classification leading  
 to heightened scrutiny. *See, e.g., A.M.*, 617 F. Supp. 3d at 966 (“The singling out of  
 transgender females is unequivocally discrimination on the basis of sex.”)

1           The Ban does not withstand heightened scrutiny when applied to Plaintiffs.  
2 Proposed Intervenors and Defendant Horne argue that the Ban is substantially related to  
3 “redress[ing] pas[t] discrimination against women in athletics and promot[ing] equality of  
4 athletic opportunity between the sexes” (Int. Br. at 12), and of “providing safety and  
5 fairness to girls in sports competition,” (Horne Br. at 12). But they advance no  
6 “exceedingly persuasive justification” as to why a ban that categorically excludes all  
7 transgender girls—without regard for age, type of sport, whether the transgender girl has  
8 or has not undergone male puberty or has taken puberty-blocking medication and hormone  
9 replacement therapy—is substantially related to those interests. *Virginia*, 518 U.S. at 531.

10           Instead, their argument rests on impermissible “overbroad generalizations without  
11 factual justification.” *Hecox*, 479 F. Supp. 3d at 982; *see Virginia*, 518 U.S. at 549–50,  
12 65.<sup>7</sup> With regards to their assertion that “biological males will have an undue advantage  
13 competing against women” and pose a safety risk to girls (Int. Br. at 13), Proposed  
14 Intervenors cite numerous studies comparing adult males to adult females or adolescent  
15 males who have undergone male puberty to adolescent females. (Int. Br. at 2–7.) They  
16 wholly ignore that Plaintiff Jane Doe has not undergone male puberty, and Plaintiff Megan  
17 Roe took puberty-blocking medication at the onset of male puberty and later hormone  
18 replacement therapy to undergo female puberty. (H. Doe Decl. ¶ 11; K. Roe Decl. ¶ 6.)  
19 There is a well-established scientific consensus that, before puberty, there are no significant  
20 differences in athletic performance between boys and girls. (Shumer Reb. Decl. ¶¶ 9, 11–  
21 12.) While some studies have found small differences between the performance of boys  
22 and girls with respect to some discrete activities, these studies did not control for other  
23

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24 <sup>7</sup> The AIA’s prior system to address transgender students’ involvement in school sports  
25 illustrates that the current law is overbroad. Proposed Intervenors and Defendant Horne  
26 ignore that prior to the Ban, the AIA made case-by-case decisions regarding whether a  
27 transgender student who wished to play on the team consistent with her gender identity  
28 should be allowed to do so, and that there are no allegations that this system was infirm  
or unworkable. (Compl. ¶¶ 19–23.) Rather, the previous system allowed the AIA the  
ability to decide on a case-by-case basis, rather than categorically, whether to allow a  
student to play on the team consistent with her gender identity. (*Id.* ¶ 21.)

1 factors, particularly age, location, or socioeconomic factors. (*Id.* ¶ 10.) When research has  
2 controlled for those factors by using representative data, researchers have found that across  
3 all measures of physical performance, there was no statistical difference in the capabilities  
4 of girls and boys until high-school age. (*Id.* ¶¶ 11–12.) Moreover, there is no evidence  
5 that transgender girls who do not undergo male puberty have an athletic advantage over  
6 other girls. (*Id.* ¶¶ 14–16, 23–26.) There are no studies that have documented any such  
7 advantage, and there is no medical reason to posit that any such advantage would exist.  
8 (*Id.* ¶ 26.) Because there is no basis to conclude that Plaintiffs have a competitive  
9 advantage over other girls, there is also no basis for Proposed Intervenors and Defendant  
10 Horne’s assertion that they pose a safety risk to other girls. (*Id.* ¶¶ 32–38, 41.)

11 Defendant Horne devotes a mere two sentences trying to refute the fact that “there  
12 is a scientific consensus that the biological driver of average group differences is their  
13 respective levels of testosterone, which begin to diverge significantly only after the onset  
14 of puberty.” (Br. at 3; Shumer Decl. ¶¶ 38–39.) To the extent that Defendant Horne rests  
15 his conclusory argument that “Plaintiffs’ focus on testosterone levels is misplaced” on the  
16 prior Brown Declaration filed in a *different* litigation brought by a *different* Plaintiff on a  
17 record not before this Court, it should not be credited. (Horne Br. at 14.)

18 In any event, nothing in the prior Brown Declaration credibly rebuts the broad  
19 scientific consensus that the surge of testosterone associated with male puberty accounts  
20 for the group-based differences in athletic ability between post-pubertal boys and girls. As  
21 the *Hecox* court noted, several studies cited by Dr. Brown supported *Plaintiffs’* position.  
22 *Hecox*, 479 F. Supp. 3d at 980 (highlighting study on which Dr. Brown relied that stated  
23 that “evidence makes it highly likely that the sex difference in circulating testosterone of  
24 adults explains most, if not all, of the sex differences in sporting performance”). Similarly,  
25 the World Rugby Transgender Women’s Guidelines 2020, which Dr. Brown cites  
26 throughout his declaration, allow transgender girls and women to participate in women’s  
27 rugby if they did not experience endogenous male puberty, stating: “Transgender women  
28 who transitioned pre-puberty and have not experienced the biological effects of

1 testosterone during puberty and adolescence can play women’s rugby.” Transgender  
2 Women Guidelines, *World Rugby*, [https://www.world.rugby/the-game/player-](https://www.world.rugby/the-game/player-welfare/guidelines/transgender/women)  
3 [welfare/guidelines/transgender/women](https://www.world.rugby/the-game/player-welfare/guidelines/transgender/women) (last visited June 1, 2023).

4 Proposed Intervenors and Defendant Horne also cite *Clark v. Arizona*  
5 *Interscholastic Association*, 695 F.2d 1126 (9th Cir. 1982), but as the district court in  
6 *Hecox* noted, that case strongly supports Plaintiffs. In *Clark*, the Ninth Circuit held that it  
7 was lawful to exclude boys from girls’ volleyball teams because: (1) women had  
8 historically been deprived of athletic opportunities in favor of men; (2) as a general matter,  
9 men had equal athletic opportunities compared to women; and (3) according to the  
10 stipulated facts in the case, average physiological differences meant that males would  
11 displace females to a substantial extent if permitted to play on women’s volleyball teams.  
12 *See id.* at 1131.

13 But as the *Hecox* court recently recognized, none of those premises holds true for  
14 girls who are transgender: (1) far from being favored in athletics, “women who are  
15 transgender have historically been discriminated against;” (2) transgender women—unlike  
16 the boys in *Clark*—would not be able to participate “in any school sports;” and (3) based  
17 on the very small numbers of transgender girls in the population, “transgender women have  
18 not and could not ‘displace’ cisgender women in athletics ‘to a substantial extent.’” *Hecox*,  
19 479 F. Supp. 3d at 977 (quoting *Clark*, 695 F.2d at 1131). As the *Hecox* court also noted,  
20 “it is not clear that transgender women who suppress their testosterone have significant  
21 physiological advantages over other women.” *Hecox*, 479 F. Supp. 3d at 978. *Hecox*’s  
22 analysis of *Clark* is even more compelling here, where there is no question that Plaintiffs,  
23 who have not experienced male puberty, have no physiological advantage over other girls.  
24 *See Hecox*, 479 F. Supp. 3d at 981 (transgender girls who do not experience male puberty  
25 “do not have an ascertainable advantage over cisgender female athletes”). In sum, the  
26 factors in *Clark* all weigh heavily in Plaintiffs’ favor, and the Ban cannot survive  
27 heightened scrutiny.

### 28 C. The Ban Fails Even Rational Basis Review.

1 Finally, the Ban fails rational basis review. The sweeping exclusion of all  
2 transgender girls from participating in athletics, regardless of their individual  
3 circumstances, “is so far removed from the[] particular justifications” put forward in  
4 support of it that it is “impossible to credit them.” *Romer*, 517 U.S. at 635. As discussed  
5 above, the legislative findings and history of the Ban make clear that it was enacted to  
6 exclude all transgender girls from school sports in Arizona. Because a “bare . . . desire to  
7 harm a politically unpopular group cannot constitute a legitimate governmental interest,”  
8 the Ban cannot survive rational basis review. *U.S. Dep’t of Agric. v. Moreno*, 413 U.S.  
9 528, 534 (1973); *see also United States v. Windsor*, 570 U.S. 744, 770 (2013) (holding the  
10 Defense of Marriage Act unconstitutional where “[t]he avowed purpose and practical effect  
11 of the law” was to “impose a disadvantage, a separate status, and so a stigma” upon same-  
12 sex married couples).

### 13 **III. PLAINTIFFS ARE LIKELY TO SUCCEED ON THEIR TITLE IX CLAIM.**

14 Plaintiffs have also demonstrated a likelihood of success on their Title IX claim  
15 because: (1) Defendant Horne admits that he is a grant recipient of federal funds (Horne.  
16 Ans. ¶ 9); (2) Plaintiffs are plainly barred from participating on sports teams that are  
17 consistent with their gender identity—unlike their similarly situated non-transgender  
18 teammates; and (3) that exclusion is “on the basis of sex” for the purposes of Title IX. *See*  
19 *Schwake v. Ariz. Bd. of Regents*, 967 F.3d 940, 946 (9th Cir. 2020) (enumerating elements  
20 of a Title IX claim).

#### 21 **A. The Ban Excludes Transgender Girls from Athletics “on the Basis of** 22 **Sex.”**

23 Plaintiffs are likely to prevail on the merits of their Title IX claim because the Ban  
24 excludes them from playing sports based on their transgender status, which constitutes  
25 discrimination on the basis of sex. *See Bostock v. Clayton Cnty.*, 140 S. Ct. 1731, 1741  
26 (2020) (“[I]t is impossible to discriminate against a person for being . . . transgender  
27 without discriminating against that individual based on sex.”); *Doe v. Snyder*, 28 F.4th 103,  
28 114 (9th Cir. 2022) (holding that discrimination based on transgender status also constitutes

1 impermissible discrimination under Title IX);<sup>8</sup> *see also* *B.P.J.*, 550 F. Supp. 3d at 357–58  
 2 (granting motion for preliminary injunction where transgender girl “alone cannot join the  
 3 team corresponding to her gender identity”); *A.M.*, 617 F. Supp. 3d at 965–66 (same).

4 **B. Proposed Intervenors’ and Defendant Horne’s Additional Arguments**  
 5 **to the Contrary Fail.**

6 Proposed Intervenors’ and Defendant Horne’s arguments to the contrary are  
 7 unavailing. *First*, contrary to Proposed Intervenors’ and Defendant Horne’s assertions, the  
 8 fact that Plaintiffs’ schools offer teams for both boys and girls is of no consequence here;  
 9 playing on a boys’ team would be shameful and humiliating for Plaintiffs, as well as in  
 10 direct conflict with their medical treatment. (J. Doe Decl. ¶ 11; H. Doe Decl. ¶ 15; M. Roe  
 11 Decl. ¶ 9; K. Roe Decl. ¶ 10; Budge Decl. ¶¶ 39–40; Shumer Decl. ¶ 51; Budge Reb. Decl.  
 12 ¶¶ 9–10.)

13 *Second*, the Ninth Circuit has not determined that “Title IX addresses biological sex,  
 14 not gender identity.” (Int. Br. at 14.) *See Snyder*, 28 F.4th at 114–15 (stating that  
 15 discrimination against transgender individuals violates Title IX). Rather, the Ninth Circuit  
 16 has found that discrimination based on transgender status constitutes impermissible  
 17 discrimination under Title IX. *Id.*<sup>9</sup>

18 \_\_\_\_\_  
 19 <sup>8</sup> Proposed Intervenors are incorrect when they reduce Title IX to merely prohibiting  
 20 discrimination based on biological sex. (Int. Br. at 14–15.) The Ninth Circuit has stated  
 21 that it uses the terms “sex” and “gender” interchangeably for purposes of Title IX. *See*  
*Schwake*, 967 F.3d at 946 n.5 (citing *Emeldi v. Univ. of Oregon*, 698 F.3d 715, 723 (9th  
 Cir. 2012) (“Title IX of the Education Amendments bars gender-based discrimination  
 by federally funded educational institutions.”)).

22 <sup>9</sup> Courts of appeals across the country have found the same. *See Whitaker v. Kenosha*  
 23 *Unified Sch. Dist. No. 1 Bd. of Educ.*, 858 F.3d 1034, 1050 (7th Cir. 2022) (finding  
 24 likelihood of success that transgender student would succeed in his Title IX claims  
 25 challenging a bathroom policy); *Dodds v. U.S. Dep’t of Educ.*, 845 F.3d 217, 221 (6th  
 26 Cir. 2016) (same); *Grimm v. Gloucester Cnty. Sch. Bd.*, 972 F.3d 586, 619 (4th Cir.  
 27 2020) (holding that restroom policy violated Title IX). Only the Eleventh Circuit, in  
 28 an outlier decision, has held otherwise. *See Adams v. Sch. Bd. of St. Johns Cnty.*, 57  
 F.4th 791, 813 (11th Cir. 2022) (en banc) (declining to consider that sex, for the  
 purposes of Title IX, might include gender identity). Indeed, the *Adams* court’s  
 holding to the contrary relied on a skewed reframing of the issue from “whether  
 Adams’s exclusion from the boys’ bathrooms under the School District’s bathroom  
 policy violated the Equal Protection Clause or Title IX” to one of whether sex-  
 segregated bathrooms were permissible, which was plainly not the issue. *See id.* at

1           *Third*, Plaintiffs do not “misstate” the Ninth Circuit’s decision in *Doe v. Snyder*.  
 2 (Int. Br. at 15.) The court there clarified the law regarding Title IX and transgender  
 3 individuals precisely to “ensure appropriate proceedings” in the district court because the  
 4 district court was construing *Bostock* too narrowly under established Ninth Circuit law.  
 5 *Snyder*, 28 F.4th at 113–14. It is of no moment that the *Snyder* court did not resolve  
 6 whether a particular statute violated Title IX.

7           *Fourth*, Plaintiffs certainly do not “seek to reverse the gains that Title IX achieved  
 8 for female athletes”—they do not challenge the existence of sex-segregated sports at all.  
 9 (Int. Br. at 14.) Proposed Intervenors’ and Defendant Horne’s arguments that Title IX  
 10 allows for such separation are therefore irrelevant. (Int. Br. at 14–17; Horne Br. at 8–10.)

11 **IV. PLAINTIFFS WILL SUFFER IRREPARABLE HARM IF THE BAN IS**  
 12 **ENFORCED AGAINST THEM.**

13           The Ban violates the Equal Protection Clause and Title IX. This alone is sufficient  
 14 to presume that Plaintiffs will suffer irreparable harm if it is enforced as to them. *See*  
 15 *Hernandez v. Sessions*, 872 F.3d 976, 994 (9th Cir. 2017) (a deprivation of constitutional  
 16 rights “unquestionably constitutes irreparable injury”); *Anders v. Cal. State Univ., Fresno*,  
 17 2021 WL 1564448, at \*18 (E.D. Cal. Apr. 21, 2021) (same for Title IX).

18           In addition to this “dispositive presumption,” *Hecox*, 479 F. Supp. 3d at 987, the  
 19 record confirms that absent a preliminary injunction, Plaintiffs will suffer significant  
 20 emotional, physical, and mental harm, as well as dignitary and stigmatic injury. (Br. at  
 21 13.) Playing on boys’ teams will be painful and humiliating to both Jane Doe and Megan  
 22 Roe (J. Doe Decl. ¶¶ 11–12; M. Roe Decl. ¶ 9; K. Roe Decl. ¶¶ 9–11) and will directly  
 23 contradict their medical treatments for gender dysphoria (Budge Decl. ¶¶ 27, 39–41;  
 24 Shumer Decl. ¶¶ 51, 24; Budge Reb. Decl. ¶¶ 9–10.). In addition, if the Ban is enforced as

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26           843 (Jill Pryor, J., dissenting) (“[This case] is not, and ha[s] never been, (again, no  
 27 matter how many times the majority opinion says it), about whether the School District  
 28 can maintain separate bathrooms for boys and girls.”) Regardless, as previously  
 discussed, *Adams* cannot override Ninth Circuit precedent to the contrary.

1 to them, they will lose out on the various social, educational, physical, and emotional  
2 benefits that come from school sports. (Budge Decl. ¶¶ 35–38.) Defendant Horne accepts  
3 that sports provide such benefits. (Horne Ans. ¶¶ 38–43.)

4 Proposed Intervenors ignore these arguments altogether and avoid the considerable  
5 jurisprudence holding that “such violations are irreparable.” *Hecox*, 479 F. Supp. 3d at 987  
6 (finding irreparable injury where plaintiffs would be subjected to “embarrassment,  
7 harassment and invasion of privacy” as well as “dignitary wounds”); *see A.M.*, 617 F. Supp.  
8 3d at 967 (finding plaintiff had shown that irreparable emotional and social harm would  
9 flow from transgender girl’s exclusion from girls’ softball team); *B.P.J.*, 550 F. Supp. 3d  
10 at 357 (“Forcing a girl to compete on the boys’ team when there is a girls’ team available  
11 would cause her unnecessary distress and stigma.”).

12 For his part, Defendant Horne cites inapposite case law unrelated to transgender  
13 individuals. *See Gregor v. W. Va. Secondary Sch. Activities Comm’n*, 2020 WL 6292813,  
14 at \*4 (S.D. W. Va. Oct. 27, 2020) (no irreparable harm where non-transgender girl who  
15 “hoped to join the boys’ soccer team to compete at a different level than the girls’ soccer  
16 team and because she believed it would better prepare her for college soccer” but could  
17 still play with the girls’ team). In any event, *Gregor*’s holding that “courts seem to lean  
18 toward the harm being irreparable only when the *person cannot participate in the sport at*  
19 *all*” hurts, rather than supports, Defendant Horne’s argument. *Id.* (emphasis added). As  
20 previously discussed, for Plaintiffs, losing the ability to play on girls’ teams forecloses the  
21 ability to play on *any* sports teams.<sup>10</sup>

22  
23  
24  
25 <sup>10</sup> Other case law cited by Defendant Horne is similarly inapposite. *See Dziewa v. Pa.*  
26 *Interscholastic Athletic Ass’n, Inc.*, 2009 WL 113419, at \*7 (E.D. Pa. Jan. 16, 2009)  
27 (no irreparable harm where male student athlete could not compete on boys’ wrestling  
28 team for one year due to school by-laws barring transfer students from competition);  
*Revesz ex rel. Revesz v. Pa. Interscholastic Athletic Ass’n, Inc.*, 798 A.2d 830, 837 (Pa.  
Commw. Ct. 2002) (same).

1 **V. THE PUBLIC INTEREST AND THE BALANCE OF THE EQUITIES**  
2 **FAVOR PLAINTIFFS.**

3 The balance of equities clearly favors Plaintiffs, who—as discussed above—face  
4 grave injury if the Ban is enforced against them and whose equal opportunity to participate  
5 on girls’ sports teams will cause no harm to Defendants or anyone else. Proposed  
6 Intervenor’s and Defendant Horne’s arguments to the contrary are based in mere  
7 speculation and ignore that this is an as-applied rather than facial challenge. The alleged  
8 harm—“that biological girls will be forced to compete against transgender girls who  
9 allegedly have an athletic advantage—is unsupported; there is no evidence in the record  
10 that allowing [Plaintiffs] to play on the girls’ [teams] will make this harm a reality.” *A.M.*,  
11 617 F. Supp. 3d at 968.<sup>11</sup> On the contrary, the record suggests the opposite. As previously  
12 discussed, Plaintiffs do not have a competitive advantage over other girls, and they do not  
13 pose a safety risk. (Shumer Reb. Decl. ¶¶ 9–27, 41.) In addition, but for the Ban,  
14 Defendants The Gregory School, Kyrene School District, Superintendent Toenjes, and the  
15 AIA would all permit Plaintiffs to play on girls’ teams. (Dkt. 36 at 3; Compl. ¶ 54; Dkt.  
16 51 at 2–3; Dkt. 59.) There is thus no harm to any Defendant in allowing Plaintiffs to  
17 continue playing with their peers as they have done until now. *Hecox*, 479 F. Supp. 3d at  
18 988 (“[A] preliminary injunction would not harm Defendants because it would merely  
19 maintain the status quo while Plaintiffs pursue their claims.”). Further, the Court should  
20 decline Proposed Intervenor’s and Defendant Horne’s “invitation to delve into the ‘what  
21 ifs’” for women across Arizona in this as-applied challenge and instead hold that the public  
22 interest “lies in enjoining [Defendants] from applying a statute that discriminates against  
23 [Plaintiffs] based on [their] status as . . . transgender female[s].” *A.M.*, 617 F. Supp. 3d at  
24 969 (citing *Bostock*, 140 S. Ct. at 1753).

25  
26 <sup>11</sup> Defendant Horne baselessly asserts that “the issuance of a preliminary injunction  
27 would be an encouragement to those boys who desire to excel in sports, and may be  
28 willing to transition to girls in order to do so.” (Horne Br. at 17.) There is not a shred  
of evidence in the record to support Defendant Horne’s speculation.

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**CONCLUSION**

For the reasons stated above, the Court should grant Plaintiffs’ motion for a preliminary injunction.

Respectfully submitted this 1st day of June, 2023.

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7  
8 **UNITED STATES DISTRICT COURT**  
**FOR THE DISTRICT OF ARIZONA**  
9 **TUCSON DIVISION**

10  
11 Jane Doe, by her next friend and parents  
Helen Doe and James Doe; and Megan Roe,  
12 by her next friend and parents, Kate Roe and  
Robert Roe,

13 **Plaintiffs,**

14 **v.**

15 Thomas C. Horne in his official capacity as  
State Superintendent of Public Instruction;  
16 Laura Toenjes, in her official capacity as  
Superintendent of the Kyrene School  
17 District; Kyrene School District; The  
Gregory School; and Arizona Interscholastic  
18 Association Inc.,

19 **Defendants.**

Case No. 4:23-cv-00185-JGZ

**REBUTTAL DECLARATION OF DR.**  
**STEPHANIE BUDGE, PH.D., IN SUPPORT**  
**OF MOTION FOR PRELIMINARY**  
**INJUNCTION**

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1 I, Stephanie Budge, declare as follows:

2 1. I submit this expert declaration based on my personal knowledge.

3 2. If called to testify in this matter, I would testify truthfully based on my  
4 expert opinion.

5 3. In preparing this declaration, I reviewed the expert declaration submitted by  
6 Dr. James Cantor, Ph.D. in support of the Proposed Intervenors' Opposition to Plaintiffs'  
7 Motion for Preliminary Injunction. As with my prior expert declaration in this matter, I  
8 also relied on my scientific education and training, my research experience, and my  
9 knowledge of the scientific literature in the pertinent fields.

10 4. The materials I have relied upon in preparing this declaration are the same  
11 types of materials that experts in my field of study regularly rely upon when forming  
12 opinions on these subjects. I may wish to supplement these opinions or the bases for them  
13 as the result of new scientific research or publications in response to statements and  
14 issues that may arise in my area of expertise.

15 5. My understanding is that this case is a legal challenge to Ariz. Rev. Stat.  
16 § 15-120.02, which prohibits transgender girls from participating in school sports.

17 6. Dr. Cantor asserts that my claims about transgender youth and their medical  
18 care are based solely on my clinical experience. (Cantor Decl. ¶ 153.) That is not true. In  
19 addition to my years of clinical experience, I rely on the APA's DSM-5-TR, the World  
20 Professional Association for Transgender Health (WPATH) Standards of Care, the  
21 Endocrine Society Clinical Practice Guidelines, and the literature cited in those sources  
22 as well as the additional research and literature cited in my declarations in this case. As  
23 mentioned in my initial declaration, WPATH is an international association of medical  
24 and mental health professionals worldwide specializing in the treatment of gender diverse  
25 people. The WPATH-promulgated Standards of Care are the internationally recognized  
26 guidelines for the treatment of persons with gender dysphoria and inform medical  
27 treatment throughout the world and have been endorsed by the American Academy of  
28 Child and Adolescent Psychiatry, the American Academy of Pediatrics, the American

1 Psychological Association, the American Psychiatric Association, and the American  
2 Medical Association, among many other professional medical and mental health  
3 organizations.

4 **Dr. James Cantor does not have the level of expertise required to provide**  
5 **expert opinions regarding the issues raised in my initial declaration**

6 7. There are several reasons why Dr. Cantor does not have the level of  
7 expertise to provide expert opinions regarding the issues discussed in my declaration. As  
8 part of his introduction, Dr. Cantor mentions his prior association with academic journals  
9 and as a member of the American Psychological Association (“APA”). Dr. Cantor has  
10 never been on a review board or an editor of a journal that specializes in transgender  
11 health, but instead on journals that focus on sexuality, sexual behavior, and sexual abuse;  
12 it is also notable that he is no longer in these positions.<sup>1</sup> As well, Dr. Cantor mentions his  
13 experience being the chair for the Committee for Science Issues for the American  
14 Psychological Association but fails to mention that this was 20 years ago (2002-2003)  
15 when the field of transgender science was barely emerging.<sup>2</sup> I have been a member of the  
16 LGBT Division of the APA since 2006 and I have never heard anyone in the division or  
17 in the greater APA indicating Dr. Cantor’s expertise related to transgender issues. As a  
18 scholar in the field, I regularly attend transgender-focused academic conferences and  
19 larger conferences relating to mental health issues (such as the APA convention). I have  
20 never seen Dr. Cantor present at those conferences on any issues relating to transgender  
21 health nor have I seen his name listed regarding transgender health on any of the  
22 scientific programming at any conference I have attended. In fact, his conference  
23 presentations and journal publications primarily focus on pedophilia, sex offenders, and

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25 <sup>1</sup> In contrast, I am an associate editor for the *Psychology of Sexual Orientation and*  
26 *Gender Diversity* and on the editorial board of two transgender-centered academic  
27 journals (*International Journal of Transgender Health* and *LGBTQ+ Family: An*  
*Interdisciplinary Journal*).

28 <sup>2</sup> In contrast, I was the co-chair of the same committee from 2011-2021 and am a  
current member of the committee.

1 hypersexuality, with only three presentations mentioning transgender people and four  
2 publications mentioning transgender people (three of which were not research).

3 8. Dr. Cantor downplays the importance of clinical expertise in his  
4 declaration, yet he opines on the role that psychotherapy can play in addressing gender  
5 dysphoria. It is notable that there is no mention in Dr. Cantor's declaration that he has  
6 ever treated a minor with gender dysphoria. In addition, when mentioning his  
7 professional expertise, he does not provide any information that he has ever diagnosed a  
8 child or adolescent with gender dysphoria, nor does it seem that he has ever monitored or  
9 supervised any minor patient receiving gender affirming treatment.

10 **Forcing Transgender Girls to Play on Boys' Teams Is Harmful to Them**

11 9. Dr. Cantor appears to suggest that transgender girls can play on boys'  
12 teams. (Cantor Decl. ¶ 158.) In my initial declaration, I discussed how that would be  
13 harmful to transgender girls. Moreover, laws that require transgender girls to participate  
14 on a boys' team will put a child who looks, acts, and for years may have been known  
15 only as a female student, in the spotlight by requiring them to be on a boys' team, thereby  
16 inviting unwanted visibility and attention, putting the student at risk of bullying and  
17 discrimination, and causing the student to fear harassment and to feel isolated and  
18 stigmatized due to the negation of their identity. Clark and Kosciw (2022) have found  
19 that transgender students avoid sports when they cannot play on teams consistent with  
20 their gender identity.<sup>3</sup>

21 10. Dr. Cantor further appears to suggest that excluding transgender girls from  
22 playing school sports is not psychologically damaging. (See Cantor Decl. ¶ 159.) This is  
23 not true. As discussed in my initial declaration, there is a broad consensus among  
24 healthcare providers working with transgender youth that laws restricting transgender  
25 students' participation in school sports will have severe negative consequences for the

26  
27 <sup>3</sup> Caitlin M. Clark & Joseph G. Kosciw, *Engaged or excluded: LGBTQ youth's*  
28 *participation in school sports and their relationship to psychological well-being*, 1  
Psychology in Schs. 95 (2022).

1 health and wellbeing of transgender youth.<sup>4</sup>

2 11. Dr. Cantor further criticizes several sources I cite in my initial declaration  
3 because they involve surveys of physicians. (Cantor Decl. ¶¶ 161–63.) However, as noted  
4 below, this is not an issue on which randomized controlled trials would be ethically  
5 permissible, and surveys of this type provide a valuable and widely accepted source of  
6 information, particularly when multiple studies arrive at similar results.

7 12. Dr. Cantor further criticizes my initial declaration because it did not address  
8 the biological differences between males and females and competitive fairness of  
9 transgender girls competing on girls’ teams. (Cantor Decl. ¶ 163.) However, as a mental  
10 health professional, I do not have expertise in these areas and therefore will not provide  
11 an expert opinion on them.

12 **Dr. Cantor’s Criticisms of the Standards of Care Are Not Well-Founded**

13 13. Dr. Cantor spends much of his declaration criticizing the well-established  
14 international standards of care for transgender youth. For the reasons stated below, Dr.  
15 Cantor’s criticisms lack merit and represent an outlier view that is not supported by  
16 medical science or best practices in the provision of medical care.

17 14. Contrary to Dr. Cantor’s unsupported claim that these standards lack a  
18 sufficient evidentiary basis, WPATH and the Endocrine Society developed these  
19 standards for treating gender dysphoria in minors using the same evidence-based  
20 approach used to develop standards of care and practice guidelines for the treatment of  
21 many other medical conditions. As explained in the most recent edition of WPATH’s  
22 Standards of Care:

23 Recommendations in the SOC-8 are based on available evidence  
24 supporting interventions, a discussion of risks and harms, as well as  
25 feasibility and acceptability within different contexts and country  
26 settings. Consensus on the final recommendations was attained using  
27 the Delphi process that included all members of the guidelines

28 <sup>4</sup> Landon D. Hughes, et al., *Pediatric Provider Perspectives on Laws and Policies Impacting Sports Participation for Transgender Youth*, 9 *LGBT Health* 247 (2022).

1 committee and required that recommendation statements were  
2 approved by at least 75% of members.<sup>5</sup>

3 15. Similarly, the Endocrine Society’s “evidence-based guideline was  
4 developed using the Grading of Recommendations, Assessment, Development, and  
5 Evaluation approach to describe the strength of recommendations and the quality of  
6 evidence. The task force commissioned two systematic reviews and used the best  
7 available evidence from other published systematic reviews and individual studies.”<sup>6</sup>

8 16. Dr. Cantor falsely states that multiple international health care systems that  
9 had initially adopted medical transition for transgender youth have reversed that policy  
10 because of research on the safety and effectiveness of that treatment. In fact, none of the  
11 countries Dr. Cantor discusses—the United Kingdom, Sweden, Finland, Norway, and  
12 France—ban either puberty blockers or hormones for transgender adolescents. Similarly,  
13 none of the international reports that Dr. Cantor cites is a clinical practice guideline, and  
14 none recommends banning medical care for transgender youth. Rather, the primary focus  
15 of concern in these countries is improving the delivery of services and quality of care,  
16 including ensuring that providers adhere to the standards of care and provide medical  
17 treatments only after careful evaluation and assessment.

18 17. For example, Dr. Cantor cites a report by Dr. Hilary Cass (2022), which  
19 reviewed the delivery of care to transgender youth in England and identified problems  
20 related to the centralization of care in a single facility. Dr. Cantor fails to note that this  
21 report concludes by recommending that England create *more* centers for providing this  
22 care and that providers follow the Endocrine Society Guidelines when providing  
23  
24

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25 <sup>5</sup> Coleman, E., et al., *Standards of Care for the Health of Transgender and Gender*  
26 *Diverse People, Version 8*, International Journal of Transgender Health, 23(S1), S8  
(2022).

27 <sup>6</sup> Wylie C Hembree, et al., *Endocrine Treatment of Gender-Dysphoric/Gender-*  
28 *Incongruent Persons: An Endocrine Society Clinical Practice Guideline*, Journal of  
Clinical Endocrinology & Metabolism 102(11) 3874 (2017).

1 hormone therapy.<sup>7</sup>

2 **Dr. Cantor’s View that Transgender Youth Are Mentally Ill and Should Not**  
3 **be Given Supportive Medical Care or Permitted to Transition Is Not Well-**  
4 **Founded**

5 18. In addition to lacking a sound foundation, Dr. Cantor fails to explain how  
6 his criticisms of the standards of care for treating gender dysphoria in youth are relevant  
7 to what I understand to be the central issue in this case: whether Plaintiffs, who are  
8 transgender girls, should be able to participate and compete on girls’ sports teams.  
9 Although it is not entirely clear, Dr. Cantor appears to believe that banning transgender  
10 girls from girls’ teams is appropriate because, in his view, minors who are diagnosed with  
11 gender dysphoria should be required to live in accordance with their sex assigned at birth  
12 and should not be permitted to transition either socially or through medications. Instead,  
13 Dr. Cantor appears to believe these minor patients should be given counseling to prevent  
14 them from identifying as transgender, based on his view that gender dysphoria in minors  
15 is a manifestation of some other mental health condition, such as borderline personality  
16 disorder. (Cantor Decl. ¶ 122 (advancing the “hypothesis that mental health issues, such  
17 as Borderline Personality Disorder (BPD), cause both suicidality and unstable identity  
18 formation (including gender identity confusion).”))

19 19. Dr. Cantor’s views on this topic have no scientific basis and contradict the  
20 medical consensus that some youth are in fact transgender, and that gender dysphoria in  
21 minors is a real and distinct medical condition, not a manifestation of “gender identity  
22 confusion” caused by other “mental health issues.” (*Id.*) There is no basis for Dr. Cantor  
23 to claim that patients who have borderline personality disorder are regularly being  
24 misdiagnosed with gender dysphoria. None of the studies he cites for this proposition  
25 involve transgender youth and there are no studies that support Dr. Cantor’s claims

26 \_\_\_\_\_  
27 <sup>7</sup> Cass, H. *The Cass Review: Independent Review of Gender Identity Services for*  
28 *Children and Young People Interim Report*, National Health Service (NHS), UK  
(2022).

1 regarding this link.

2 20. Dr. Cantor’s views also contradict the medical consensus that counseling  
3 designed to encourage or compel transgender youth to live in accordance with their sex  
4 assigned at birth is as ineffective, unethical, and harmful as other types of conversion  
5 therapy. As explained in the WPATH Standards of Care:

6 Activities and approaches (sometimes referred to as “treatments”)  
7 aimed at trying to change a person’s gender identity and expression  
8 to become more congruent with the sex assigned at birth have been  
9 attempted, but these approaches have not resulted in changes in  
10 gender identity (Craig et al., 2017; Green et al., 2020). We  
11 recommend against such efforts because they have been found to be  
12 ineffective and are associated with increases in mental illness and  
13 poorer psychological functioning (Craig et al., 2017; Green et al.,  
14 2020; Turban, Beckwith et al., 2020).<sup>8</sup>

15 21. Dr. Cantor rejects the use of the term “conversion therapy” when applied to  
16 transgender minors, claiming that the research on conversion therapy has exclusively  
17 addressed sexual orientation and that its results cannot be extrapolated to gender identity.  
18 (Cantor Decl. ¶ 147.) Dr. Cantor’s view on this issue has no scientific basis and diverges  
19 from the consensus of all major professional associations of medical and mental health  
20 providers in the United States that efforts to change a person’s gender identity or gender  
21 expression are ineffective and harmful.

22 22. For example, the WPATH Standards of Care explain:

23 Much of the research evaluating ‘conversion therapy’ and  
24 ‘reparative therapy’ has investigated the impact of efforts to change  
25 gender expression (masculinity or femininity) and has conflated  
26 sexual orientation with gender identity (APA, 2009; Burnes et al.,  
27 2016; Craig et al., 2017). Some of these efforts have targeted both  
28 gender identity and expression (AACAP, 2018).  
Conversion/reparative therapy has been linked to increased anxiety,  
depression, suicidal ideation, suicide attempts, and health care  
avoidance (Craig et al., 2017; Green et al., 2020; Turban, Beckwith  
et al., 2020).<sup>9</sup>

29 23. Similarly, the American Academy of Child and Adolescent Psychiatry has

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30 <sup>8</sup> Coleman, E., et al., *Standards of Care for the Health of Transgender and Gender*  
31 *Diverse People, Version 8*, International Journal of Transgender Health, 23(S1), S8  
32 (2022).

33 <sup>9</sup> *Id.* at S53.

1 noted:

2 [B]ased on the scientific evidence, the AACAP asserts that such  
3 “conversion therapies” (or other interventions imposed with the  
4 intent of promoting a particular sexual orientation and/or gender as a  
5 preferred outcome) lack scientific credibility and clinical utility.  
6 Additionally, there is evidence that such interventions are harmful.  
7 As a result, “conversion therapies” should not be part of any  
8 behavioral health treatment of children and adolescents.<sup>10</sup>

9 24. Likewise, the American Psychological Association stated:

10 [T]he incongruence between sex and gender in and of itself is not a  
11 mental disorder so, any behavioral health or [Gender Identity  
12 Change Efforts (GICE)] technique or treatment that seeks to change  
13 an individual’s gender identity or expression is not indicated; thus,  
14 any behavioral health or GICE effort that attempt to change an  
15 individual’s gender identity or expression is inappropriate.

16 . . . .

17 [T]he APA, because of evidence of harm and lack of  
18 evidence of efficacy, supports public policies and legislation  
19 that prohibit, or aim to reduce GICE.<sup>11</sup>

20 25. In 2023, the Substance Abuse and Mental Health Services Administration  
21 published a comprehensive review of existing literature on therapeutic efforts to change a  
22 child’s gender identity or gender expression and found:

23 No research has demonstrated that gender identity change efforts are  
24 effective in altering gender identity; there is also no evidence of any  
25 benefits of such practices to children, adolescents, or their families.  
26 Recent large, methodologically sound studies have investigated  
27 harms associated with gender identity change efforts. These studies  
28 indicate that exposure to gender identity change efforts—in  
childhood, adolescence, and/or adulthood—is associated with harm,

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25 <sup>10</sup> The AACAP Policy on “Conversion Therapy” (2018), *available at*,  
26 [https://www.aacap.org/aacap/Policy\\_Statements/2018/Conversion\\_Therapy.aspx](https://www.aacap.org/aacap/Policy_Statements/2018/Conversion_Therapy.aspx)  
(last visited May 22, 2023).

27 <sup>11</sup> Am. Psychological Ass’n, APA on Gender Identity Change Efforts at 1, 3 (2021),  
28 *available at*, <https://www.apa.org/about/policy/resolution-gender-identity-change-efforts.pdf> (last visited May 22, 2023).

1 including suicidality, suicide attempt, and other negative mental  
2 health outcomes such as severe psychological distress.<sup>12</sup>

3 26. It is also my clinical experience that psychotherapy is not effective as the  
4 sole treatment for individuals who need to socially transition and who need medical  
5 changes to their bodies to reduce gender dysphoria. I have often worked with individuals  
6 diagnosed with gender dysphoria who have financial barriers that do not allow them to  
7 receive medical treatments. I have also provided psychotherapy to transgender  
8 adolescents who experienced interpersonal barriers to social and medical transition.  
9 While psychotherapy can assist these patients with coping on a day-to-day basis, many of  
10 these patients experience significant distress from delays in social and medical transition  
11 and psychotherapy alone does not alleviate their dysphoria. Clinically, I see extremely  
12 high rates of suicidal ideation and suicidal intent with patients who have barriers to social  
13 and medical transitioning. I have assisted several of these patients with obtaining  
14 inpatient care to ensure that they do not die by suicide (which is costly and usually only  
15 provides a short-term solution to their immediate distress). As noted in my previous  
16 declaration, delaying the transition process can be detrimental for transgender youth, with  
17 early recommendations noting the importance of not delaying a gender dysphoria  
18 diagnosis and treatments (including social transition) that are most appropriate for the  
19 youth<sup>13</sup> and more recent articles noting the immense harms from delaying treatment (de  
20 Vries et al., 2021).<sup>14</sup> In sum, Dr. Cantor's view that minors with gender dysphoria should  
21 not be permitted to transition and should be counseled to live in their sex assigned at birth  
22 contradicts a long-standing and well-established consensus opposing such practices as

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23 <sup>12</sup> Substance Abuse and Mental Health Services Administration (SAMHSA), *Moving*  
24 *Beyond Change*, Pages 26-27, available at,  
25 <https://store.samhsa.gov/sites/default/files/pep22-03-12-001.pdf> (2023).

26 <sup>13</sup> Edwards-Leeper, L., & Spack, N. P., *Psychological evaluation and medical*  
27 *treatment of transgender youth in an interdisciplinary "Gender Management*  
28 *Service" (GeMS) in a major pediatric center*, *Journal of Homosexuality*, 59(3), 321-  
336 (2012).

<sup>14</sup> de Vries, A. L. C., et al., *Weighing current knowledge and uncertainties in decisions*  
*about gender-related treatment for transgender adolescents*, *International Journal of*  
*Transgender Health*, 22, 217-224 (2021).

1 ineffective and harmful.<sup>15</sup>

2 27. Dr. Cantor similarly disputes that “gender identity is well-established in  
3 psychology and medicine”—pointing to a statement taken out of context in the DSM-5-  
4 TR. (Cantor Decl. ¶ 155.) In fact, as noted in my prior declaration, gender identity is a  
5 well-established term in psychology and medicine that has been in use for decades. It is  
6 defined in the DSM-5-TR, which explains: “Gender identity is a category of social  
7 identity and refers to an individual’s identification as male, female, some category in  
8 between (i.e., gender fluid), or a category other than male or female (i.e., gender  
9 neutral).” It is a central component of gender dysphoria, which is the distress caused  
10 when a person’s gender identity diverges from their assigned sex at birth.<sup>16</sup> Gender

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12 <sup>15</sup> See, e.g., Am. Coll. of Physicians, *Lesbian, Gay, Bisexual, and Transgender Health*  
13 *Disparities: A Policy Position Paper from the American College of Physicians*, 163  
14 *Annals of Internal Medicine* (2015); Am. Counseling Ass’n, *Resolution on*  
15 *Reparative Therapy/Conversion Therapy/Sexual Orientation Change Efforts (SOCE)*  
16 *as a Significant and Serious Violation of the ACA Code of Ethics* (2017), available  
17 *at*, [https://www.counseling.org/docs/default-source/resolutions/reparative-therapy-  
resolution-letter--final.pdf?sfvrsn=d7ad512c\\_4](https://www.counseling.org/docs/default-source/resolutions/reparative-therapy-resolution-letter--final.pdf?sfvrsn=d7ad512c_4) (last visited May 22, 2023); Am.  
18 *Medical Ass’n & GLMA, Issue Brief: Sexual orientation and gender identity change*  
19 *efforts (so-called “conversion therapy”)* (2022), available at, [https://www.ama-  
assn.org/system/files/conversion-therapy-issue-brief.pdf](https://www.ama-assn.org/system/files/conversion-therapy-issue-brief.pdf) (last visited May 22, 2023);  
20 *Am. Psychiatric Ass’n, Position Statement on Conversion Therapy and LGBTQ*  
21 *Patients* (2018), available at, [https://www.psychiatry.org/getattachment/3d23f2f4-  
1497-4537-b4de-fe32fe8761bf/Position-Conversion-Therapy.pdf](https://www.psychiatry.org/getattachment/3d23f2f4-1497-4537-b4de-fe32fe8761bf/Position-Conversion-Therapy.pdf) (last visited May  
22 22, 2023); Nat’l Ass’n of Social Workers, *Sexual Orientation Change Efforts*  
23 *(SOCE) and Conversion Therapy with Lesbians, Gay Men, Bisexuals, and*  
24 *Transgender Persons* (2015), available at,  
25 <https://www.socialworkers.org/LinkClick.aspx?fileticket=yH3UsGQQmYI%3D> (last  
26 visited May 22, 2023); Jason Rafferty, *American Academy of Pediatrics Policy*  
27 *Statement: Ensuring Comprehensive Care and Support for Transgender and Gender-*  
28 *Diverse Children and Adolescents*, 142 *Pediatrics* (2018); Society for Adolescent  
Health & Medicine, *Position Paper: Recommendations for Promoting the Health and*  
*Well-being of Sexual and Gender-diverse Adolescents Through Supportive Families*  
*and Affirming Support Networks*, 70 *J. Adolescent Health* (2022).

26 <sup>16</sup> Coleman, E., et al., *Standards of Care for the Health of Transgender and Gender*  
27 *Diverse People, Version 8*, *International Journal of Transgender Health*, 23(S1), S59  
28 (2022) (“Compared with the earlier version, the DSM-5 replaced gender identity  
disorder with gender dysphoria, acknowledging the distress experienced by some

1 identity is also discussed at length in the WPATH Standards of Care, the Endocrine  
2 Society Practice Guidelines, and a large body of medical literature.<sup>17</sup>

3 28. Dr. Cantor uses outdated, inaccurate, and narrow definitions of sex. Dr.  
4 Cantor mentions that sex can only be determined either by “visual inspection” or  
5 “chromosomes.” There are several significant flaws to this outdated argument, the first  
6 being that major medical and psychological associations agree that sex is multifaceted,  
7 comprising of chromosomes, hormones, internal and external genitalia, secondary sex  
8 characteristics, and gender identity (e.g., American Academy of Pediatrics, 2018;  
9 American Psychological Association, 2014; American Psychological Association, 2021;  
10 American Psychiatric Association, 2017; American Medical Association, 2018).<sup>18</sup>

11 29. To be more specific, American Medical Association Board member Dr.  
12 William Kobler has explained: “Sex and gender are more complex than previously  
13 assumed. It is essential to acknowledge that an individual’s gender identity may not align  
14 with the sex assigned to them at birth. A narrow limit on the definition of sex would have  
15 public health consequences for the transgender population and individuals born with

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16 people stemming from the incongruence between experienced gender identity and the  
17 sex assigned at birth.”).

18 <sup>17</sup> Dr. Cantor criticizes my prior declaration for citing the DSM-5 rather than the  
19 updated DSM-5-TR for the meaning of gender dysphoria. (Cantor Decl. ¶ 154.)  
20 However, the DSM-5-TR also fully supports my statements in that paragraph.

21 <sup>18</sup> See, e.g., Rafferty, J. et al., *Ensuring comprehensive care and support for transgender*  
22 *and gender-diverse children and adolescents*, Pediatrics, 142(4) (discussing the  
23 American Academy of Pediatrics) (2018); American Medical Association, *AMA*  
24 *Adopts New Policies at 2018 Meeting* (2018), available at [https://www.ama-](https://www.ama-assn.org/press-center/press-releases/ama-adopts-new-policies-2018-interim-meeting)  
25 [assn.org/press-center/press-releases/ama-adopts-new-policies-2018-interim-meeting](https://www.ama-assn.org/press-center/press-releases/ama-adopts-new-policies-2018-interim-meeting)  
26 (last accessed on May 27, 2023); American Psychiatric Association, *Definitions of*  
27 *Gender, Sex, Sexual Orientation, and Pronoun Usage* (2017), available at  
28 [https://www.psychiatry.org/psychiatrists/diversity/education/transgender-and-gender-](https://www.psychiatry.org/psychiatrists/diversity/education/transgender-and-gender-nonconforming-patients/definitions-and-pronoun-usage)  
[nonconforming-patients/definitions-and-pronoun-usage](https://www.psychiatry.org/psychiatrists/diversity/education/transgender-and-gender-nonconforming-patients/definitions-and-pronoun-usage) (last accessed on May 27,  
2023); American Psychological Association, *Answers to your questions about*  
*transgender people, gender identity, and gender expression* (2014), available at  
[http://www.apa.org/topics/lgbt/ transgender.aspx](http://www.apa.org/topics/lgbt/transgender.aspx) (last accessed on May 27, 2023);  
American Psychological Association, *APA Resolution on Gender Identity Change*  
*Efforts* (2021), available at [https://www.apa.org/about/](https://www.apa.org/about/policy/resolution-gender-identity-change-efforts.pdf)  
[policy/resolution-gender-](https://www.apa.org/about/policy/resolution-gender-identity-change-efforts.pdf)  
[identity-change-efforts.pdf](https://www.apa.org/about/policy/resolution-gender-identity-change-efforts.pdf) (last accessed on May 27, 2023).

1 differences in sexual differentiation, also known as intersex traits” (AMA, 2018). The  
2 second is that visual inspection is inherently flawed regarding determination—for  
3 example, if a non-transgender man sustains injuries to his genitals to make them  
4 unrecognizable, that would mean that his sex is undeterminable. Similarly, in the past,  
5 babies with intersex conditions that influence their genitals typically had medical  
6 providers decide the sex of the baby, usually deciding female since those genitals were  
7 easier to reconstruct (Carpenter 2016).<sup>19</sup> Chromosomes are not limited to XX and XY and  
8 thus cannot also be deemed as the only major way to determine one’s sex. Given that  
9 there are biological changes that occur with hormone therapy and gender affirming  
10 surgeries, relying solely on one aspect of sex determined in utero is outdated.<sup>20</sup>

11 30. In his report, Dr. Cantor contends that the terminology “sex assigned at  
12 birth” should not be used. His arguments are grounded in a false and narrow definition of  
13 what sex is. As well, “sex assigned at birth” is the terminology that is used by the major  
14 medical and psychological organizations when referring to infants being labeled as male  
15 or female at birth (see American Academy of Pediatrics, 2018; American Psychological  
16 Association, 2014; American Psychological Association, 2021; American Psychiatric  
17 Association, 2017; American Medical Association, 2018). In addition to this terminology  
18 being the primary terminology that is used in by these organizations, this is also reflected  
19 in the field in academic publications and presentations. For example, in March 2023, in  
20 the *Journal of Adolescent Health*, Tabb and colleagues published an article titled “The  
21 Role of Caregiver Acceptance and Sex Assigned at Birth on Depression Among Gender-  
22 diverse Youth.”<sup>21</sup> A google scholar search of the terms “sex assigned at birth” and

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23  
24 <sup>19</sup> Carpenter, M., *The human rights of intersex people: Addressing harmful practices  
and rhetoric of change*, *Reproductive Health Matters*, 24(47), 74-84 (2016).

25 <sup>20</sup> Coleman, E., et al., *Standards of Care for the Health of Transgender and Gender  
Diverse People, Version 8*, *International Journal of Transgender Health*, 23(S1)  
26 (2022).

27 <sup>21</sup> Tabb, A. et al., *The Role of Caregiver Acceptance and Sex Assigned at Birth on  
Depression Among Gender-diverse Youth*, *Journal of Adolescent Health*, 72(3), S18  
28 (2023).

1 “assigned sex at birth” elicited 1,959 results for articles published in 2023 alone.

2 31. Dr. Cantor also incorrectly claims that gender identity is not innate and has  
3 no biological foundation. (Cantor Decl. ¶ 157.) This is false. There is consensus among  
4 professional organizations that one’s gender identity cannot be changed and it is a  
5 “deeply felt, inherent sense” (e.g., American Psychological Association, 2021).<sup>22</sup> As the  
6 Endocrine Society Clinical Practice Guidelines for Endocrine Treatment of Gender-  
7 Dysphoric Persons explain: “although there is much that is still unknown with respect to  
8 gender identity and its expression, compelling studies support the concept that biologic  
9 factors, in addition to environmental factors, contribute to this fundamental aspect of  
10 human development.”<sup>23</sup>

11 32. To support his view that minors should not be permitted to transition, Dr.  
12 Cantor claims that “among prepubescent children who feel gender dysphoric, the  
13 majority cease to want to be the other gender over the course of puberty.” (Cantor Decl.  
14 ¶¶ 67-70.) The studies that are cited to promote this argument: a) are often  
15 misunderstood, and b) have significant flaws in their design. In these studies, both  
16 children who did not have gender dysphoria and children who did not identify as  
17 transgender were included in the analyses because they exhibited behaviors that did not  
18 conform to gender norms. Therefore, the concept of gender dysphoria being “outgrown”  
19 does not make sense for the vast majority of these children since they did not have gender  
20 dysphoria to begin with. All of these studies used criteria for diagnosing gender identity  
21 disorder that focused mainly on behaviors (and not identity) and had less specific criteria  
22 for distinguishing those with the disorder from other children. The current DSM-5-TR  
23 (American Psychiatric Association, 2022) gender dysphoria criteria require that

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24  
25 <sup>22</sup> American Psychological Association, *APA Resolution on Gender Identity Change*  
26 *Efforts* (2021), available at <https://www.apa.org/about/policy/resolution-gender-identity-change-efforts.pdf> (last accessed May 26, 2023).

27 <sup>23</sup> Wylie C Hembree, et al., *Endocrine Treatment of Gender-Dysphoric/Gender-*  
28 *Incongruent Persons: An Endocrine Society Clinical Practice Guideline*, *Journal of*  
*Clinical Endocrinology & Metabolism* 102(11) 3874, 3875 (2017).

1 children/adolescents identify with a gender that is different from their assigned gender for  
2 at least six months, which was not the case for any of the studies that are cited to indicate  
3 whether or not a youth will identify experience gender dysphoria in the future (*see*  
4 Temple Newhook et al. (2018) for a comprehensive review of the data).<sup>24</sup>

5 33. Steensma & Cohen-Kettenis (2018) agree that their data have been cited  
6 incorrectly to support the purportedly low persistence rates and have stated that their  
7 “studies cannot be used to support” the persistence estimation, in that they never  
8 calculated or reported rates of persistence/desistence.<sup>25</sup> They also note that the negative  
9 social climate for transgender children and adolescents should be taken into account  
10 when reading the data. They further state that their data did not actually reflect gender  
11 dysphoria in children and “expect that future follow up studies using the new diagnostic  
12 criteria may find higher persistence rates.”<sup>26</sup> Finally, they indicate that the terms  
13 “desistence” and “persistence” have been misused; they state that when they were  
14 researching youth, there were many youth who may have been “hesitating, searching,  
15 fluctuating, or exploring” and that those youth have been misclassified as desisting.”<sup>27</sup>

16 34. Today, based on current scientific knowledge and clinical practice,  
17 researchers and clinicians are much better equipped to differentiate transgender from  
18 non-transgender children and adolescents. As the Endocrine Society Practice Guidelines  
19 explain: “It may be that children who only showed some gender nonconforming  
20 characteristics have been included in the follow-up studies, because the DSM-IV text  
21 revision criteria for a diagnosis were rather broad . . . With the newer, stricter criteria of  
22

23  
24 <sup>24</sup> Temple Newhook, J., Pyne, J., et al., *A critical commentary on follow-up studies and*  
25 *“desistence” theories about transgender and gender-nonconforming children,*  
International Journal of Transgenderism, 19, 212-224 (2018).

26 <sup>25</sup> Steensma, T. D., & Cohen-Kettenis, P. T., *A critical commentary on follow-up studies*  
27 *and “desistence” theories about transgender and gender non-conforming*  
*children,* International Journal of Transgenderism, 19, 225-230 (2018).

28 <sup>26</sup> *Id.* at 226.

<sup>27</sup> *Id.* at 227.

1 the DSM-5, persistence rates may well be different in future studies.”<sup>28</sup>

2 35. Dr. Cantor does not dispute that minors whose transgender identification  
3 persists into adolescence are likely to continue to identify as transgender as adults. As  
4 recent studies have shown, for “transgender adolescents who, following careful  
5 assessment, receive medical necessary gender-affirming medical treatment,” “rates of  
6 reported regret...are low.”<sup>29</sup>

7 **The Medical Treatments for Transgender Youth are Safe and Effective**

8 36. Dr. Cantor claims that there is insufficient evidence to support the safety or  
9 efficacy of medical treatments for gender dysphoria in minors. (Cantor Decl. ¶ 39.) In  
10 fact, as both WPATH and the Endocrine Society have concluded based on  
11 comprehensive reviews of all existing data, the safety and efficacy of medical treatments  
12 for transgender adolescents with gender dysphoria are well-supported. For example, the  
13 WPATH Standards of Care concludes that: “Taken as a whole, the data show early  
14 medical intervention—as part of broader combined assessment and treatment approaches  
15 focused on gender dysphoria and general well-being—can be effective and helpful for  
16 many transgender adolescents seeking these treatments.”<sup>30</sup> These Standards of Care also  
17 include an extensive discussion of the potential benefits and risks of puberty blockers and  
18 hormone therapy and the need for providers to consider “the potential physical and  
19 psychological benefits and risks of starting treatment with the potential risks and benefits  
20 of delaying treatment.”<sup>31</sup>

21 37. Dr. Cantor’s claim rests on false or misleading assumptions. For example,  
22 he notes that randomized controlled trials provide the strongest evidence of safety and

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24 <sup>28</sup> Wylie C Hembree, et al., *Endocrine Treatment of Gender-Dysphoric/Gender-*  
25 *Incongruent Persons: An Endocrine Society Clinical Practice Guideline*, *Journal of*  
*Clinical Endocrinology & Metabolism* 102(11) 3876 (2017).

26 <sup>29</sup> Coleman, E., et al., *Standards of Care for the Health of Transgender and Gender*  
27 *Diverse People, Version 8*, *International Journal of Transgender Health*, 23, (S47)  
(2022).

28 <sup>30</sup> *Id.*

<sup>31</sup> *Id.* at S66.

1 efficacy and suggests that the evidence supporting transitioning medications for  
2 transgender minors is deficient because it is not based on such trials. (Cantor Decl. ¶ 44.)  
3 That criticism has no scientific merit and contradicts fundamental ethical and scientific  
4 principles that guide medical knowledge and practice. While randomized controlled trials  
5 provide the highest quality of evidence in many contexts, management of gender  
6 dysphoria in minors is not ethically amenable to randomized controlled trials. Because  
7 there is already substantial evidence that puberty blockers and hormone therapy benefit  
8 transgender minors, it would be unethical to propose a study randomly assigning some  
9 patients to these treatments and some to a placebo.<sup>32</sup> Deutsch et al. (2016) state that  
10 randomizing transgender people to receive or not receive hormone therapy or surgery  
11 violates the principle of equipoise (true scientific uncertainty about whether an  
12 intervention will help the individual); there are ethical ways to conduct RCTs (randomly  
13 controlled trials) with transgender youth and adults, however, these studies would be  
14 focused on schedules and delivery modes of treatment, and not on whether or not the  
15 treatment is effective. Non-transgender youth receive pubertal suppression treatments and  
16 hormone therapy treatments for a host of medical disorders and are considered safe and  
17 effective (albeit with side effects, as medical treatments typically have). Given the ethical  
18 considerations and bodies of existing evidence, researchers in this field must rely on other  
19 types of study design, such as longitudinal cohort studies, which monitor changes in  
20 symptoms over the course of treatment,<sup>33</sup> or cross-sectional studies comparing treated and  
21 untreated persons.<sup>34</sup>

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23 <sup>32</sup> Deutsch, M. B., Radix, A., & Reisner, S., *What's in a guideline? Developing*  
24 *collaborative and sound research designs that substantiate best practice*  
25 *recommendations for transgender health care*, *AMA Journal of Ethics*, 18(11), 1098  
(2016).

26 <sup>33</sup> de Vries A.L.C., et al., *Young adult psychological outcome after puberty suppression*  
*and gender reassignment*, *Pediatrics* 2014 Oct;134(4):696-704.

27 <sup>34</sup> Turban J.L., et al., *Access to gender-affirming hormones during adolescence and*  
28 *mental health outcomes among transgender adults*, *PLoS One* 17(1):e0261039  
(2022).

1 38. Studies have repeatedly documented that puberty blocking medication and  
 2 hormone therapy are associated with mental health benefits for transgender people in  
 3 both the short and long term, including a dramatically reduced rate of suicidality.<sup>35</sup>

4 **The Medical Treatments for Transgender Youth Reduce Suicidality and Suicide**

5 39. Dr. Cantor asserts that there is no evidence that medicalized transition  
 6 significantly reduces rates of suicide or suicidality among transgender youth. (Cantor  
 7 Decl. ¶ 117.) As discussed above, that is untrue.

8 40. Dr. Cantor cites Dhejne (2011) for the proposition that undergoing sex-

9  
 10 <sup>35</sup> See, e.g., Tordoff, D.M., et al., *Mental Health Outcomes in Transgender and*  
 11 *Nonbinary Youths Receiving Gender-Affirming Care*, *Jama Network Open*,  
 12 5(2):e220978 at 1 (2022) (finding that receipt of medical care, including puberty  
 13 blockers and gender-affirming hormones, was associated with 60% lower odds of  
 14 moderate or severe depression and 73% lower odds of suicidality over a 12-month  
 15 follow-up); Green, A.E., et al., *Association of Gender-Affirming Hormone Therapy*  
 16 *with Depression, Thoughts of Suicide, and Attempted Suicide Among Transgender*  
 17 *and Nonbinary Youth*, *J. Adolesc. Health* [ePublication ahead of print] at 1 (2021)  
 18 (finding that access to hormone therapy during adolescence was associated with  
 19 lower odds of recent depression and having attempted suicide in the past year);  
 20 Turban, J.L., et al., *Pubertal Suppression for Transgender Youth and Risk of Suicidal*  
 21 *Ideation*, *Pediatrics* 145(2):e20191725 at 1 (2020) (finding that access to puberty  
 22 blockers during adolescence is associated with a decreased lifetime incidence of  
 23 suicidal ideation among adults); Achille, C., et al., *Longitudinal impact of gender-*  
 24 *affirming endocrine intervention on the mental health and well-being of transgender*  
 25 *youths: Preliminary results*, *Int'l J. Pediatric Endocrinology* 2020:8 at 1 (2020)  
 26 (finding that endocrine intervention was associated with decreased depression and  
 27 suicidal ideation and improved quality of life for transgender youth); Kuper, L.E., et  
 28 al., *Body Dissatisfaction and Mental Health Outcomes of Youth on Gender-Affirming*  
*Hormone Therapy*, *Pediatrics* 145(4):e20193006 at 1 (2020) (showing hormone  
 therapy in youth is associated with reducing body dissatisfaction and modest  
 improvements in mental health); van der Miesen, A.I.R., et al., *Psychological*  
*Functioning in Transgender Adolescents Before and After Gender-Affirmative Care*  
*Compared with Cisgender General Population Peers*, *J. Adolesc. Health* 66(6):699-  
 704 (2020) (showing fewer emotional and behavioral problems after puberty  
 suppression and similar or fewer problems compared to same-age non-transgender  
 peers); Costa, R., et al., *Psychological Support, Puberty Suppression, and*  
*Psychosocial Functioning in Adolescents with Gender Dysphoria*. *J. Sexual Medicine*  
 12(11):2206-14 at 2206 (2015) (finding increased psychological function after six  
 months of puberty suppression).

1 reassignment surgery does not decrease suicidality among transgender adults. (Cantor  
2 Decl. ¶ 118.) Dr. Cantor’s claim misrepresents the data from Dr. Dhejne’s study, which  
3 found that suicide rates are higher among transgender people than the general population.  
4 The study did not compare treated versus untreated transgender women, as Dr. Cantor  
5 incorrectly suggests. Dr. Dhejne compared morbidity and mortality statistics from a  
6 national database of transgender people with those in the general Swedish population,  
7 and only made comparisons between these groups, not before and after surgery, or  
8 transgender women with surgery and without surgery. The study itself warns against  
9 drawing any conclusions regarding the effectiveness of surgery as a treatment for gender  
10 dysphoria: “For the purpose of evaluating whether sex reassignment is an effective  
11 treatment for gender dysphoria, it is reasonable to compare reported gender dysphoria pre  
12 and post treatment. Such studies have been conducted either prospectively or  
13 retrospectively and suggest that sex reassignment of transsexual persons improves quality  
14 of life and gender dysphoria.”<sup>36</sup> Since the study was published, Dr. Dhejne has cautioned  
15 that interpretations like Dr. Cantor’s are incorrect.<sup>37</sup>

16 41. Dr. Cantor further opines that McNeil, et al. (2017) does not show that  
17 transition reduces suicidality among transgender youth. (Cantor Decl. ¶ 120.) In fact, the  
18 study concluded that “[d]iscrimination emerged as strongly related to suicidal ideation  
19 and attempts, whereas positive social interactions and timely access to interventions  
20 appeared protective.” Bauer, et al. (2015), which Dr. Cantor erroneously cites for the  
21 proposition that social support is associated with increased suicide attempts, further  
22 supports that conclusion: “Our findings support a strong effect for social exclusion,  
23 discrimination and lack of medical transition (for those needing it) on suicide ideation

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24 <sup>36</sup> Dhejne, C. et al., *Long-Term Follow-Up of Transsexual Persons Undergoing Sex*  
25 *Reassignment Surgery: Cohort Study in Sweden*, PLOS One, 6(2):e16885,  
doi:10.1371/journal.pone.0016885 (2011).

26 <sup>37</sup> Dhejne, C. H, *Science AMA Series: I’m Cecilia Dhejne a fellow of the European*  
27 *Committee of Sexual Medicine, from the Karolinska University Hospital in Sweden.*  
28 *I’m here to talk about transgender health, suicide rates, and my often misinterpreted*  
*study. Ask me anything!*, Winnower 10:e150124.46274 (2017).

1 and attempts, and potentially on the survival of trans persons.” The WPATH Standards of  
2 Care cite Bauer’s study as evidence that “[a]ccess to gender-affirming medical treatment  
3 is associated with a substantial reduction in the risk of suicide attempt.”<sup>38</sup>

4 42. Dr. Cantor also cites Canetto, et al. (2021) in support of his implausible  
5 claim that providing social support to transgender youth is associated with *increased*  
6 suicidal attempts. (Cantor Decl. ¶ 121.) The Canetto study did not include or address  
7 transgender youth and does not support Dr. Cantor’s claim.

8 43. Dr. Cantor also places great weight on the fact that there is no research  
9 showing that medical treatments for transgender youth reduce suicide as opposed to  
10 reducing suicidality—apparently to support his opposition to providing transgender youth  
11 with supportive treatment and care. But that argument is faulty for at least three important  
12 reasons. First, the absence of data about how treatment impacts suicide as opposed to  
13 suicidality largely reflects the difficulty of designing or undertaking such research. Dr.  
14 Cantor misleadingly cites the Baker study as though its conclusion was that no positive  
15 impact of treatment on suicide can be shown because none exists; in fact, the study found  
16 only that it was impossible to answer the question because of “the difficulty of  
17 identifying appropriate comparison groups and uncontrolled confounding factors.”<sup>39</sup>

18 44. Second, the harms caused by suicidality are themselves very serious. In a  
19 recent systematic review of the impact of suicidal ideation, the harms directly associated  
20 with suicidal thoughts are clear: a sense of loss of the self, lack of self-worth, low self-  
21 esteem, loss of meaning in life, self-hatred, feelings of worthlessness, increased guilt, and  
22 increased shame.<sup>40</sup> These experiences are incredibly painful. Even if suicidality and

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23  
24 <sup>38</sup> Coleman, E., et al., *Standards of Care for the Health of Transgender and Gender*  
25 *Diverse People, Version 8*, International Journal of Transgender Health, 23(S1), S174  
(2022).

26 <sup>39</sup> Baker, K. E., et al., *Hormone Therapy, Mental Health, and Quality of Life Among*  
27 *Transgender People: A Systematic Review*, Journal of the Endocrine Society, Vol. 5,  
Issue 4, 11-12 <https://doi.org/10.1210/jendso/bvab011> (2021).

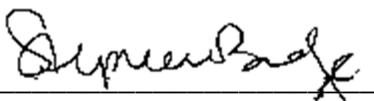
28 <sup>40</sup> Søndergaard, R., et al., *Living with Suicidal Thoughts: A Scoping Review*,  
Scandinavian Journal of Caring Sciences, 37(1), 60-78 (2023).

1 suicide were not related, which they are, preventing suicidality alone would be a  
2 compelling reason to provide medically needed care to transgender adolescents.

3 45. And third, because suicide attempts and suicide *are* interrelated, a treatment  
4 that reduces the former reduces the latter, even if current research designs cannot quantify  
5 that impact precisely.<sup>41</sup> For example, a recent study found that transgender teens were 7.6  
6 times as likely to attempt suicide as their non-transgender peers.<sup>42</sup> Providing medically  
7 necessary care dramatically reduces the suicidality of transgender youth, including  
8 reductions in suicide attempts. In one recent study of transgender youth under 18,  
9 receiving hormone therapy was associated with nearly 40% lower odds of having had a  
10 suicide attempt in the past year.<sup>43</sup> Given the relationship between suicide attempts and  
11 suicide, there can be little doubt that receiving medically necessary care significantly  
12 reduces suicide among transgender youth.

13 I declare under criminal penalty under the laws of Arizona that the foregoing is  
14 true and correct.

15 Signed on the 31st day of May, 2023 in Madison, Wisconsin.

16   
17 \_\_\_\_\_  
18 Stephanie Budge, Ph.D.

19  
20  
21  
22 <sup>41</sup> Jones, S.E., et al., *Mental Health, Suicidality, and Connectedness Among High School Students During the COVID-19 Pandemic—Adolescent Behaviors and Experiences Survey, United States, January-June 2021*, 71(Suppl-3):16-21 (2022), available at, <https://www.cdc.gov/mmwr/volumes/71/su/su7103a3.htm>.

23  
24  
25 <sup>42</sup> Pelc, Corrie, *Transgender Teens 7.6 Times More Likely to Attempt Suicide*, Medical News Today, available at, <https://www.medicalnewstoday.com/articles/transgender-teens-7-6-times-more-likely-to-attempt-suicide> (last visited May 25, 2023).

26  
27 <sup>43</sup> Carlisle, Madeleine, *Gender-Affirming Hormone Therapy for LGBTQ Youth Can Help Save Lives, Study Finds*, Time, available at, <https://time.com/6128131/gender-affirming-hormone-therapy-study/> (last visited May 25, 2023).  
28

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7  
8 **UNITED STATES DISTRICT COURT**  
9 **FOR THE DISTRICT OF ARIZONA**  
10 **TUCSON DIVISION**

11 Jane Doe, by her next friend and parents  
Helen Doe and James Doe; and Megan Roe,  
12 by her next friend and parents, Kate Roe and  
Robert Roe,

13 Plaintiffs,

14 v.

15 Thomas C. Horne in his official capacity as  
State Superintendent of Public Instruction;  
16 Laura Toenjes, in her official capacity as  
Superintendent of the Kyrene School  
17 District; Kyrene School District; The  
Gregory School; and Arizona Interscholastic  
18 Association Inc.,

19 Defendants.

Case No. 4:23-cv-00185-JGZ

**REBUTTAL DECLARATION OF DANIEL  
SHUMER, M.D., IN FURTHER SUPPORT  
OF MOTION FOR PRELIMINARY  
INJUNCTION**

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12 *\*Admitted pro hac vice.*

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1 I, Daniel Shumer, declare as follows:

2 1. I submit this expert declaration based on my personal knowledge.  
3 2. If called to testify, I would testify truthfully based on my expert opinion.  
4 3. In preparing this declaration, I reviewed the expert declarations submitted  
5 by Dr. Gregory A. Brown, Ph.D., Dr. James M. Cantor, Ph.D., and Dr. Chad Thomas  
6 Carlson, M.D., in support of Proposed Intervenors' Opposition to Plaintiffs' Motion for  
7 Preliminary Injunction, as well as the expert declaration of Dr. Gregory A. Brown, Ph.D.  
8 in *Hecox v. Little*, 1:20-cv-00184 (D. Id. 2020), which is attached to Defendant Horne's  
9 Opposition to Plaintiffs' Motion for Preliminary Injunction. As with my prior expert  
10 declaration, I relied on my scientific education and training, my research experience, and  
11 my knowledge of the scientific literature in the pertinent fields. The materials I have  
12 relied on in preparing this declaration are the same types of materials that experts in my  
13 field of study regularly rely on when forming opinions on these subjects. I may wish to  
14 supplement these opinions or the bases for them as a result of new scientific research or  
15 publications or in response to statements and issues that may arise in my area of  
16 expertise.

17 **Dr. Brown's Declarations**

18 **I. Testosterone levels are the biological driver of performance differences in**  
19 **sports between males and females.**

20 4. Although Dr. Brown asserts that biological male physiology and anatomy is  
21 the basis for the performance advantage between males and females in athletic events  
22 (Brown Decl. at 5; Brown *Hecox* Decl. ¶ 11c),<sup>1</sup> the studies and findings discussed  
23 throughout Dr. Brown's declaration support the scientific consensus that the biological  
24 cause of average group differences in athletic performance between males and females is  
25 the rise in circulating levels of testosterone beginning in endogenous male puberty.

26  
27 <sup>1</sup> The "Brown Declaration" refers to the declaration the Proposed Intervenors  
28 submitted in this case. (ECF No. 38-3.) The "Brown *Hecox* Declaration" refers to  
the declaration Defendant Horne submitted in this case. (ECF No. 40-1.)

1           5.       Dr. Brown misrepresents the findings in several of the articles he cites to  
2 support his assertion that sex-based differences in sports are a result of male physiology  
3 and anatomy, without regard to the impact of the heightened level of testosterone  
4 associated with male puberty. Contrary to what Dr. Brown says, McManus and  
5 Armstrong (2011) acknowledge that differences between prepubertal boys and girls in  
6 various measurements are minimal or nonexistent. See Alison McManus & Neil  
7 Armstrong, *Physiology of elite young female athletes*, 56 *Medicine & Science Sports &*  
8 *Exercise* 23, 24 (2011) (“Prior to 11 years of age differences in average speed are  
9 minimal”); *id.* at 27 (“[S]mall sex difference in fat mass and percent body fat are evident  
10 from mid-childhood”); *id.* at 29 (“[B]one characteristics differ little between boys and  
11 girls prior to puberty”); *id.* at 32 (“There is little evidence that prior to puberty pulmonary  
12 structure or function limits oxygen uptake”); *id.* at 34 (“[N]o sex differences in arterial  
13 compliance have been noted in pre- and early- pubertal children”).

14           6.       Dr. Brown also misleadingly cites Staiano and Katzmarzyk (2012) for the  
15 proposition that 22 peer reviewed publications conclude that girls have more total body  
16 fat than boys throughout childhood and adolescence. (Brown Decl. ¶ 79.) Dr. Brown  
17 gives the false impression that all 22 of the peer-reviewed publications demonstrated  
18 differences on total body fat. Instead, Staiano and Katzmarzyk expressly note that “not  
19 all studies demonstrate sex differences in T[otal]B[ody]F[at] before puberty.” AE  
20 Staiano & PT Katzmarzyk, *Ethnic and sex differences in body fat and visceral and*  
21 *subcutaneous adiposity in children and adolescents*, 36 *Int. J. Obesity* 1261, 1265 (2012).  
22 Nor do any of these studies connect these differences to athletic performance.

23           7.       Dr. Brown further misrepresents Handelsman (2018)’s findings, notably  
24 omitting key portions from the study he cites. Dr. Brown writes, “[t]here is convincing  
25 evidence that the sex differences in muscle mass and strength are sufficient to account for  
26 the increased strength and aerobic performance of men compared with women and is in  
27 keeping with the differences in world records between the sexes.” (Brown Decl. ¶ 59;  
28 Brown *Hecox* Decl. ¶ 88.) But Dr. Brown omits the following sentence from

1 Handelsman which explains that “[t]he basis for the sex difference in muscle mass and  
2 strength *is the sex difference in circulating testosterone.*” David Handelsman, et al.  
3 *Circulating Testosterone as the Hormonal Basis of Sex Differences in Athletic*  
4 *Performance*, 39 *Endocrine Revs.* 803, 816 (2018) (emphasis added).

5 8. Handelsman (2018), which Dr. Brown cites throughout his declaration,  
6 supports the scientific consensus that the biological cause of average differences in  
7 athletic performance between men and women is the rise in circulating levels of  
8 testosterone beginning in endogenous male puberty. (See Brown Decl. ¶¶ 127–30;  
9 Brown *Hecox* Decl. ¶¶ 20a, 25–28, 77–85.) As Handelsman states, “evidence makes it  
10 highly likely that the sex difference in circulating testosterone of adults explains most, if  
11 not all, of the sex differences in sporting performance.” See Handelsman (2018) at 823  
12 (summarizing evidence rejecting the hypothesis that physiological characteristics are  
13 driven by the Y chromosome).

14 **II. There is no evidence that prepubertal boys have a biological athletic**  
15 **advantage over prepubertal girls.**

16 9. Contrary to Dr. Brown’s Declarations, there is a well-established scientific  
17 consensus that, before puberty, there are no significant differences in athletic  
18 performance between boys and girls. See, e.g., Marnee McKay & Joshua Burns, *When it*  
19 *Comes to Sport, Boys “Play Like a Girl,”* The Conversation (Aug. 3, 2017),  
20 <https://theconversation.com/when-it-comes-to-sport-boys-play-like-a-girl-80328>  
21 (discussing results of research published in *American Academy of Neurology Journal*).

22 10. While some studies have found small differences between the performance  
23 of boys and girls with respect to some discrete activities, these studies did not control for  
24 other factors, particularly age, location, or socioeconomic factors. *Id.*

25 11. When research has controlled for those factors by using representative data,  
26 researchers have found that “[a]cross all measures of physical performance, there was  
27 one consistent finding. There was no statistical difference in the capabilities of girls and  
28 boys until high-school age (commonly age 12).” *Id.* These tests included long jump,

1 muscle strength, walking, jumping, and balancing. *Id.*

2 12. This finding has been replicated in many other studies, and there is a clear  
3 scientific consensus that athletic ability does not diverge significantly until puberty. *See,*  
4 *e.g.,* David Handelsman, *Sex Differences in Athletic Performance Emerge Coinciding*  
5 *with the Onset of Male Puberty*, 87 *Clinical Endocrinology* 68, 70–71 (2017) (“The  
6 gender divergence in athletic performance begins at the age of 12–13 years”); Jonathon  
7 W. Senefeld et al., *Sex Differences in Youth Elite Swimming*, 14 *PLOS ONE* 1, 1–2  
8 (2019) (studying child and youth swimmers and concluding that the data suggests “girls  
9 are faster, or at least not slower, than boys prior to the performance-enhancing effects of  
10 puberty”).

11 13. In support of his contention that boys have at least some biological  
12 advantages in athletic performance over girls before puberty, Dr. Brown relies primarily  
13 on demographic data from physical fitness tests or athletics in which there is a small  
14 difference in performance between prepubertal non-transgender boys and prepubertal  
15 non-transgender girls.<sup>2</sup> This data merely observes phenomena across a population sample  
16 in isolated areas and does not determine a cause for whatever is observed. There is no  
17 reliable basis for Dr. Brown to attribute those small differences to physiology or anatomy  
18 instead of other factors, such as greater societal encouragement of athleticism in boys,  
19 greater opportunities for boys to play sports, or different preferences of the boys and girls  
20 surveyed (Handelsman 2017).

21 **III. Transgender girls who receive puberty suppressing medication at the onset of**  
22 **puberty have no athletic advantage over other girls.**

23 14. Dr. Brown incorrectly asserts that the administration of puberty suppressing  
24 medication (also sometimes referred to as puberty blocking medication) and hormone  
25

26  
27 <sup>2</sup> Two of the studies cited by Dr. Brown are also cited in paragraph 6 of the legislative  
28 findings of Arizona’s statute. *See* S.B. 1165, 55th Leg., 2d Reg. Sess. (Ariz. 2022), §  
6.

1 replacement therapy to transgender girls does not eliminate the athletic advantage that  
2 men and adolescent boys have over women and adolescent girls.

3 15. Puberty suppressing medication (gonadotropin-releasing hormone agonists,  
4 or GnRHa) may be prescribed to transgender girls at the onset of puberty, well before any  
5 observable increase in testosterone or muscle mass.

6 16. Because such girls do not undergo male puberty, they do not gain the  
7 increased muscle mass or strength that accounts for why post-pubertal boys as a group  
8 have an advantage over post-pubertal girls as a group.

9 17. For that reason, studies on transgender women who have undergone  
10 testosterone suppression as adults are almost meaningless when assessing the athletic  
11 abilities of transgender girls who have received pubertal suppression beginning at the  
12 onset of puberty. The women in those studies did not transition until well after puberty  
13 and experienced exposure to testosterone over an extended time, allowing their muscles  
14 to keep developing. In sharp contrast, transgender girls who receive GnRHa do not go  
15 through male puberty and are not exposed to the heightened level of testosterone  
16 associated with male puberty.

17 18. Even so, those studies of adult transgender women show that testosterone  
18 suppression resulted in significant mitigation of muscle mass and development in adult  
19 transgender women.

20 19. For example, the only study directly examining the effects of hormone  
21 therapy on the athletic performance of transgender female athletes is a small study of  
22 eight long-distance runners. The study showed that after undergoing medical  
23 interventions, which included lowering their testosterone levels, the athletes'  
24 performance had reduced so that relative to non-transgender women their performance  
25 was now proportionally the same as it had been relative to non-transgender men prior to  
26 any medical treatment. In other words, a transgender woman who performed at about  
27 80% as well as the best performer among men of that age before transition would also  
28 perform at about 80% as well as the best performer among women of that age after

1 transition. See Joanna Harper, *Race Times for Transgender Athletes*, 6 J. Sporting  
2 Cultures & Identities 1 (2015).<sup>3</sup> Given that adolescent transgender girls who receive  
3 puberty suppressing medication do not go through male puberty, there is no medical basis  
4 to expect that transgender girls receiving such medications would have an athletic  
5 advantage.

6 20. Dr. Brown states that although he is not aware of any research directly  
7 addressing the implications of the use of pubertal suppression on athletic capability, “[i]t  
8 seems likely that males who have undergone puberty suppression will have physiological  
9 and performance advantages over females somewhere between those possessed by pre-  
10 pubertal boys, and those who have gone through full male puberty, with the degree of  
11 advantage in individual cases depending on that individual’s development and timing of  
12 the start of puberty blockade.” (Brown Decl. ¶ 116.) Dr. Brown admits that his  
13 speculation about puberty blockers is outside his area of expertise. (Brown Decl. ¶ 116).  
14 In fact, Dr. Brown’s mere speculation has no basis in scientific evidence and seems to  
15 rest on a misunderstanding about the use of puberty suppressing medication to treat  
16 gender dysphoria.

17 21. Tanner staging (also called Sexual Maturity Rating) is used to document  
18 and track the development and sequence of secondary sex characteristics of children  
19 during puberty. Under current standards of care, transgender adolescents are eligible to  
20 receive puberty blockers when they reach Tanner Stage 2, at the first onset of puberty,  
21 and long before the development of increased muscle mass and strength associated with

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22 <sup>3</sup> The legislative findings of the Arizona statute incorrectly state that for transgender  
23 women who go through male puberty (unlike the plaintiffs here), the benefit  
24 conferred by testosterone “is not diminished through the use of testosterone  
25 suppression.” See S.B. 1165, 55th Leg., 2d Reg. Sess. (Ariz. 2022), § 13. While that  
26 statement conflicts with available evidence, which shows that hormone therapy  
27 significantly reduces muscle mass and strength, it is also irrelevant to the situation of  
28 the plaintiffs in this case who have not undergone male puberty and thus are not in  
the position of having to mitigate the increased muscle mass and strength caused by  
male puberty. Notably, the legislative findings do not state that transgender girls  
who receive puberty suppressing medication have any conceivable athletic  
advantage, nor do they cite any evidence that would support that claim.

1 later stages of male puberty. See Wylie C. Hembree et al., *Endocrine Treatment of*  
2 *Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice*  
3 *Guideline*, 102 J. Clinical Endocrinology & Metabolism 3869–3903 (2017).

4 22. Following the administration of puberty blockers, transgender girls will  
5 also receive hormone replacement therapy to allow them to go through puberty consistent  
6 with their female gender identity. As a result, these transgender girls will develop many  
7 of the same physiological and anatomical characteristics of non-transgender girls,  
8 including bone size (Brown Decl. ¶¶ 49-51), skeletal structure (*id.* at ¶ 49), and  
9 “distinctive aspects of the female pelvis geometry [that] cut against athletic performance”  
10 (*id.* at ¶ 54). Thus, a transgender girl who received puberty suppressing medication  
11 followed by hormone replacement therapy does not have the same physiology as a  
12 prepubertal non-transgender boy.

13 23. None of the studies Dr. Brown cites support his hypothesis that transgender  
14 girls who receive puberty suppressing medication and hormone therapy have an athletic  
15 advantage over other girls. For example, the primary finding of the Klaver (2018) study  
16 is that receiving GnRHa and hormone therapy brings the body composition of young  
17 transgender women much closer to their non-transgender female peers than their non-  
18 transgender male peers. (Brown Decl. ¶ 118.) Those results are more pronounced the  
19 earlier a transgender girl starts GnRHa treatment.

20 24. Dr. Brown also cites to Tack et al. (2018) for the proposition that  
21 transgender girls who receive medical treatments around 16 years of age purportedly  
22 maintain higher muscle mass, lower percent body fat, higher body mass, higher body  
23 height, and higher grip strength than comparable girls of the same age. (Brown Decl. ¶  
24 117.) However, the medication administered in this study is not used in the United States  
25 and does not have nearly the same impact as puberty blockers and hormone therapy for  
26 transgender girls. The medications administered to the study participants did not fully  
27 block puberty for the participants. Yet, even with this less effective medication, the study  
28 found that transgender girls “showed a significant increase in fat mass and decrease in

1 lean mass, resulting in an increased body fat percentage” and did not experience any  
2 increase in grip strength. Lloyd Tack et al., *Proandrogenic and Antiandrogenic*  
3 *Progestins in Transgender Youth: Differential Effects on Body Composition and Bone*  
4 *Metabolism*, *J. Clinical Endocrinology & Metabolism* 2147, 2153–54 (2018). If  
5 anything, this study shows that even with a less effective medication, the physiological  
6 impact of medically treating transgender girls in adolescence, rather than when they are  
7 adults, is profound.

8 25. The World Rugby Transgender Women’s Guidelines 2020, which Brown  
9 cites throughout his declaration, allow transgender girls and women to participate in  
10 women’s rugby if they did not experience endogenous puberty, stating: “Transgender  
11 women who transitioned pre-puberty and have not experienced the biological effects of  
12 testosterone during puberty and adolescence can play women’s rugby.”

13 26. In sum, there is no evidence that transgender girls on puberty suppression  
14 medication or hormone therapy have an athletic advantage over other girls. There are no  
15 studies that have documented any such advantage, and there is no medical reason to posit  
16 that any such advantage would exist.

17 27. In my clinical practice, I have provided medical care to more than 300  
18 adolescent transgender girls. None of the transgender girls I have treated with the above  
19 medical interventions appeared to have any athletic advantage over other girls.

20 **IV. There is no evidence linking in-utero development or minipuberty to athletic**  
21 **performance and no credible medical reason to posit any such connection.**

22 28. There is no scientific basis for the claim that boys gain an athletic  
23 advantage over girls based on exposure to testosterone in utero or during minipuberty.

24 29. In a male fetus, testosterone production peaks around 11–14 weeks of  
25 gestation (in the first trimester of pregnancy), then declines until it is completely  
26 suppressed at birth. Testosterone is necessary during this time for normal development of  
27 the genitals. *See, e.g.,* Marianne Becker & Volker Hesse, *Minipuberty: Why Does it*  
28 *Happen?*, *93 Hormone Research Paediatrics* 76 (2020). Male babies also experience an

1 elevation of testosterone after birth, with levels peaking between one to two months old,  
2 and returning to prepubertal levels before six months of age. As with the in-utero  
3 elevation of testosterone, a rise in testosterone during minipuberty correlates positively  
4 with growth of the male genitals. *Id.* at 78–79.

5 30. Minipuberty does not result in clinically visible physical changes, other  
6 than a possible transient increase in testicular volume.

7 31. No research has linked this brief exposure to elevated testosterone during  
8 minipuberty to any lasting physiological impact, much less to an increase in athletic  
9 ability. Nor is there any credible medical basis even to hypothesize such an impact.

10 **Dr. Carlson’s Declaration**

11 32. Dr. Carlson asserts that permitting transgender girls to play on girls’ teams  
12 jeopardizes the safety of other girls, but none of the evidence he cites has any relevance  
13 to transgender girls—like the plaintiffs in this case—who are either prepubertal or have  
14 received puberty blocking medication at the onset of puberty and therefore have not  
15 undergone male puberty.

16 33. For example, Dr. Carlson states “it is [his] opinion that World Rugby’s  
17 assessment of the evidence is scientifically sound.” (Carlson Decl. at 2.) But as noted  
18 above, the World Rugby Transgender Women’s Guidelines 2020 allow transgender girls  
19 and women to participate in women’s rugby if they did not experience endogenous  
20 puberty, stating: “Transgender women who transitioned pre-puberty and have not  
21 experienced the biological effects of testosterone during puberty and adolescence can  
22 play women’s rugby.”

23 34. Dr. Carlson also cites the UK Sports Councils’ Equality Group guidance for  
24 transgender inclusion in organized sports, which is not a scientific report and did not  
25 consider the situation of transgender girls who receive puberty suppression at the onset of  
26 puberty. (Carlson Decl. at 2.) Notably, however, the guidance stated that “[c]urrent  
27 scientific evidence indicates that the difference between the strength, stamina, and  
28 physique between the sexes is largely due to the higher testosterone levels of males

1 during their lifetime”—a consideration that has no relevance to transgender girls who do  
2 not undergo male puberty. United Kingdom Sports Councils, *Guidance for transgender*  
3 *inclusion in domestic sport* (2021), [https://equalityinsport.org/docs/300921/Guidance for](https://equalityinsport.org/docs/300921/Guidance%20for%20Transgender%20Inclusion%20in%20Domestic%20Sport%202021%20-%20Summary%20of%20Background%20Documents.pdf)  
4 *Transgender Inclusion in Domestic Sport 2021 - Summary of Background*  
5 *Documents.pdf* (last accessed May 29, 2023).

6 35. Throughout his declaration, Dr. Carlson bases his opinion that transgender  
7 girls pose a safety risk to other girls on the fact that “[m]ales exhibit large average  
8 advantages in size, weight, and physical capacity over females—often falling far outside  
9 female ranges.” (Carlson Decl. ¶ 11c.) But that fact has no relevance to transgender girls  
10 who receive puberty suppressing medications at the onset of puberty and thus do not  
11 develop the size, weight, and physical capacity of individuals who go through male  
12 puberty.

13 36. In particular, transgender girls who receive puberty suppressing medication  
14 at the onset of puberty do not differ from other girls with respect to the factors that Dr.  
15 Carlson discusses at paragraphs 42 to 56 of his declaration. They do not have greater  
16 bone density or connective tissue strength. They do not have greater speed, strength,  
17 weight, or power. And they do not have greater throwing or kicking speed.

18 37. Dr. Carlson notes that girls are more prone to concussions than boys  
19 (Carlson Decl. ¶¶ 58–65) and cites research indicating this may be because, on average,  
20 adolescent girls have weaker neck muscles than post-pubertal adolescent boys. (Carlson  
21 Decl. ¶ 66.) If that accounts for girls’ higher rates of concussions, transgender girls on  
22 puberty suppression would be at the same or similar risk for such injury as non-  
23 transgender girls. There is no evidence, and no medical reason to believe, that their  
24 participation on girls’ teams would pose any increased threat of such injuries to other  
25 girls.

26 38. Dr. Carlson similarly claims that permitting transgender girls to play on  
27 girls’ teams increases the risk of ACL injuries because “[w]hen males are permitted to  
28 enter into the pool of female athletes based on gender identity rather than biological sex,

1 there is an increased possibility that a statistical outlier in terms of size, weight, speed,  
2 and strength—and potentially an extreme outlier—is now entering the female pool.  
3 Although injury is not guaranteed, risks to female participants will increase.” (Carlson  
4 Decl. ¶ 78.) That rationale for exclusion has no relevance to transgender girls who  
5 receive puberty suppressing medications at the onset of puberty and who therefore do not  
6 have any advantage over other girls with respect to size, weight, speed, or strength.

7 39. Dr. Carlson spends a large part of his declaration disputing whether  
8 testosterone suppression and hormone therapy can mitigate athletic advantage for  
9 transgender women who transition as adults and who have therefore undergone male  
10 puberty. (Carlson Decl. ¶¶ 79–96.) I disagree with his analysis of the evidence on this  
11 issue; however, it is irrelevant to this case, which concerns transgender girls who have  
12 not yet undergone male puberty or have received puberty suppressing medication at the  
13 onset of puberty. Dr. Carlson does not cite to any evidence, nor does any exist, that such  
14 girls have an athletic advantage over other girls.

15 40. Dr. Carlson states in passing that there are differences in athletic ability  
16 between prepubertal boys and girls, but he does not cite any evidence to support that  
17 opinion. For the reasons stated in paragraphs 9 through 13 above, there is no evidence to  
18 support that claim.

19 41. In sum, transgender girls who have not yet undergone male puberty or have  
20 received puberty suppressing medication at the onset of puberty do not present any  
21 unique safety risks to other girls. Their physical characteristics in terms of height,  
22 weight, and strength overlap with those of other girls.

### 23 **Dr. Cantor’s Declaration**

24 42. As discussed above, this case concerns a legal challenge to Arizona’s law  
25 prohibiting girls who are transgender from participating on girls’ sports teams. Dr.  
26 Cantor’s expert declaration does not offer a single expert opinion that directly relates to  
27 Arizona’s law or to the participation of transgender athletes in sports. Instead, Dr. Cantor  
28 launches a broadside attack against the prevailing model of medical care for transgender

1 youth that has been endorsed by the American Academy of Child and Adolescent  
2 Psychiatry, the American Academy of Pediatrics, the American Psychological  
3 Association, the American Psychiatric Association, and the American Medical  
4 Association, among many other mainstream medical organizations.

5 43. Many of Dr. Cantor’s criticisms are largely irrelevant to the group targeted  
6 by Arizona’s law, instead relating to children who no longer identify as transgender once they  
7 reach puberty and transgender boys. But Arizona’s law affects only transgender girls.

8 44. Dr. Cantor appears to have no experience in child or adolescent psychology  
9 and no relevant experience with respect to gender dysphoria in childhood and  
10 adolescence. His academic career has focused on pedophilia and sexual paraphilias in  
11 adults.

12 45. In terms of substance, Dr. Cantor’s declaration demonstrates a basic lack of  
13 understanding of the nature, evaluation, and treatment of gender dysphoria, the serious  
14 consequences of the condition if left untreated, and the strength of the evidence in  
15 support of medical management of gender dysphoria, including the efficacy and safety of  
16 these treatments. His opinions are not consistent with current evidence-based standards  
17 of care or the general medical consensus—they run counter to recommendations made by  
18 leading and well-respected medical bodies.

19 **I. Medical care for transgender adolescents is safe and effective.**

20 46. Dr. Cantor devotes much of his declaration to criticizing medical care for  
21 transgender adolescents. Dr. Cantor does not explain how any of his criticisms are  
22 relevant to the issue of whether transgender girls should be able to participate on female  
23 sports teams. In any event, his criticisms are not well-founded.

24 47. Studies have repeatedly documented that pubertal suppression and hormone  
25 therapy are safe and effective treatments for transgender adolescents with gender  
26 dysphoria.<sup>4</sup> These articles represent a small percentage of the full body of literature that

27 \_\_\_\_\_  
28 <sup>4</sup> See, e.g., Diana M. Tordoff et al., *Mental Health Outcomes in Transgender and  
Nonbinary Youths Receiving Gender-Affirming Care*, 5 *Jama Network Open* at 1

1 was utilized to create evidence-based clinical practice guidelines for the treatment of  
 2 gender dysphoria in children, adolescents, and adults. These treatments alleviate the  
 3 increased distress and dysphoria caused by the physical changes accompanying puberty.  
 4 Hormone therapy also brings a transgender person's body into greater alignment with  
 5 their identity and reduces the number of surgeries a transgender person may need as an  
 6 adult.<sup>5</sup>

7 48. The guidelines were published by long-standing and well-respected bodies,  
 8 including the World Professional Association for Transgender Health (WPATH) and the

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9 (2022) (finding that receipt of medical care, including puberty blockers and gender-  
 10 affirming hormones, was associated with 60% lower odds of moderate or severe  
 11 depression and 73% lower odds of suicidality over a 12-month follow-up); Amy E.  
 12 Green et al., *Association of Gender-Affirming Hormone Therapy with Depression,*  
 13 *Thoughts of Suicide, and Attempted Suicide Among Transgender and Nonbinary*  
 14 *Youth*, 70 *J. Adolescent Health* [ePublication ahead of print] at 1 (2021) (finding that  
 15 access to hormone therapy during adolescence was associated with lower odds of  
 16 recent depression and having attempted suicide in the past year); Jack L. Turban et  
 17 al., *Pubertal Suppression for Transgender Youth and Risk of Suicidal Ideation*, 145  
 18 *Pediatrics* at 1 (2020) (finding that access to puberty blockers during adolescence is  
 19 associated with a decreased lifetime incidence of suicidal ideation among adults);  
 20 Christal Achille et al., *Longitudinal impact of gender-affirming endocrine*  
 21 *intervention on the mental health and well-being of transgender youths: Preliminary*  
 22 *results*, *Int'l J. Pediatric Endocrinology* at 1 (2020) (finding that endocrine  
 23 intervention was associated with decreased depression and suicidal ideation and  
 24 improved quality of life for transgender youth); Laura E. Kuper et al., *Body*  
 25 *Dissatisfaction and Mental Health Outcomes of Youth on Gender-Affirming*  
 26 *Hormone Therapy*, 145 *Pediatrics* at 1 (2020) (showing hormone therapy in youth is  
 27 associated with reducing body dissatisfaction and modest improvements in mental  
 28 health); Anna I.R. van der Miesen et al., *Psychological Functioning in Transgender*  
*Adolescents Before and After Gender-Affirmative Care Compared with Cisgender*  
*General Population Peers*, 66 *J. Adolescent Health* 699–704 (2020) (showing fewer  
 emotional and behavioral problems after puberty suppression and similar or fewer  
 problems compared to same-age non-transgender peers); Rosalia Costa et al.,  
*Psychological Support, Puberty Suppression, and Psychosocial Functioning in*  
*Adolescents with Gender Dysphoria*, 12 *J. Sexual Medicine* at 2206 (2015) (finding  
 increased psychological function after six months of puberty suppression); Annelou  
 L.C. de Vries et al., *Young Adult Psychological Outcome After Puberty Suppression*  
*and Gender Reassignment*, 134 *Pediatrics* 696–704 (2014) (following a cohort of  
 transgender young people in the Netherlands from puberty suppression through  
 surgical treatment and finding that the cohort had global functioning equivalent to the  
 Dutch population).

<sup>5</sup> See de Vries, *supra* n.4.

1 Endocrine Society (Coleman et al. 2022; Coleman et al. 2012; Hembree et al. 2017;  
2 Hembree et al. 2009). Other leading medical bodies such as the American Association of  
3 Pediatrics (“AAP”), the American Medical Association (“AMA”), the American  
4 Psychological Association, the American Psychiatric Association, and the American  
5 Academy of Family Physicians (“AAFP”) all support the tenants of these guidelines due  
6 to the rigorous nature of their review of scientific evidence in the field (Rafferty et al.  
7 2018 (AAP); AMA 2019; American Psychological Association 2015; Drescher et al.  
8 2018 (American Psychiatric Association); Klein et al. 2018 (AAFP)).

9 49. Dr. Cantor’s criticisms of the process used to develop the WPATH Standards  
10 of Care and the Endocrine Society Guidelines are unfounded. Both were created based  
11 on rigorous reviews of the best available science and expert professional consensus in  
12 transgender health. For WPATH, international professionals were selected to serve on  
13 the SOC 8 writing committee. Recommendation statements were developed based on  
14 data derived from independent systemic literature reviews. Grading of evidence was  
15 performed by an Evidence Review Team which determined the strength of evidence  
16 presented in each individual study relied upon in the document (Coleman et al. 2022).  
17 Similarly, the Endocrine Society Guidelines were developed through rigorous scientific  
18 processes that “followed the approach recommended by the Grading of  
19 Recommendations, Assessment, Development, and Evaluation group, an international  
20 group with expertise in the development and implementation of evidence-based  
21 guidelines.” The Endocrine Society published its clinical practice guidelines in  
22 collaboration with the Pediatric Endocrine Society, the European Societies for  
23 Endocrinology and Pediatric Endocrinology, and WPATH, among others (Hembree et al.  
24 2017).

25 50. Dr. Cantor also spends more than 10 pages of his declaration discussing the  
26 “Pyramid of Standards of Evidence” to support his claim that the evidence supporting  
27 puberty suppression and hormone therapy is not based on randomized controlled trials  
28 and is therefore not reliable. (Cantor Decl. ¶¶ 38–66.) While I agree with Dr. Cantor that

1 randomized control trials are an excellent study design in many contexts, such trials are  
2 not ethically permissible for treatments that are already known to provide a benefit to  
3 patients, which includes the use of GnRHa and hormone therapy to treat gender  
4 dysphoria in adolescents. For this reason, no such study of these treatments would be  
5 approved, no patients and families would participate, and no ethical researcher would  
6 undertake such a study. As is true for most other pediatric treatments, researchers in this  
7 field must rely on other types of study design. These types of studies can include  
8 longitudinal cohort studies, which examine any changes in symptoms over the course of  
9 treatment, or cross-sectional studies, which compare persons who are treated with those  
10 who are untreated.

11 51. Dr. Cantor also misstates the risks and benefits associated with GnRHa and  
12 hormone therapy. (Cantor Decl. ¶¶ 125–37.)

13 52. Dr. Cantor’s concerns about bone density in patients prescribed GnRHa are  
14 well-known, generally short-lived (as he himself admits), and are specifically managed  
15 during patient care. In practice, risk of lower bone mineral density is mitigated by  
16 screening for, and treating, vitamin D deficiency when present, and by limiting the number  
17 of years of treatment based on a patient’s clinical course (Rosenthal 2014). It is accurate  
18 to state that pubertal hormones (either testosterone or estrogen) contribute to bone density  
19 accrual. A person who was never exposed to any sex hormones for their entire life would  
20 be at high risk of osteoporosis. GnRHa, however, is administered only for a relatively  
21 short period of time. Once a decision is made to either administer gender-affirming  
22 hormones or to resume puberty consistent with a patient’s birth-assigned sex, bone  
23 density accrual rises with exposure to those sex hormones.

24 53. Dr. Cantor also raises a hypothetical concern regarding the impact of  
25 puberty blockers on brain development. (Cantor Decl. ¶ 128.) While it is common for  
26 researchers and clinicians to consider any possible adverse impacts of medications, there  
27 is no evidence that puberty blockers have any adverse impact on brain development. For  
28 example, when considering children with naturally occurring delayed puberty, I find no

1 published evidence of negative consequences to brain development compared with  
2 children with normally timed puberty. Likewise, Dr. Cantor can point to no published  
3 evidence in support of this concern in transgender adolescents prescribed GnRHa, instead  
4 citing various articles that simply raise the issue. There are also studies related to  
5 children who are prescribed GnRHa for precocious puberty that found that “GnRHa  
6 treated girls do not differ in their cognitive functioning ... from the same age peers.”  
7 (Wojniusz et al. 2016). The authors of this article came to this conclusion because there  
8 was not a statistically significant difference in IQ, memory, mental rotation, cognitive  
9 executive function, processing speed, attention, or executive function in participants  
10 treated with GnRHa for precocious puberty.

11 54. Dr. Cantor asserts that I have not provided sources showing that gender  
12 identity “has a strong biological basis.” (Cantor Decl. ¶ 145.) Scientific research and  
13 medical literature across disciplines demonstrates that gender identity, like other  
14 components of sex, has a strong biological foundation. For example, there are numerous  
15 studies detailing the similarities in the brain structures of transgender and non-  
16 transgender people with the same gender identity (Luders et al. 2009; Rametti et al. 2011;  
17 Berglund et al. 2008). In one such study, the volume of the bed nucleus of the *stria*  
18 *terminalis* (a collection of cells in the central brain) in transgender women was equivalent  
19 to the volume found in non-transgender women (Chung et al. 2002).

20 55. There are also studies highlighting the genetic components of gender  
21 identity. Twin studies are a helpful way to understand genetic influences on human  
22 diversity. Identical twins share the same DNA, while fraternal twins share roughly 50%  
23 of the same DNA; however, both types of twins share the same environment. Therefore,  
24 studies comparing differences between identical and fraternal twin pairs can help isolate  
25 the genetic contribution of human characteristics. Twin studies have shown that if an  
26 identical twin is transgender, the other twin is much more likely to be transgender  
27 compared to fraternal twins, a finding which points to genetic underpinnings to gender  
28 identity development (Heylens et al., 2012).

1           56. There is also ongoing research on how differences in fetal exposures to  
2 hormones may influence gender identity. This influence can be examined by studying a  
3 medical condition called congenital adrenal hyperplasia. Female fetuses affected by  
4 congenital adrenal hyperplasia produce much higher levels of testosterone compared to  
5 fetuses without the condition. While most females with congenital adrenal hyperplasia  
6 have a female gender identity in adulthood, the percentage of those with gender  
7 dysphoria is higher than that of the general population. This suggests that fetal hormone  
8 exposures contribute to the later development of gender identity (Dessens et al. 2005).

9           57. There has also been research examining specific genetic differences that  
10 appear associated with gender identity formation (Rosenthal 2014). For example, one  
11 study examining differences in the estrogen receptor gene among transgender women and  
12 non-transgender male controls found that the transgender individuals were more likely to  
13 have a genetic difference in this gene (Henningsson et al. 2005).

14           58. The above studies are representative examples of scientific research  
15 demonstrating biological influences on gender identity. Gender identity, like other  
16 complex human characteristics, is rooted in biology with important contributions from  
17 neuroanatomic, genetic, and hormonal variation (Roselli 2018).

18           59. Dr. Cantor discounts gender identity on the basis that there is “no means of  
19 either falsifying or verifying people’s declarations of their gender identities.” (Cantor  
20 Decl. ¶ 105.) He also claims “[i]n science, it is the objective factors—and only the  
21 objective factors—that matter to a valid definition.” (Cantor Decl. ¶ 105.) But just  
22 because gender identity is a human characteristic ascertained through observation and  
23 conversations rather than a lab test makes it no less valid or “scientific.” Gender identity  
24 is a real human characteristic, and it is rooted in biology.

25           60. Dr. Cantor also takes issue with my statement in my original declaration  
26 that a “person’s gender identity is innate and cannot be changed by medical or  
27 psychological intervention.” (Shumer Decl. at 7.) Dr. Cantor notes that a youth may be  
28 “mistaken about their gender identity” or may “misinterpret their experiences to indicate

1 they are transgender.” (Cantor Decl. ¶ 146.) It is true that some youth go through a  
2 period of exploration and identity development before they understand their gender  
3 identity, while others consistently identify as a particular gender from an early age into  
4 adulthood. This is true for both transgender and non-transgender youth and does not  
5 show that therapy or any other intervention can change a young person’s gender identity.  
6 To the contrary, substantial evidence shows that attempts to change a young person’s  
7 gender identity or gender expression are both ineffective and extremely harmful.<sup>6</sup>

8 61. Dr. Cantor also appears to dispute that supportive treatments for gender  
9 dysphoria reduce suicidality in transgender adolescents. In fact, there are multiple studies  
10 demonstrating this positive impact, which is also consistent with my own clinical  
11 practice.<sup>7</sup>

12 62. Finally, Dr. Cantor claims, without citation, that I somehow violated  
13 “medical ethics” in my original declaration by asserting specific conclusions about the  
14 medical status of “people not under my care.” Dr. Cantor is presumably referring to the  
15 plaintiffs in this case and to my statements about those plaintiffs at the end of my  
16 declaration. There is nothing unethical about those statements, all of which I stand  
17 behind.

## 18 **II. Other countries provide medical care to transgender adolescents.**

19 63. Dr. Cantor’s declaration references documents from several other countries  
20 on the treatment of gender dysphoria, predominantly from Finland, Sweden, and the  
21 United Kingdom (“UK”), although they also mention documents from France and  
22 Norway.

23 64. Before addressing the substance of his claims related to these documents,

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24 <sup>6</sup> Douglas C. Haldeman (Ed.), *The Case Against Conversion “Therapy”: Evidence, Ethics, and Alternatives* (2022).

25 <sup>7</sup> See Diana M. Tordoff et al., *Mental Health Outcomes in Transgender and Nonbinary*  
26 *Youths Receiving Gender-Affirming Care*, 5 JAMA Network Open (2022); Amy E.  
27 Green et al., *Association of Gender-Affirming Hormone Therapy With Depression,*  
28 *Thoughts of Suicide, and Attempted Suicide Among Transgender and Nonbinary*  
*Youth*, 7 J. Adolescent Health 643–649 (2022).

1 several preliminary points should be made. Dr. Cantor does not provide a comprehensive  
 2 review of international practices; rather, he selectively cites documents that he believes  
 3 support his position.

4 65. Language differences also make it difficult to fully assess some of the  
 5 material that the defendants' experts cite to as support for their claims. For example, the  
 6 Swedish National Board of Health and Welfare's ("NBHW"'s) guideline for the care of  
 7 children and adolescents with gender dysphoria is not available as an official English  
 8 translation; only a 6-page summary is available.<sup>8</sup>

9 66. With respect to the content of these documents, none is a clinical practice  
 10 guideline which rates the quality of the evidence and the strength of the  
 11 recommendations. Some of the documents are systematic reviews of the literature that  
 12 rate the quality of the evidence but do not make recommendations.<sup>9</sup> Direct inferences  
 13 cannot be drawn from the quality of the evidence to the strength of recommendations;  
 14 low quality evidence may be a sufficient basis for strong recommendations. The French  
 15 document referenced is in fact only a press release.<sup>10</sup>

16 67. Dr. Cantor mischaracterizes the conclusions of these documents, stating for  
 17 example that they "range from medical advisories to outright bans on the medical  
 18 transition of minors." (Cantor Decl. ¶ 16). None of the documents to which Dr. Cantor  
 19 refers recommends banning medical care for treating gender dysphoria in adolescents.

20 68. Finland, Sweden, and the UK are all moving to providing care through  
 21

22 <sup>8</sup> The National Board of Health and Welfare, *Care of Children and Adolescents with*  
 23 *Gender Dysphoria: Summary* (2022),  
 24 [https://www.socialstyrelsen.se/globalassets/sharepoint-dokument/artikelkatalog/  
 25 kunskapsstod/2022-3-7799.pdf](https://www.socialstyrelsen.se/globalassets/sharepoint-dokument/artikelkatalog/kunskapsstod/2022-3-7799.pdf) (last accessed May 26, 2023).

24 <sup>9</sup> National Institute for Health and Care Excellence (NICE), *Evidence Review:*  
 25 *Gonadotrophin releasing hormone analogues for children and adolescents with*  
 26 *gender dysphoria* (2020), available at [https://cass.independent-review.uk/nice-  
 27 evidence-reviews/](https://cass.independent-review.uk/nice-evidence-reviews/) (last accessed May 26, 2023).

26 <sup>10</sup> Académie Nationale de Médecine, *Medicine and gender transidentity in children and*  
 27 *adolescents* (2022), available at [https://www.academie-medecine.fr/la-medecine-  
 28 face-a-la-transidentite-de-genre-chez-les-enfants-et-les-adolescents/?lang=en](https://www.academie-medecine.fr/la-medecine-face-a-la-transidentite-de-genre-chez-les-enfants-et-les-adolescents/?lang=en) (last  
 accessed May 26, 2023).

1 regional multidisciplinary clinics, the type of care commonly provided in the US.<sup>11</sup> In  
2 Finland, for example, medical care is provided by Helsinki University Central Hospital  
3 and Tampere University Hospital. Puberty suppression and hormone treatment are  
4 provided to minors with persistent gender dysphoria on a case-by-case basis.<sup>12</sup>

5 69. Sweden is restructuring care for gender dysphoria into three national  
6 specialized medical care units. While the Swedish recommendations state puberty  
7 suppression and gender-affirming hormone treatment “should be offered only in  
8 exceptional cases,” they later state that “an early (childhood) onset of gender  
9 incongruence, persistence of gender incongruence until puberty and a marked  
10 psychological strain in response to pubertal development is among the recommended  
11 criteria.”<sup>13</sup>

12 70. The UK is moving from a single specialist provider model to regional  
13 centers. The Cass Review encourages providers prescribing puberty blocker and  
14 hormone therapy to follow the Endocrine Society Guidelines and UK guidelines  
15 regarding informed consent.<sup>14</sup>

16 71. The documents all emphasize the importance of data collection. The Cass  
17 Review recommends, for example, “[e]xisting and future services should have  
18 standardised data collection in order to audit standards and inform understanding of the  
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20 <sup>11</sup> Sam Hsieh & Jennifer Leininger, *Resource list: Clinical care programs for gender-*  
21 *nonconforming children and adolescents*, 43 *Pediatric Annals* 238–244 (2014).

22 <sup>12</sup> Council for Choices in Health Care in Finland, *Medical treatment methods for*  
23 *dysphoria associated with variations in gender identity in minors – recommendation*  
24 (2020), available at [https://palveluvalikoima.fi/documents/1237350/22895008/Summary\\_minors\\_en+\(1\).pdf/fa2054c5-8c35-8492-59d6-b3de1c00de49/Summary\\_minors\\_en+\(1\).pdf?t=1631773838474](https://palveluvalikoima.fi/documents/1237350/22895008/Summary_minors_en+(1).pdf/fa2054c5-8c35-8492-59d6-b3de1c00de49/Summary_minors_en+(1).pdf?t=1631773838474) (last accessed May 26, 2023).

25 <sup>13</sup> The National Board of Health and Welfare, *Care of Children and Adolescents with*  
26 *Gender Dysphoria: Summary* (2022), available at  
<https://www.socialstyrelsen.se/globalassets/sharepoint-dokument/artikelkatalog/kunskapsstod/2022-3-7799.pdf> (last accessed May 26, 2023).

27 <sup>14</sup> Hilary Cass, *The Cass Review: Independent Review of Gender Identity Services for*  
28 *Children and Young People Interim Report*, National Health Service (NHS), UK at 71–72 (2022).

1 epidemiology, assessment and treatment of this group of children and young people.”<sup>15</sup>

2 72. The Swedish NBHW similarly states, “[t]o ensure that new knowledge is  
3 gathered, the NBHW further deems that treatment with GnRH-analogues and sex  
4 hormones for young people should be provided within a research context, which does not  
5 necessarily imply the use of randomized controlled trials (RCTs). As in other healthcare  
6 areas where it is difficult to conduct RCTs while retaining sufficient internal validity, it is  
7 also important that other prospective study designs are considered for ethical review and  
8 that register studies are made possible.”<sup>16</sup>

9 I declare under criminal penalty under the laws of Arizona that the foregoing is  
10 true and correct.

11 Signed on the 31st day of May, 2023, in Ann Arbor, Michigan.

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Daniel Shumer, M.D.

26 <sup>15</sup> *Id.*

27 <sup>16</sup> The National Board of Health and Welfare, Care of Children and Adolescents with  
28 Gender Dysphoria: Summary (2022), *available at*  
[https://www.socialstyrelsen.se/globalassets/sharepoint-dokument/artikelkatalog/  
kunskapsstod/2022-3-7799.pdf](https://www.socialstyrelsen.se/globalassets/sharepoint-dokument/artikelkatalog/kunskapsstod/2022-3-7799.pdf) (last accessed May 26, 2023).