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CAN TRACK AND FIELD'S GOVERNING BODY BAN FEMALE RUNNERS FROM COMPETING IN THE U.S. BECAUSE OF HIGH TESTOSTERONE LEVELS?

Ronald S. Katz* and Robert W. Luckinbill**

This article explores the applicability, if any, in the United States of a decision rendered by a private sports arbitration organization in Lausanne, Switzerland: the Court of Arbitration for Sport (CAS). The decision validated regulations of World Athletics—the private organization that governs track and field internationally—which had the effect of banning an Olympic champion, Caster Semenya of South Africa, from international competition against females because she had testosterone levels that World Athletics deemed too high.

The article focuses on the fact that the CAS decision uses the law of Monaco to decide the matter. CAS specifically states that the decision may not apply in other countries like the U.S. CAS expressly leaves such decisions to the courts of the respective countries involved.

*The article then explores the reasoning of CAS with respect to both the U.S. law of discrimination and the law of evidence. The article concludes that the CAS decision would not stand up under either set of laws in the United States. In particular, most of the evidence relied on by CAS would not be admissible in U.S. courts because of the standards set in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), that prohibit expert testimony not in accord with generally accepted scientific standards.*

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I. INTRODUCTION

In April 2019, the Court of Arbitration for Sport (“CAS”), a private body headquartered in Lausanne, Switzerland, issued a decision (“the Arbitration Award”) against a South African middle-distance runner, Caster Semenya.¹ In the decision, the arbitration panel ruled that Ms. Semenya—whom all parties to the arbitration and the arbitration panel itself acknowledged is legally a woman—and runners like her, with naturally-occurring testosterone levels deemed too high by the sport’s governing body, World Athletics, will have to comply with recently adopted

1. *Semenya v. Int’l Ass’n of Athletics Fed’ns*, CAS 2018/O/5794 & CAS 2018/O/5798, Arbitral Award, 2, ¶ 3, 163, ¶ 1 (2019).

regulations, and take testosterone-reducing hormones in order to compete internationally.²

The arbitration panel applied the law of Monaco, expressly declining to rule on the law of other jurisdictions:³ “[T]he Panel . . . cannot come to a conclusion on whether or not the [World Athletics] . . . Regulations would be found to be unenforceable in, or contrary to the domestic law of, different national jurisdictions.”⁴

Since USA Track and Field, Inc. (“USATF”) is an affiliate of World Athletics, analyzing whether the decision would apply in the United States is not merely an academic exercise, as many more international track meets—including the World Championships scheduled for 2022 in Eugene, Oregon—occur in the U.S. than in Monaco.⁵ This article will explore how a U.S. court would rule if Ms. Semenya, or someone similarly situated,⁶ brought a case in a U.S. federal court to enjoin the application of World Athletics’ *Eligibility Regulations for the Female Classification (Athletes with Differences of Sex Development)* (DSD Regulations).

After providing some background, this article briefly describes, for context, a closely related CAS arbitration that set the stage for the Semenya arbitration. The earlier arbitration was won by a female runner who, like Ms. Semenya, had testosterone levels deemed too high.⁷ In its decision, the CAS determined, *inter alia*, that athletic ability was too complex to depend on any one factor like testosterone.⁸ That case, which the panel that issued the recent arbitration decision in Semenya’s case

2. Sean Ingle, *Semenya loses landmark legal case against IAAF over testosterone levels*, GUARDIAN (May 1, 2019, 6:00 PM), <https://www.theguardian.com/sport/2019/may/01/caster-semenya-loses-landmark-legal-case-iaaf-athletics>. World Athletics was formerly known as the International Association of Athletics Federations (“IAAF”). *About World Athletics*, WORLD ATHLETICS, <https://www.worldathletics.org/about-iaaf> (last visited Oct. 14, 2020). For purposes of clarity, the organization will be referred to herein as World Athletics except in quotations and titles where the former name was used.

3. *Semenya*, CAS 2018/O/5794 at 110, ¶ 424.

4. *Id.* at 145, ¶ 555.

5. *See, e.g., Calendar/Results*, WORLD ATHLETICS (2020), <https://www.worldathletics.org/competition/calendar/2019#180> (showing that in 2019, there were six World Athletics events in the United States and one event in Monaco); *World Athletics Championships Oregon22 to be Held July 15-24, 2022*, USATF (Apr. 8, 2020), <https://www.usatf.org/news/2020/world-athletics-championships-oregon22-to-be-held-> [hereinafter *Oregon22*].

6. *Oregon22*, *supra* note 5.

7. *Chand v. Athletics Fed’n of India (AFI)*, CAS 2014/A/3759, Interim Arbitral Award, 5, ¶16, 2, ¶1 (2015).

8. *Id.* at 154, ¶ 532 (“[W]hile the evidence indicates that higher levels of naturally occurring testosterone may increase athletic performance, the Panel is not satisfied that the degree of that advantage is more significant than the advantage derived from the numerous other variables which the parties acknowledge also affect female athletic performance . . .”).

did not consider as a binding precedent,⁹ helps to illuminate the Arbitration Award. This article will then analyze the evidence and arguments set forth in the Arbitration Award.

This article will then set out arguments that would likely be made in a U.S. court, both for and against any female athlete challenging the requirement that she take testosterone-reducing hormones in order to compete. Finally, the article will reach a conclusion on whether a U.S. court would be likely to strike down the World Athletics regulations in question for purposes of U.S. competitions.

II. BACKGROUND

The international track world has struggled with how to treat female competitors whose bodies produce a naturally-occurring amount of testosterone deemed too high by World Athletics. Such a condition, known as hyperandrogenism, results in the production of an excess amount of androgen (such as testosterone) and occurs in five to ten percent of women.¹⁰ World Athletics initially adopted a set of regulations dealing with this topic entitled *Regulations Governing Eligibility of Females with Hyperandrogenism to Compete in Women's Competitions*.¹¹ After the Hyperandrogenism Regulations were successfully challenged by Indian sprinter Dutee Chand,¹² World Athletics adopted the DSD Regulations.¹³ Basically, the DSD Regulations mandate that female competitors whose bodies contain more testosterone than World Athletics deems appropriate must take testosterone-reducing hormones in order to compete internationally.¹⁴

Ms. Semenya challenged the legality of the DSD Regulations at the CAS.¹⁵ She asserted a number of claims, including that the regulations

9. Semenya v. Int'l Ass'n of Athletics Fed'ns, CAS 2018/O/5794 & CAS 2018/O/5798, Arbitral Award, 122, ¶ 471 (2019).

10. Susie East, *Should a woman's testosterone level matter in sports?*, CNN (Aug. 12, 2016, 4:59 PM), <https://www.cnn.com/2016/08/12/health/testosterone-and-hyperandrogenism-in-female-athletes/index.html>.

11. See generally IAAF, IAAF REGULATIONS GOVERNING ELIGIBILITY OF FEMALES WITH HYPERANDROGENISM TO COMPETE IN WOMEN'S COMPETITIONS (2011), <https://www.sportsintegrityinitiative.com/wp-content/uploads/2016/02/IAAF-Regulations-Governing-Eligibility-of-Females-with-Hyperandrogenism-to-Compete-in-Women%E2%80%99s-Competition-In-force-as-from-1st-May-2011-6.pdf> [hereinafter HYPERANDROGENISM REGULATIONS].

12. See *infra* Section III.

13. See IAAF, ELIGIBILITY REGULATIONS FOR THE FEMALE CLASSIFICATION (ATHLETES WITH DIFFERENCES OF SEX DEVELOPMENT) 3, ¶ 2.3 (2019) [hereinafter DSD REGULATIONS].

14. *Id.* at 3, ¶ 2.3(b).

15. Semenya v. Int'l Ass'n of Athletics Fed'ns, CAS 2018/O/5794 & CAS 2018/O/5798, Arbitral Award, 2, ¶ 1 (2019).

discriminate “on the basis of sex and/or gender.”¹⁶ Although World Athletics prevailed in the arbitration, it was a narrow victory, decided pursuant to the laws of Monaco,¹⁷ where World Athletics is headquartered.¹⁸ As noted above, the Arbitration Award expressly states that the panel did not decide the arbitration based on law other than that of Monaco.¹⁹ As a result, enforceability of the DSD Regulations outside of Monaco “will ultimately be a matter for the courts of the various jurisdictions in question to determine.”²⁰

Ms. Semenya appealed the Arbitration Award to the Swiss Federal Tribunal, Switzerland’s supreme court.²¹ On August 25, 2020, the Swiss Federal Supreme Court dismissed the appeals filed by Ms. Semenya.²² The Court found that “[t]he Court of Arbitration for Sport had the right to uphold the conditions of participation issued for female athletes with the genetic variant ‘46 XY DSD’ in order to guarantee fair competition for certain running disciplines in female athletics.”²³ Regardless of the result of the appeal, the enforceability of the DSD Regulations is, by the express language of the Arbitration Award, an open question in the U.S.

III. *DUTEE CHAND V. IAAF*: PRECURSOR TO THE SEMENYA ARBITRATION

Indian sprinter Dutee Chand, who, like Ms. Semenya, had higher levels of naturally occurring testosterone than deemed appropriate by World Athletics,²⁴ prevailed in a CAS arbitration against World Athletics regarding regulations that would have prevented her from competing because of her testosterone level.²⁵ The CAS panel in the matter involving Ms. Semenya expressly stated, however, that “the findings and

16. *Id.* at 2, ¶ 2.

17. *Id.* at 110, ¶ 424.

18. *About World Athletics*, WORLD ATHLETICS, <https://www.worldathletics.org/about-iaaf> (last visited Sept. 30, 2020).

19. *See Semenya*, CAS 2018/O/5794 at 109-10, ¶¶ 421-24 (explaining the decision to apply the law of Monaco in this case).

20. *Id.* at 145, ¶ 555.

21. Associated Press, *Caster Semenya appeals testosterone ruling: ‘The IAAF will not drug me,’* L.A. TIMES (May 29, 2019, 1:08 PM), <https://www.latimes.com/sports/olympics/la-sp-caster-semenya-appeals-testosterone-ruling-20190529-story.html>.

22. Press Release, Swiss Federal Supreme Court, DSD Regulations: Caster Semenya’s Appeal Against the Decision of the Court of Arbitration for Sport Dismissed (Sept. 8, 2020) [hereinafter Press Release, DSD Regulations]; *see Semenya v. Int’l Ass’n of Athletics Fed’ns*, 4A_248/2019 & 4A_398/2019, Judgment, (1st Court of Civil Law 2020).

23. Press Release, DSD Regulations, *supra* note 22.

24. *Chand v. Athletics Fed’n of India (AFI)*, CAS 2014/A/3759, Interim Arbitral Award, 8, ¶¶ 27-29 (2015).

25. *Semenya v. Int’l Ass’n of Athletics Fed’ns*, CAS 2018/O/5794 & CAS 2018/5798, Executive Summary, 1, ¶¶ 2-4 (2019), https://www.tas-cas.org/fileadmin/user_upload/CAS_Executive_Summary_5794_.pdf.

decision in *Chand* are in no way binding on this Panel,²⁶ at least in part because the prior arbitral ruling related to a different set of regulations.²⁷

Ms. Chand had an outstanding junior career, primarily focusing on the “200 metres sprint and the 4 x 400-metre sprint relay.”²⁸ However, Ms. Chand’s ability to continue competing was called into question in 2011 when World Athletics published its Hyperandrogenism Regulations.²⁹

These regulations were intended to determine the eligibility of women with hyperandrogenism to compete in women’s track and field meets.³⁰ Pursuant to the regulations, females with hyperandrogenism would be eligible to compete in women’s meets only if they participated in a three-level medical process and were determined to have androgen levels that World Athletics deemed appropriate.³¹

After undergoing certain medical testing as required by the Athletics Federation of India (“AFI”), the Indian affiliate of World Athletics, Ms. Chand was notified that she would not be permitted to participate in the World Championships or the Commonwealth Games “because her ‘male hormone’ levels were too high.”³² Subsequently, she was “provisionally suspended from participating” in any sporting events.³³

Ms. Chand filed an appeal with the CAS against the AFI and World Athletics.³⁴ Ms. Chand claimed that the Hyperandrogenism Regulations discriminated against female athletes with “a particular natural physical characteristic” and were “based on flawed factual assumptions about the relationship between testosterone and athletic performance.”³⁵ World Athletics contested each of Ms. Chand’s assertions.³⁶

In July 2015, the panel of arbitrators unanimously issued an interim arbitration award finding in favor of Ms. Chand.³⁷ The arbitrators held that the male and female categories of competition are intended to cover all athletes; the arbitrators also expressed their concern that those like

26. *Semenya v. Int’l Ass’n of Athletics Fed’ns*, CAS 2018/O/5794 & CAS 2018/O/5798, Arbitral Award, 122, ¶ 471 (2019).

27. *Id.*

28. *Chand*, CAS 2014/A/3759 at 2, ¶ 1.

29. *Id.* at 14-22, ¶¶ 41-68.

30. *Id.* at 14, ¶ 42.

31. HYPERANDROGENISM REGULATIONS, *supra* note 11, at 5. A female needed androgen less than or equal to ten nanomoles per liter or to have an androgen resistance such that they would not have a competitive advantage from the elevated levels of androgen. *Id.* at 12.

32. *Chand*, CAS 2014/A/3759 at 5, ¶¶ 14-16.

33. *Id.* at 8, ¶ 27.

34. *Id.* at 10, ¶ 32.

35. *Id.* at 2, ¶ 4.

36. *Id.*

37. *Id.* at 160, ¶¶ 1-8.

Ms. Chand might not be allowed to compete at all.³⁸ Specifically, the arbitrators found that:

On the basis of the evidence currently before the Panel, the Panel is unable to conclude on the balance of probabilities that androgen-sensitive hyperandrogenic female athletes enjoy such a substantial performance advantage over non-hyperandrogenic female athletes that excluding them from competing in the female category, and thereby excluding them from competing at all unless they take medication or undergo treatment, is a necessary and proportionate means of preserving fairness in athletics competition and/or policing the binary male/female classification.³⁹

The CAS panel specifically found that numerous other factors, including “nutrition, access to specialist training facilities and coaching, and other genetic and biological variations,” may increase athletic performance.⁴⁰

The arbitrators suspended the Hyperandrogenism Regulations for a period of two years, subject to World Athletics submitting additional evidence and expert reports on the “actual degree of athletic performance advantage sustained by hyperandrogenic female athletes as compared to non-hyperandrogenic female athletes.”⁴¹ Absent such a submission, the Hyperandrogenism Regulations would be deemed void after the two-year suspension.⁴²

After obtaining an extension to submit additional evidence, World Athletics submitted materials to the CAS “including expert reports and legal submissions.”⁴³ Among the materials submitted were “draft revised regulations that would only apply to female track events over distances of between 400 meters and one mile.”⁴⁴ World Athletics also submitted as its primary analysis a 2017 article from the *British Journal of Sports Medicine (BJSM)*.⁴⁵

38. *Chand*, CAS 2014/A/3759 at 148, ¶¶ 512-13.

39. *Id.* at 154, ¶ 532.

40. *Id.*

41. *Id.* at 160, ¶ 3.

42. *Id.* at 158, ¶ 548.

43. Media Release, Court of Arbitration for Sport Media Release, The Application of the IAAF Hyperandrogenism Regulations Remain Suspended (Jan. 19, 2018), https://www.tas-cas.org/fileadmin/user_upload/Media_Release_3759_Jan_2018.pdf [hereinafter CAS Media Release].

44. *Id.*

45. See Press Release, International Association of Athletics Federations, Levelling the playing field in female sport: new research published in the British Journal of Sports Medicine (July 3, 2017), <https://www.worldathletics.org/news/press-release/hyperandrogenism-research>; *IAAF decides to take Dutee Chand gender case back to court*, TIMES NOW (July 4, 2017), <https://www.timesnownews.com/sports/article/iaaf-decided-to-take-dutee-chand-gender-case-back-to-court/65056>; Stéphane Bermon & Pierre-Yves Garnier, *Serum Androgen Levels and Their Relation to Performance in Track and Field: Mass Spectrometry Results*

The CAS determined that World Athletics' submission of additional evidence was sufficiently compliant but, with the consent of the parties, suspended the proceedings for six months, during which the World Athletics Hyperandrogenism Regulations would remain suspended.⁴⁶ Moreover, the CAS decreed that the arbitration proceedings would continue in the event World Athletics decided not to withdraw the existing regulations, and would be terminated in the event World Athletics withdrew the existing regulations or replaced them with the proposed new regulations.⁴⁷

In March 2018, World Athletics informed the CAS that it was going to withdraw the Hyperandrogenism Regulations challenged by Ms. Chand and replace them with the DSD Regulations, which were enacted in April 2018,⁴⁸ and came into effect on November 1, 2018,⁴⁹ providing the predicate for Ms. Semenya's arbitration.

IV. *CASTER SEMENYA V. IAAF*

The first words in the Arbitration Award under the heading "MERITS" are

Ms. Semenya is a woman. At birth, it was determined that she was female She has been raised as a woman. She has lived as a woman. She has run as a woman. She is—and always has been—recognized in law as a woman and has always identified as a woman.⁵⁰

Obviously, Ms. Semenya's legal sex was not what the case was about. Rather, according to World Athletics, the case turned on whether she had a so-called "male sports sex."⁵¹ That determination, in turn, depended on the testimony of numerous expert witnesses on both sides.⁵² Ultimately, the majority of the panel agreed with the experts offered by World Athletics,⁵³ although the panel did not specifically rule on the term "male sports sex."⁵⁴ Instead, the ruling was on the issue whether

from 2127 *Observations in Male and Female Elite Athletes*, 51 *BRIT. J. SPORTS MED.* 1, 2 (May 15, 2017).

46. CAS Media Release, *supra* note 43.

47. *Id.*

48. *See* Semenya v. Int'l Ass'n of Athletics Fed'ns, CAS 2018/O/5794 & CAS 2018/5798, Executive Summary, 1, ¶¶ 4-5 (2019), https://www.tas-cas.org/fileadmin/user_upload/CAS_Executive_Summary_5794.pdf.

49. *See* Semenya v. Int'l Ass'n of Athletics Fed'ns, CAS 2018/O/5794 & CAS 2018/O/5798, Arbitral Award, 3, ¶ 10 (2019).

50. *Id.* at 118, ¶ 454.

51. *Id.* at 132-33, ¶¶ 501-07.

52. *See id.* at 4-10, ¶¶ 15-53, 12-15, ¶¶ 56-71, 17-22, ¶¶ 79-108.

53. *See id.* at 108, ¶ 415, 160, ¶ 626.

54. *Id.* at 133, ¶ 507.

intersex women “have an athletic advantage over other female athletes and, if so, whether the magnitude of that advantage is capable of subverting fair competition in certain athletic events.”⁵⁵

The expert testimony depended on questions relating to endocrinology and other complex areas of science, which are beyond the scope of this article. What will be explored below, however, are undisputed facts about the evidence on which a majority of the arbitration panel relied.

The primary public World Athletics arguments were set out in *BG17*, the *British Journal of Sports Medicine* article previously submitted by World Athletics in connection with the Dutee Chand arbitration, and referenced in section III, *supra*. A number of key undisputed facts undermine the credibility and viability of *BG17*, however.

The first undisputed fact about that article is that it was co-authored by a consultant and an employee of World Athletics, Stéphane Bermon and Pierre Yves-Garnier, respectively.⁵⁶ At the end of the article there is a “**Disclaimer**” in bold type that reads, in relevant part:

SB [Stéphane Bermon] is a medical and scientific consultant for the IAAF and a member of the IAAF and IOC working groups on hyperandrogenic female athletes and transgender athletes and for that purpose appeared as a witness in the Dutee Chand vs IAAF CAS case. PYG [Pierre Yves-Garnier] is the director of the IAAF Health and Science Department⁵⁷

The fact that the co-authors of the article are employed or retained by World Athletics creates a serious conflict of interest; it is unlikely in the extreme that they would write anything against the interests of the organization that signs their paychecks.

The second undisputed fact about that article is that some of the data on which it was based was problematic. That fact was expressly noted in a *New York Times* article,⁵⁸ and also acknowledged by Mr. Bermon, who co-authored *BG17*, in a second article on the topic that appeared in the *British Journal of Sports Medicine (BHKE18)*.⁵⁹

The second article begins “[w]e thank our colleagues for their constructive comments that relate to [*BG17*].” It goes on to state that “[t]o

55. Semenya v. Int’l Ass’n of Athletics Fed’ns, CAS 2018/O/5794 & CAS 2018/O/5798, Arbitral Award, at 133, ¶ 507.

56. Bermon & Garnier, *supra* note 45, at 6.

57. *Id.*

58. See Jeré Longman, *Did Flawed Data Lead Track Astray on Testosterone in Women?*, N.Y. TIMES (July 12, 2018), <https://www.nytimes.com/2018/07/12/sports/iaaf-caster-semenya.html>.

59. See Stéphane Bermon, Angelica Lindén Hirschberg, Jan Kowalski & Emma Eklund, *Serum androgen levels are positively correlated with athletic performance and competition results in elite female athletes*, 52 BRIT. J. SPORTS MED. 1531, 1531-32 (2018).

address the other criticisms, we have now performed a sensitivity analysis using a modified data set in which (1) observations from athletes who participated in both World Championships were only counted once”⁶⁰ The result was that the authors of *BHKE18* “excluded 230 observations, corrected some data capture errors and performed the modified analysis on a population of 1102 female athletes.”⁶¹ This significant change in the data used to perform the analysis is an acknowledgment that the data relied upon in drafting *BGI7* was questionable.

The third undisputed fact relates to peer review of the articles. The co-authors of *BGI7* state at the end that it was “externally peer reviewed,”⁶² although clearly that alleged external peer review did not detect some serious errors. However, the co-authors of *BHKE18* state at the end of the article that it was “internally peer reviewed.”⁶³ Internal peer review, which is undefined and appears to be a contradiction in terms, does not rise to the level of a trusted peer review of a scientific work.

The fourth undisputed fact is that, although the Arbitration Award upheld the DSD Regulations as they relate to the one mile and the 1500-meter races, it acknowledges that the evidence presented by World Athletics is sparse at best, and speculative at worst with respect to those included races.⁶⁴ Regarding speculation, the Arbitration Award states that

[o]n the basis of the evidence presented to the Panel, the IAAF’s decision to include the 1500m and 1 mile events within the list of Restricted Events seems to be based, at least in part, on speculation that athletes who compete in the 800m also compete successfully in the 1500m and 1 mile.⁶⁵

Regarding sparseness, the Arbitration Award states that “the evidence of actual (in contrast to theoretical) significant athletic advantage by a sufficient number of 46 XY DSD athletes [females with high testosterone levels] in the 1500m and 1 mile events could be described as sparse.”⁶⁶

60. *Id.* at 1531.

61. *Id.*

62. Bermon & Garnier, *supra* note 45, at 6.

63. Bermon et al., *supra* note 59, at 1532.

64. Semenya v. Int’l Ass’n of Athletics Fed’ns, CAS 2018/O/5794 & CAS 2018/O/5798, Arbitral Award, 156, ¶¶ 608-09 (2019).

65. *Id.* at 156, ¶ 608.

66. *Id.* at 160, ¶ 623.

V. POTENTIAL ARGUMENTS FOR AND AGAINST THE ENFORCEMENT OF DSD REGULATIONS IN THE U.S.

Should Caster Semenya or someone similarly situated challenge the validity of the DSD Regulations in an American court, there are several arguments that World Athletics might assert to justify the existence of those regulations. What follows is an analysis of those arguments and the likely responses with respect to each.

*A. Do U.S. Courts have Jurisdiction?**1. World Athletics will likely contend that the CAS has exclusive jurisdiction*

The World Athletics Constitution provides that final decisions made by World Athletics under its Constitution “may be appealed exclusively to the CAS (Appeal Arbitration Division) which will resolve the dispute definitively in accordance with the CAS Code of Sports-related Arbitration.”⁶⁷ Moreover, the DSD Regulations expressly state:

Any dispute between the IAAF and an affected athlete (and/or her Member Federation) in connection with these Regulations will be subject to the exclusive jurisdiction of the CAS. In particular (but without limitation), the validity, legality and/or proper interpretation or application of the Regulations may only be challenged (a) by way of ordinary proceedings filed before the CAS; and/or (b) as part of an appeal to the CAS made pursuant to clause 5.3.⁶⁸ (emphasis added)

In addition, the DSD Regulations provide:

The decision of the CAS will be final and binding on all parties, and no right of appeal will lie from that decision. All parties waive irrevocably any right to any form of appeal, review or recourse by or in any court or judicial authority in respect of such decision, insofar as such waiver may be validly made.⁶⁹

As a result, World Athletics likely would contend that the CAS has exclusive jurisdiction to rule on claims such as those that might be brought by Ms. Semenya or another challenger to the DSD Regulations. Ms. Semenya, who did not object to the jurisdiction of the CAS,⁷⁰ pursued

67. INTERNATIONAL ASSOCIATION OF ATHLETICS FEDERATIONS (IAAF) CONSTITUTION § 84.3 (2019).

68. DSD REGULATIONS, *supra* note 13, at 10.

69. *Id.*

70. *Semenya v. Int’l Ass’n of Athletics Fed’ns*, CAS 2018/O/5794 & CAS 2018/O/5798, Arbitral Award, 109, ¶ 418 (2019).

arbitration before a CAS panel.⁷¹ As a result, litigation before other tribunals would be contrary to the express provisions of the World Athletics Constitution and the DSD Regulations.

2. Likely Response of Challenger to DSD Regulations

Ms. Semenya, or another challenger to the DSD Regulations, can happily concede that the CAS has exclusive jurisdiction and that the CAS decision is final and binding on all parties. This concession would be helpful to Ms. Semenya because, as noted in Sections I and II, *supra*, the CAS stated that it could not rule on the law of jurisdictions different from Monaco, including the U.S.⁷² The final holding of the Arbitration Award left such rulings “for the courts of the various jurisdictions in question to determine,”⁷³ including the courts of the United States.

Ms. Semenya would have standing to sue in the U.S. because a track meet there would be under the auspices of the USATF,⁷⁴ the U.S. affiliate of World Athletics.⁷⁵ The Bylaws of the USATF provide that one of its duties is to implement the regulations of World Athletics, which purport to benefit track and field athletes: “USATF is affiliated to the WA [World Athletics] . . . USATF shall recognize, accept, apply, observe and abide by the Constitution, Rules and Regulations of the WA . . . as amended from time to time, unless any of these documents conflict with federal or state law.”⁷⁶

There is no doubt that U.S. courts have personal jurisdiction over the USATF, a non-profit organization incorporated in Virginia,⁷⁷ with its headquarters and principal place of business in Indianapolis, Indiana.⁷⁸ USATF can be, and has been, sued in U.S. courts.⁷⁹

It is also clear that Ms. Semenya would have standing to sue the USATF because, as a participant in a meet held by USATF in the U.S.,

71. *Id.* at 4, ¶ 14.

72. *Id.* at 145, ¶ 555.

73. *Id.*

74. *See, e.g., Oregon22, supra* note 5.

75. USATF, 2020 GOVERNANCE HANDBOOK § 3(B)(14) (2020).

76. *Id.*

77. *Clerk's Information System*, VA. ST. CORP. COMMISSION, <https://cis.sec.virginia.gov/EntitySearch/BusinessInformation?businessId=78443&businessType=Non-stock%20Corporation&Source=fromFormation&isSeries=False> (last visited Sept. 27, 2020); *Tax Information*, USATF, <https://www.usatf.org/about/financials/tax-information> (last visited Oct. 26, 2020).

78. *About*, USATF, <https://www.usatf.org/about> (last visited Oct. 1, 2020).

79. *See, e.g., Defendant's Brief in Support of Motion to Strike Paragraphs 17 & 24 of Plaintiff's Complaint*, Logan v. USA Track & Field, Inc., Cause No. 1:10-cv-1315-TWP-TAB (S.D. Ind. 2010).

she is a third-party beneficiary of the contract between World Athletics and the USATF. There is precedent to support this proposition.

In a case brought by a college athlete against the National Collegiate Athletic Association (“NCAA”), the collegiate sports governing organization, the athlete’s standing was based on his status as a third-party beneficiary of the contract between the NCAA and one of its members, the University of Colorado, where the athlete attended.⁸⁰ The court stated:

A person not a party to an express contract may bring an action on the contract if the parties to the agreement intended to benefit the nonparty, provided that the benefit claimed is a direct and not merely incidental benefit of the contract . . . the NCAA’s constitution, by-laws, and regulations evidence a clear intent to benefit student-athletes. And because each student-athlete’s eligibility to compete is determined by the NCAA, we conclude that Bloom had standing . . . to contest the meaning or applicability of NCAA eligibility restrictions *See Hall v. NCAA*, 985 F. Supp. 782, 796-97 (N.D. Ill. 1997) (given importance of NCAA’s function to benefit student-athletes and NCAA’s role in determining eligibility of student-athletes, court assumed student athlete was likely to succeed in proving third-party beneficiary standing vis-a-vis the contract between the NCAA and its members); *see also NCAA v. Brinkworth*, 680 So. 2d 1081, 1083 (Fla. Dist. Ct. App. 1996).

. . . .

. . . [T]o the extent Bloom’s claim of arbitrary and capricious action asserts a violation of the duty of good faith and fair dealing that is implied in the contractual relationship between the NCAA and its members, his position as a third-party beneficiary of that contractual relationship affords him standing to pursue this claim [S]ee also *Hall v. NCAA*, *supra*, 985 F. Supp. at 784 (implied duty of good faith and fair dealing ‘requires that a party vested with contractual discretion exercise that discretion reasonably, not arbitrarily or capriciously’).⁸¹

Thus, it is readily apparent that Ms. Semenya or someone else pursuing a claim would be able to do so as a third-party beneficiary.

80. *Bloom v. Nat’l Collegiate Athletic Ass’n*, 93 P.3d 621, 622 (Colo. App. 2004).

81. *Id.* at 623-24.

B. Should U.S. Courts Defer to Policies on Internal Management of Private Sports Organizations?

1. World Athletics will likely contend that U.S. courts should refuse to interfere in the internal management of private sports organizations

There is a longstanding common law rule that courts should be reluctant to intervene or interfere in the internal management of private organizations.⁸² This rule was intended to allow such organizations to establish their own rules and policies and abide by those rules without interference from outside forces.

The theory behind this non-interference doctrine is that the individual members of such associations have the freedom to choose their associates and the conditions of their association; further, it is argued, judicial review of the affairs of such associations would violate this basic principle of the freedom to associate. . . . [Moreover,] the rules and regulations upon which these associations operate are often unclear, and the courts would have no available standard upon which to determine the reasonableness of their rules.⁸³

The same is true when it comes to private sports organizations.⁸⁴

82. See, e.g., *Plummer v. Am. Inst. of Certified Pub. Accountants*, 97 F.3d 220, 226 (7th Cir. 1996) (citing *State ex rel. Givens v. Superior Court of Marion Cty.*, 233 Ind. 235, 117 N.E.2d 553, 555 (1954)) (“[T]he Supreme Court of Indiana has recognized in very clear terms, private voluntary associations do have a “sacred right” to make, interpret, and enforce rules governing the ethical conduct of their own members”); *Falcone v. Middlesex Cty. Med. Soc’y*, 34 N.J. 582, 590, 170 A.2d 791, 796 (1961) (New Jersey Supreme Court stated “Courts have been understandably reluctant to interfere with the internal affairs of membership associations and their reluctance has ordinarily promoted the health of society”); *Screwmen’s Benevolent Ass’n v. Benson*, 76 Tex. 552, 554, 13 S.W. 379, 380 (1890) (Texas Supreme Court held that by being a member of private organization, “the member assents to and accepts the constitution, and impliedly binds himself to abide by the decision of such boards as that instrument may provide”); *Am. Fed’n of Tech. Eng’rs, Local 144 v. La Jeunesse*, 63 Ill. 2d 263, 268, 347 N.E.2d 712, 715 (1976) (Illinois Supreme Court expressed “[i]t is generally held that courts . . . will not intervene in questions involving the enforcement of bylaws and matters of discipline in voluntary associations”).

83. *Gulf S. Conference v. Boyd*, 369 So. 2d 553, 556-57 (Ala. 1979) [citations omitted]. That case in turn cites cases as far back as 1884 in support of that proposition: *Weatherly v. Med. & Surgical Soc’y of Montgomery Cty.*, 76 Ala. 567 (1884); see also *NCAA v. Bd. of Regents of Univ. of Okla.*, 468 U.S. 85, 98 (1984); *NCAA v. Lasege*, 53 S.W.3d 77, 83 (Ky. 2001).

84. See, e.g., *Hatley v. Am. Quarter Horse Ass’n*, 552 F.2d 646, 656 (5th Cir. 1977); *Crouch v. Nat’l Ass’n. for Stock Car Auto Racing, Inc.*, 845 F.2d 397, 401 (2d Cir. 1988); *Schulz v. U. S. Boxing Ass’n*, 105 F.3d 127, 132 (3d Cir. 1997) (“[c]ourts have been understandably reluctant to interfere with the internal affairs of [private] associations and their reluctance has ordinarily promoted the health of society”) (internal citations and quotations omitted); *Charles O. Finley & Co. v. Kuhn*, 569 F.2d 527, 542 (7th Cir. 1978).

Ms. Semenya and those similarly situated voluntarily chose to participate in international track and field competitions. The governing bodies for each country and the international governing bodies of such competitions get to set the rules for participation.⁸⁵ World Athletics would contend that the courts should not interfere with the policies and procedures established by those organizations in seeking to manage the internal workings of the organizations themselves, and the sporting events that they oversee.

2. Likely Response of Challenger to DSD Regulations

U.S. courts have frequently judged the activities of private sports organizations like World Athletics and USATF.⁸⁶ Although courts are reluctant to interfere in the affairs of private athletic organizations, they will do so, and have done so—particularly concerning matters of eligibility, as in this case—when “the actions of an association are the result of fraud, lack of jurisdiction, collusion, arbitrariness, or are in violation of or contravene any principle of public policy.”⁸⁷

The U.S. Supreme Court has delineated the standard for what is arbitrary and capricious.⁸⁸ As with interfering into the affairs of a private athletic association, courts are reluctant to substitute their judgment for that of an administrative agency, but will do so if agency actions are arbitrary and capricious:

The scope of review under the ‘arbitrary and capricious’ standard is narrow and a court is not to substitute its judgment for that of the agency. Nevertheless, the agency must examine the relevant data and articulate a satisfactory explanation for its action, including a ‘rational connection between the facts found and the choice made.’⁸⁹

Moreover, although the courts are generally hesitant to intervene in the affairs of private associations, they will intervene when the actions of private organizations contravene public policy.⁹⁰ Clearly, a private

85. See, e.g., *Book of Rules*, WORLD ATHLETICS, <https://www.worldathletics.org/about-iaaf/documents/book-of-rules> (last visited Sept. 27, 2020).

86. See, e.g., *Gold Medal LLC v. USA Track & Field*, 187 F. Supp. 3d 1219 (D. Or. 2016), *aff’d*, 899 F.3d 712 (9th Cir. 2018); *Reynolds v. Int’l Amateur Athletic Fed’n*, 505 U.S. 1301 (1992).

87. *Gulf South Conference*, 369 So. 2d at 557.

88. *Motor Vehicle Mfrs. Ass’n v. State Farm Ins.*, 463 U.S. 29, 43 (1983).

89. *Id.* at 43 (quoting *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962)). In the *Motor Vehicles* case, the agency’s action was determined by the U.S. Supreme Court to be arbitrary and capricious, and the matter was therefore remanded to the agency for further consideration consistent with the opinion of the U.S. Supreme Court. *Motor Vehicle Mfrs. Ass’n*, 463 U.S. at 56-57.

90. See, e.g., *Gulf South Conference*, 369 So. 2d at 557; *Falcone v. Middlesex Cty. Med. Soc’y*, 34 N.J. 582, 590, 170 A.2d 791, 796 (1961).

organization establishing rules that are in violation of discrimination laws intended to protect members of classes that have historically been discriminated against would be a public policy the courts would seek to protect.

The courts will intervene when the underlying conduct is arbitrary and capricious or when the policies of sports organizations are contrary to public policy, even in cases involving private sports organization.

C. Are the DSD Regulations a Justified and Proportionate Way to Ensure Fairness?

1. World Athletics will contend that the DSD Regulations are a “justified and proportionate means of ensuring consistent treatment, and preserving fair and meaningful competition within the female classification.”⁹¹

The basic position of World Athletics has been that the DSD Regulations are not discriminatory, but that, even if found discriminatory, they are “necessary, reasonable and proportionate to the achievement of a legitimate objective.”⁹² World Athletics further has contended that the DSD Regulations are:

based on a strong scientific, legal and ethical foundation . . . [and] establish a framework governing the eligibility of 46 XY DSD athletes to compete in the female category that is logical and rational and fully respects the requirement that like cases should be treated alike and different cases should be treated differently.⁹³

Furthermore, World Athletics has asserted that it is “both entitled and required to provide male and female athletes with an equal chance to excel in elite-level athletics.”⁹⁴ In order to allow females to have such a chance, World Athletics must have separate categories of competition for men and women, and must prevent competitors with significant biological advantages from competing against women.⁹⁵ World Athletics has further asserted that women athletes determined to have male chromosomes (*i.e.*, XY rather than XX) are “‘biologically identical’ to male athletes (save with respect to virilisation of external genitals) . . . [and] derive performance benefits from their physiology that are

91. Semenya v. Int’l Ass’n of Athletics Fed’ns, CAS 2018/O/5794 & CAS 2018/O/5798, Arbitral Award, 108, ¶ 415 (2019).

92. *Id.* at 144, ¶ 548.

93. *Id.* at 71, ¶ 286.

94. *Id.* at 71, ¶ 287.

95. *Id.* at 71-73, ¶¶ 287-89.

indistinguishable from the advantages derived by male athletes.”⁹⁶ Finally, World Athletics has contended that it had to take steps “to remove or at least minimise as much as possible those ergogenic advantages.”⁹⁷

World Athletics has argued, and can be expected to continue arguing, that the DSD Regulations are thus necessary to ensure a fair and balanced playing field.⁹⁸ Given that athletes like Ms. Semenya can compete against females in international competitions if they take steps to reduce their testosterone to acceptable levels,⁹⁹ World Athletics contends that the DSD Regulations are reasonable and proportionate. “In the absence of the DSD Regulations, the divide between the male and female categories would be policed by legal sex or self-declarations of gender identity, thereby denying female athletes an equal chance to excel in sport.”¹⁰⁰

2. Likely Response of Challenger to DSD Regulations

Ms. Semenya would likely respond that the evidence submitted in support of World Athletics’ position is not admissible under U.S. law. Rule 702 of the U.S. Federal Rules of Evidence permits testimony by a qualified expert only if it “will help the trier of fact to understand the evidence or to determine a fact in issue.”¹⁰¹

The landmark case of *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993) (now codified in Rule 702 of the Federal Rules of Evidence), set standards for the admissibility of scientific evidence to be applied by the trial court judge.¹⁰² The court mandates the use of scientific knowledge, but:

in order to qualify as ‘scientific knowledge,’ an inference or assertion must be derived by the scientific method. Proposed testimony must be supported by appropriate validation—*i.e.*, ‘good grounds,’ based on what is known. In short, the requirement that an expert’s testimony pertain to ‘scientific knowledge’ establishes a standard of evidentiary reliability.¹⁰³

The *Daubert* Court set out criteria for “whether a theory or technique is scientific knowledge that will assist the trier of fact.”¹⁰⁴ One of these

96. *Semenya v. Int’l Ass’n of Athletics Fed’ns*, CAS 2018/O/5794 & CAS 2018/O/5798, Arbitral Award, 75, ¶ 296 (2019).

97. *Id.* (emphasis in original).

98. *Id.* at 76, ¶ 300.

99. *Id.* at 77, ¶ 307.

100. *Id.* at 79, ¶ 311.

101. Fed. R. Evid. 702.

102. *Id.*; *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 579-98 (1993).

103. *Daubert*, 509 U.S. at 590.

104. *Id.* at 593.

criteria is whether the knowledge “can be (and has been) tested.”¹⁰⁵ “‘Scientific methodology today is based on generating hypotheses and testing them to see if they can be falsified; indeed, this methodology is what distinguishes science from other fields of human inquiry.’”¹⁰⁶

A second criteria set by the *Daubert* Court is “whether the theory or technique has been subjected to peer review and publication.”¹⁰⁷ Although the court acknowledges that publication is not essential for admissibility—for example, for “well-grounded but innovative theories”—it would support admissibility because “submission to the scrutiny of the scientific community is a component of ‘good science,’ in part because it increases the likelihood that substantive flaws in methodology will be detected.”¹⁰⁸

A third criteria set out by the *Daubert* Court is “general acceptance.”¹⁰⁹ The court notes that “[w]idespread acceptance can be an important factor in ruling particular evidence admissible”¹¹⁰

U.S. courts applying the above criteria likely would rule that World Athletics’ evidence supporting the DSD Regulation is inadmissible. First, as noted in Section IV, *supra*, regarding the 1500m and one-mile races, the evidence is either speculative or sparse. Not only does that level of evidence not meet the standards of *Daubert*, but also it does not amount to the preponderance of evidence necessary to meet the burden of proof in a civil case in the U.S.

Second, as also noted above in Section IV, it is undisputed that the key empirical, publicly known data on which the evidence is based is flawed. The scientists who first reported these flaws were quoted extensively in the *New York Times* article referenced in Section IV, *supra*.¹¹¹ For example, Roger Pielke Jr., the director of the Sports Governance Center at the University of Colorado, stated: “I think everyone can understand that if your data set is contaminated by as much as one-third bad data, it’s kind of a garbage-in, garbage-out situation I really see no option for [World Athletics] other than to retract the paper.”¹¹² Erik Boye, one of the independent researchers who heads the Department of Cell Biology at Oslo University Hospital,¹¹³ added “the data [World

105. *Id.*

106. *Id.*

107. *Id.*

108. *Id.*

109. *Daubert*, 509 U.S. at 594.

110. *Id.*

111. Longman, *supra* note 58.

112. *Id.*

113. *Department of Cell Biology, OSLO U. HOSP.*, <https://www.ous-research.no/cellbiology/> (last visited Sept. 26, 2020).

Athletics] have presented is not solid.”¹¹⁴ He further criticized World Athletics for lack of transparency regarding the data, and “doing everything with their hands over the data.”¹¹⁵

A third independent researcher, Ross Tucker, a professor of exercise physiology who taught at the School of Medicine of the University of the Free State in South Africa and is currently at the University of Cape Town, stated that the original study is “entirely untrustworthy” and that a subsequent study by World Athletics using the same data with the errors purportedly thrown out included “too much uncertainty to trust.”¹¹⁶ Concerning the subsequent World Athletics study, Pielke commented that “[t]his is an effort at what I would call a do-over, and it’s embarrassing and it’s not how science is expected to be done.”¹¹⁷ Concerning the lack of transparency and the fact that affiliates of World Athletics authored *BGI7*, Pielke stated “[y]ou don’t have drug companies doing their own studies that no one else can see.”¹¹⁸

These comments demonstrate that the evidence in *BGI7* and *BHKE18* does not meet the standards of the Daubert case. *BGI7* was admittedly flawed, and the article allegedly correcting its errors was not peer reviewed.

Furthermore, *BGI7* itself acknowledges that the studies do not explain any cause-and-effect relationship between testosterone and athletic performance: “Our study design cannot provide evidence for causality between androgen levels and athletic performance” but rather consists solely of observations of results of males and females with differing levels of testosterone at two track and field world championship events.¹¹⁹ Lack of proof of a cause-and-effect relationship led to numerous speculative statements in *BGI7*, speculation that would not be admissible in a U.S. court.¹²⁰ The speculative statements include:

- “A **possible** explanation for these findings is the important contribution of oxidative metabolism in the total energy spent to run a 400 or 800 m race.”¹²¹

114. Longman, *supra* note 58.

115. *Id.*

116. *Id.*; ross tucker (international), ERGOSPORT MODELS, <https://ergosportmodels.com/models/dr-ross-tucker/> (last visited Nov. 13, 2020).

117. Longman, *supra* note 58.

118. *Id.*

119. Bermon & Garnier, *supra* at note 45, at 3.

120. *See* Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 590 (1993).

121. Bermon & Garnier, *supra* note 45, at 5.

- “Our **hypothesis** is that, in addition to their recognised effect on aggressiveness and risk-taking behaviours, androgens exert their ergogenic effects on some sportswomen through better visuo-spatial neural activation.”¹²²
- “One explanation **could be** the higher prevalence of doping with exogenous androgens in this subgroup.”¹²³
- “Hence, the known negative influence of fat mass on SHBG concentration and T bioavailability **may possibly** account for the low T and SHBG concentrations reported in male throwers in our study.”¹²⁴
- “In female athletes, a high fT concentration **appears** to confer a 1.8-2.8% competitive advantage in long sprint and 800 m races.”¹²⁵
- “As androgens are erythropoietic hormones, it is **tempting to hypothesise** that female athletes with high T and fT levels show high Hb concentrations which in turn increase the oxygen-carrying capacity and (non-bicarbonate) extracellular buffering capacity — both of which are crucial when running 400 m, 400 m hurdles or 800 m races.”¹²⁶
- “Increased lean body mass, mental drive and aggressiveness, which are also known to be influenced by androgens, provide **alternative explanations, but these parameters have not been measured** in the present study.”¹²⁷
- “Such a finding **might** be a consequence of **either** a higher prevalence of doping with androgens **or** a higher adiposity in this group of athletic events.”¹²⁸
- “. . . the results obtained in pole vaulters and hammer throwers **seem to confirm** that females with high levels of androgens may

122. *Id.*

123. *Id.*

124. *Id.*

125. *Id.*

126. *Id.*

127. Bermon & Garnier, *supra* note 45, at 5.

128. *Id.* at 6.

also benefit from a competitive advantage through improved visuospatial abilities.”¹²⁹

(Emphasis added)

Because the scientific evidence of World Athletics would not likely be admissible in a U.S. court, World Athletics’ arguments that its regulations are for the purpose of ensuring equal treatment should fail for lack of evidence.

VI. CONCLUSION

By far the most extraordinary claim of World Athletics is that it is above the law. As noted in the Arbitration Award, “Regulation 1.2 provides that the DSD Regulations ‘operate globally’ and therefore ‘are to be interpreted and applied not by reference to national or local laws, but rather as an independent and autonomous text’”¹³⁰ CAS, however, has now definitively ruled that, outside of Monaco, the DSD Regulations are subject to national and local laws. Furthermore, as demonstrated above, the DSD Regulations would not pass muster in a U.S. federal court.

129. *Id.*

130. Semenya v. Int’l Ass’n of Athletics Fed’ns, CAS 2018/O/5794 & CAS 2018/O/5798, Arbitral Award, 111, ¶ 427 (2019).