CAS 2018/A/5768 Dylan Scott v. International Tennis Federation

ARBITRAL AWARD

delivered by the

COURT OF ARBITRATION FOR SPORT

sitting in the following composition:

President:	Prof. Ulrich Haas, Attorney-at-Law, Zurich, Switzerland
Arbitrators:	Prof. Cameron Myler, Professor, New York, United States of America
	Hon. Michael J. Beloff QC, Barrister, London, United Kingdom
Ad hoc Clerk:	Me. Marianne Saroli, Attorney-at-Law, Montreal, Canada

in the arbitration between

Dylan Scott, United States of America

Represented by Mr. Howard Jacobs and Ms. Lindsey S. Brandon, Attorneys-at-Law with the Law Offices of Howard Jacobs in Westlake Village, California, United States of America

Appellant

and

International Tennis Federation, United Kingdom

Represented by Mr. Jonathan Taylor QC, Attorney-at-Law with Bird & Bird LLP in London, United Kingdom

Respondent

I. PARTIES

1. Mr. Dylan Scott (the "Appellant" or "Athlete") is a professional tennis player born on 31 August 1992. He became a member of the International Tennis Federation (the "ITF") in December 2015 and has since played at the Futures and Challenger levels.

2. The ITF (or the "Respondent") is the international sports federation for the sport of tennis. According to Article 4.1 of the ITF Constitution, one of the objects and purposes of the ITF's Tennis Anti-Doping Programme is "to maintain the integrity of the sport and protect the health and rights of international-level tennis players." To this end, the ITF, a signatory to the World Anti-Doping Code (the "WADC") established by the World Anti-Doping Agency ("WADA"), adopted the Tennis Anti-Doping Programme (the "TADP") to implement the provisions of the WADC.

II. FACTUAL BACKGROUND

A. Introduction

3. This appeal is brought by the Athlete against the Respondent with respect to a decision rendered by the Independent Tribunal on 9 May 2018 (the "Appealed Decision") in accordance with the TADP 2017 whereby the Athlete was sanctioned with a four-year period of ineligibility following an adverse analytical finding ("AAF") for a prohibited substance belonging to the category S1 of WADA's International Standard for Prohibited Substances and Methods in effect in 2017 (the "Prohibited List").

B. Background Facts

4. Below is a summary of the relevant facts and allegations based on the parties' written submissions, pleadings and evidence adduced at the hearing. Additional facts and allegations found in the parties' written submissions, pleadings and evidence may be set out, where relevant, in connection with the legal discussion that follows. While the Panel has considered all the facts, allegations, legal arguments and evidence submitted by the parties in the present proceedings, it refers in its Award only to the submissions and evidence it considers necessary to explain its reasoning.

5. The Athlete is an entry-level, professional tennis player. Prior to joining the ITF in December 2015, the Athlete was an insurance adjuster. He did not play tennis in college or at the club level. Indeed, before turning professional, the Athlete's only competitive tennis was played while he was in high school (pre-2010).

6. The Athlete alleges that from June 2014 until September 2015 he ingested a supplement called "Quad", a product that was allegedly recommended to him by an employee of Total Nutrition in Coral Gables, Florida, and from which franchise he purchased his supply of Quad on a regular basis. The Athlete also alleges that he followed the recommended dosage of two capsules per day for 30 days (i.e. bottle of 60 capsules per month). Once he finished a bottle, he would – as directed by the manufacturer's instructions – abstain from use of the supplement for a period of approximately 4-6 weeks. Over a 12-14 month period (beginning in 2014 and ending in late 2015), the Athlete claims to have purchased and used 4-5 bottles of Quad.

7. The Athlete states that he discontinued using Quad in 2015 for medical reasons, namely because he developed a small lump on his chest. According to the Appellant's medical records, this lump could have possibly been a "mild left gynecomastia".

8. Despite discontinuing his use of Quad, the Athlete retained an empty bottle of Quad in his possession.

9. In December 2015, the Athlete joined the ITF and began his career as a professional tennis player. He achieved little success in his early career while playing in 5 Futures and 1 Challenger tournaments between 2016 and 2017: in all but 1 tournament the Athlete lost in the first round.

10. In early 2017, the Athlete began training with Mr. Dominik Hrbaty, a highly ranked former professional player in Florida. Between May 2017 and August 2017, the Athlete trained with Mr. Hrbaty in Slovakia to focus on his training regimen and to increase his level of fitness for competition.

11. On 8 July 2017, while competing at the Czech Republic Futures tournament in Pardubice, Czech Republic, the Athlete was selected for doping control by the ITF. This was the Athlete's first doping control as a professional tennis player. After the match, upon request, he provided a urine sample for drug testing purposes, which was assigned reference number 3097704, split into A and B samples, and then sent to the WADA-accredited laboratory in Montreal (the "Laboratory") for analysis.

C. The (Original) Charge

12. On 28 July 2017, the Laboratory issued a certificate of analysis indicating the detection of 4-chloro-18- nor-17β-hydroxymethyl,17 α-methyl-5-androst-13-en-3-ol ("M4 metabolite") in the Athlete's A sample (A3097704).

13. The ITF referred the Athlete's sample to the Independent Review Board ("IRB") which determined that the Athlete had violated TADP Article 2.1, i.e. presence of a Prohibited Substance or its metabolites or markers in a player's sample.

14. On 9 August 2017, the ITF informed the Athlete that an analysis of his urine screen was found to contain the M4 metabolite. The ITF described it as a metabolite of the substance Dehdrochlormetyltestosterone ("DHCMT"), which is specifically named as a Prohibited Substance on the Prohibited List in the category of Anabolic Agents (S1.1(a)).

15. At the Athlete's request, the Laboratory estimated the concentrations of the M4 metabolite in the A and B samples at approximately 0.08 ng/mL, or 80 pg/mL. Furthermore, the Laboratory established the epimer M4 metabolite at an estimated concentration of approximately 14 pg/ml.

16. On 19 August 2017, the ITF provisionally suspended the Athlete and his case was referred to the ITF Independent Tribunal for adjudication at first instance. Since the DHCMT is not a Specified Substance, the provisional suspension was mandatory, in accordance with TADP Article 8.3.1. The Athlete was advised by the ITF in its notice of charge that he was entitled to apply to the Independent Tribunal to set aside the

imposition of the provisional suspension, but he did not do so. Hence, the provisional suspension commenced on 19 August 2017.

17. On 24 August 2017, the Laboratory analysed the Athlete's B sample (no. B3097704) and also identified the M4 metabolite therein.

18. On 25 September 2017, during the course of the procedure before the ITF Independent Tribunal, the Athlete sought clarification from the ITF as to the nature of the specific charge against him and requested documentation relating to the Laboratory's analysis:

> 1. *" For additional clarity, please confirm Mr. Scott's understanding that the Anti-Doping Rule Violation charges against him is the presence of the Prohibited Substance, as set forth the WADA Prohibited List effective 1 January 2017, Dehydrochlormethyltestosterone as evidence by the presence of Dehydrochlormethyltestosterone metabolite 4-chloro-18-nor-17β-hydroxymethyl, 17a-methyl-5-androst-13-en-3-ol in his Urine.*
>
> 2. *Any and all documentation establishing the validated Lower Limit of Detection for the testing laboratory's test for Dehydrochlormethyltestosterone metabolite 4-chloro-18-nor-17β-hydroxymethyl, 17a-methyl-5-androst-13-en-3-ol.*
>
> 3. ...
>
> 4. ...
>
> 5. *Please advise whether the testing laboratory has tested Sample #3097704 for any "Dehydrochlormethyltestosterone metabolite(s)" other than 4-chloro-18-nor-17β-hydroxymethyl, 17a-methyl-5-androst-13-en-3-ol; and if so, please provide all documentation related to said testing.*"

19. On 12 October 2017, the ITF responded to the Athlete's inquiry as follows:

> 1. *"The WADA-accredited laboratory in Montreal reported an adverse analytical finding in Mr Scott's sample number 3097704 for 4-chloro-18-nor-17β-hydroxymethyl, 17a-methyl-5-androst-13-en-3-ol (referenced as "M4" or "M04" in the assays included in the laboratory documentation packages), which is a metabolite of dehydrochlormethyltestosterone (4-chloro-17β-hydroxy-7a-methylandrosta-1,4-dien-3-one)(DHCMT). DHCMT is listed by name in section S1.a of the WADA Prohibited List (exogenous anabolic androgenic steroids). Article 2.1 of the Tennis Anti-Doping Programme (TADP) provide that the "presence of a Prohibited Substance or any of its Metabolites or Markers in a Player's Sample" constitutes an anti-doping rule violation "unless the Player established that such presence is consistent with a TUE [...]" (emphasis added). The adverse analytical finding is this matter is therefore based on the presence of a DHCMT metabolite in Mr Scott's sample number 3097704.*

2. *The lower limit of detection for the initial testing procedure was estimated to be 5pg/mL. The Montreal laboratory advises that it has declined your request for "any and all further documentation" establishing this limit of detection. . . .*

3. ...

4. ...

5. *The Montreal laboratory tested Mr. Scott's sample for several other DHCMT metabolites during the confirmation assay, as shown on pp. 45 and 24 of (respectively) the A and B sample laboratory documentation packages. As set out under point 2, above, the Montreal laboratory is not required (and so will not) provide any further documentation in respect of the testing conducted on those other metabolites, other than what is set out in the laboratory documentation packages."*

20. On 27 November 2017, the ITF filed its opening brief, in which it contended that the M4 metabolite detected in the Athlete's sample had come from DHCMT.

D. The Further Proceedings

21. On 22 December 2017, the Athlete filed his response in which he argued, *inter alia*, that the M4 metabolite found in his sample could have come from a parent compound other than DHCMT, namely a compound with the chemical name 4-chloro-17a-methyl-androst-1,4-diene-3,17b-diol ("Halodrol").

22. On 17 January 2018, the ITF amended its charge against the Athlete as follows:

> *"Mr Scott is hereby put on notice of the following amendment to the notice of charge sent to him by the ITF on 9 August 2017:*
>
> *The ITF's primary case is that the parent of the "M4" metabolite found in Mr Scott's sample no. 3097704 was dehydrochlormethyltestosterone (DHCMT).*
>
> *Alternatively, the parent of the "M4" metabolite was a DHCMT variant, such as 4-chloro-17a-methyl-androst-1,4-diene-3,17b-diol, which is metabolised into the "M4" metabolite either directly or via an intermediate conversion into DHCMT.*
>
> *4-chloro-17a-methyl-androst-1,4-diene-3,17b-diol falls within section S1 of the WADA Prohibited List, because it is an anabolic agent and because it has a similar chemical structure to and/or similar biological effects to one or more steroids listed by name in that section, being a derivative of testosterone and a prohormone/variant of DHCMT.*
>
> *Therefore, whether the "M4" metabolite found in Mr Scott's sample came from DHCMT or from 4-chloro-17a-methyl-androst-1,4-diene-3,17b-diol, it is a metabolite of a Prohibited Substance under the TADP."*

23. On 4 February 2018, Professor Ayotte issued a report, wherein she offered her opinions that:

"(...) All of the four ingredients listed on the label of QUAD product provided by the athlete are synthetic steroids that are banned in sport. However, the analysis of the faint residue found inside the bottle revealed that none of the steroids listed were present. Instead, several other steroids were identified, the most important ones being methasterone (17β-hydroxy2α,17α-dimethyl-5α-androstan-3-one) and chloromethylandrostenediol (4-chloro-17α-methylandrost-4-en-3,17-diol, two isomers) 1. Methylclostebol (4-chloro-17α-methyl-17β-hydroxyandrost-4-en-3-one), methylstenbolone (2,17α-dimethyl-5α-androst-1-en-17β-ol-3-one) and DHCMT (traces) were also found. Except DHCMT, all these products are synthetic "designer" steroids that are prohibited anabolic agents (Section S1.1 a of World Anti-Doping Code (WADC) List) (...)

DHCMT (4-chloro-17ß-hydroxy-17α-methyl-androst-1,4-diene-3-one) is an exogenous (e.g. purely synthetic) anabolic steroid listed as such under Section S1.1. a of the World Anti-Doping Code Prohibited List. (...) It is also a controlled substance in the US, making its import and/or sale illegal. Nonetheless, DHCMT is available in the USA from the black-market. It is also present in products that are labelled as containing other steroids related to DHCMT. (...)

The consumption of the QUAD product that we analysed could have produced the adverse analytical finding for the DHCMT metabolite ("M4") that was identified in urine sample 3097704 due to the presence of DHCMT, but also of chloromethylandrostenediol and methylclostebol, both are known to convert to "M4".

(...)

Although the "M4" metabolite has a much longer detection window than the other DHCMT metabolites that are present in urines for only few days, there is no evidence that it would (or any plausible explanation for how or why it would) be present in the system for 21-22 months after ingestion (as the athlete suggests). Second, although the level at which the "M4" metabolite was roughly estimated e.g. approx. 80 pg/mL (0.08 ng/mL), appears infinitesimal to the athlete's expert, it is relatively important for this metabolite which we never found at more than 200 pg/mL (0.2 ng/mL) in routine samples. In fact, the average level of "M4" in the athletes' samples that we have tested is 40 pg/mL, ranging from 1.3 pg/mL to 120 pg/mL, the highest level observed. At the end of its detection period, M4 is present in the low pg/mL range, 1 or 2 pg/mL (0.002 ng/mL). Therefore, although we cannot deduce with any certainty the timing and frequency of use from a single urine test result, the delay between the last administration of QUAD product and the provision of the sample must be much less than 20 months, more realistically of a few months. The expert's theory of a storage in fat deposit followed by release due to weight-loss cannot be applied to DHCMT and to the athlete who was not, as in the studies quoted by the expert, an obese individual. DHCMT is not a persistent chlorinated pollutant resistant to biodegradation that accumulates in fat deposits.

(...)

The four compounds listed on the QUAD label are designer synthetic steroids made to circumvent the legislation and the doping control tests. Three of these are controlled in the USA (they cannot be sold) and all four are prohibited in sports.

However, it is not possible given the poor quality of steroid products offered by the black-market to know the content of this product without having first analysed it. The black-market does not follow GLP manufacturing processes, traceability is never provided; purity is often low, labelling is often wrong.

The athlete's bottle was received on January 19, 2018. The results of the testing done on the white residue inside the bottle, show that none of the steroids listed on the label of the QUAD product were present. A complex mixture of several substances was instead detected of which we could identify the major ones, methasterone (17β-hydroxy-2α,17α-dimethyl-5α-androstan-3-one) and 4-chloro-17-methyl-androst-4-en-3,17-diol (two isomers). These two steroids are listed on the USA Designer Steroid Anabolic Act of 2014 (respectively compounds lviii and liv). Other substances, stimulants and anabolic steroids were also found (...).

The other compounds present in the QUAD product, e.g. chloromethylandrostenediol (4-chloro-17- methyl-androst-4-en-3,17-diol) and methylclostebol (4-chloro-17α-methyl-17β-hydroxy-androst-4- en-3-one) and the one listed on its label, are considered to be prohibited exogenous anabolic androgenic steroid within section S 1.1. (a) of the WADC Prohibited List as they have structures very similar to listed anabolic steroids DHCMT and clostebol. (...)

In view of the results that we obtained from testing the residue left in the empty bottle, the ingestion of the QUAD product could result in the presence of DHCMT "M4" metabolite in the urine samples collected subsequently. Not only due to the presence of DHCMT but also since one of its main ingredients, chloromethylandrostenediol, was shown to lead to its formation (...).

Sobolevsky et al in 2012 did not report any level, but described the high sensitivity required for the detection of "M3" (our "M4") and its epimer, since they are excreted in very low concentrations. With the reference material available in our laboratory, we were able to estimate the level of the long-term metabolite "M4" detected in some of the athletes' samples reported with an abnormal analytical finding for DHCMT. The average level of "M4" found in those samples is 40 pg/mL (0.04 ng/mL), and the range is from 120 pg/mL (the highest level observed) to less than 10 pg/mL (lowest being 1.3 pg/mL or 0.001 ng/mL). In 2015 and 2016, when most of the cases were detected, the average amount in the DHCMT positive samples was approximately 64 pg/mL while in 2017, it dropped to 8 pg/mL. In 2017, Schänzer described the excretion profile of DHCMT long-term metabolite following the oral administration of a single dose of DHCMT (20 mg) by a male volunteer17. The highest amount measured was around 150 pg/mL after 5 days, falling to around 20 – 30 pg/mL after 40 to

100 days. They could still detect very low traces (2 to 3 pg/mL) after 200 to 250 days (6 to 8 months). Nothing past that time.

According to the explanation provided, the athlete stopped using the QUAD product during the summer of 2015, which implies that almost two years separate the administration from the sample collection. In sample 3097704, the level of the LTM was roughly estimated to 80 pg/mL: this is not a concentration that can be considered to represent the very end of the excretion period during which less than 10 pg/mL (1, 2 or 3 pg/mL) are observed. The delay is greater than anything described for this metabolite moreover, the level does not match an end of the excretion period. Other than controlled excretion studies, one athlete's case may be useful to this case. A first sample from this athlete was reported positive for the presence of DHCMT and the long-term metabolite "M4", which means that the product at the source of this finding had been recently consumed. Three months later none of those two metabolites could not be detected in a follow up sample.

(...)

My conclusion is that the findings reported for urine sample 3097704 are proof of administration of DHCMT (or of a similar anabolic steroid such as chloromethylandrostenediol or methylclostebol). DHCMT, QUAD, Halodrol (or else) are black-market products, their content is not known and could vary significantly from one capsule to the next. However, the athlete's assertion that the finding was due to his ingestion of QUAD capsules 21-22 months earlier seems inconsistent with the existing knowledge presented earlier concerning the excretion of the long-term DHCMT metabolite "M4" from oral administration. I am not aware of the detection of 80 pg/mL of DHCMT M4 metabolite in an athlete's sample collected 21-22 months after the last use. Therefore, although we cannot deduce with any certainty the timing and frequency of use from a single urine test result, the delay between the last administration of the DHCMT/DHCMT variant and the provision of the sample in July 2017 must be much less than 20 months, more realistically of a few months."

24. On 26 March 2018, the United States Anti-Doping Agency ("USADA") collected a urine sample from the Athlete, which was initially tested at the WADA-accredited laboratory in Salt Lake City. This sample also contained the M4 metabolite. The same sample was subsequently analysed by the Laboratory, which also found the M4 metabolite at an estimated concentration of approximately 80 pg/mL and the epimer M4 metabolite at an estimated concentration of approximately 22 pg/mL.

25. On 16 April 2018, the ITF advised the Athlete that a urine sample collected from him by USADA on 26 March 2018 had also tested positive for the same M4 metabolite.

26. On 9 May 2018, the ITF Independent Tribunal issued the Appealed Decision. With regard to the question whether or not the M4 metabolite stemmed from a Prohibited Substance, the Independent Tribunal found as follows:

"31. It is clear from the evidence that, contrary to an initial assumption, the M4 metabolite is not exclusively and necessarily a metabolite of DHCMT. It may

be produced in the body from the ingestion of other exogenous anabolic steroids. These include Halodrol, as relied upon by Mr Scott. They also include the steroids known as Promagnon and Methylclostebol. Professor Ayotte noted that Methasterone, a steroid specifically named on the Prohibited List, might also produce the M4 metabolite. However, no-one suggested before us that there could be any substance other than DHCMT, Halodrol, Methasterone, Promagnon or Methylclostebol which could be the "parent" of the M4 metabolite.

32. The critical question ventilated before us was whether Halodrol, Promagnon and Methylclostebol are all substances with a similar chemical structure to DHCMT. We accept the evidence of Professor Ayotte and her illuminating diagrams of the chemical structures and are entirely satisfied that they are . . . Given our finding that they all have a similar chemical structure to DHCMT, we conclude that they all constitute Prohibited Substances for the purpose of the TADP.

...

34. We are, therefore, entirely satisfied that the M4 metabolite found in Mr Scott's system on 7 July 2017 was a metabolite of a Prohibited Substance. It follows that there was an Anti-Doping Rule Violation. We note Mr Jacobs's submission that it is unfair for Mr Scott to be found to have committed an Anti-Doping Rule Violation for having ingested a product prior to joining the ITF. Even accepting the factual premise, we are unable to accept the plea. Under the TADP what matters for an Anti-Doping Rule Violation to be established is the presence of the metabolite of a Prohibited Substance. How and when the Prohibited Substance came to be ingested are immaterial for this purpose, although they are very relevant questions in the consideration of the consequences which follow from the Anti-Doping Rule Violation.

27. With regard to the question whether or not the M4 metabolite stemmed from the consumption of the Quad by the Athlete prior to December 2015, the Independent Tribunal found as follows:

15. Professor Ayotte had carried out analysis of a residue in the Quad bottle produced by Mr Scott and which was labelled as containing Halodrol. She found no trace of any of the ingredients listed on the label, including Halodrol, although she noted that they would in fact all be Prohibited Substances under the WADA Code. However, she did find traces of other steroids in the bottle including, in particular, DHCMT itself, methasterone, promagnon and methylclostebol. Methasterone is listed by name as a Prohibited Substance under the WADA Code, whilst the latter two designer steroids are testosterone based and structurally similar compounds to DHCMT. Professor Ayotte illustrated her evidence with diagrammatic representations of the molecular structures of promagnon, methylclostebol (and Halodrol) which vividly showed the extremely close structural similarity to DHCMT. Professor Ayotte noted that any of these, like DHCMT itself, could metabolise into M4 metabolite. Professor Dordick opined that the DHCMT found in the bottle might possibly be the result

of oxidisation of Halodrol and, whilst the structure of the other designer steroids might appear visually similar to DHCMT, even the smallest differences might produce different effects on the body in practice.

16. As is well known, steroids metabolise after ingestion. They remain in the body and are excreted over time. Normally the time frame is short before all trace disappears. However, the M4 metabolite has been identified as longer lasting. In his original evidence Professor Dordick has noted that Mr Scott had undergone significant and rapid weight loss in 2017 and had been diagnosed with a fatty tumour. The M4 metabolite is sequestered in body fat. Thus, Professor Dordick expressed the view that the concentration of the M4 metabolite found in Mr Scott's sample in July 2017 "would likely not be inconsistent with his 2014-2015 use of supplement containing Halodrol when considered in conjunction with his significant weight loss in the months preceding his 8 July 2017 urine sample". The original opinion was rather undermined given that:

a) there was no "fatty tumour" but, rather, a possible mild gynecomastia ; and

b) Mr Scott's 2018 positive test result had not come about after rigorous endurance training and consequential rapid weight loss.

Nevertheless, Professor Dordick maintained his view that the 80 pg/ml M4 metabolite found on 7 July 2017 could have resulted from the slow release of a substance in Quad regularly consumed over some 12 months up to September 2015. There was a lack of data or literature to support this hypothesis, but Professor Dordick maintained that it could theoretically be possible.

17. Professor Ayotte was adamant that it was quite impossible for the approximately 80 pg/ml M4 metabolite found in July 2017 to be derived from consumption of the parent substance some 22 months earlier. She agreed that M4 metabolite was longer lasting than other metabolites of DHCMT. But she said that some 22 months was out of the question. She referred to a study of the excretion profile of the DHCMT long term metabolite which had only demonstrated minuscule amounts (2-3 pg/ml) some 6 to 8 months after ingestion of DHCMT. It is fair to say that this was the result of a single dose of 20 mg DHCMT and so was distinguishable from the facts of Mr Scott's case". But, because the present case is concerned with designer steroids manufactured on the black market, hard data is very limited. However, as a practical matter a retention period off some 22 months was unheard of. It had never been found in any other athlete who had taken DHCMT or a related synthetic steroid. In Professor Ayotte's opinion a retention period of a few months, say 7-8 months at the outside, was the maximum possible.

28. The ITF Independent Tribunal concluded by stating that it

... found Professor Ayotte rather more persuasive. Professor Dordick's evidence was more on the speculative side, although it is fair to say that his

instructions seem to have been to put forward theories which might possibly fit with his client's case."

...

44. Mr Scott has not established that it is more likely than not that the source of the Adverse Analytical Finding in July 2017 was his consumption of Quad prior to about September 2015. We cannot, of course, say how the M4 metabolite did in fact come to be in Mr Scott's system in July 2017. Possibly, he would have taken Quad on other occasions. Possibly, the Prohibited Substance came from one or more of the numerous supplements which Mr Scott was taking up to July 2017 and has subsequently continued to take. We cannot, however, speculate. It suffices to say that Mr Scott has not discharged the burden of showing that on the balance of probability the July 2017 Adverse Analytical Finding was caused by the ingestion of Quad in 2014-5.

29. The Appealed Decision ruled as follows:

46. For the reasons given above, our conclusions are as follows:

(1) There was an Anti-Doping Rule Violation by Mr Scott on 7 July 2017; and

(2) It has not been established that the Anti-Doping Rule Violation was not intentional within the meaning of the TADP.

47. It follows that the Period of Ineligibility for Mr Scott is four years. This will run from the date of his Provisional Suspension, that is 19 August 2017. In addition, whist it is perhaps academic, we direct disqualification of Mr Scott's results pursuant to Article 9.1 of the TADP. No party made an application for costs. Either party may appeal by filing a Notice of Appeal against this decision to CAS within 21 days of receipt of the decision by the appealing party.

E. The Athlete's test results following the Appealed Decision

30. Following the issuance of the Appealed Decision, the Athlete was subsequently tested on two other occasions.

31. On 14 May 2018, the Athlete underwent a doping control by the ITF. His sample was analysed by the Laboratory, which detected the M4 metabolite at an estimated concentration of 30pg/mL and its epimer at an estimated concentration of 5pg/mL.

32. On 15 June 2018, Professor Ayotte then issued a new report in which she provided documentation related to an "excretion study" authored by Dr. Wilhelm Schänzer and discussed the epimer of the M4 metabolite, namely mentioning that the epimer of the M4 metabolite is "*always present and excreted in lesser amounts*" than the M4 metabolite. She added:

(...) Three samples were collected from Mr. Scott and all three revealed the presence of the metabolite of dehydrochlormethyltestosterone (DHCMT) or one

of its variants such as methylclostebol or chloromethylandrostenediol /"Promagnon". The first test was collected in July 2017 and the second one in March 2018.

While close to 8 months separate both tests, the roughly estimated level of the M4 metabolite is the same (80 pg/mL) in both samples while the level of the epimer is higher (from14 to 22 pg/mL), which suggests that another administration occurred after July 2017.

The metabolite M4 is always excreted in relatively low levels (in my experience below 200 pg/mL) and 80 pg/mL does not represent the end of the excretion i.e. the final days of detection. In the Cologne study, such level is observed in the first month following the administration of DHCMT. Then, less than two months later, the level of both M4 and epiM4 has decreased significantly, as expected and that also supports a repeated administration. The decrease observed from 26 March to 14 May is consistent with the excretion data presented by Schänzer.

There is consequently no reason to accept that the July 2017 test results are due to a past administration dating from around 20 months (almost 2 years), furthermore in the relatively "high" level of 80 pg/mL and the March 2018 test results are not consistent with a last administration having occurred 28 months before.

The concentration of the "M4" metabolite was roughly estimated by comparing the signal to the one from the reference urine itself estimated by comparison with the synthesised reference standard. The second metabolite, which is the epimer of "M4", is always present and excreted in lesser amounts as described by Sobolevsky in 2012. We have roughly estimated its amount by assuming it has a similar response than "M4" (comparing peak heights).

(...)

In conclusion, I maintain that "although we cannot deduce with any certainty the timing and frequency of use from a single urine test result, the delay between the last administration of the DHCMT/DHCMT variant and the provision of the sample in July 2017 must be much less than 20 months, more realistically of a few months". It is also my opinion that the results of the March 2018 sample and of the May 2018 sample indicate that the administration was repeated after July 2017, such repeated administration being a few months before the collection of the second sample on 26 March 2018.

33. On 30 June 2018, the Athlete was again tested by USADA. His urine sample was analysed by the Salt Lake City laboratory, which found the M4 metabolite at an estimated concentration of 65pg/mL. However, this analysis did not reveal the presence of the M4 epimer in his sample.

34. On 9 July2018, , Professor Dordick issued an updated report, based on the analytical results of the Salt Lake City laboratory wherein he opined that:

5.2 Based on Mr. Scott's witness statement, it is my understanding that he had undergone significant and rapid weight loss prior to the urinalysis test. Release of persistent lipophilic compounds from fat stores (e.g., adipose tissue) would be consistent with this rapid weight loss. This would be the case whether the compound is a POP or Diol. Indeed, many POPs are chlorinated, as is Diol, which serves to enhance systemic fat sequestration.

5.3 Based on the ability of hydrophobic compounds to accumulate in adipose tissue, it is certainly possible that Diol and/or their long-term metabolites, including the M04 metabolite detected in Mr. Scott's urinalysis, could be slowly, yet measurably, released over time. Without baseline data on M04 concentration levels following the ingestion of Diol at certain points in time, one cannot definitively draw any conclusions on the precise date of usage. However, when viewed in relation to the dosage, duration and excretion data of the Schänzer subject versus Mr. Scott's, and given Mr. Scott's three subsequent positive M04 urine samples and their peculiarities, the excretion time for Diol must be substantially greater than the eight months observed in the Schänzer subject, more realistically multiples of that observed in the Schänzer subject. In this context, and considered together with Mr. Scott's significant weight loss in the months preceding his 8 July 2017 urine sample, Mr. Scott's 8 July 2017 positive test for the "M04 metabolite" would be consistent with his 2014-2015 usage of a supplement containing Diol.

(...)

9.1 The testing history of Dylan Scott only further supports my expectation that the Diol and/or the M04 metabolite becomes sequestered in fat tissue. As will be described below, Dylan Scott's urinalysis showed that a classic drug elimination pharmacokinetics profile was not followed. Such a classic profile would show that over time, the excretion of the M04 metabolite would occur in roughly an exponential decay, ultimately to levels below reliable analysis. However, if there were fat sequestration, such a classic elimination profile would not be expected. Indeed, one would expect that there would be variable excretion levels as a function of time, and that other extrinsic factors would influence the elimination profile. This could include level of exercise, weight loss, and even time of day of the urinalysis test. More recent information on Dylan Scott's urinalysis testing only provides substantial evidence that such variable M04 metabolite excretion levels again supports a fat sequestration model. I will provide additional insight below based on my quantitative analysis of the M04 metabolite excretion profile.

9.2 Based on Dylan Scott's prolonged use of the Quad supplement in 2014 and 2015, and based on his own personal testing history for the M04 metabolite as explained in this expert report, it is my opinion that Dylan Scott's 8 July 2017 positive test for the "M04 metabolite" was more likely than not caused by his 2014-2015 use of the Quad supplement. For the same reasons, it is my opinion that Dylan Scott's subsequent positive tests for the "M04 metabolite" [on 26 March 2018, 14 May 2018 and 30 June 2018] were very likely caused by the same 2014-2015 use of the Quad supplement.

(...)

10.3 The study by Dr. Schänzer evaluated the pharmacokinetics of DHCMT excretion on a single volunteer athlete based on a single dose of 20 mg DHCMT. Prof. Ayotte obtained the data from Dr. Schänzer and provided that information to us, and I have replotted this data in the form of a log-log plot, as the excretion is non-linear (as expected) (Figure 1). Dr. Schänzer's data follow an exponential decay of the M4 metabolite (linear drop in concentration) between Days 5 and 112. In this period, a decay from 80 pg/mL to 30 pg/mL (as the Appellant showed between the March and May 2018 urinalyses - 49 days) would require 32 days for Dr. Schänzer's athlete's case. Clearly, the Appellant's decay is slower by approximately 50%. Moreover, as stated above, Dr. Schänzer's study included a single 20 mg dose of DHCMT. One would expect that at higher dosages, the rate of excretion would be increased (albeit the absolute levels would be increased), not decreased. Thus, the Appellant's excretion profile is inconsistent with Dr. Schänzer's study. This is not unexpected, as the Appellant had a far higher amount of the M04 parent over a long period of time. Hence, the level of the M04 metabolite in the Appellant's system would be expected to be higher and the rate of excretion also would be expected to be higher than in Dr. Schänzer's study. I will discuss in more detail the influence of dosage below; however, the lower rate of M04 metabolite excretion of the Appellant is inconsistent with the sole study available with DHCMT in a human.

(...)

11.1 This is pure speculation by Prof. Ayotte. First, as indicated above, the Appellant's M4 metabolite excretion profile is not consistent with the single dosage DHCMT study performed by Dr. Schänzer. Moreover, a high repeated dosage by the Appellant of the Diol within the Quad supplement prior to 2016 would be expected to result in higher levels, which would certainly push out the detection window to later dates. Second, Prof. Ayotte indicates correctly that it is not possible to "deduce with any certainty the timing and frequency of use from a single urine test." Similarly, it is not possible for Prof. Ayotte to express certainty that the July 2017 sample must have been ingested "much less than 20 months, more realistically of a few months." Prof. Ayotte simply does not have any data to prove this. While there is no available data to draw any specific conclusions, considering inter-individual differences and a lengthy regimen consisting of a dosage several hundred times greater than that administered to the single Schänzer athlete, it is highly likely that the detection window of M04 would be multiples of the 250 days (approximately 8 months) observed in the single Schänzer study subject.

(...)

12.2 It is more likely than not, therefore, that Dylan Scott's M04 metabolite excretion results point to a very high ingestion of Diol over a long period of time prior to 2016 as opposed to a repeat administration after July 2017. This will be addressed further below.

(...)

13.1 The Tribunal's conclusion is not based on scientific data nor do they explain their rationale or the facts they relied upon in reaching their conclusion. However, there are three pieces of scientific data available today that if available to them in April 2018 may have provided insight into a clearer hypothesis regarding the Mr. Scott's M04 metabolite excretion profile: (1) the dosage regimen of the M4 parent (e.g., the Diol in the Quad supplement) was 340 times greater than that administered to the subject of the Schänzer study and resulted in a dramatically higher level of M4 parent ingested over a far longer period of time than in the Schänzer study; (2) the M4 metabolite excretion profile of the Appellant is inconsistent with results of the Schänzer study; and (3) the increase in the M4 metabolite level and decrease in the epi-M4 level in the most recent (July 2018) urinalysis vs. the May 2018 urinalysis is inconsistent with a repeated dosing of an M4 parent and inconsistent with Professor Ayotte's expert opinion where she states that "The second metabolite, which is the epimer of "M4", is always present", and her conclusion therefrom that the Appellant must have repeated a dose between the May 2018 and July 2018 testing dates.

(...)

13.4 Prof. Ayotte argues in her June 2018 report that the presence of the epiM4 metabolite is relevant from the standpoint of repeated dosing of an M4 parent. Specifically, she states on p. 4, "The second metabolite, which is the epimer of "M4", is always present and excreted in lesser amounts as described by Sobolevsky in 2012." (emphasis added). In the Appellant's urinalysis, while the M4 metabolite more than doubled, the epi-M4 was absent. Thus, according to Prof. Ayotte, this result must indicate that the Appellant could not have repeated a dose between the May 2018 and July 2018 testing dates, or with an increase in the M4 metabolite, there would be a concomitant increase in the epi-M4 metabolite.

13.5 Since the repeat dosing argument was hypothesized (speculated?) to be the cause of the maintained higher than expected level of the M4 metabolite, it is clear that this was just speculation, and the data today does not support such a hypothesis. However, given the high level of M4 parent ingested (high dosages over extended times) by the Appellant prior to January 2016, the highly lipophilic nature of Diol, and the lack of epi-M4 metabolite, it is far more likely that this high degree of ingestion of an M4 parent, such as Diol, resulted in the M4 metabolite (and epi-M4 metabolite) being sequestered in the Appellant's fat tissue. Over time, both metabolites are excreted, although the rate of excretion for either compound does not need to be constant nor equivalent. Under such a hypothesis, it is quite possible that over time, differential levels of the M4 metabolite would be excreted – in some cases, higher concentrations of M4 are excreted and in other cases, lower concentrations of M4 are excreted.

35. On 30 June 2018 a further analysis was performed on the Athlete's sample by the Laboratory, which detected the M4 metabolite at an estimated concentration of 40 pg/mL and the epimer at an estimated concentration of 7 pg/mL.

36. On 11 October 2018, the ITF received the results of the analysis that had been performed by the Laboratory on 30 June 2018.

37. On 21 October 2018, Professor Ayotte issued another report, based on the latest findings of the Laboratory wherein she, *inter alia,* opined as follows:

> *6. Whatever the source, DHCMT or DHCMT variant steroids, there is no evidence, either from controlled experiments or from athletes' test results, to support that metabolite "M4" may still be found in urine samples collected approximately 2 to 3 years after the last ingestion of the parent compound, let alone in amounts such as those estimated in Mr. Scott's samples (approximately 80 pg/mL to 30 pg/mL). Instead, the available evidence suggests an excretion period of a few months at such levels, 4 months with DHCMT itself, 9 to 10 months for methylclostebol. The "M4" metabolite at the tail-end of the excretion period (a couple months later) would be undetectable for most laboratories being found in the extremely low amounts of 1 to 3 pg/mL.*
>
> *7. I did not find that the literature cited by the athlete supported the hypothesis of DHCMT storage in the athlete's fat deposit and release by weight loss.*
>
> *8. It is my opinion that the results of the March, May and July 2018 samples are consistent with repeated ingestion of an M4 parent after July 2017, and further inconsistent with the hypothesis of sequestration and slow release of the M4 parent ingested in 2014-15, i.e. almost 3 years before the latest AAF reported in July 2018.*
>
> *(...)*
>
> ***Conclusion:** We cannot deduce with any certainty the timing and frequency of use of an anabolic steroid from spot urine samples in which a very minor metabolite was identified in minuscule amounts. The difficulty is even higher when black-market products of unknown composition are involved. However, from my experience and knowledge of testing these substances, it seems extremely unlikely that 3 years have passed since the last administration of the "QUAD" product while the "M4" and epi"M4" metabolites are still present in the amounts estimated, moreover when at such levels, this is not yet the end of the excretion period. A more likely scenario dates back the last administration prior to the collection of the July 2017 sample to a few months (up to around 7 – 8 months) and repeated administration after July 2017. The opinion expressed by Prof. Dordick did not convinced me of the contrary."*

III. PROCEEDINGS BEFORE THE COURT OF ARBITRATION FOR SPORT

38. On 30 May 2018, the Athlete filed his statement of appeal against the Respondent with the Court of Arbitration for Sport ("CAS") in accordance with Article R47 et seq. of the Code of Sports-related Arbitration (the "Code"). In his statement of appeal, the Appellant nominated Prof. Cameron Myler, Professor of Law in New York, New York. In addition, the Appellant filed a request that the Respondent disclose certain documents.

39. On 13 June 2018, the Respondent nominated Hon. Michael J. Beloff Q.C. as arbitrator.

40. On 15 June 2018, the Respondent voluntarily responded, in part, to the Appellant's request for the disclosure of documents.

41. On 18 June 2018, the CAS Court Office acknowledged the Respondent's voluntary production of documents in response to the Appellant's request for disclosure, and invited the Appellant to reformulate his requests following his review of the materials provided by the Respondent, as needed.

42. On 26 June 2018, the Appellant filed his reformulated requests for disclosure.

43. On 28 June 2018, the CAS Court Office provided the parties with a Redfern Schedule which set out the Appellant's outstanding disclosure requests and invited the Respondent to complete the schedule based on the Appellant's reformulated requests.

44. On 10 July 2018, the Respondent completed the Redfern Schedule and produced additional materials to the Appellant.

45. On 12 July 2018, the CAS Court Office, on behalf of the Deputy President of the Appeals Arbitration Division, confirmed the appointment of the Panel as follows:

President:	Prof. Ulrich Haas, Attorney-at-Law in Zurich, Switzerland
Arbitrators:	Prof. Cameron Myler, Professor in New York, USA
	Hon. Michael J. Beloff QC, Barrister in London, United Kingdom

46. On 20 July 2018, Me. Marianne Saroli, Attorney-at-Law in Montreal, Canada was appointed ad hoc clerk by the President of the Panel.

47. On 10 August 2018, the Panel, having considered the Appellant's outstanding disclosure requests as set forth in the Redfern Schedule, denied all remaining requests, but directed the parties' experts to provide copies of any specific studies, data, publications, etc. with any report he/she may file in this procedure.

48. On 10 September 2018, following an agreed-upon extension of time, the Appellant filed his appeal brief in accordance with Article R51 of the Code.

49. On 22 October 2018, following an agreed-upon extension of time, the Respondent filed its answer in accordance with Article R55 of the Code.

50. On 10 November 2018, the Respondent signed and returned the Order of Procedure in this appeal whereas the Appellant signed and returned it on 15 November 2018.

51. On 25 November 2018, the Appellant filed a new case (the "World Rugby case") along with the expert evidence of Professor David Cowen contained therein.

52. On 26 November 2018, a hearing in New York, New York was conducted in this procedure. The Panel was assisted by Mr. Brent J. Nowicki, CAS Managing Counsel, and Me. Marianne Saroli, ad hoc clerk, and joined by the following:

For the Appellant:

Mr. Dylan Scott (Appellant)
Mr. Jeffrey Scott (Counsel)
Mr. Howard Jacobs (Counsel)
Ms. Lindsey Brandon (Counsel)
Ms. Lisa Ann Scott (Appellant's mother, as observer)
Ms. Jordan Scott (Appellant's sister, as observer)

Mr. Jonathan Dordick (witness)
Mr. Dominic Hybaty (witness)
Ms. Mariela Pennock (witness)
Mr. Franco Santinato (witness)

For the Respondent:

Mr. Jonathan Taylor (counsel)
Ms. Lauren Pagé (counsel)
Dr. Stuart Miller (ITF Senior Executive Director)
Prof. Christine Ayotte (witness)

53. At the outset of the hearing, the parties confirmed that they had no objection to the constitution of the Panel or the manner in which the proceedings had been conducted thus far. At the conclusion of the hearing, the parties confirmed that that their right to be heard had been fully respected, save for an objection by Mr. Jeffrey Scott who, at the close of the near 10-hour hearing, requested that he be permitted to have additional time for oral submissions. Such request was rejected as not required by principles of fairness or equal treatment, especially given that the Panel permitted the parties to file comprehensive post-hearing briefs ("PHB") on all evidentiary and legal issues. The Respondent noted that it would directly contact Professor Cowen concerning his adduced evidence and the Appellant objected unless he too had access to Professor Cowen.

54. The Panel did not object to either party contracting Professor Cowen after the hearing.

55. On 20 December 2018, the Appellant advised the CAS Court Office that in order to assist the preparation of the PHB, the parties had agreed to the preparation of a transcript of the 26 November 2018 hearing. A copy of the transcript was attached to the Appellant's letter. Furthermore, the letter informed the CAS Court Office that the parties had agreed that the Appellant should submit his PHB on 21 January 2019 and the Respondent on 18 February 2019, Furthermore, the Appellant would be allowed to submit an optional Reply Brief on 4 March 2019.

56. On 21 December 2018, the CAS Court Office acknowledged receipt of the Appellant's letter and invited the Respondent to state by 24 December 2018 whether it agreed with the Appellant's proposal.

57. On 24 December 2018, the Respondent informed the CAS Court Office that it had no objections to the timetable submitted by the Appellant.

58. On 3 January 2019, the CAS Court Office confirmed the timetable proposed by the Appellant.

59. On 21 January 2019, the Appellant filed his PHB.

60. On 22 January 2019, the CAS Court Office acknowledged receipt of the Appellant's PHB. The letter further reminded the Respondent that its PHB was due by 18 February 2019.

61. On 25 January 2019, the Respondent requested a short extension of the time limit to file its PHB. Attached to the letter was a correspondence between the parties, which showed that the Appellant opposed any extension of the deadline.

62. On 29 January 2019, the Appellant reiterated to CAS his concerns about an extension of the deadline.

63. On 30 January 2019, the CAS Court Office on behalf of the Panel granted an extension of the deadline in favour of the Respondent to file its PHB until 5 March 2019.

64. On 5 March 2019, the Respondent filed its PHB. Attached to the PHB was an expert opinion by Professor Cowan.

65. On 8 March 2019, the CAS Court Office invited the Appellant to file his final reply submissions (PHB-Reply Brief) within 14 days.

66. On 8 March 2019, the Appellant objected to the inclusion of an Expert Report of Professor Cowan appended to the Respondent's PHB.

67. On 11 March 2019, the CAS Court Office invited the Respondent to reply to the Appellant's objection to the inclusion of Professor Cowan's report.

68. On 15 March 2019, the Respondent filed its observation on the Appellant's objection.

69. On 20 March 2019, the Appellant requested an extension to file his PHB-Reply Brief until 25 March 2019.

70. On 21 March 209, the CAS Court Office granted the extension as requested.

71. On 25 March 2019, the Appellant filed his PHB-Reply Brief.

72. On 26 March 2019, the Panel admitted the (third) Report of Professor Cowen, as appended to the Respondent's PHB.

73. On the same day, 26 March 2019, the Respondent noted that while it did not wish to reply to the Appellant's PHB-Reply Brief, it did wish to clarify certain points therein. Such comments were made and on 27 March 2019, the CAS Court Office thereafter invited the Appellant to reply, if necessary.

74. On 27 March 2019, the Appellant requested that the Respondent's letter dated 26 March 2019 be disregarded.

75. On 28 March 2019, the Respondent objected to the Appellant's request.

76. Still on the same day, the CAS Court Office invited the Appellant to provide without delay evidence that WADA had installed a working group on the long-term effects of the M4 metabolite, failing which the Panel would admit the Respondent's letter dated 26 March 2019 into the file.

77. On 29 March 2019, the Appellant filed a reply to the Respondent's letter of 26 March 2019.

IV. SUBMISSIONS OF THE PARTIES

A. The Appellant

78. The Athlete's submissions, in essence, may be summarized as follows:

a) Liability and the establishment of an anti-doping rule violation

- The ITF shall have the burden of establishing that an anti-doping rule violation has occurred. In the present case, the Athlete contends that the Independent Tribunal was wrong to find that the presence of the M4 metabolite in his 8 July 2017 sample constitutes an anti-doping rule violation ("ADRV").

i. M4 metabolite no indication for DHCMT

- The Athlete is charged with the commission of an anti-doping rule violation under TADP Article 2.1, on the basis that a Prohibited Substance, DHCMT, i.e. Dehydrochlormethyltestosterone metabolite (4-chloro-17β-hydroxy-17α-methyl-androst-1,4-diene-3-ine) was found to be present in his urine sample. This is an incorrect charge because the Athlete tested positive for the M4 metabolite (i.e., 4-chloro-18- nor-17β-hydroxymethyl,17α-methyl-5-androst-13-en-3-ol) – not for DHCMT itself. This explains why the Athlete asked the ITF on 25 September 2017 to specify during the course of the procedure before the ITF Independent Tribunal the nature of the specific charge against him.

- The Athlete acknowledges that DHCMT is a Prohibited Substance, but submits that it is uncertain that the M4 metabolite found in his system derived from DHCMT. The Athlete has never used DHCMT but used, in the past and prior becoming subject to TADP, the Quad supplement which contained another non-prohibited substance that could have caused his positive test for the M4 metabolite. Indeed, a positive test for M4 metabolite does not definitely indicate

that he ever ingested DHCMT or that the presence of the M4 metabolite stems from DHCMT, i.e. that the M4 metabolite is the DHCMT's "metabolite".

- The Athlete highlights the scientific paper of Sobolevsky and Rodchenkov and notes that such research does not indicate that the M4 metabolite is exclusive to DHCMT. Since this paper contains recommendations for WADA-accredited laboratories to continue screening for DHCMT metabolites "I" and "II", it is plausible that Sobolevsky and Rodchenkov recognized the presence of M4 metabolite in substances other than DHCMT.

- The Athlete notes that according to Professor Ayotte's analysis, only a tiny residue of DHCMT was found in his sample. The presence of the purported trace amount of DHCMT in the residue testing of the Quad supplement bottle might have been caused by oxidation or might have also derived from Halodrol. Hence, such residue cannot constitute a clear evidence that DHCMT was ever contained in the Quad supplement.

- The substance that the Athlete alleges to have ingested (Halodrol) is not named on the Prohibited List, nor were the two possible parent substances put forward by Professor Ayotte, namely chloromethylandrosteanediol ("Promagnon") and methylclostebol. In his expert report, Dr. Dordick explains that Halodrol is listed as the primary ingredient in the Quad supplement while Promagnon is the primary ingredient presented by Professor Ayotte in her analysis of the residue found in the Quad supplement bottle. Dr. Dordick refers to both Halodrol and Promagnon as "Diol". According to Dr. Dordick, Diol can generate the M4 metabolite by converting directly to DHCMT or it can metabolize to the M4 metabolite without ever converting to DHCMT itself. In fact, a number of athletes have had positive tests caused by non-prohibited substances in the past. For instance, in *Calle Williams v. IOC*, CAS 2005/A/726 ("*Calle Williams*"), the Panel declared that: "*the presence of Heptaminol (i.e. the Prohibited Substance) in the Appellant's sample was not due to the Appellant having ingested that very substance but was the result of the following process (i.e. Isometheptene metabolizing into Desmethyl-Isometheptene which then transforms into Heptaminol during laboratory analysis)*".

ii. Substance that metabolized into M4 is not mentioned on the Prohibited List

- It is undisputed that neither Diol nor the M4 metabolite is specifically listed on the applicable Prohibited List. The presence of a metabolite, which could be caused by either a prohibited or a non-prohibited substance, cannot lead to a finding of an ADRV. Proof that such presence was caused by the ingestion of a actual prohibited substance is required.

- The Athlete alleges that WADA has known for years that Diol and other substances can cause a positive test for the M4 metabolite and that it has taken no steps to notify athletes of this fact. WADA has not sought to specifically prohibit substances other than DHCMT which it knew to be M4 parents. Had it

done so products like Quad, which contain the ingredient of one of the non-DHCMT M4 parents, would possibly not be sold in supplement retail stores.

- The ITF intended to depict the Athlete's behavior as some sort of nefarious drug purchase with its references to the "black market". Nevertheless, it appears that the Athlete purchased the Quad product from Total Nutrition, a large supplement retailer in Coral Gables, Florida. The Athlete was aware that supplement stores are only permitted by US law to sell natural products in the USA.

- Athletes have not had clear notice that Diol is prohibited or that its ingestion can lead to a positive test for the M4 metabolite or, ultimately, that a positive test for the M4 metabolite can constitute an ADRV regardless of what substance caused the positive test. In this respect, the Athlete views WADA's practice of not listing by name all prohibited substances and so hiding them from the athletes as unfair. Indeed, it is unreasonable to expect athletes to guess what might be prohibited. He refers to *UEFA v. Sakho*, whereby the CEBD indicated that: "*there must be legal certainty as to the substances on WADA s prohibited list. Any uncertainty must be interpreted in favour of the accused and, based on the foregoing discussion of Higenamine, there is clearly considerable uncertainty in this case about the categorisation of Higenamine as a Beta-2 Agonist on WADA s prohibited list. As a final point, the CEDB feels compelled to make some mention of the rights of athletes and how they are affected by the uncertainty discussed above. Fundamentally, it is unreasonable to expect an athlete to have a greater understanding of a substance than a WADA accredited laboratory and its scientists*."

iii. The substance ingested is not a "similar substance"

- The ITF cannot prove which parent substance (DHCMT, Diol or multiple other substances) caused the finding of the M4 metabolite in the Athlete's system.

- Although DHCMT is mentioned on the Prohibited List, the other M4 parent substances are not. The Prohibited List does not specifically identify Diol. As a result, the only way to assimilate Diol as a banned substance is if the ITF can prove by greater than a mere balance of probability it is a substance *"with a similar chemical structure or similar biological effect(s)*" that should be included in Section S1, which lists specific anabolic androgenic steroids, including DHCMT, as prohibited substances.

- The Athlete considers that analysing the similarity of substances should entail the exact same level of review than the decision relating to the inclusion of a substance on the Prohibited List. In this respect, he again cites the case of *Calle Williams*.

- Following the rationale of CAS 2005/A/726, before a substance could be named on the Prohibited List, WADA has to be satisfied that two out of three criteria are met: 1) potential performance enhancement, 2) health risk and 3) violation of the spirit of sport. Thus, the same criteria must be applicable for a substance to be categorised as similar to a named substance. As a result, the Athlete

contends that the ITF has to prove that each of the M4 parent substances has a "*similar chemical structure or similar biological effect(s)*" to other substances listed in section S1.1(a) of the WADA Prohibited List. The ITF must also satisfy at least two of the three criteria presented in Article 4.3 of the WADA Code for inclusion on the Prohibited List.

- Even if the ITF could sustain its burden of proving that Diol is similar to DHCMT, it cannot prove by greater than a mere balance of probability that Diol meets two of the three criteria for inclusion of a substance on the WADA List. Relying on Dr. Dordick's report, the Athlete submits that:

  - There is no evidence that Diol has the potential to enhance or enhances sport performance.
  - There is no evidence that Diol represents an actual or potential health risk to the athlete.
  - There is no evidence that Diol violates the spirit of the sport.

- Moreover, the ITF cannot prove that all of the M4 parent substances are prohibited . Dr. Dordick clearly states in his report that any assertion as to the pharmacological similarity between Diol and DHCMT is unfounded. From a metabolic perspective, Diol and DHCMT are not structurally similar biologically, notably because different enzymes would be involved in metabolizing DHCMT and Diol to the M4 metabolite. In addition, the 3-hydroxyl group is distinct from the 3-keto group, as it is also for the 3a-hydroxyl group.

- Even if Diol and DHCMT may be to some extent chemically structurally related, such chemical structural similarity obscures very significant pharmacological effects relevant to the pharmacological similarity or lack thereof of the two compounds. Hence, Diol does not have a sufficiently similar chemical structure to DHCMT to categorise it as a Prohibited Substance.

iv. Procedural flaws and fair trial

- Since neither of the Diol substances was identified in the ITF's charges against the Athlete, there can be no violation unless the ITF can demonstrate that the M4 metabolite found in his urine samples was related to the 9 August 2017 charge for the Prohibited Substance DHCMT itself and not any other M4 parent substances (prohibited or non-prohibited).

- Furthermore, the ITF did not follow the required procedures to charge the Athlete. While the ITF served an amended charge, specifying that the possible sources are DHCMT or a DHCMT variant. , this amended charge is invalid because it was never submitted to the ITF's IRB as required by Article 8.1.1 of the TADP, and the Athlete was provided with no opportunity to respond to it in writing.

- In addition, the first-instance hearing was initially scheduled for 7 February 2018. On 16 January 2018, the ITF requested an extension until 31 January 2018

to submit its reply brief on the basis that it intended to ask the Athlete to submit an empty bottle of the Quad supplement for residue testing by Professor Ayotte. It is to be noted that this request was lodged 24 days after the submission of the Athlete's Appeal Brief and on the day that the ITF's reply brief was due.

- The Athlete objected to the ITF's request since he had already agreed to an extension to the ITF to submit its Reply Brief until 22 January 2018. He added that such extension would necessitate an adjournment of the hearing that would cause him prejudice given that he had remained under provisional suspension since August 2017.

- Notwithstanding the above, the ITF's request was granted on 17 January 2018 and the hearing was rescheduled to 25 April 2018.

- On 6 February 2018, the ITF submitted its reply brief accompanied with the 4 February 2018 Expert Report of Professor Ayotte, which relied significantly upon confidential unpublished data, which the Athlete had no access to and whose author the Athlete would have no opportunity to cross-examine.

- Following the receipt of Professor Ayotte's report, the Athlete requested on 2 April 2018, *inter alia*, the following information:

  - The controlled excretion studies referenced on page 12 of Prof. Ayotte's Expert Report;
  - The lab reports and data on the "Athlete" referenced; and
  - The documentation supporting the referenced "case study" at page 12

- On 10 April 2018, the ITF responded to these requests as follows:

  In relation to your request no. 17, our understanding is that the sentence at page 12 of Professor Ayotte's report to which you refer ('Other than controlled excretion studies, one athlete's case may be useful to this case') means 'In the absence of controlled excretion studies, ...' We respectfully decline to provide any of the other documentation or information sought in your letter, on the grounds that you have not established that they are sufficiently relevant to justify the burden and expense of conducting the necessary searches/gathering the relevant information (see, e.g., your requests 14, 15, 18/19) ...

- According to the Athlete, the lack of procedural due process and the consequent prejudice to him could not be more obvious. Indeed, the Parties proceeded to the First Instance Hearing, with the ITF and Professor Ayotte having refused to provide documentation that was clearly relevant to the Athlete's case.

- As to the CAS proceedings, the Athlete requested that the ITF be required to produce pertinent documentation and literature related to the detection window of the M4 metabolite, his positive tests for the M4 metabolite subsequent to 8 July 2018 as well as studies or data previously referenced by Professor Ayotte

in her expert report. The ITF subsequently produced only some, but not all, of the requested documentation.

v. The shifts in Respondent's expert opinion

- In its 15 June 2018 response, the ITF produced new documents as well as a new report and documents provided by Professor Ayotte, in which for the first time she provided some documentation related to a Schänzer "excretion study", as well as the data and "experience" upon which she based her conclusions. She also mentioned for the first time the "epimer" of the M4 metabolite and definitively stated that the "epimer" of the M04 metabolite is "*always present and excreted in lesser amounts*" than the M4 metabolite.

- In fact, the ITF and its expert Professor Ayotte have taken different positions each time they found out that there was a subsequent positive test for the M4 metabolite. First, the ITF asserted that there was more than a single compound which could result in a positive test for the M4 metabolite; notably Professor Ayotte declared in her report dated of 4 February 2018 that the detection window of the M4 metabolite was "*a few months*." After the ITF was notified that the Athlete also tested positive on 26 March 2018 for the M4 metabolite, Professor Ayotte testified during the hearing held on 25 April 2018 as follows:

  (...)I did not quantify a 'few month', what I meant exactly by 'a few months'. So it could have been, it could have been in 2017, but this is speculation, around September, around August. It could have been in 2017, yes. (...) the July test was 22 month. So I considered that one 3rd of it is a few month, yeah. Fewer than the 22, so for me it's, by definition, yes.

- In her 15 June 2018 report, Professor Ayotte declared that the results from the Athlete's three samples established two separate ingestions of DHCMT. Her opinion as of 15 June 2018 was apparently that the increase in the epimer of M4 between the 8 July 2017 and the 26 March 2018 samples proved the use of DHCMT after 8 July 2017 whereas the decrease in the M4 metabolite and its epimer between the 26 March 2018 sample and the 14 May 2018 sample was consistent with normal excretion. Therefore, she concluded that the epimer of the M4 metabolite "*is always present*" when the M04 metabolite is present.

- Thereafter, the ITF was advised that a fourth urine sample of the Athlete, collected on 30 June 2018, was found positive for the M4 metabolite at an estimated concentration level of 65 pg/mL, but that the epimer of the M04 metabolite was absent. Hence, Professor Ayotte's assertion was incorrect. In sum, all of her opinions are inconsistent and unreliable.

b) The Athlete's position on the sanction

i. Proving the source of the M4 metabolite

- If the M4 metabolite found in the Athlete's July 2017 sample came from a Prohibited Substance, it came from the Quad supplement the Athlete consumed

between June 2014 and September 2015, i.e., before he registered with the ITF in December 2015. Thus, the use of the Quad supplement prior to him becoming subject to and bound by the TADP does not constitute an ADRV.

- However, if the presence of the M4 metabolite in his July 2017 sample is an ADRV, then it does not require the imposition of a four-year suspension pursuant to TADP Article 10.2.1(a).

- The Athlete denies using any substance intentionally to enhance his performance on the professional tennis circuit, claiming that the M4 metabolite found in his July 2017 sample is attributable to his ingestion of the Quad product in the period June 2014 to September 2015 "*to help him get stronger and gain weight*". At that time, he had no plan to play professional tennis. He stopped taking the product in early September 2015 for medical reasons, i.e., 22 months before providing his 8 July 2017 sample.

- In support of his position, the Athlete refers to the expert opinion of Dr. Dordick, who considers that the 8 July 2017 positive test is consistent with fat sequestration and slow release of the Diol contained in the Quad supplement ingested in 2014-2015 (and that was validated by the three subsequent positive tests for the same M4 metabolite which are also to be attributed to the Quad supplements).

- Professor Schänzer's "single administration 20 mg study", which Professor Ayotte is greatly reliant upon, is clearly inconsistent with the Athlete's excretion pattern illustrated by his long-term use of the Quad supplement and his subsequent test results. Furthermore, Professor Schänzer conducted this study in non-peer-reviewed work.

- When comparing the dosage, duration and excretion data of the Schänzer subject to the Athlete's case, the excretion time for Diol must be considerably greater than the eight months observed in the Schänzer subject. Taking into account the Athlete's significant weight loss in the months preceding his 8 July 2017 positive test for the M4 metabolite, his result would be consistent with his 2014-2015 usage of a supplement containing Diol.

- According to the Athlete, Professor Schänzer's study cannot be relied upon in this case, since the study evaluated the pharmacokinetics of DHCMT excretion on a single volunteer athlete based on a single dose of 20 mg DHCMT whereas his data follows an exponential decay of the M4 metabolite between Days 5 and 112. In the case at hand, however, the Athlete showed a decay from 80 pg/mL to 30 pg/mL for the period of March until May 2018. As noted by Dr. Dordick, a decay from 80 pg/mL to 30 pg/mL would necessitate 32 days for the athlete in Dr. Schänzer's study. Therefore, the decay of the M4 metabolite in the Athlete's case would be slower by approximately 50%.

- Professor Ayotte's conclusion that "*the last administration of the DHCMT/DHCMT variant and the provision of the sample in July 2017 must be*

much less than 20 months, more realistically of a few months" is speculative, namely because the Athlete's M4 metabolite excretion profile is not consistent with the single dosage DHCMT study performed by Dr. Schänzer and also because a high repeated dosage by the Athlete of the Diol within the Quad supplement prior to 2016 would be expected to result in higher levels, which would undoubtedly postpone the detection window to later dates.

- Simply put, there is no available data to support any specific conclusions in this case. There are clear inter-individual differences and the lengthy regimen of a dosage of the Athlete several hundred times greater to what was prescribed to the only Schänzer subject. For that reason, it is very probable that the detection window of M4 would be multiples of the 250 days observed in the single subject examined in the Schänzer study.

- In consideration of the foregoing, it is more likely than not that the Athlete's M4 metabolite excretion results from a very high consumption of an M4 parent over a long period of time prior to January 2016, rather than from a repeated administration after July 2017. The highly lipophilic nature of Diol could possibly justify why this high level of ingestion of an M4 parent, like Diol, caused the M4 metabolite and epi-M4 metabolite to be sequestered in the Athlete's fat tissue. Dr. Dordick points out that both metabolites were excreted over time, but the excretion rate for either compound was neither constant nor equivalent.

ii. Absence of intent to violate the anti-doping rules

- Establishing the source of the prohibited substance under TADP Art. 10.2.1 cannot impose a greater burden than what is required under TADP Articles 10.4 and 10.5.2. Consequently, the Athlete has inevitably established how the M04 metabolite entered his system for the purpose of TADP Article 10.2.1 as soon as he satisfied his burden of proving how the M4 metabolite entered his system for the purpose of TADP Articles 10.4 and 10.5.2. Nevertheless, establishing how the substance entered his system is not an absolute pre-condition to prove a lack of intent to violate the anti-doping rules (CAS 2016/A/4534, CAS 2016/A/4676).

iii. Burden shifting to the ITF

- Considering that the Athlete has met his burden by proving that he took Quad in 2015 that contained one or more M4 parent substances the burden shifts to the ITF to prove that such ingestion could not have caused his positive test.

- The ITF, however, has failed to discharge this burden. It has merely asserted that the Athlete must have consumed the substance again after his July 2017 positive test. It did not provide any study to support its hypothesis. Since the ITF failed to complete any reliable excretion studies, it would be unjust for the anti-doping organizations to impose the requirement on athletes to prove something like the detection window for the M4 metabolite. This is all the more true, considering that the ITF acknowledged "*the absence of a controlled excretion study*", and

that it never bothered to adequately study the issue. Thus, the lack of any reliable excretion studies makes it impossible for the ITF and its expert Professor Ayotte to rule out the possibility that the Athlete's positive tests were caused by his 2015 ingestion of the Quad supplement. Consequently, the ITF cannot prove that the Appellant's 2014-2015 use of the Quad supplement did not cause the Athlete's positive tests.

iv. Elimination or reduction of the sanction

- In the event that Diol is a Prohibited Substance and that the Athlete's use of a supplement containing Diol constitutes an ADRV, the Athlete contends that he bears no fault or negligence or no significant fault or negligence and he should receive no suspension or at least suspension less than 24 months.

- The Athlete explains that he had no intention of playing tennis when he took the Quad product in 2014- 2015. At the time, he was working as an insurance adjuster and was not subjected to the TADP.

- In addition, the Athlete contends that he did not know and could not have known that the Quad supplement metabolite would still be in his system 22 months later, in July 2017, when he provided his first urine sample.

- Moreover, there was no way the Athlete knew or could not have known how long he would have to stop using the Quad supplement before joining the ITF to avoid a positive test for the M4 metabolite.

c) The Athlete's prayer for relief

79. In his appeal brief, the Athlete sought the following relief:

9.1 For all the foregoing reasons, it is submitted that the ITF's charge of an anti-doping rule violation in connection with Dylan Scott's 8 July 2017 urine sample must be dismissed.

9.2 Alternatively, if the alleged anti-doping rule violation is not dismissed in its entirety, then it is submitted that this case is a case of "No Fault or Negligence" within the meaning of TADP Art. 10.4, for which there can be no sanction (or reduced on a finding of no significant fault or negligence, pursuant to TADP Art. 10.5.2).

9.3 Appellant respectfully requests the Panel to:

9.3.1 Annul the Decision of the First Instance Tribunal;

9.3.2 Find that the ITF has not established a violation of the TADP with respect to the 8 July 2017 urine sample;

9.3.3 Find that the ITF cannot establish[] a violation of the TADP with respect to Appellant's urine samples based solely on the presence in Dylan Scott of the M04 metabolite or its epimer.

9.3.4 Alternatively, find that a Violation based solely on the presence in Dylan Scott's urine sample(s) of the M04 metabolite or its epimer is a case of "No Fault or Negligence" within the meaning of TADP Art. 10.4, for which there can be no sanction [or reduced on a finding of no significant fault or negligence, pursuant to TADP Art. 10.5.1(b) or TADP Art. 10.5.2];

9.3.5 Order the ITF to:

9.3.5.1 Reimburse Dylan Scott for his legal costs and other expenses pertaining to these Appeal proceedings before CAS; and

9.3.5.2 Bear the costs of arbitration.

9.4 Appellant respectfully requests the right to file separate costs submission on completion of this Appeal.

B. The Respondent

80. The Respondent's submissions, in essence, may be summarized as follows:

a) ITF's position on the Athlete's liability

- Considering that DHCMT is a designer anabolic steroid mentioned by name on the WADA List, the ITF accepts that it must establish that that parent substance is also a Prohibited Substance. Out of the other M4 parent substances, two have been found in products or samples and a third is mooted. However, the ITF states that, materially, they are all designer steroids, variants of and derived from DHCMT or other listed steroids.

i. M4 metabolite indicates the presence of a Prohibited Substance

- Since each of the following substances metabolizes in the human body after ingestion into the M4 metabolite, the M4 metabolite found in the Athlete's July 2017 sample must have come from at least DHCMT (aka 'Turinabol') (4-chloro-17β-methyl-androsta-1,4-diene-17β-ol-3-one) and the following DHCMT variants:
  - chloromethylandrostenediol (trade name 'Promagnon' or 'P-Mag') (4chloro-17-methyl-androst-4-en-3, 17-diol);
  - methylclostebol (4-chloro-17α-methyl-17β-hydroxy-androst-4-en-3one); and
  - 4-chloro-17a-methyl-androst-1,4-diene-3,17b-diol (aka 'Halodrol').

- DHCMT is undeniably a Prohibited Substance because it is listed by name in section S.1 of the WADA List, as an exogenous anabolic steroid. As to the other three substances, they are not listed by name. Considering that they are designer steroids, they derive from listed steroids that have been manipulated to increase their anabolic effect and/or evade detection. Thus, they also constitute Prohibited Substances, for the reason that each of them has a similar chemical structure to DHCMT and is an anabolic agent, falling within the blanket prohibition of anabolic agents set out in Section 1 of the WADA Prohibited List.

- Moreover, each of the other three M4 parent substances includes the three changes that were made to the testosterone compound to increase its anabolic effect and to create DHCMT, i.e., the inclusion of a double bond in C-1, of a chlorine atom in C-4 and of a methyl group in C-17α'. The fact that each of these three DHCMT variants convert after ingestion into DHCMT further confirms that these strong similarities in chemical structure.

- The ITF also submits and relies on a letter from Dr Olivier Rabin (WADA Director of Science) and Dr Alan Vernec (WADA Medical Director) according to which: "*We can confirm that 4-chloro-17α-methylandrosta-1,4-diene-3,17β-diol is an exogenous steroid and is prohibited under section S1 of the International Standard of the List of Prohibited Substances and Methods (The Prohibited List) as a substance with similar chemical structure and/or biologic effect. This substance is a testosterone derivative marketed on websites as an anabolic agent as well as a prohormone of turinabol*"

- The ITF submits that this confirmation is sufficient for the purposes of establishing an ADRV under the WADC and TADP, properly construed, and it is not necessary for the ITF to go further and prove that the "Halodrol/Diol" compound or the other two potential M4 parent compounds also satisfy at least two of the three criteria set out in Code Art 4.3 for inclusion on the Prohibited List.

- Nevertheless, if (quod non) it is necessary for the ITF to prove that further matter, then it submits that, as determined by the Independent Tribunal, the other M4 parent compounds also satisfy all three of the relevant WADC criteria. Contrary to Professor Dordick's opinion with regard to the absence of "peer-reviewed literature" evidencing the satisfaction of all three criteria for inclusion on the Prohibited List, the ITF emphasizes that Article 4.3.1.1 of the WADC permits reliance on any "medical or other scientific evidence, pharmacological effect or experience":

  1) ***Performance enhancement:*** the ITF notes there are many published studies showing the ergogenic effects of anabolic steroids. Bearing in mind that the other M4 parent substances are all anabolic steroids, they have the potential to enhance sport performance and the products containing these substances are marketed precisely because they will carry these anabolic effects. The ITF highlights that Dr. Dordick conceded this point at the first-instance hearing.

  2) ***Health risk:*** there is a large body of evidence establishing that the androgenic and anabolic effects of anabolic steroids can seriously adversely affect health. At the first-instance hearing, Professor Dordick conceded that "they all therefore have to have a potential health risk".

  3) ***Violation of the spirit of sport:*** WADA has confirmed in the letter supplied for use in this matter that it considers the use of "Halodrol/Diol" by athletes to be contrary to the spirit of sport.

- The ITF disagrees with the Athlete's assertion that WADA considered whether to list 'Halodrol'/'Diol' as prohibited substances and deliberately decided not to do so. The letter received from WADA suggests the opposite, and indicates that WADA believe it has a "similar chemical structure" to DHCMT and has "similar biological effects" as other listed steroids so that express listing was not required The ITF also rejects to the Athlete's contention that it is unfair to athletes for WADA not to list all designer steroids by name on the List.

- The ITF stress that an unlimited number of possible variants of the testosterone compound exist. It is impossible to know all of the variants or to list them all by name. Even if it were, new ones could be invented with the result that the WADA List would (impracticably) have to be continually updated.

- In the case at dispute, the Athlete knowingly chose a workout supplement to help him bulk up, which had on its label a list of ingredients that was a series of chemical compounds. If he had done any research on those ingredients or if he had contacted the ITF's 24-hour service that provides anti-doping information to athletes, he would have learned that these were designer anabolic steroids banned for use in tennis. Moreover, the label on the bottle contained a specific warning that taking the product could cause him to test positive for steroids.

- Consequently, whether the M4 metabolite found in the Athlete's sample derived from DHCMT, or from one of the three DHCMT variants, or from some combination of them, it undeniably metabolised from a Prohibited Substance.

ii. No procedural flaws

- The ITF's original charge letter only revealed DHCMT as the potential parent of the M4 metabolite found in the Athlete's sample. But more than three months prior to the hearing, the ITF amended this charge to clarify that while its primary case was that the parent substance of the M4 metabolite found in sample 3097704 was DHCMT, its alternative case was that the parent was a DHCMT variant, such as "Halodrol", also prohibited due to having similar chemical structure and/or biological effects to steroids named in section S1 of the Prohibited List.

- This amendment was prompted by the Athlete's written submission that the M4 metabolite could have come from a substance other than DHCMT. The Athlete could not and did not complain that he was prejudiced because he is the one who anticipated such amendment and addressed it in his pre-hearing submission.

- As to the Athlete's contention that the ITF did not follow the required procedures to charge him, the ITF notes that pursuant to TADP Articles 7.3 and 8.1.1, a player is not charged with an ADRV based on an AAF unless the IRB determines that there is no applicable TUE and there has been no departure from

the International Standard for Testing and Investigations or from the International Standard for Laboratories that caused the AAF.

- There is no additional requirement that the IRB approves the formulation of the consequent charge or of any proposed amendment to that charge. Instead, the ITF Anti-Doping Manager has the sole authority over these issues.

- Under TADP Article 8.7.4, it is clear that "*departures from any other International Standard, or other anti-doping rule or policy set out in the Code or this Programme that did not cause the facts alleged or evidence cited in support of a charge shall not invalidate such facts or evidence*". This asserted technical departure does not invalidate the amended charge, which falls squarely within that provision.

- A clear prejudice would have to be established to substantiate such dismissal of the amended charge but the Athlete has failed to particularise any prejudice. On tne contrary, the amendment came as no surprise to the Athlete whereas he had the opportunity to address it, which he did in his written pre-hearing submission and during the hearing.

iii. The Athlete was bound by the TADP at the time he committed the violation

- The ITF disputes that the Athlete consumed the DHCMT or DHCMT variants that metabolised into the M4 metabolite found in his July 2017 sample back in 2014-2015. Instead he must have consumed it in the months leading up to July 2017, at a time he was undeniably bound by the TADP.

- In any event, the ADRV in this case is the presence of the metabolite in the Athlete's sample and that presence occurred in July 2017, when the sample was collected. No sample was collected at the earlier point when the substance that metabolised into the M4 metabolite was ingested, whenever that was.

- As of July 2017, the Athlete cannot and does not dispute that he had submitted to the TADP and was bound by those rules, Hence he is liable for the presence of the metabolite of a Prohibited Substance in his sample collected on 8 July 2017.

b) The sanction imposed on the Athlete

i. Proving source is a threshold requirement to any reduction in sanction below four years

- TADP Art 10.2.1(a) requires imposition of a four-year ban "*unless the Participant establishes that the Anti-Doping Rule Violation was not intentional*". To meet that burden, TADP Art 10.2.3 requires the Player to show that he did not "*engage in conduct that he/she knew constituted an Anti-Doping Rule Violation or knew that there was a significant risk that the conduct might*

constitute or result in an Anti-Doping Rule Violation and manifestly disregarded that risk".

- According to the CAS jurisprudence, an athlete cannot sustain a claim of lack of intent for purposes of Articles 10.2.1 and 10.2.3 unless he first establishes how the Prohibited Substance got into his system.

- Likewise, in order to sustain a plea of "No Fault or Negligence" or "No Significant Fault or Negligence" that would eliminate or reduce the otherwise applicable suspension, the Athlete would first have to establish how the substance came to be present in his system. The CAS jurisprudence is clear that this is a strict precondition or threshold requirement (*Karatancheva v ITF CAS 2006/A/1032, IAAF v AFI, Ashwini et al CAS 2012/A/2763, Puerta v ITF CAS 2006/A/1025*). **Unless and until this requirement is met, a plea of No or No Significant Fault or Negligence cannot even be considered. In any event, exceptions to this requirement shall be limited to rare and truly exceptional cases.**

ii. The Athlete must prove that his case on source is more likely than not to be correct

- **TADP Article 8.6.2 specifies that the standard of proof that the athlete must meet on this issue is the balance of probabilities. The Athlete argues that to meet his burden, he only has to show that the occurrence of the circumstances on which he relies is more probable than other possible explanations of the doping offence. The Athlete relies upon** *UCI v Burke 2013/A/3370* as authority for this proposition. The ITF, however, submits that the CAS panel in that case does not even appear to have recognised the distinction, let alone chosen for good reasons to adopt the more lenient standard. The Athlete fails to mention the more recent line of CAS decisions that have considered the issue and specifically rejected the proposition that the athlete can satisfy his burden in the manner for which he contends (*WADA v Daiders & FIM, WADA v Abdelrahman, Errani v ITF*). The ITF therefore invites this CAS Panel to confirm that it is not enough for the Athlete to identify a source that he claims is more likely to be correct than any alternative identified by anyone else. Rather, he can only sustain his burden by satisfying the Panel that the source he has identified is more likely than not to be correct.

- The Athlete also contends that in order to meet his burden of proof, all he needs to do is prove how the Prohibited Substance entered his/her system and that he does not have to show that ingestion of that amount of the parent at that time is consistent with the concentration of the M4 metabolite found in his sample. Instead, he maintains, the burden shifts to the ITF to prove that the 2015 ingestion of the Quad supplement *could not* have caused his positive test in July 2017. This assertion from the Athlete is contrary to the consistent CAS jurisprudence, which places clear and stringent requirements on a player who is seeking to discharge his burden of proving on the balance of probabilities how a Prohibited Substance found in his sample got into his system, including

requiring him to show not only how and when he ingested the substance but that his ingestion of that amount at that time is consistent with what was found in his subsequent sample. Therefore, the Athlete's speculation is insufficient to discharge this burden.

- In sum, the Athlete has to prove the factual circumstances in which administration occurred, i.e., when and how, and he has to show that it is more likely than not that the ingestion of such supplement in such amounts at such times would have produced the concentrations of the substance found in the sample subsequently collected from him.

iii. Serious doubts about the provenance of Quad

- There are several questions about the provenance of the Quad product itself given that the Athlete produced an empty bottle, which he allegedly retained for more than two years after finishing it. The Athlete's explanation that he kept the empty container in a drawer in his bedroom and simply never threw it out even when it was empty is unconvincing. And, in addition, the ITF notes that this explanation changed over time as the Athlete later asserted that he consciously kept the bottle to have a record of what he had taken.

- The bottle produced by the Athlete is a generic plastic pill bottle, on which a plain label has been stuck in a very shoddy and unprofessional manner. This label contains very little information about the product; there is no mention of any manufacturer, no bar code, and no product identification number. There is a lot number and expiry date printed on the label, but they are not reproduced on the bottom of the bottle.

- The ITF confirms that despite having tried every type of Google search it has not been able to find any mention at all of the Quad product online. The ITF adds that the Athlete has likewise not been able either to produce any evidence in this respect or any image of the Quad bottle through Google Images.

- The ITF even contacted the owner of the Total Nutrition store in Coral Gables, who has advised that he has never heard of any Quad product and that it was not in the catalogue of products that the Total Nutrition franchisors made available to franchisees online.

- Since several of the listed ingredients of Quad are designer steroids, the sale of of Quad would have been illegal in the US and contrary to the US Designer Steroid Control Act of 2014.

The witness statement provided for the Athlete by Mr Franco Santinato is not convincing. Mr Santinato is said to be a former employee of the Total Nutrition store who may have recommended and sold him the Quad product. Although Quad was apparently one of his favourite workout supplements, Mr Santinato

did not appear to recall much about the Quad product, notably the name of its manufacturer. He believed that Quad was probably manufactured by Blackstone, which the ITF believes to be an illicit supplement manufacturer. Blackstone apparently manufactured a product called "Metha-Quad", which was distributed in 2015. However, the Blackstone product does not look like the Quad supplement. Later, Mr Santinato recalled that Quad was probably manufactured by "WK Supps". The Athlete, however, has taken no steps to identify, or to make any contact whatsoever with "WK Supps" to confirm that it manufactured the Quad product at the relevant time or that it was supplied to the Total Nutrition store in Coral Gables at the relevant time.

- It appears highly doubtful that the Athlete stopped using the Quad product in early September 2015 because if, as he states, he started ingestion in June 2014 and followed a cycle of one month on, 4-6 weeks off, he would have finished his 4-5 bottles in May 2015 at the latest, not in September 2015.

- Furthermore, the Athlete's credit card statement evidencing the purchase of two bottles of Quad is not clear as to the store where the purchase took place or as to what was actually purchased. If he indeed bought two more bottles in June 2015 and stopped taking them in early September 2015, then numerous Quad tablets should have still been in the bottle, yet they all seem inexplicably to have disappeared.

- Based on the foregoing, it is not safe to make any assumptions about the nature or the number of Quad tablets that the Athlete may have ingested in 2014 and 2015, what substances they had in them, in what quantity, or when he stopped taking them in 2015.

iii. Unconvincing evidence by Dr. Dordick

- The ITF criticises Dr. Dordick for his failure to find any studies or data or other evidence that support his opinion as to the lengthy excretion rate of the M4 metabolite premise or even one other scientist who has ever expressed a similar opinion. He submitted two studies by Tremblay, et al showing that when subjects who had organochlorinated compounds stored in their fat cells lost weight, those compounds were released into their bloodstreams and then excreted in their urine. Still, it has never been reported before that the M4 metabolite can still be detectable in urine 22 months after ingestion and that steroids are stored in fat to be released slowly into the body.

- The ITF contends that the detection period for a steroid taken orally is usually a few days or weeks, while for DHCMT or a DHCMT variant it might be longer. Nonetheless, the M4 metabolite would not be observed in concentrations such as those seen in the Athlete's samples (30-80 pg/mL) more than four months after ingestion of DHCMT, or more than nine to ten months after ingestion of a DHCMT variant such as methylclostebol.

- The ITF does not follow Dr. Dordick's reasoning when he assumes that the Athlete took 272 tablets, when the Athlete's own evidence is that he allegedly bought four or five bottles containing 60 tablets each. It is either 240 tablets or 300 tablets, not 272. Dr Dordick's calculation is speculative and without factual foundation.

- Dr. Dordick's assumption that the Quad tablets taken by the Athlete in 2014-15 either contained 25 mg of Halodrol or Diol or was contaminated with a similar amount of chloromethylandrostenediol is likewise purely speculative. The label may have said each tablet contained 25 mg of the Halodrol substance, but the Quad residue tested by the Montreal lab did not contain any of the ingredients listed on the label. It did however contain a number of substances not listed on the label (i.e. contaminants), including other M4 parents.

- Hence, the ITF concludes that the production standards of the Quad were demonstrably as haphazard as they are for most such black market products, adding that it is doubtful to presume each bottle would have contained the same substances.

- Professor Ayotte has submitted that persistent organochlorinated pollutants have numerous chlorine atoms that prevent their bio-transformation, which is why they accumulate in the body. On the other hand, DHCMT encloses only one chlorine atom that also contains a hydroxyl group, which is hydrophilic not hydrophobic. Consequently, it bio-transforms rapidly, with most of the dose being excreted in the first week. This could be an explanation for the absence of evidence in the literature with regard to DHCMT or DHCMT variants being sequestered in fat tissue.

- Dr. Dordick's original premise was that the steroids stored in the fat cells are released into the system when there is significant weight loss that breaks down the fatty cells. The high level of M4 metabolite found in the Athlete's July 2017 sample (80 pg/mL) could therefore be explained by his significant and rapid weight loss (25 pounds) prior to his 8 July 2017 test.

- Aside from some data available, no formal excretion studies have been published on this subject. The ITF submits that the M4 metabolite could still be excreted in the amounts seen in the Athlete's sample (30-80 pg/mL) possibly four months after ingestion of DHCMT, and possibly even 9-10 months after ingestion of a DHCMT variant such as methylclostebol, but not after that.

- In 2017, Professor Schänzer depicted the excretion profile of the M4 metabolite in urine samples collected following the oral administration of a single dose of 20 mg of DHCMT to a male volunteer. The highest amount measured was around 150 pg/mL after 5 days, falling to around 20-30 pg/mL after 40 to 100 days. After 200 to 250 days (6 to 8 months), very low traces (2 to 3 pg/mL) were detected. After that time, the M4 metabolite could not be detected in urine samples collected from the volunteer.

- Another study, in which samples were collected from a subject by the Sydney laboratory, following oral administration of a single 25mg dose of methylclostebol was brought to Professor Ayotte's attention in August 2018. The subject excreted M4 metabolites at higher levels than in the Schänzer study. The sample contained 30 pg/mL of the M4 metabolite almost nine months after ingestion. In the last samples collected, after 12 and 16 months, the M4 metabolite could only be seen in trace amounts (of 1-3 pg/mL).

- Professor Ayotte explains that "*whatever the source, DHCMT or DHCMT variant steroids, there is no evidence, either from controlled experiments or from athletes' test results, to support that metabolite "M4" may still be found in urine samples collected approximately 2 to 3 years after the last ingestion of the parent compound, let alone in amounts such as those estimated in Mr. Scott's samples (approximately 80 pg/mL to 30 pg/mL). Instead, the available evidence suggests an excretion period of a few months at such levels, 4 months with DHCMT itself, 9 to 10 months for methylclostebol.*"

- In principle, it is plausible that a greater dosage could increase the amount excreted as well as the detection period. However, there is no basis to conclude that it could increase it by "multiples" like the amount that Dr. Dordick is suggesting.

- In sum, even repeated administration of an effective dose, of 40 mg a day for 30 days, is unlikely to lead to the presence of the M4 metabolite in a urine sample collected nine months later. The administration of an unknown amount over a longer period in 2014/2015 leading to the presence of the M4 metabolite 22 months and more later is still less likely.

iv. In any event, the Athlete acted intentionally

- Even if the CAS Panel were somehow to accept that it is more likely than not that the M4 metabolite in the Athlete's July 2017 sample came from the use of Quad that the Athlete stopped taking in September 2015, it itself would not be enough to rebut the presumption of intentional use that arises under TADP Article 10.2.1(a).

- The Athlete still bears the burden of proving to the satisfaction of the Panel, on the balance of probabilities, that he did not engage in conduct "*that he* [] *knew constituted an Anti-Doping Rule Violation or knew that there was a significant risk that the conduct might constitute or result in an Anti-Doping Rule Violation and manifestly disregarded that risk.*"

- The Athlete chose to join the professional tennis circuit in September 2015 and he started intensive training in October 2015. On 7 December 2015, he registered with the ITF, and played his first competitive match on 8 January 2016. Hence, the Athlete agreed to be bound by and to comply with his obligations under the TADP, including the obligation not to train and compete on the professional tennis circuit with steroids in his system.

- The Athlete knew that such steroids have long-lasting effects on the body and that they stay in the system for a long time, and so could be detected by drug testing for a long time. The label on the Quad product itself listed a series of chemical compounds as ingredients, as well as the following warning: "*This product may elevate hormone serum levels, which could produce a positive result if you are subject to steroid testing*". Even if it could be accepted that the Athlete's adverse finding was caused by the ingestion of the Quad product ending in September 2015, the Athlete knew it contained steroids. The salesman told him it contained Promagnon, which is a notorious designer steroid.

- When the Athlete decided in September 2015 to join the professional tennis circuit, he consciously accepted the risk that if and when he was tested those steroids would still be in his system. The Athlete knows he could be tested at any time under the TADP while competing on the professional tennis circuit. He also knew that he might test positive for the steroids he had ingested. Even if he did not know exactly for how long the steroids could be detected for, he deliberately took that risk. Therefore, the violation is intentional within the meaning of the relevant rules, and the four-year ban must apply.

v. At a minimum, a two-year suspension should be imposed

- Even if the CAS Panel were to find that the Quad supplement used in 2014 and 2015 was the source of the M4 metabolite and that the Athlete did not act intentionally, the Athlete is still significantly at fault and would not be entitled to any reduction of the applicable two-year ban.

- In order to plead No Fault or Negligence or No Significant Fault or Negligence, the Athlete needs to prove he used "utmost caution" to ensure that he did not do anything that might constitute or result in his commission of an ADRV.

- In the case at hand, the Athlete took a body-building product made up of a series of chemical compounds, to gain muscle mass and improve his strength. Thus, the doping risks are obvious even without the express warning on the bottle, and the degree of care he must take to ensure that this use does not lead to a greater risk of committing a violation.

- The Athlete alleges that he did not know that the Halodrol or Diol listed as a Quad ingredient was a Prohibited Substance. Even so, the label still warned him that taking the product could lead to a positive test for steroids. The Athlete could have easily found out through an online search that this ingredient was a designer steroid derived from Turinabol. Moreover the ITF offers its players an email 'helpline', where they can email the ingredients of a product to an email address set out on the inside front cover of the TADP and on the ITF anti-doping website, and in return will be advised whether or not the ingredients are Prohibited Substances. So even if the Athlete did not know, he certainly could and should have known that he was ingesting a prohibited substance.

- The ITF refers – *inter alia* – to the case *Doping Authority Netherlands v Zuijkerbuijk*, CAS 2009/A/2012, whereby it was stated that "*although it might have slipped his mind at the day of the match, the Athlete knew that he had consumed cocaine four days before the match on 5 April 2009. Still he did not tell anyone about it, nor had he seen a doctor for advice, nor did he make a comment on the Doping Control Form. He just played the match without thinking that the cocaine might still be present in his body. Under these circumstances the Athlete knowingly and wilfully accepted the risk that a prohibited substance would still be present in his body at the day of the match*".

- In sum, even if the Athlete's account is accepted, and his violation is found to be unintentional, nevertheless he bears significant fault for that violation. Thus, he cannot benefit from any reduction from the two year ban prescribed by TADP Article 10.2.2.

c) ITF's prayer for relief

81. In its answer, the ITF sought the following relief:

10.1.1 to dismiss in its entirety the instant appeal against the decision of the Independent Tribunal dated 9 May 2018;

10.1.2 in doing so, to confirm:
10.1.2.1 that the Player has committed an ADRV under TADP Article 2.1, in that a metabolite of a Prohibited Substance was present in his urine sample collected on 8 July 2017;
10.1.2.2 that the Player has failed to prove the source of the metabolite found in his sample, and/or has failed to prove that his violation was not 'intentional' within the meaning of TADP Article 10.2.3, and so is required to serve a period of ineligibility of four years pursuant to TADP Article 10.2.1(a); and
10.1.2.3 that the results obtained by the Player at the Event at which his sample was taken that tested positive are to be disqualified (with all resulting consequences), pursuant to TADP Article 9.1;

10.1.3 alternatively, if (contrary to the above) it finds that the Player has proven the source of his positive test and that his ADRV was not 'intentional', to reject his plea of No (or No Significant) Fault or Negligence and impose a period of ineligibility of two years pursuant to TADP Article 10.2.2; and

10.1.4 in any event, in accordance with TADP Article 10.10.3(a), to confirm that the start date of the Player's ban is to be back-dated to 19 August 2017, which is the date the Player was provisionally suspended.

V. JURISDICTION

82. Article R47 of the Code provides as follows:

An appeal against the decision of a federation, association or sports-related body may be filed with the CAS insofar as the statutes or regulations of the said body so provide or as the parties have concluded a specific arbitration agreement and insofar as the Appellant has exhausted the legal remedies available to him prior to the appeal, in accordance with the statutes or regulations of the said sports-related body.

83. Article 12 "*Appeals*" of the TADP provides as follows:

12.1 Decisions Subject to Appeal:

Decisions made under this Programme may be appealed only as set out in this Article 12 .....

12.2. Appeals from Decisions Regarding Anti-Doping Rule Violations, Consequences, Recognition of Decisions and Jurisdiction:

12.2.1 A decision that an Anti-Doping Rule Violation has been committed, a decision imposing (or not imposing) Consequences for an Anti-Doping Rule Violation ... may ... be appealed by any of the following parties exclusively to CAS:

(a) the Player or other Persons who is the subject of the decision being appealed; ...

84. The Appealed Decision constitutes both (i) a decision that an ADRV has been committed by the Athlete; and (ii) a decision imposing consequences on the Athlete.

85. No party has asserted otherwise, and the parties expressly confirmed the jurisdiction of CAS when signing the Order of Procedure.

86. The Panel, therefore, confirms that CAS has jurisdiction to decide this dispute.

VI. ADMISSIBILITY

87. Article R49 of the Code provides as follows:

In the absence of a time limit set in the statutes or regulations of the federation, association or sports-related body concerned, or of a previous agreement, the time limit for appeal shall be twenty-one days from the receipt of the decision appealed against. After having consulted the parties, the Division President may refuse to entertain an appeal if it is manifestly late.

88. Article 12.5.1 TADP, which are the rules applicable to the present arbitration (as discussed below), the Athlete's deadline for filing an appeal "*shall be 21 days from the date of receipt of the decision in question*".

89. The Athlete received the Appealed Decision on 9 May 2018. His statement of appeal was thereafter filed on 29 May 2018 (i.e., within the 21-day limitation). The Respondent did not object to the timeliness of this appeal.

90. The Panel, therefore, confirms that this appeal is admissible.

VII. OTHER PROCEDURAL ISSUES

A. The Request for the Production of Documents

91. On 28 June 2018, the CAS Court Office provided the parties with a Redfern Schedule which set out the Appellant's outstanding disclosure requests and invited the Respondent to complete the schedule based on the Appellant's reformulated requests. On 10 July 2018, the Respondent completed the Redfern Schedule and provided some of the documents sought by the Athlete. Insofar, the Panel by letter dated of 10 August 2018, has dismissed the requests Nos. 1, 2, 3, 4. In doing so, the Panel applied the respective provisions of the Code and, in addition, was influenced by the IBA Rules on the Taking of Evidence in International Arbitration. More precisely, the Panel denied the requests Nos. 2 & 4 as moot in light of the documentation and information provided by the Respondent. As to the Requests Nos. 1 & 3, the Panel dismissed them, namely because the Respondent's Counsel was not the proper addressee for such a request under Article R44.3 of the Code; the Respondent itself (credibly) stated that it was not in possession of the respective documents while some information are protected for confidentiality reasons and others are available in the public domain. Moreover, the Panel directed the parties' experts to provide copies of any specific studies, data, publications, etc. with any report he/she may file in this procedure.

B. The new Expert Report of Prof. Cowan

92. On 25 November 2018, i.e. two days before the hearing in New York, the Appellant filed documents pertaining to the "World Rugby case", which included expert evidence of Professor David Cowen ("the Third Expert Report"). At the hearing the Panel decided that – in the interest of it being fully informed on a critical point – it will admit such evidence into the file. However, it also acknowledged that the Respondent would not be able to respond to this evidence at the hearing. In order to grant the Respondent the right to be heard adequately, it was allowed to respond to the evidence submitted by the Appellant in its PHB. Whenever the Appellant sought to refer to the Cowan evidence contained in the "World Rugby case" during the hearing, the Panel made it clear that the parties should deal with such evidence in its totality in their PHB.

93. In its PHB, the Respondent submitted a new Expert Report of Professor Cowan. The Appellant objects to the new Expert Report and argues that "*it was never contemplated that a party would be able to introduce a new expert report, from an expert who had not previously been designated.*" The Appellant also states that his right to be heard is curtailed, since he "*has no opportunity to cross-examine him or confront his assumptions and conclusions.*" The Respondent invited the Panel to reject the Appellant's application to remove the new Expert report of Professor Cowan from the file. According to the Respondent it was the Appellant who chose to introduce the Third Expert Report at the very last minute, thus depriving the Respondent to address the new evidence at the hearing. When the Panel decided to deal with the outstanding issue of the Third Expert Report in the PHB, there was no suggestion – according to the Respondent – that the ITF would not be allowed to contact Professor Cowan to seek clarification on his Third Expert Report.

94. In its letter dated 26 March 2019, the Panel decided to admit the new Expert Report from Professor Cowan and explained that the PHB became necessary, because the Appellant filed the new documents pertaining to the World Rugby case at the very last minute, depriving the Respondent to respond to this new evidence at the hearing. The Panel nevertheless admitted the new evidence on file in the paramount interest of justice. In order to respect the Respondent's right to be heard, however, it allowed the Respondent to address the Appellant's new evidence in the PHB. This was made clear at the outset and at the end of the hearing. No restrictions were imposed by the Panel. That this included the possibility of the Respondent to contact Professor Cowan in order to seek clarifications of his Third Expert Report was specifically envisaged at the hearing. The Appellant stated that he would only object to the Respondent contacting Professor Cowan, if he had also access to him. In response to this the Respondent stated that it was not objecting to the Appellant having access to Professor Cowan. There is no evidence on file that the Appellant tried to contact Professor Cowan or that the latter refused to speak to the Appellant. It simply appears that the Appellant did not make any attempts to contact Professor Cowan.

95. The Appellant claims that his right to be heard has been violated because he did not have the opportunity to cross-examine Professor Cowan. The Panel observes that there is no inalienable right under the Code for a party to cross-examine an expert. The Panel is only called upon to ensure that the parties' right to be heard are guaranteed. This, however, can be done also through other means than by cross-examination, e.g. by an additional round of written submission (here PHB). This is all the more true considering that the Appellant's new evidence was admitted under the condition that it be dealt with in the PHB. The Appellant was therefore sufficiently granted the possibility to respond to the new Expert Report in his PBH-Reply Brief.

96. The Panel further finds that the new Expert Report of Professor Cowan is directly related and linked to his Third Expert Report that was submitted prior to the hearing by the Appellant. The Appellant introduced the new Expert Report related to the World Rugby case arguing, in particular, that the mathematical model applied therein backed the alleged long excretion window of the M4 metabolite allegedly observed with the Athlete. In the new Expert Report, the ITF asked Professor Cowan to apply the mathematical model used in the World Rugby case to the analytical data in this case. The Panel does not find that this exercise was beyond the scope of the leave granted to the Respondent at the hearing. The Panel also observes that in any case, the new Expert Report of Professor Cowan was not material to the outcome of this case.

VIII. APPLICABLE LAW

97. Article R58 of the Code provides as follows:

The Panel shall decide the dispute according to the applicable regulations and the rules of law chosen by the parties or, in the absence of such a choice, according to the law of the country in which the federation, association or sports-related body which has issued the challenged decision is domiciled or according to the rules of law, the application of which the Panel deems appropriate. In the latter case, the Panel shall give reasons for its decision.

98. Par. 1.11 of the *Introduction* to the TADP 2017 provides as follows:

> "*Any player who enters or participates in a Covered Event or who has an ATP or WTA ranking ... in the 2017 calendar year ... in automatically bound by and required to comply with all the provisions of this Programme ...*"

99. The Czech Republic Futures Tournament, in which the Athlete competed just before the doping control, is a Covered Event according to par. 1.10 of the *Introduction*.

100. According to par. 1.6.1 of the *Introduction*, the TADP 2017 applies to all cases where the alleged ADRV occurred after its entry into force, i.e. 1 January 2017.

101. Both parties expressly rely on the TADP and the WADC, and various CAS jurisprudence interpreting these rules. Moreover, the application of those rules, which were applied by the Independent Tribunal in the Appealed Decision, was not contested by the parties. The Panel, therefore, will apply the TADP and WADC to merits of this appeal.

VIII. SCOPE OF THE PANEL'S REVIEW

102. According to Article R57 of the Code,

> "*the Panel shall have full power to review the facts and the law. It may issue a new decision which replaces the decision challenged or annul the decision and refer the case back to the previous instance....*"

103. This Panel, therefore, has full power to examine *de novo* the Athlete's actions, and the evidence before it, in order to verify whether the Athlete's ADRV is grounded or not. Such exercise is linked to the appellate structure of CAS proceedings.

IX. MERITS

104. The main questions that the Panel needs to answer in this appeal are:

A. Was the Athlete bound by the TADP at the relevant time?

B. If the aforementioned question is answered in the affirmative, did the Athlete commit an ADRV?

C. If the aforementioned question is answered in the affirmative, are there any procedural reasons that prevent this Panel from finding that an ADRV has been committed?

D. If the aforementioned question is answered in the negative, could the Athlete establish that he did not act intenionally?

E. What are the consequences of the finding under paragraph D, supra?

A. Was the Athlete bound by the TADP at the relevant time?

105. The Athlete can only be sanctioned for an ADRV according to the TADP if he was bound by the respective rules at the relevant time, i.e., at the time the ADRV was committed. The Appellant asserts that this is not the case because he used the Quad prior to entering into any agreement to be bound by (1) the applicable anti-doping rules; (2) the applicable anti-doping sanctions; and (3) the applicable results management system. Simply put, the TADP cannot reach backwards to apply to conduct that occurred before the Appellant agreed to adapt his conduct to those rules (i.e., before the Athlete became a professional tennis player). Similarly, the Appellant asserts that the ITF Membership Agreement cannot apply to conduct that pre-dated his signing that agreement.

106. It is undisputed that the Athlete joined the ITF in December 2015 and that he was bound to the TADP at the time when he submitted to the doping control on 8 July 2017. If it were otherwise, the Athlete could have simply refused sample collection (which he rightfully did not). Furthermore, the Panel notes that the alleged ADRV in question here is TADP Article 2.1, i.e. the presence of a Prohibited Substance in the Athlete's urine sample (not the administration or use of a prohibited substance). This clearly follows from the charge notice sent by the ITF on 9 August 2017 to the Appellant. Therein the ITF advised the Athlete this letter was a "*formal notice, sent in accordance with TADP Article 8.1.1, that* ... [the Appellant is] *hereby charged with the commission of an Anti-Doping Rule Violation under TADP Article 2.1.*" Such an ADRV is committed whenever the laboratory analysis of an athlete's urine or blood sample reveals that such sample contains a Prohibited Substance. The Athlete – while competing at the Czech Republic Futures tournament – had a Prohibited Substance in his system, i.e. at a point in time at which he was undoubtedly bound by the TADP. Therefore, there is no question here of any retroactive application of the TADP. Instead, for the Appellant to be bound to the TADP at the relevant time it suffices that the Appellant (allegedly) had a prohibited substance in his body when he submitted to the July 2017 doping control. To find differently would permit any athlete to abuse an assortment of performance-enhancing substances prior to joining the professional ranks and later to claim innocence just because substances were ingested (whether intentionally or unintentionally) prior to his or her being bound by the rules.

B. Did the Athlete commit an ADRV

a. The legal framework

107. TADP Article 2.1 provides in material part as follows:

> *2. Anti-Doping Rule Violations*
>
> *Doping is defined as the occurrence of one or more of the following (each, an "Anti-Doping Rule Violation"):*
>
> *2.1 The presence of a Prohibited Substance or any of its Metabolites or Markers in a Player's Sample . . . .*

> *2.1.1 It is each Player's personal duty to ensure that no Prohibited Substance enters his/her body. A Player is responsible for a Prohibited Substance or any of its Metabolites or Markers found to be present in his/her Sample. Accordingly, it is not necessary that intent, Fault, negligence or knowing Use on the Player's part be demonstrated in order to establish an Anti-Doping Rule Violation under Article 2.1; nor is the Player's lack of intent, Fault, negligence or knowledge a defence to a charge that an Anti-Doping Rule Violation has been committed under Article 2.1.*

108. A Prohibited Substance includes any substance described in the Prohibited List as set out in Appendix 3 of the TADP, which in essence is the WADA Prohibited List. TADP Article 3.3.2 also provides that the Prohibited List "*encompasses substances that are not mentioned by name on the Prohibited List but instead are incorporated onto the Prohibited List by category and/or by reference to substances with a similar chemical structure or similar biological effects.*"

109. Category S1 of the Prohibited List specifically names DHCMT as an exogenous anabolic steroid, which is a Prohibited Substance. In accordance with TADP Article 3.3.2, any substance with a "*similar chemical structure or similar biological effects*" as DHCMT is, therefore, also a Prohibited Substance.

b. Is the M4 metabolite found in the Athlete's specimen proof of the presence of a Prohibited Substance

i. The (original) position of the Parties

110. In his written submissions, and at times during his oral submission, the Athlete argued that a positive test for the M4 metabolite does not definitively indicate that he had a Prohibited Substance in his system. The Appellant submits that the M4 metabolite found in his specimen does not necessarily stem from DHCMT. Instead, the M4 metabolite has "numerous parent compounds". The presence of the M4 metabolite cannot, therefore, be directly attributed to the ingestion of DHCMT. The Athlete asserts that the M4 metabolite could have been derived from parent substances such as Methylclostebol, Promagnon, or Halodrol. The Appellant submits that these parent substances are not specifically listed on the Prohibited List and that the ITF bears the onus of proof that these possibly ingested parent substances are (all) prohibited. Therefore while the Appellant must establish that there is greater than a mere balance of probability that each of these parent substances have a "*similar chemical structure or similar biological effect*" to any anabolic agent specifically listed in S1 as a Prohibited Substance. The Respondent must – in light of the *Calle Williams* jurisprudence – show on a balance of probability that at least two of the three list criteria enshrined in TADP Article 3.2 for inclusion on the Prohibited List are met (namely, (1) potential performance enhancement; (2) health risk; and (3) violation of the spirit of sport) (the "Criteria Test").

111. The Panel notes that the parties are in agreement that – as the ITF Independent Tribunal had already observed – "*the M4 metabolite is not exclusive and necessarily a metabolite of DHCMT. It may be produced in the body from the ingestion of other exogenous anabolic steroids. These include Halodrol ... They also include the steroids known as Promagnon and Methylclostebol. Professor Ayotte noted that Methasterone, a steroid*

specifically named on the Prohibited List, might also produce the M4 metabolite." The Panel notes that the parties are not in agreement whether or not there are other parent compounds (than the ones mentioned) that produce the M4 metabolite. At the hearing Prof. Dordick explained that "theoretically" there could be other parent compounds, while Prof. Ayotte explained that she had never encountered any other parent compounds that produce the M4 metabolite in practice.

ii. The requirements for a (non-listed) substance to be qualified as prohibited

112. The Panel accepts the Appellant's submission that the ITF bears the burden of showing that any of the possible parent compounds that may produce the M4 metabolite are a Prohibited Substance within the meaning of the WADA Prohibited List. In order to be prohibited, a substance must either be specifically listed on the Prohibited List or must have a "*similar chemical structure or similar biological effect*" as one of the listed substances. The Panel does not, however, endorse the decision in *Calle Williams,* according to which the Criteria Test must also be met in order to qualify a substance as prohibited. The Panel notes that the Criteria Test advocated in *Calle Williams* was only set out as an *obiter dictum* and disagrees with the *Calle Willams* majority. Whether or not a (new) substance shall be listed on the Prohibited List is the result of an expert determination applying the list criteria (through a worldwide consultation process) that cannot be challenged in a CAS proceeding (TADP Article 3.2). If, therefore, WADA determines that a specific substance (including all variants having a similar chemical structure or having similar biological effects) should be included on the Prohibited List, it is not for any adjudicatory bodies (including CAS) to dispute this. Instead, the powers of any adjudicatory body is limited to determine whether or not the substance in question is either specifically listed or has a "*similar chemical structure or similar biological effect*" as one of the substances listed by name. By qualifying a substance as "*chemically similar*" the Panel does not amend the Prohibited List and does not question or undermine the determination of the experts of what shall be considered prohibited or not. Instead, a Panel deciding on the factual/legal question of whether or not a substance is "*chemically similar*" merely applies whatever the list experts have previously (in their expert determination) agreed to - no more, no less. Therefore, the Criteria Test is of no relevance to this Panel.

iii. The concession of the Appellant

113. Thus, the decisive question for this Panel is whether or not all (possible) parent compounds of the M4 metabolite are either explicitly listed on the Prohibited List or have a "*similar chemical structure or similar biological effect*" as one of the substances that is included on the Prohibited List. The Panel notes that at the hearing, the Appellant by his Counsel conceded that this was the case. This clearly follows from the following parts of the transcript:

> ***Mr. J. Scott****: ... We spent a lot of time at the first instance hearing talking about chemical structure, and performance enhancing potential. These are not things that we necessarily dispute. And, I am not sure we need to spend a lot of time on it. Our issue with it being prohibited substance is one of jurisprudence, and legal under the code. It's not a scientific objection.*

> ***Prof. Haas***: *... So is there agreement between the parties that the chemical structure is similar ...?*
>
> ***Mr. J. Scott***: *We're not going to fight the fight on chemicals similarity, structural similarity ...*
>
> ***Prof. Haas***: *... this is a change now in position ...*
>
> ***Mr. Taylor QC***: *I would be delighted if it was now agreed that the chemical structures are similar ...*
>
> ***Mr. J. Scott***: *... We know they are steroids. We know they got the chlorine atom. We know Dylan used them to work out, and he got bigger and stronger ... It is what it is ....*
>
> ***Prof. Haas***: *... So ... there is a general agreement between the parties that any parent substance of M4 would have a similar chemical structure ... to substances explicitly listed on the prohibited ... Would that summarize the positions of the parties here correctly?*
>
> ***Mr. J. Scott***: *We are willing to concede that.*

114. Based on the above, it follows that the M4 metabolite found in the Athlete's system is proof of the presence of a Prohibited Substance.

iv. No withdrawal of the concession made

115. At first sight it might appear questionable whether the above-cited concession still reflects the position of the Appellant today. The Panel notes that the Appellant has not specifically withdrawn the above statement. However, the Panel is aware that the Appellant in his PHB now declares that "*Diol* [Halodrol, Promagnon] *and DHCMT are not structurally similar biologically.*" The purpose of this statement – in the view of the Panel – is not, however, to challenge the above "*general agreement between the parties*"; biology and chemistry are not the same. This follows from the mere fact that according to TADP Article 3.3.2 it suffices for a (unlisted) substance to be prohibited that it has "*a similar chemical structure*" as one of the substances named on the Prohibited List. In his PHB-Reply Brief the Appellant explained that he conceded the structural similarity of the parent compounds "*in the interest of limited hearing time*". Be it as it may and for the sake of clarity, the Panel states that in light of the statements of the experts and the findings of the ITF Independent Tribunal it is persuaded that all parent compounds of the M4 metabolite are either specifically listed on the Prohibited List (e.g. DHCMT) or variants of DHCMT that have a similar chemical structure (i.e. the androstane backbone, a methyl group in the C-17 position, a chlorine atom in C-4, an oxygen in C-3). Thus, there can be no doubt that whatever the Athlete had in his system that produced the M4 metabolite was prohibited within the meaning of the Prohibited List.

c. The purpose and legality of the "related substances" clause

116. The Appellant submits that the "related substance" clause in the Prohibited List is legally questionable because it undermines legal certainty and foreseeability. According to the Appellant the "related substance" clause is only legally acceptable, if construed

narrowly in light of its purpose. The purpose of the "related substance" clause is – according to the Appellant – to

> *ensure that designer steroids that the anti-doping organizations could not have known or did not know existed are banned.*" The provision is "*meant to capture newly discovered substances to which WADA could not be reasonably aware and not to allow bad actors to stay one step ahead of the scientific and anti-doping community, The 'similar substance' provision is not intended to capture substances like Diol that WADA has known about for years.*

117. Thus, according to the Appellant, to the extent WADA is aware of a substance that is "*chemically similar*" in structure to another prohibited substance(s), then WADA must be obliged to name this "*chemically similar*" substance on the Prohibited List. The Appellant relies on CAS 2016/A/4371 ("*Lea*") and UEFA Disciplinary Case 29251 - UEL - 2015/16 ("*Sakho*") to establish that an athlete must have "*clear notice*" that his actions could possibly lead to an ADRV.

118. The fight against doping is arduous and requires strict rules, and the Panel fully agrees that the rule-makers and rule-appliers must begin by being strict with themselves (cf. CAS 1994/A/129). But the Panel disagrees with the Appellant's broad "*clear notice*" interpretation of *Lea*. The Prohibited List is not a closed list and does not provide an exhaustive enumeration of substances, but it does establish the principle that all steroids are prohibited. The list expressly identifies examples of various steroids and clearly states that substances of similar chemical structure or similar biological effects are also anabolic steroids and agents prohibited within the scope of class S1. The Panel notes that there are virtually an unlimited number of potential variances of the Testosterone compound. It would be impractical to require the identification of all forms of steroids and there is always the possibility for a nefarious scientist to synthesize a new substance before it becomes detectable the Appellant rightly concedes, and the Panel in any event finds, that there is a need, in principle, for a catch-all clause in the form of a "related substance" clause in order to establish a level playing field for all athletes.

119. The Panel is not prepared to follow the Appellant's argument that once WADA is aware of a substance that is "*chemically similar*" in structure to another prohibited substance(s), then WADA must include the name of this "*chemically similar*" substance on the Prohibited List. Imposition of such an obligation would be impractical. It would have the effect that a "*chemically similar*" substance would in principle be covered by the Prohibited List initially and then depart from it as and when at some unidentifiable time WADA fails to name it expressly. The creation of such a mechanism would provoke endless disputes on when WADA would become "aware" of a "*chemically similar*" substance and what the time line would be for WADA to comply with its obligation to put it on the Prohibited List. This would lead to unequal treatment of the various athletes depending on the sheer coincidence when the "*chemically similar*" substance is detected in an athlete's system. In addition, it would completely undermine the principle of legal certainty. When would a stakeholder know whether or not WADA was aware of the chemically similar substance within the above meaning?

120. The Appellant's conclusion is not only impractical, but in addition not warranted to protect the Athlete's interests in this case. First, the Panel observes that contrary to the Athlete's assertion, this is not a case of WADA or the ITF "hiding" certain information from him, and his reliance on *Lea* and *Sakho* for the proposition that he is entitled to be judged as to what could reasonably be expected of him to know and learn about the prohibited substance is not persuasive. The Panel is reminded that the product Quad was taken to "bulk up", and on the product label (which ingredients included a series of chemical compounds) there was a warning that ingestion could result in a positive test for steroids. And moreover, the Appellant himself claims that once he had decided to join the ITF and to start a career as a professional tennis player he immediately discontinued the use of the Quad product (that he claims caused the AAF). Thus, it is the Athlete's own admission that he was aware that there was an "issue" with the product he was using and that, therefore, he did not need any additional warning notice or information in the form of a specific listing of all the parent compounds of the M4 metabolite on the Prohibited List. To conclude, therefore, the Panel finds that the Athlete has committed an ADRV within the meaning of the TADP.

C. Are there any Procedural Reasons preventing this Panel to establish that an ADRV has been committed?

121. The Appellant submits that the ITF Independent Tribunal was prevented from establishing an ADRV because of procedural flaws in the disciplinary procedure. As set out above, the Athlete asserts that a positive test for the M4 metabolite does not necessarily indicate an ingestion of DHCMT or that the presence of the M4 metabolite can be attributed directly to the ingestion of DHCMT. The presence of the M4 metabolite, if caused by the ingestion of a substance other than DHCMT, would not be DHCMT's metabolite but rather the other substance's metabolite.

122. The Athlete's argument matters in the present case because of his claim that there cannot be any ADRV unless the ITF establishes that DHCMT (and not a DHCMT variant) was the parent of the M4 metabolite found in his sample because this is what was alleged in the original notice of charge and his associated assertion that because the ITF did not follow the correct procedures when charging the Athlete with any other possible parent compound that could have caused the ADRV, no violation can properly be found now.

123. The original letter of charge reads as follows:

> *Please therefore take this letter as formal notice, sent in accordance with TADP Article 8.1.1, that you are hereby charged with the commission of an Anti-Doping Rule Violation under TADP Article 2.1, on the basis that a Prohibited Substance, Dehydrochlormethyltestosterone metabolite was found to be present in the urine sample A3097704 that you provided at the Event on 8 July 2017.*

124. The charge was then amended by the ITF's counsel on 17 January 2018. In doing so, the ITF clarified that while its primary case was that the parent substance of the M4 metabolite found in sample 3097704 was DHCMT, its alternative case was that the parent was a DHCMT variant, such as Halodrol, also prohibited due to having similar chemical structure and/or biological effects to steroids named in Section S1 of the Prohibited List. The letter amending the charge reads as follows:

Mr Scott is hereby put on notice of the following amendment to the notice of charge sent to him by the ITF on 9 August 2017:

The ITF's primary case is that the parent of the "M4" metabolite found in Mr Scott's sample no. 3097704 was dehydrochlormethyltestosterone (DHCMT).

Alternatively, the parent of the "M4" metabolite was a DHCMT variant, such as 4-chloro-17a-methylandrost-1,4-diene-3,17b-diol, which metabolised into the 'M4' metabolite either directly or via an intermediate conversion into DHCMT.

4-chloro-17a-methyl-androst-1,4-diene-3,17b-diol falls within section S1 of the WADA Prohibited List, because it is an anabolic agent and because it has a similar chemical structure to and/or similar biological effects to one or more steroids listed by name in that section, being a derivative of testosterone and a prohormone/variant of DHCMT.

Therefore, whether the 'M4' metabolite found in Mr Scott's sample came from DHCMT or from 4chloro-17a-methyl-androst-1,4-diene-3,17b-diol, it is a metabolite of a Prohibited Substance under the TADP.

125. The Panel finds no prohibition either in principle or the applicable rules against the ITF amending its charge. This is all the more true considering that the amendment occurred well before the hearing of the ITF Independent Tribunal took place. There is no evidence put before the Panel establishing that the Athlete's case was prejudiced by this amendment. Indeed, as the ITF notes, this amendment appears prompted by the Athlete's written submission that the M4 metabolite could have come from a substance other than DHCMT.

126. Moreover, contrary to the Athlete's assertion, the Panel agrees with the ITF that there is no requirement under TADP Articles 7.3 and 8.1.1 that the Review Board approve a subsequent charge or any amendment to that charge. Nevertheless, and at best, the ITF's failure to seek a re-review by the Review Board for such amendment is minor and following TADP Article 8.7.4, such technical departure of the TADP would not invalidate the amended charge. In conclusion the Panel finds that there are no procedural impediments to preclude this Panel from establishing an ADRV.

D. Did the Athlete establish lack of intent?

a. The Legal Framework

127. The TADP differentiates – with respect to an ADRV based on presence of a Prohibited Substance – between different degrees of fault, i.e. intentional (TADP Article 10.2.1), negligent (TADP Article 10.2.2), no significant fault or negligence ("NSF") (TADP Article 10.5) and no fault and negligence ("NF") (TADP Article 10.4).

128. The starting point of an analysis of the Athlete's degree of fault is TADP Article 10.2.1. According thereto, in the case of the presence of a Prohibited Substance other than a Specified Substance (as it is the case here) the period of ineligibility shall be four years, unless the Athlete establishes that the ADRV was not committed intentionally. Thus, the provision presumes in cases involving non-specified substances that the Athlete acted intentionally. This follows from the provision that reads as follows:

The period of Ineligibility shall be four years where:

(a) The Anti-Doping Rule Violation involves a Prohibited Substance that is not a Specified Substance, unless the Participant establishes that the Anti-Doping Rule Violation was not intentional.

129. The term intentional is defined TADB Article 10.2.1 as follows:

As used in Articles 10.2 and 10.3, the term "intentional" is meant to identify those Participants who cheat. The term, therefore, requires that the Participant engaged in conduct that he/she knew constituted an Anti-Doping Rule Violation or knew that there was a significant risk that the conduct might constitute or result in an Anti-Doping Rule Violation and manifestly disregarded that risk. ...

130. As for the standard of proof, TADP Article 8.6.2 provides as follows:

Where this programme places the burden of proof upon the Participant alleged to have committed an Anti-Doping Rule Violation to rebut a presumption or establish specified facts or circumstances, the standard of proof shall be by a balance of probability.

b. The Burden of Proof

131. It clearly follows from TADP Article 10.2.1 that the burden of proof is on the Athlete to convince the Panel that he did not act intentionally because the provision presumes intention on the part of the Athlete. Since there is no direct evidence available to conclude whether or not the Appellant acted intentionally, the Athlete must submit and substantiate objective facts from which – taken together – the Panel can deduce (based on the applicable standard of proof) what was the Athlete's state of mind at the relevant time.

132. The Athlete – in essence – submits that he did not act intentionally because

- he used the Quad supplement for recreational purposes unrelated to tennis,
- the source of the M4 metabolites found in his samples stems from the consumption of the Quad supplement,
- he stopped using the Quad supplement in September 2015 as soon as he decided to go into professional tennis and well before submitting to the TADP, and
- because only the consumption of the Quad supplement in September 2015 plausibly explains the analytical results (concentrations) obtained from his sample.

133. The Athlete argues that he does not to assume the burden of proof for all of the above facts submitted by him. Instead, he argues that

once the Appellant has proven that the Quad he consumed would cause a positive test for the M4 metabolite ... the burden should be shifted to the

Respondent to prove that the 2015 ingestion of the Quad supplement could not have cause his positive test.

134. The ITF, on the contrary, argues that it is not sufficient for the Athlete to show in general terms how and when he ingested a particular supplement. He must also show that his ingestion of a stated amount, at a certain time, is consistent with the concentrations of the substance found in his samples in order to prove his case that he did not act intentionally.

135. In consideration of CAS jurisprudence, the Panel concurs, in principle, with the ITF that the Athlete must not only show how the M4 parent compound entered his system (i.e., the Quad), but also that the timing of such ingestion is consistent with the concentrations of the substance ultimately found in his sample (cf. CAS 2007/A/1399). It cannot, otherwise, be sufficient for an athlete to meet his or her burden of proof by simply pointing to a product as the source of the prohibited substance without ensuring that the timing and route of the alleged ingestion corresponds to the sample results in question. To conclude, therefore, the Panel finds that the Appellant, in principle, bears the burden of proof for establishing all of the above objective facts that are necessary to deduce his lack of intention. The Panel does not overlook the fact that there may be exceptions to this rule (cf. CAS 2011/A/2384&2386), where one party conceals evidence or in so-called instances of "Beweisnotstand" or "evidence calamity"," i.e., "*when a party faces serious difficulty in discharging his or her burden of proof, in light of the fact that the information required to prove the fact is (for example) not in the athlete's control, or that: [...] by its very nature, the alleged fact cannot be proven by direct means. This is the case whenever a party needs to prove 'negative facts'.*"

136. Such an exceptional situation does not exist here. The Panel notes that there is no evidence on file that the ITF concealed evidence from the Appellant. The Athlete claims difficulties in proving his case because the science around the M4 metabolite is evolving constantly and because there is "*utter lack of consensus among the WADA experts*". He claims further that such uncertainty cannot be for him to resolve. It would be – according to the Athlete – "*unconscionable to expect an athlete to prove something that the leading scientific experts in the field of anti-doping themselves cannot even agree upon, let alone be certain of.*" It follows from the very fact – according to the Appellant – that there exists a WADA M4 metabolite working group (composed of WADA laboratory directors) that it would be unfair to impose a burden of proof upon the Athlete when there is no cogent data available about the very issue he must address.

137. The Respondent actually disputes that a working group studying any long term M4 metabolites has been put in place. The Panel did not find any reference to such a working group on WADA's website. The Panel also takes note of the email sent on 26 March 2019 by Dr. Olivier Rabin, WADA's Science Director, according to which he "*is not aware of a WADA Working Group on the long term DHCMT metabolites.*" If necessary therefore, the Panel would prefer the Respondent's position on this point.

138. But without prejudice to that, the Panel finds that the mere fact that science is evolving is no reason to shift the burden of proof. Such a shift (contrary to explicit wording of the applicable rules) would significantly interfere with the law applicable on the merits and, thus, cannot be accepted readily or indeed at all. This is all the more true

considering that the applicable rules already provide for a standard of proof favourable to the Athlete to make his case (balance of probabilities). The less scientific certainty there is, the easier may the applicable standard of proof be reached. Thus, when looking at the evidentiary situation in its entirety (burden and standard of proof), the Panel finds that there is no such disparity as to the equality of arms between the parties that would justify a shifting of the burden of proof. To conclude, therefore the Panel finds that the Athlete must establish on the balance of probabilities all key elements of his version of the facts on which he bases his lack of intention, i.e., that he used the Quad supplement, that the source of the M4 metabolite in each of his samples is one or more M4 parent compounds contained in the Quad, that he last ingested Quad capsules on or around 6 September 2015 and that such pattern of use is – at the very least – compatible with the analysis result of the Athlete.

c. Are there specific (elevated) requirements for rebutting the above Presumption?

139. The Respondent submits that in order to rebut the presumption that the Athlete acted intentionally, the latter must prove to the Panel on a balance of probabilities how the Prohibited Substance entered his system. This includes – according to the Respondent – that the Appellant's "*hypothesis as to the source must be corroborated by objective and persuasive evidence that satisfies the CAS Panel that is more likely than not to be correct.*"

140. The Panel notes that unlike the standard for NSF, the TADP does not specifically require the Athlete to show how the Prohibited Substance entered his system in order to prove no intent. Also, the legislative history of the provision speaks against a restrictive approach. Instead, the legislative history clearly evidences that in order to rebut the presumption of intent an athlete need not show how the prohibited substance entered into his or her system.

141. The drafting team of the WADC 2015 had contemplated at the time to introduce such requirement into Art. 10.2 of the WADA Code and had requested a supplementary expert opinion by Judge Jean-Paul Costa on this issue, i.e. the new draft wording. The latter stated in his expert opinion as follows:

> *Une telle preuve est difficile à rapporter. Ce durcissement est-il excessif ? On peut éprouver des doutes à cet égard, car une preuve impossible aboutirait à un renversement de la charge de la preuve ou à l'institution d'une présomption quasi-irréfragable de violation des règles antidopage.* [...] *J'en conclus donc, non sans quelque hésitation je l'admets, que la nouvelle rédaction du projet de révision peut être considérée comme acceptable, étant bien entendu précisé que ce seront les juridictions compétentes en cas de litige qui auront à apprécier les éléments de preuve fournis par les parties, et à les peser."*
>
> free translation: *Such proof* [how the substance entered the body] *is difficult to provide. Is such aggravation excessive? One could have doubts in this respect, because an impossible proof either leads to a reversal of the burden of proof or to the irrefutable assumption of an anti-doping rule violation* [...] *I conclude, thus, not without some hesitation, that this new text of the draft*

may be considered acceptable, subject however that it will be for the competent jurisdiction in the individual case to assess the elements of evidence adduced by the parties.

142. In view of Judge Jean-Paul Costa's concerns ("*I conclude, thus, not without some hesitation*"), the redaction group went back to the initial text of the draft (which corresponds to the final text enacted) and acknowledged that whilst proof of the route of the ingestion of the prohibited substance is an important fact in order to establish whether or not an athlete acted intentionally, it should not be elevated to a mandatory condition to prove lack of intent on the part of the athlete. To conclude, therefore, the Panel finds that – unlike in the context of NSF or NF –*proof of* the source of the prohibited substance is not an absolute (*although always an important*) pre-condition of establishing lack of intent (*see* 2016/A/4534, CAS 2016/A/4676 and CAS 2017/A/5178), *and that only extremely rarely will an athlete be able to prove lack of intent without proof of source..*

d. The balance of probability test

143. According to the consistent, long-established CAS jurisprudence, the balance of probability test requires the Athlete to convince the Panel that the occurrence of the circumstances on which the Athlete relies is "*more probable than their non-occurrence*" (cf. CAS 2016/A/4377 [*citing* CAS 2008/A/1515 and *contra* CAS 2013/A/3370]; CAS 2006/A/1032). If and to what degree a Panel is persuaded by certain facts is a question of the evaluation of the evidence. The latter is a procedural issue and, thus, is governed by Article 182, 184 of the Swiss Private International Law Act ("PILA"). Absent any specific rules to which the parties agreed, it is up to the Panel to apply the provisions or principles it deems fit with regard to the evaluation of the evidence (Art. 182 para. 2, 184 PILA). Influenced by Swiss Procedural Law (Article 157) and the IBA Rules on the Taking of Evidence (cf. Article 9 para. 1) the Panel applies the so-called principle of the free assessment of the evidence. According thereto the Panel must decide on the facts of the case according to its (subjective) conviction. Thus, as a starting point there is not one form of evidence that is more persuasive or carries more weight than any other. Furthermore, there is no principle according to which – as claimed by the Respondent – "*any assertions submitted by an athlete cannot be given much, if any weight*". Instead, a Panel – in application of the principle of free assessment of the evidence – must reach its conclusion based on its appreciation and evaluation of the submissions by the parties and the outcome of the evidentiary proceedings. It can take into account direct or indirect evidence alike (CAS 2013/A/3370, no. 169).

144. The Panel notes that, despite the large measure of discretion that it has when assessing the evidence and the facts of the case, such process is far from arbitrary, since the Panel must – in coming to its conclusion – take into account logic, common sense and experience and, in addition, make its reasoning transparent. Furthermore, the Panel must reach its conclusion based on the totality of the facts and evidence submitted in the proceedings. However, the Panel does not need to address in this, or any, award every single piece of evidence submitted by the parties in detail. It suffices that it explains which elements were material for coming to its conclusion.

145. The above principles also apply when the Panel is called upon to determine the Athlete's degree of fault. This also follows from the TADP itself that provides that when assessing the athlete's degree of fault all relevant circumstances of the case must be considered. Accordingly, the definition of fault reads as follows:

> *Fault is any breach of duty or any lack of care appropriate to a particular situation. Factors to be taken into consideration in assessing a Player or other Person's degree of Fault include, for example, the Player or other Person's experience, whether the Player or other Person is a Minor, special considerations such as impairment, the degree of risk that should have been perceived by the Player and the level of care and investigation exercised by the Player in relation to what should have been the perceived level of risk. In assessing the Player or other Person's degree of Fault, the circumstances considered must be specific and relevant to explain the Player or other Person's departure from the expected standard of behaviour. ...*

146. Only if the Panel cannot reach a conviction with respect of the occurrence of a certain fact, the burden of proof comes into play. In such circumstances the party having the burden of proof bears the risk that the Panel cannot reach a conclusion on the balance of probability whether or not a certain fact occurred.

e. The Application of the above Principles to the Case at Hand

i. Did the Appellant buy and consume the Quad product?

147. The parties are in agreement that "*the Quad capsules exist*". The Athlete submits that he obtained the Quad capsules from the Total Nutrition store in Coral Gables. He provided an empty bottle of the Quad supplement and credit card records showing purchases at the shop in Coral Gables. The Appellant also located a former store employee of Total Nutrition (Mr. Santinato) through an investigator, Ms Pennock. The Appellant submits that it was Mr Santinato who recommended and sold the Quad supplement to him. While the witness statement of Mr Santinato is not particularly enlightening, the testimony – mostly hearsay evidence – of Ms Pennock provided a more comprehensive picture. According thereto Mr Santinato told Ms Pennock – after seeing a picture of the Athlete – that the latter looked familiar to him. He also acknowledged vis-à-vis Ms Pennock that the Total Nutrition store sold the Quad product back in 2015.

148. In coming to its conclusion the Panel has taken due account of the fact that the Quad bottle has no name of the manufacturer on it, that it does not show a batch number or any other of the normal manufacturing information and that there is no evidence of the Quad supplement on the internet site of Total Nutrition. Also, Mr Santinato – according to the recollection of Ms Pennock – could not remember who the manufacturer of the Quad supplement was. In addition, the explanation given why – allegedly – the shop in Coral Gables stopped selling the Quad supplement in 2015 appears vague. According to the information obtained by Ms Pennock the sales had been discontinued because "*several of the products of the manufacturer had tested positive for some substance*". This is somewhat surprising considering the warning on the label of the Quad bottle that itself records that this "*product ... could produce a positive result if you are subject to steroid testing.*" Be it as it may, the Panel is of the view that the Athlete did whatever

he could to reconstruct the facts of the case in relation to the Quad bottle and that despite the uncertainties remaining the balance of probabilities tips in favour of assuming that the Athlete bought the Quad product at the Total Nutrition store in Coral Gables or elsewhere and that he subsequently used the supplement.

ii. Does the Quad supplement contain substances that turn into the M4 metabolite

149. The Athlete did not provide capsules of the Quad supplement. He did, however, provide a bottle of Quad to the ITF that he had kept in a drawer. The empty bottle contained a residue of powder. It is the Appellant's submission that the bottle provided to the ITF for analysis was not the last bottle, but only "a bottle" that he had previously consumed. The analysis of the residue powder in the Laboratory revealed that none of the ingredients listed on the product label were contained in the residue. The residue, however, contained Promagnon, Methylclostebol and DHCMT. Thus, the Panel is therefore satisfied that the Quad supplement contained ingredients/parent compounds which could metabolise into the M4 metabolite.

150. There is an issue between the parties, whether this finding applies only to the bottle provided to the ITF for analysis or also to the (last) bottle of Quad allegedly used by the Appellant in September (that allegedly was the cause of the analytical findings in the Athlete's samples). The Athlete submitted that he is no longer in possession of the "September bottle". The Panel recalls that the list of ingredients printed on the Quad bottle is completely unreliable (since none of the ingredients listed could be found in the residue of the powder). This confirms the Respondent's conclusion that this is a low quality black market product that was put together in some kind of "kitchen lab" using raw ingredients imported illegally from somewhere and put together in a haphazard manufacturing process. In light of this the composition of the capsules may vary quite considerably from one bottle to the next. Thus, it appears questionable whether any assumption can safely be made about what was in the capsules of the last Quad bottle taken by the Athlete until September 2015. Again, the Panel finds that the Athlete provided all information that could be reasonably expected. It is impossible for him to provide a bottle of the Quad that was used in September, if - and explicably - it no longer exists. However, it is not unreasonable to infer from the contents of a previous Quad bottle what could be the contents of another Quad bottle. Despite the uncertainties remaining, it is the Panel's view that the balance of probabilities tips in favour of assuming that not only the Quad bottle provided for analysis, but also all other Quad bottles (including the "September bottle") contained substances that could turn into the M4 metabolite.

iii. Did the Athlete stop using the Quad supplement in September?

151. The Athlete submits that he started consuming the Quad supplement – along with other supplements – "from summer 14", i.e., around June 2014. Furthermore, the Athlete declared that he stopped using Quad before "September 15". In the course of the hearing the Athlete declared that he "*did stop* [using Quad] *around that first week of September*". The Athlete explained that he consumed Quad until September 2015 for "*fitness and looking good*" and the Quad was a "*gym supplement*".

152. The reason why the Athlete decided to stop using the product is far from clear. At the CAS hearing the Appellant declared – *inter alia* – that he stopped using the product when he decided to quit his job as an insurance adjuster and to pursue a professional tennis career. The hearing transcript records the Athlete saying as follows:

> *So the date of last use for sure before September '15. That I do remember, because I do remember when I did quit my job which was around September 15th and, and made the decision to, to pursue professional tennis that I was no longer taking Quad. I never took any Quad after that point, so for sure I was done with it by then.*

153. This statement sounds as if there was a direct link between his ceasing to use Quad and his embarking on a professional tennis career. However other statements made by the Athlete at the hearing are inconsistent with such link:

> ***Taylor QC**: You see the four ingredients* [listed on the bottle]... *you never looked at those?*
>
> ***Mr. Scott**: No. ... I may have glanced, I certainly didn't know what they meant or paid really attention to them.*
>
> ***Mr. Taylor QC**: Didn't matter to you what you were putting in your body?*
>
> ***Mr. Scott**: At the time, probably not super smart, but really I didn't give it too much thought.*
>
> ***Mr. Taylor QC**: And there's a warning on the bottle ... Do you remember that?*
>
> ***Mr. Scott**: Well, I don't remember that, I know you have pointed it out now, but then I never read or ... noticed at all, at the ... time when I purchased it, it was irrelevant to me to ... read those kinds of things.*

154. The Panel also notes that before the ITF Independent Tribunal the Athlete's explanation focused on a slightly a different explanation for discontinuing the use of the Quad in September 2015:

> ***Mr. Jacobs**: And why did you stop using the Quad supplement?*
>
> ***Mr. Scott**: For health reasons, really. I discovered a, kind of a lump in my chest, and you know, I assumed it could have something to do with what I was taking.*
>
> ***Mr. Jacobs**: So why did you think that?*
>
> ***Mr. Jacobs**: Well I knew that it was ... hormone, that's what I was told, and you know, anything related to hormones will, you know, case grows in the body and, you know side effects, so ...*
>
> *Because it was ... pretty memorable time for me, to notice this lump and feel a little bit nervous about it, and ... start my tennis course ...*

155. The Athlete unequivocally denies that he took the Quad product (or any comparable product) after 15 September 2015. In the CAS hearing the Athlete said:

> *I definitely never took anything even remotely like this kind of things and to be completely honest, it wouldn't help me in a ... sport like tennis where it's ... a lot of cardio training and sweating and things like that.*

156. This statement gives the impression that the Athlete discontinued the use of Quad because he no longer focused on "*fitness and looking good*", but on "*cardio training and sweating*" instead.

157. On a general note the Panel observes that the Athlete's change of career plans was depicted as a spontaneous decision - referred to at the hearing as an "epiphany". Before the ITF Independent Tribunal the Athlete stated:

> *I ... wanted to ... have some sort of (inaudible) with the sport that I never really had, I always thought I could perform better, get better results than I had in the past, play at a higher level and, I wasn't, you know, unhappy with what I was doing my life ... or anything, but it was definitely something I wasn't really taking pride in, ... so tennis was something that I would take pride in and be proud of.*

158. In the CAS hearing the Athlete stated:

> *When I ... went to New York, was the first time I had even ... I was still working ... as an insurance adjuster and when I went to New York for my sister's birthday, it was the first time that I'd even given a thought to persuing something, I was more passionate about ... I met with some friends and my sister, who ... were following their dreams ... So ... it was the first time I'd ever thought about going back to something I love.*

159. Not only was the decision-making process itself sudden and spontaneous in nature (occurring between 6 and 15 September 2015), But the next steps undertaken by the Athlete (i.e., to get back into professional tennis) appear not to have been either elaborate or well-planned. Before the ITF Independent Tribunal the Athlete stated in this respect as follows:

> ***Mr. Scott**: I just wanted to, at first, try and get back into better shape, and, you know ... and advance. So I knew I had a very difficult road ahead of me, to come back. So, you know, in the beginning I really just wanted to get back, maybe play a couple of matches, get some experience, but generally get back in shape, and maybe (inaudible) results two or three years down the road ...*
>
> *I was planning on playing Futures in Florida, and my coach at the time had recommended I play those just for, you know, some experience ...*
>
> *The very first one I played ... really not expecting anything at all, just for some experience, ... in January* [2016] ...
>
> *I* [played the next Futures] ... *in the summer. I went ... to Spain, and played a couple there. Again, it would only have been about six months, so really it was just for more experience and to kind of get into the lifestyle as well, and travel, and play with other players, and that kind of thing. I ... didn't do so well there again.*

> ***Mr. Jacobs***: *Okay, and why didn't you play [Futures] in any after the summer* [2016], *for the rest of the year?*
>
> ***Mr. Scott***: *A couple of different reasons. I had a falling out with my coach at the time, and on top of that I ... really needed to get back to the drawing board a little bit and re-evaluate how (inaudible) again, and then move forward.*

160. Things only changed, according to the Athlete in "*February March 2017*", when he started to work with the coach Dominik Hrbaty. As from this moment onwards his attitude became much more professional and the focus of his activities changed. This clearly follows from the Appellant's testimony before the ITF Independent Tribunal. According thereto the Appellant said as follows:

> ***Mr. Jacobs***: *When you started working with him, what did he tell you you needed to do improve your game?*
>
> ***Mr. Scott***: *I don't think I could list all those things in the time, but mainly I needed to improve my ... fitness, my endurance, and, you know, just be able to stay on the court, ... be able to survive these matches and, and ... the tennis strokes, ... he thought the real reason was not my ... talent, or my skill, but my ... endurance to do it enough to be successful.*
>
> ***Mr. Jacobs***: *So how did ... your training change with Dominik?*
>
> ***Mr. Scott***: *It was just very intense. A lot more hours, and, or more fitness oriented.*
>
> ***Mr. Jacobs***: *And did you see a change in your body as a result of that?*
>
> ***Mr. Scott***: *Of course, I look at myself in the mirror every day, but I weighed myself from time to time, and I was happy with, yeah, getting pretty cut ...*

161. It appears from the above that the "epiphany" of what was required to succeed as a professional tennis athlete did not occur in September 2015, but rather in February - March 2017. While the Athlete's primary goal in late 2015 and throughout 2016 was to gain experience in competition, the focus on achieving a level of physical fitness necessary to succeed as a professional tennis player only came about once he started training with Dominik Hrbaty. It was only then that the Athlete shifted his priority from "gaining experience in Futures" to improving "endurance and cardio". This is also evidenced by the fact that only after training with Dominik Hrbaty – and not already when starting to play Futures –*did* the Athlete's physical fitness – and appearance – change (*and change* dramatically). It is only under the guidance of Dominique Hrbaty that the Athlete started to lose a lot of weight (*with a* drop from 175 pounds to 125 pounds by 8 July 2017).

162. The Panel notes that this change of focus is also reflected in the types of supplements the Athlete used. The Athlete has submitted an impressive list of supplements that he used after September 2015, i.e. after he decided to turn professional. With respect to some of these supplements the Athlete declared at the CAS hearing as follows:

> ***Mr. Taylor QC***: *... we know we've got 21 different supplements, right?*
>
> ***Mr. Scott***: *I don't remember the exact but ...*

> ***Mr. Taylor QC**: But you gave, you were asked for all the supplements you've used, and you gave me 21 ... Well you gave, whatever you gave them, they sent on and I'm telling you it's 21. That sound right to you?*
>
> ***Mr. Scott**: All the supplements I'd used in ... that I could remember in between September '15 and up to the current day.*
>
> ***Mr. Taylor QC**: And those include ... Nitrix 2.0 Advanced Strength ... and QuadraLean ... and then TribX90.*
>
> ***Mr. Scott**: Yeah. I do*
>
> ***Mr. Taylor QC**: Ultra Concentrated Bulgarian Species Natural Testosterone Booster*[1]
>
> ***Mr. Scott**: Mmm, natural, yeah*
>
> ***Mr. Taylor QC**: ... so you'd be taken ... that when?*
>
> ***Mr. Scott**: ... I took that in 2016 well before Dominik you know ... about maybe winter 2016 something like that ...*

163. It follows from the above that at least at the beginning of his professional tennis career, the Athlete continued using "*gym supplements*". This supports the Panel's finding that the Athlete found out that such supplements are no good in a "*sport like tennis where it's ... a lot of cardio training and sweating and things like that*" only at a later stage (i.e., at the end of 2016 or when the Athlete started training with Dominique Hrbaty). At the CAS hearing the Athlete stated as follows:

> ***Mr. Jacobs**: And while you were ... [with Dominique Hrbaty], did you discuss supplements with Dominique at all?*
>
> ***Mr. Scott**: That was a pretty big point we made actually.*
>
> ***Mr. Jacobs**: What do you remember discussing with him?*
>
> ***Mr. Scott**: Just what a professional athlete obviously specifically tennis player should take to ... help their career ... We had already kind of been working together in Florida, so ... I already knew that whatever I was taking in 2016 wasn't really ... something that would help me.*

164. The Panel is compelled to wonder why, if the Athlete took (other) "gym supplements" well into the year 2016, he would stop taking the Quad supplement abruptly in September 2015.

165. The Panel's considerable doubts as to the diverse and divergent explanations provided by the Athlete are reinforced by the act that the dosage of the Quad supplement described by the Athlete does not add up. The Athlete could not recall whether he bought four of five bottles of Quad. It is undisputed between the parties that each bottle contains 60 pills. The recommended dosage – printed on the bottle – is two pills per day for 30 days. The Athlete confirmed that he more or less stuck to this recommendation and that he would therefore use up a bottle in about four weeks. The Athlete further stated that Mr Santinato had recommended that he pause before using the next bottle. The recommended time off in between the cycles of consumption was – according to

[1] *Ultra Concentrated Bulgarian Species Natural Testosteronee Booster and TribX90 are the same.*

the Appellant – four to six weeks. If one adds up these cycles (starting in June 2014) then one ends up with the contents of the last bottle being used in May/June 2015 always, provided that the Athlete was taking the pills – as he claimed – continuously. The Athlete further submitted that he bought the last Quad bottle on 15 August 2015. He further submits that he had finished up all pills by the time he decided to turn professional. However, if he had bought the last bottle on 15 August 2015, there must have been capsules left, if he stopped – as claimed – taking the Quad capsules around "*that first week of September*". To conclude, therefore, the Panel based on all of the above does not accept on a balance of probabilities that the Athlete stopped using the Quad supplement in September 2015. Instead, it concludes that the Athlete took the Quad supplement well into 2016.

iv. Could a last consumption of the Quad capsules in September 2015 lead to the Appellant's analysis results?

166. As a preliminary remark the Panel notes that when examining whether or not a consumption of the Quad capsules (until September 2015) can lead to the Appellant's analytical results, it must take into account not only the analysis result for the 8 July 2017 sample, but for all of the Athlete's the samples. It is true that the matter in dispute before the Panel only concerns the Appealed Decision, i.e. whether or not the Athlete committed and ADR on 8 July 2017 and what are the consequences. However, it is the common understanding of the parties that in order to appreciate what happened with respect to the ADRV committed on 8 July 2017 one must look also at the facts that occurred after said point in time, in particular to the other analysis results.

> ***Prof. Haas***: *... I mean what you are asking us is ... don't stick only to the facts that were envisaged by the first decision, [but] go beyond, because it's important to understand what happened in the first decision.*
>
> ***Mr. Jacobs***: *At a minimum.*

167. In view of the above, the crucial question in these proceedings, thus, is whether the intake of a parent compound of the M4 metabolite in September 2015 is compatible with excreting the M4 metabolite some 22 to 36.5 months after ingestion.

168. The Panel takes note of a study by Prof Schänzer of the Cologne Laboratory submitted at the 2017 USADA Symposium ("Schänzer Study"). The latter is based on an excretion study of a single oral intake of 20 mg of DHCMT by a single male volunteer. Furthermore, the Panel is aware of the so-called Sydney Study that measured the M4 and the epiM4 metabolite after the administration of a single dose of 25 mg Methylclostebol.

169. The Appellant submits that his ingestion of the Quad supplement in September 2015 caused the results of his samples on 8 July 2017, 26 March 2018, 14 May 2018, 30 June 2018 and 25 September 2018. In support of his allegation, the Athlete points to the pharmacological profile for either DHCMT or Methylclostebol to support a very long excretion/detection window, which he attempts to explain would result in the M4 metabolite remaining in his body for such a long period of time, and notes the following:

a. Lipophilic compounds (such as the M4 metabolite and it parents), following ingestion, distribute to various tissues in the body, the most favourable being fat;

b. The half-life of the M4 metabolite is 50 days, which is quite a long period of time;

c. The C_{max} value of methylclostebol is very high and such high levels coupled with a long half-life correlate to long excretion times;

d. Multiple dosing will result in increasing levels of the M4 metabolite in the body, generally, and in fat tissue, specifically.

e. Multiple dosing of an M4 parent, particularly Methylclostebol and Promagnon, would yield a high C_{max} value.

170. Moreover, the Athlete highlights that, given that he ingested repeated doses of Quad over an extended period of time before he stopped using the supplement, and given that the half-life is 50 days, it is reasonable that the C_{max} value would increase over time. Furthermore, given also that Quad contained multiple M4 parents with differing and overlapping excretion patterns, it is likely that the excretion profile may be less that an idealized exponential decay, i.e. the excretion data may be somewhat flattened.

171. With this, and considering the available data set out in the Schänzer and Sydney studies, the Athlete's own testimony, the composition of Quad, and fundamental pharmacology, it is, according to the Athlete, more likely than not that the Athlete's excretion profile is a direct result of his ingestion of Quad no later than September 2015.

172. The Athlete attempts further to bolster his explanation and data through the revised opinions (World Rugby) of Professor Cowen and an opinion from Dr. Eichner; statements from other anti-doping experts Jeff Novitsky and Matt Fedoruk; and USADA's conclusions in relation to UFC fighter Jon Jones.

173. The Panel, however, is not persuaded by any of the above.

174. The Panel notes that there is not a single scientific publication that records an excretion pattern of the M4 metabolite comparable to that claimed by the Appellant (i.e., a period of 36.5 months for a concentration of 54 pg/ml). The Appellant submits that such cases nevertheless exist and refers to reports from Mr Jeff Novitzky, the Vice President of Athlete Health & Performance at UFC (and formerly a federal agent for the United States Food and Drug Administration), or to the case of the UFC fighter Jones. The Panel does not question Mr Novitzky's reputation. However, he is not a scientist and the case referred to in his report is either hearsay or reflects his speculative interpretation of facts on which the Panel will not rely. As for the Jones case, the relevant facts were as follows:

- Mr Jones has been banned for a first ADRV for presence of a Prohibited Substance in June 2016 (clomiphene). The period of ineligibility imposed was 12 months.

- A further sample was collected from Jones on 28 July 2017, in which he tested positive for the M4 metabolite. Mr Jones was convicted for a second ADRV.

- Thereafter, Mr Jones underwent other testing. Samples taken on 11 October 2017 and 9 August 2018 tuned out a negative result. On 29 August 2018 and 18 September 2018 he tested positive for low amounts of the M4 metabolite. Tests conducted on 21 September 208, 2 and 11 October 2018 and 14 November 2018 were again negative. On 9 December 2018, Mr Jones tested again positive for an M4 metabolite. The levels were similar to the ones in the 28 July 2018 sample.

- In a press release published in December 2018, USADA announced that it had decided not to charge Mr Jones with a third ADRV (for the AAF collected after 28 July 2018) because "*after examining the scientific literature on this substance and the extensive testing history on Jones and consulting with the leading scientific experts, USADA has concluded that the extremely low level of DHCMT in Mr Jones' December 9, 2018 sample is consistent with residual amounts from his prior exposure for which he was previously sanctioned.*"

175. Leaving aside that this is only a press release (not a scientific paper or a decision by an adjudicatory body) and that no specific reference to the scientific literature and the opinions provided by the scientific experts are made, the Panel reads this press release to mean that according to USADA, Mr Jones' testing results on 9 December 2018 are consistent with an exposure to a parent compound of the M4 metabolite prior to 28 July 2017 (and not prior to the 16 March 2016 ADRV). It follows from the press release that it is USADA's view that the M4 metabolite stayed in the system of Mr Jones (despite the negative tests in between) for a minimum of 499 days (28 July 2017 – 9 December 2018), i.e. between 16 to 17 months. Contrary to the Appellant's submission, however, the Panel does not understand the press release to mean or imply that the M4 metabolite could be detected even up to 36.5 months or after being ingested the day following the first ADRV (for a completely different substance) on 16 March 2016.

176. The Panel further notes that there are no recorded cases in which an athlete would have been found with such elevated C_{max} values as claimed by the Appellant. All of this makes the Athlete's case – highly – exceptional. As part of the Appellant's explanation for such extraordinary pattern the Panel recognizes that the M4 metabolite may be lipophilic. But as Professor Ayotte noted, the reason the M4 metabolite is detectable for longer periods of time than other substances is likely due to its metabolism process and because its chemical structure lends itself to detection at very low levels. Moreover, the Panel notes the agreement between the parties' experts that if multiple doses are taken of one or more M4 parents, the M4 metabolite will build up in the body until it reaches a "plateau," or a steady state, which could increase the detection window to some degree. This said, excretion will nevertheless vary from individual to individual, depending on the individual's own metabolism.

177. In addition, even if the Panel were to consider all the above factors to the benefit of the Athlete, and even with a generous calculation of the sequestering of the M4 metabolite in the Athlete's fat tissue, neither the Cologne nor the Sydney results can be read in such a liberal fashion to support the Athlete's argument. In the Cologne study, single

administration (20 mg) of DCHMT to a male volunteer resulted in low-level detection (2 to 3 pg/mL) at up to 246 days and no detection at 259 days (i.e. 8-9 months).

178. In the Sydney study, the duration of detection increased from the Cologne study following a single administration (25 mg) of Methylclostebol to a male volunteer to a concentration of 30 pg/mL at 263 days. The Panel recognizes the parties' dispute as to the sample collections at 12 and 16 months, which may have had the presence of the M4 metabolite. But this is speculative, and even then, such a detection would be below any WADA-accredited laboratory's limit of detection. Moreover such detection at its slightest level comes some 6 months earlier than the Athlete's detection at 22 months (for his first sample).

179. There is no substantial support or evidence that the detection window for the M4 metabolite could be extended to 22 months (over double the period of time set out in the Cologne and Sydney studies). Dr. Dordick --- – could not provide the Panel with reliable scientific support for his proposition. As presented, even if the Athlete ingested 2 capsules of Quad per day from 15 August 2015 to 6 September 2015 (the focus point conceded by Dr. Dordick), and even considering a generous "plateau", the Athlete's detection at 22 months simply defies the empirical and factual evidence set out in this procedure and is not consistent with the concentrations of the substance found in his samples. While the Panel acknowledges that Professor Ayotte on several occasions glossed her original conclusion in the light of the results of the tests administered to the Athlete which postdated her first report, she never abandoned her basic conclusion which was that Quad last consumed in September 2015 could not produce the result of the first test with which the Panel was primarily concerned, Finally, the Panel notes that the much-relied upon revised opinion of Professor Cowen (the World Rugby case) does not rescue the Athlete. While the Athlete piqued the interest of the Panel at the hearing with his reliance on Professor Cowen's new mathematical model which, if applied to this case, could extend detection to 22 months, Professor Cowen's response to the ITF's specific inquiry following post-hearing proved otherwise. Based on the express figures provided, as inserted into his mathematical model, an athlete would need to: (1) ingest 20 grams of Methlyclostebol in order to show 30 pg/mL of M4 metabolite in his/her urine 22 months later; and (2) ingest 25 kg of Methlyclostebol in order to show 100 pg/mL of the M4 metabolite in his/her urine 36 months later.

180. As the ITF notes, even assuming that (i) the Athlete ingested two Quad capsules per day for 30 days between August/September 2015, (ii) each capsule contained 25 mg of Methlyclostebol (total 50mg per day), and even factoring in accumulation and ignoring any excretion during that period, and calculating a 50-day half-life for the M4 metabolite, the concentration calculated using Professor Cowen's mathematical formula would result in a concentration of 20 pg/mL after 510 days. In consideration of all the foregoing, the Panel concludes that the Athlete has failed on a balance of probability to establish that the timing of such ingestion of a M4 parent (i.e. the Quad) corroborates with the concentrations of the substance found in his sample. The Panel has been provided with a series of scientific and mathematical hypotheses, none of which, when tested, proved with remote certainly how and when the prohibited substance enter an athlete's bodily system.

v. Conclusion

181. To conclude, the Panel finds that it is – on a balance of probabilities – not persuaded by the submission of the Appellant that he stopped using the Quad supplement in September 2015 and that the results of the Athlete's doping tests could be explained by an ingestion of the Quad supplement in September 2015. If, however, the Athlete used the Quad after September 2015, in particular also in 2016, then he acted intentionally within the meaning of TADP Article 10.2.1 and 10.2.3 with respect to the Quad. In such case the Athlete "*engaged in conduct that he/she knew constituted an Anti-Doping Rule Violation or knew that there was a significant risk that the conduct might constitute or result in an Anti-Doping Rule Violation and manifestly disregarded that risk. ...*"

182. In any event, the Panel finds that the Appellant has failed to discharge his burden of proof that he did not act intentionally when committing the ADRV. He is, thus, presumed to have acted intentionally according to TADP Article 10.2.1. In sum the hypothesis that the Athlete was a repetitive Quad user through at least 2016, which would sufficiently explain the sequence of analytical results without disturbing received scientific knowledge appears to the Panel to be far more plausible than the alternative posited by Dr Dordick which, with all due respect to his experience, lacked any sufficient foundation either in relevant literature or in his own research.

E. What are the Consequences of the Finding under paragraph D, supra?

183. TADP Article 10.2.1 provides that in case the Athlete cannot establish that he did not act intentionally, he shall be sanctioned with a 4-year period of ineligibility. Considering that the Athlete did not sustain his burden under TADP Article 10.2.1, the Panel cannot consider whether such period of ineligibility may be reduced according to articles providing for fault-related reduction. Furthermore, the Appellant has not claimed a reduction for non-fault related reasons under the TADP.

184. The Panel notes that, the ITF provisionally suspended the Athlete on 19 August 2017 subject to TADP Article 8.3.1. There is no evidence that the Athlete has breached his provisional suspension. Therefore, the Panel determines that the start date for the Athlete's 4-year period shall be the date of the CAS hearing (26 November 2018) and that the time served under the provisional suspension since 19 August 2017 shall be credited to the Athlete.

X. COSTS

185. Pursuant to Article R65.1 and R65.2 of the CAS Code, cases which are exclusively of a disciplinary nature and which are rendered by an international federation shall be free of charge, except for the Court Office fee to be paid by the Appellant and retained by the CAS and for a reduced contribution of CHF 2'500 per party, already paid, related to the costs of the hearing, held in New York at the request of the parties. Since the prerequisites of this provision are met, the proceedings are free subject to the non-refundable Court Office fee that is retained by the CAS.

186. Article R65.3 of the CAS Code provides, however, that the Panel has discretion to grant the prevailing party a contribution towards its legal fees and other expenses incurred in

connection with the proceedings. When granting such contribution, the Panel shall take into account the complexity and the outcome of the proceedings, as well as the conduct and financial resources of the parties.

187. In view of the outcome of the case, and noting that the parties each agreed to contribute to the administrative costs associated with holding the hearing in New York, and considering the overall outcome of the procedure, the Panel finds it appropriate and fair that the ITF be awarded CHF 2,000 as a contribution towards its administrative, legal, and other expenses in this procedure.

ON THESE GROUNDS

The Court of Arbitration for Sport rules that:

1. The appeal filed by Mr. Dylan Scott with the Court of Arbitration for Sport on 29 May 2108 against the International Tennis Federation with respect to the decision rendered by the Independent Tribunal on 9 May 2018 is dismissed.

2. The award is pronounced without costs, except for the Court Office fee of CHF 1,000 (one thousand Swiss Francs) paid by Mr. Dylan Scott and for a contribution of CHF 5,000 (five thousand Swiss Francs) as participation to the costs of the hearing, paid in half by each party, which are retained by the CAS.

3. Mr. Dylan Scott is ordered to pay the International Tennis Federation a total amount of CHF 2,000 as contribution towards the expenses incurred in connection with these arbitration proceedings.

4. All other motions or prayers for relief are dismissed.

Seat of arbitration: Lausanne, Switzerland
Date: 11 September 2019

THE COURT OF ARBITRATION FOR SPORT

Ulrich Haas
President of the Panel