



Arbitrations CAS 2018/A/5654 Olha Zemliak v. Ukrainian Athletic Federation (UAF) & World Anti-Doping Agency (WADA) and CAS 2018/A/5655 Olesia Povh v. UAF & WADA, award of 29 March 2019

Panel: Mr Murray Rosen QC (United Kingdom), Sole Arbitrator

Athletics (sprint)

Doping (testosterone)

De novo hearing

Validity and reliability of the analytical method used as a mean of proof of the ADRV

Disqualification of results

1. Under Article R57 of the CAS Code, the CAS has power to review the facts and the law. The scope of this power is basically unrestricted, meaning that CAS may re-hear the matter afresh, is not bound by the evidence or the factual and legal findings, and can consider new facts and new evidence adduced by the parties. The curing effect of the CAS appeal covers any deficiencies in the investigation and hearing, even fundamental procedural defects such as the denial of the right to be heard, justice, the failure to analyse important questions, or a lack of independence of the first-instance tribunal.
2. According to IAAF Rule 33.1(a), analytical methods or decision limits approved by WADA after consultation with the relevant scientific community and which have been the subject of peer review are deemed to be scientifically valid. The consequence in the athletes' favour is that an analytical method not approved by WADA is *not deemed* scientifically valid. However it can nevertheless serve as a reliable means of proof as the results may still be proved as such. The fact that resulting procedural provisions in IAAF Rule 33.1(a) do not apply, i.e. the presumption of scientific validity, carries no inherent prejudice. Moreover, the fact that a method does not carry with it specific reference guidelines, and explanatory and protective documentation from athletes' point of view, so as to regulate its use in ADRV procedures, does not mean that the athletes' rights of defence are significantly prejudiced. Athletes are able and entitled to question the scientific evidence presented against them, to present their own evidence, and otherwise to challenge the results allegedly proved by use of the method.
3. Article 10.8 of the WADA Code specifically allows results subsequent to sample collection out of the relevant competition to stand "*if justice requires*". This is a question to be considered primarily with regards to fairness as regards to the athlete in violation, but without regarding the effect on other athletes who have been or may feel "*cheated*" by the violation. There are cases where significant and prejudicial delay between testing and notification makes it unfair to disqualify all of the athlete's results in the interim, for example where it is known that the athlete failed a test but he or she is allowed to compete for years (or in many events) before notification, at

events where he or she was or may have been “*clean*”. It can also be considered just for WADA, in view of the delay between sample collection and notification to the athletes, to accept that the periods of ineligibility might commence as early as the date of sample collections if the athletes accept the disqualifications of their competitive results since then.

I. PARTIES

1. Ms. Olha Zemliak (“Ms. Zemliak”) is an international-level Ukrainian sprinter who competed at the London 2012 and Rio 2016 Olympic Games. Ms. Zemliak was previously disqualified for 2 years as from 25 August 2009 for using the prohibited substance Norandrosterone. Ms. Zemliak won a bronze medal at the 2012 London Olympic Games as part of the Ukrainian 4x100m relay team.
2. Ms. Olesia Povh (“Ms. Povh”) is also an international-level Ukrainian sprinter who competed at the London 2012 and Rio 2016 Olympic Games. Ms. Povh also won a bronze medal at the 2012 London Olympic Games as part of the Ukrainian 4x100m relay team.
3. Ms. Zemliak and Ms. Povh are collectively referred to as the “Athletes”.
4. The Ukrainian Athletic Federation (the “First Respondent” or “UAF”) is the national governing body for athletics in Ukraine (of which both the Athletes are members) and is in turn a member federation of the International Association of Athletics Federations (“IAAF”).
5. The World Anti-Doping Agency (the “Second Respondent” or “WADA”) is the international agency responsible for the implementation of the World Anti-Doping Code (the “WADA Code”) which is followed by sporting organisations including the IAAF and the UAF.

II. FACTUAL BACKGROUND

6. 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 Sole Arbitrator has considered all the facts, allegations, legal arguments and evidence submitted by the parties in the present proceedings, he refers in his Award only to the submissions and evidence he considers necessary to explain his reasoning
7. The Athletes have each sought to appeal to the Court of Arbitration for Sport (“CAS”)

decisions rendered by the UAF executive committee (“ExCo”) on 2 February 2018 (the “Appealed Decisions”). WADA intervened in these appeals, which were consolidated, heard and determined together as set out below.

A. The Athletes’ 2016 samples

8. Between 8 August 2013 and 9 February 2017, the IAAF collected 5 blood serum samples from Zemliak and between 24 August 2011 and 2 March 2017 the IAAF collected 6 such samples from Povh. These samples were analysed, among other things, for endocrine measurement and using the so-called “UHPLC-MS/MS” method (the “Method”).
9. It is alleged that (a) in the case of Zemliak, the blood serum sample (no. 305404) collected on 5 July 2016 (shortly before the Rio 2016 Olympic Games) was found on analysis using the Method at the accredited Lausanne laboratory to contain a serum testosterone concentration of 10.10 nmol/L; and (b) in the case of Povh, the samples collected on 15 June 2016 (no. 18099) and collected on 8 July 2016 (no. 304860) were found on analysis at the Seibersdorf and Lausanne accredited laboratories to contain serum testosterone concentrations of 7.30 and 7.37 nmol/L, respectively.
10. In each case, such concentrations are said to be far in excess of the Athletes’ normal serum testosterone values and those in the female population generally. The Athletes’ results were submitted for review to an independent expert Professor David Handelsman of the ANZAC Research Institute in Sydney Australia, who concluded in reports dated 25 July 2017 that it is *“highly likely, almost certain, that the results are due to the athlete’s use of exogenous testosterone, and are unlikely to be the result of any other cause”*.

B. The IAAF Rules

11. When administered exogenously, testosterone is a non-specified anabolic androgenic steroid, prohibited under S1.1 of the WADA 2016 Prohibited List as referred to in Rule 34 of the IAAF Competition Rules 2016-2017 (the “IAAF Rules”) such that use or attempted use constitutes a violation (“ADRV”) under IAAF Rule 32.2(b).
12. Among other things, under Rule 33:
 - (1) the IAAF, the Member or other prosecuting authority shall have the burden of establishing that an ADRV has occurred. The standard of proof shall be whether [an ADRV has been] established ... to the comfortable satisfaction of the relevant hearing panel; and
 - (2) facts related to anti-doping rule violations may be established by any reliable means, included but not limited to admissions, evidence of third persons, witness statements, experts reports, documentary evidence, conclusions drawn from longitudinal profiling such as the Athlete Biological Passport and other analytical information; and certain

particular rules of proof are set out as applicable in doping cases, referred to further below.

13. Under Rules 35 and 36, testing and investigations will only be conducted for anti-doping purposes (including the processing of intelligence from all available sources to inform the development of proportionate test distribution plans) and all samples collected will be analysed in accordance with certain principles including the use of accredited laboratories, for “*legitimate anti-doping purposes*” and in conformity with the International Standard for Laboratories (“ISL”).
14. Rule 36.1(c) provides that no sample should be used for research without the Athlete’s written consent and with all means of identification of the Athlete removed.

C. The IAAF/UAF Process

15. By letters dated 25 July 2017, the UAF and/or IAAF informed the Athletes that they had initiated investigations into possible ADRVs by them in respect of their blood serum testosterone levels, enclosing among other things Professor Handelsman’s reports, and requested their explanations for those levels by 1 August 2017.
16. By letters dated 31 July 2017, the Athletes sought further information as to the relevant results management process and extensions of their times for providing explanations.
17. On 2 and/or 3 August 2017, the UAF and/or IAAF charged the Athletes with ADRVs under Rule 32.2(b), provisionally suspended the Athletes from all competitions, including the imminent World Championships in London, and publicised the same.
18. Following a series of further letters on behalf of the Athletes to the UAF, IAAF and WADA seeking more clarification, which they claim was not satisfactorily provided, the Athletes were invited to the UAF ExCo meeting on 2 February 2018 at which the ADRV charges were heard and in respect of which they complain that their request for a postponement and submissions by their legal representative were ignored and/or refused.
19. The Appealed Decisions, as notified to the Athletes by letters of 6 February 2018, established ADRVs and imposed periods of ineligibility as from 3 August 2017 of (a) 8 years in respect of Ms. Zemliak (this being her second violation) and (b) 4 years in respect of MS. Povh, and disqualified the results achieved by both until 3 August 2017, with all consequences, including forfeiture of medals, points and prize money, from (a) 5 July 2016 and (b) 15 June 2016, respectively.
20. On 12 February 2018, the Athletes requested from the UAF the reasons for the Appealed Decisions (under IAAF Rules 38.1 ff and Articles 8.1 and 14.1 of the WADA Code), but the UAF declined to do more in that regard.

D. The Method

21. Included in the evidence on these appeals were various writings regarding the Method, in particular a paper entitled “*Longitudinal monitoring of endogenous steroids in human serum by UHPLC-MS/MS as a tool to detect testosterone abuse in sports*” (published on 16 December 2015 in *Anal. Bioanal. Chem.* 2016 408:705-719) by 7 credited authors including one of WADA’s expert witnesses in these appeals, Professor Martial Saugy of the Lausanne Laboratory.
22. In summary, this paper explained that as of late 2015 the Method had been developed and validated for the quantification of testosterone and related compounds, including major progestogens, corticoids and estrogens in human serum, and longitudinal monitoring of those biomarkers using intra-individual thresholds, showed considerable improvement in the detection of testosterone detection; and proposed a follow-up for a blood steroid profile as a complement to the urinary module of future steroid abuse detection capabilities.
23. More specifically, by a letter dated 21 November 2017 to the IAAF’s Athletics Integrity Unit, a Dr Tiia Kuuranne of the Lausanne Laboratory stated among other things that “*According to agreement with the testing authority, the serum analysis for ‘endocrine measurement’ have been carried outside (sic) the anti-doping context. Furthermore there is no reference guideline within the WADA regulations to apply to the serum analysis. The method has been validated according to the good analytical practices and has undergone through (sic) a peer review process*”.

III. THE PROCEEDINGS BEFORE CAS

24. In accordance with Articles R47 *et seq.* of the Code of Sports-Related Arbitration (the “CAS Code”), the Appellants filed their statements of appeal with respect to the Appealed Decisions against UAF on 23 March 2018. In their statements of appeal, the Appellants nominated Mr. Romano Subiotto as arbitrator.
25. On 13 April 2018, the Respondent requested that a Sole Arbitrator be appointed by the President of the Appeals Arbitration Division.
26. On 18 April 2018, the Appellants joined in the Respondent’s request for the appointment of a Sole Arbitrator.
27. On 26 April 2018, the IAAF filed a request for intervention in this procedure in accordance with Article R41.3 and R54 of the CAS Code.
28. On 30 April 2018, the Appellants filed an objection to the IAAF’s request to intervene.
29. On 8 June 2018, the CAS Court Office, on behalf of the President of the Appeals Arbitration Division, confirmed the appointment of Mr. Murray Rosen QC as Sole Arbitrator.

30. On 15 June 2018, WADA also filed a request for intervention in accordance with Article R41.3 of the CAS Code.
31. Also on 15 June 2018, the Sole Arbitrator, upon consideration of the parties' positions, denied the IAAF's request for intervention.
32. On 21 June 2018, the Sole Arbitrator, upon consideration of the parties' position, confirmed the intervention of WADA in this procedure.
33. On 9 August 2018, WADA filed its answer in accordance with Article R55 of the CAS Code.
34. On 8 September 2018, following approval from the Sole Arbitrator, filed a reply submission in accordance with Article R56 of the CAS Code.
35. Notwithstanding the serious allegations against it, the First Respondent failed to file an answer and did not participate in the appeals.
36. On 21, 24, and 28 December 2018, the Appellant, WADA, and the Respondent, respectively, signed and returned the Order of Procedure to the CAS Court Office.
37. On 9 January 2019, a hearing took place at the CAS Court Office. The Sole Arbitrator was assisted by Mr Brent J. Nowicki, Managing Counsel of the CAS.
38. The Athletes attended through their legal representative Mr Anton Bychkov. UAF failed to attend (despite earlier notifying of its intention to do so). WADA attended by Messrs Ross Wenzel and Anton Sotir of Kellerhals Carrard.
39. WADA made available as witnesses Professors Handelsman and Dr Maria Tsivou of the Seibersdorf Laboratory (in place of Dr Gmeiner) by skype or telephone, and Professor Saugy in person. The Athletes did not challenge the reports of Professor Handelsman and Dr Gmeiner. Professor Saugy was examined on behalf of both the Athletes and WADA as to certain aspects of his report.
40. At the beginning and end of the hearing, the Athletes and WADA confirmed that they had no complaints with respect to the appeals procedures including the hearing and that their rights to be heard had been fully respected. Moreover, the Sole Arbitrator confirmed with the parties' consent that this procedure would be consolidated and that he would proceed to issue one award covering both Athletes.

IV. THE PARTIES' SUBMISSIONS

41. The Sole Arbitrator has carefully considered all the parties' submissions, and the following is a summary which is not intended nor required comprehensively to repeat all of them.

A. The Appellants' Submissions

42. The Athletes' main submissions were as follows:

- (a) that they were deprived entirely of their rights under the applicable rules to a fair hearing by an unbiased and informed disciplinary body (rather than ExCo and its vice-President a Mr Felix Tymenko) and proper reasons for the Appealed Decisions, and each had "*no choice but to submit her appeal to CAS in order to have her case considered de novo*";
- (b) that the sample analysis results asserted against the Athletes were unlawful and inadmissible since in particular (i) the Method was not approved by WADA under IAAF Rule 33(a), quoted below (ii) neither WADA nor the IAAF had established any special procedure for results management concerning so-called "blood steroid profiles" (iii) the Athletes' samples had been used for research without their consent and/or not tested for anti-doping purposes, (iv) without notifying the Athletes promptly or until 25 July 2017 and/or sufficient review by experts, and (v) as a result the Athletes had not been properly informed of the results management processes and had been deprived of their rights to defence;
- (c) that neither the UAF (which had acted in breach of the relevant rules and not properly considered the relevant matters) nor CAS could have been or could be comfortably satisfied that the alleged ADRVs were established; and
- (d) that alternatively the periods of ineligibility should start from the dates of sample collection (5 July 2016 for Ms. Zemliak and 15 June 2016 for Ms. Povh) rather than 3 August 2017, and the Athletes' results in the interim are not disqualified, given the delays in the results management and investigation process not attributable to the Athletes.

43. The Athletes requested by way of relief that CAS in each case (according to their Appeal Briefs):

- (1) ... *confirm that the present appeal is admissible and CAS has jurisdiction to entertain this dispute...*
- (2) ... *review the present case as to the facts and the law in compliance with ... R57 of the CAS Code, IAAF Rule 42.22 and Articles 13.1.1, 13.1.2 of the WADA Code ...*
- (3) ... *confirm that the Athlete was completely deprived with (sic) the right to be heard within the disciplinary proceedings conducted by UAF concerning the alleged [ADRV] and UAF Decision was adopted with procedural flaws and errors of law and shall be overturned...*
- (4) ... *issue a new decision which overturns the UAF Decision dated 2 February 2018 confirming that no ADRV had been committed by the Athlete and no sanction shall be applied to her due to the fact that whole case is built on inadmissible evidence*

(5) ... alternatively, ... issue a new decision which sets aside the UAF Decision dated 2 February 2018 starting the period of ineligibility (1) retroactively from the date of the sample collection (ie 5 July 2016 and 15 June 2016 respectively) ... alternatively (2) ... 2 August 2017 ... All competitive results achieved by the Appellant ... until 2 August 2017 to leave (sic) untouched...

(6)... order the Respondents to bear all costs and legal expenses related to the present procedure [and]... reimburse the Appellant her legal expenses in amount of not less than €4,000; alternatively, due to UAF default which led (sic) to this appeal, to order each party to bear its own costs

B. The Respondents' Submissions

44. UAF made no submissions in answer to the Athletes complaints against it. WADA's main submissions were, in summary:
- (a) that consideration of any procedural irregularities committed by UAF is moot given CAS' power to review the cases *de novo* as to both the facts and the law;
 - (b) that that the analytical results of the Athletes' samples were reliable and amounted to evidence of the use of the prohibited substance testosterone (the nature of that charge of use being different from a charge of possession) to the standard of comfortable satisfaction;
 - (c) that the samples were not used for research but rather for anti-doping purposes, to profile relevant parameters in an athlete's urine, blood or other matrix and to detect any prohibited substances; and
 - (d) that in view of the delay (of over a year) between sample testing and notification of the ADRVs to the Athlete's WADA would in principle accept that the periods of ineligibility should begin on the earlier dates so long as their competitive results were disqualified similarly.
45. WADA requested that CAS rule that the appeals be dismissed and WADA be granted an award for costs, including a contribution to its legal and other costs.

V. JURISDICTION

46. Article R47 of the CAS Code provides as follows:

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

47. The Appellants rely on the IAAF Anti-Doping Rules 2015 as conferring jurisdiction on the CAS. This jurisdiction is not contested by the Respondents and is confirmed in their signature

to the order of procedure.

48. The Sole Arbitrator, therefore, determines that CAS has jurisdiction to decide the appeals.

VI. ADMISSIBILITY

49. Article R49 of the CAS 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.

50. The Appealed Decision were notified to the Appellants on 6 February 2018. The statements of appeal were filed on 23 March 2018 within the 45-day deadline specified in IAAF Rule 42.15. The Respondents did not contest the admissibility of the appeals.

51. The Sole Arbitrator, therefore, determines that these appeals are admissible.

VII. APPLICABLE LAW

52. Article R58 of the CAS Code provides as follows:

The Panel shall decide the dispute according to the applicable regulations and, subsidiarily, to 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 Panel deems appropriate. In the latter case, the Panel shall give reasons for its decision.

53. In the present case, the parties agree that the applicable regulations are the IAAF Rules. No issues arose which required the application of subsidiary national law.

VIII. MERITS

A. The Review of the Appealed Decisions

54. The parties agree on (and indeed the Appellants invoke) that under Article R57 of the CAS Code, the Sole Arbitrator has power to review the facts and the law. The scope of this power is basically unrestricted, meaning that CAS may re-hear the matter afresh, is not bound by the evidence or the factual and legal findings below, and can consider new facts and new evidence adduced by the parties.

55. The curing effect of the CAS appeal covers any deficiencies in the investigation and hearing below, even fundamental procedural defects such as the denial of the right to be heard, justice, the failure to analyse important questions, or a lack of independence of the first-instance tribunal (see for example CAS 2006/A/1153; CAS 2006/A/1175; CAS 2008/A/1718; CAS 2015/A/3879).
56. Thus, in effect, virtually any violation of procedural rights at first instance can be cured by a full appeal to the CAS, as noted in CAS 2016/A/4387:
- ... The Swiss Federal Tribunal has also confirmed the legality of the curing effect of the CAS de novo review. Accordingly, infringements of the parties' right to be heard can generally be cured when the procedurally flawed decision is followed by a new decision, rendered by an appeal body which had the same power to review the facts and the law as the tribunal in the first instance and in front of which the right to be heard had been properly exercised (ATF 124 II 132 of 20 March 1998).*
57. The Sole Arbitrator has conducted such a full review in respect of the present appeals, and the Appellants have had every opportunity to deal with all the evidence and arguments on fact and on law. Thus, procedural irregularities of which they complain against UAF are dismissed as moot.

B. The Method

58. The Athletes make various criticism of the process by which their samples were used in order to produce the alleged analysis relating to testosterone. First, there is no evidence to support their claim that their samples were wrongly used for research subject to IAAF Rule 36.1(c). No-one else (including Dr Kuuranne) ever so stated and Professor Saugy, Director of the Lausanne Laboratory at the time, confirmed that *"the samples were not in a research phase when the analysis took place"*.
59. In oral evidence he disagreed with Dr Kuuranne's comment in her letter of 21 November 2017 that the testing was for endocrine measurement *"outside the anti-doping context"*. Making allowances for any nuances of English, Dr Kuuranne probably meant – although she was not called as a witness – that the initial or primary purpose from her recollection was to profile relevant parameters in an Athlete's urine, blood or other matrix rather than immediate prohibited-substance-detection.
60. But both of these are anti-doping purposes under IAAF Rule 36.1(b) and the comment to articles 2.2 and 6.2 of the WADA Code sets out explicitly that profile data may be used to establish an anti-doping rule violation under its Article 2.2 (Use or Attempted Use of a Prohibited Substance or a Prohibited Method). The Athletes' contention that their samples were used for data relevant to new Eligibility Regulations for Female Classification does not detract from this.

61. As for the reliability of the Method in measuring testosterone in blood serum, there can be no doubt on the evidence in these appeals that it is scientifically valid, and this in itself was not disputed on behalf of the Athletes. Professor Saugy stated that
- “In particular, for the quantification of testosterone, the spectrum of concentrations which was tested during the validation process was from 20 to 25000 pg/ml (ca. 0.1 to 80 nmol/L), showing a precision of the quantification (meaning the sum of repeatability and intermediate precision) being between maximum 13% (for the lower concentrations) and 4% for the most concentrated serums... the quantification of testosterone has been ... and accepted as totally reliable by the scientific community (peer-reviewed)... This method is using LC/MSMS technique, which is known today as the gold-standard method for testosterone measurement and quantification in serum”.*
62. But at the heart of the Athletes’ case, as summarised in their reply and oral submissions, was the contention that the Method, while scientifically valid, was not “approved” by WADA for the purpose of IAAF Rule 33.1(a) and did not carry with it specific reference guidelines, and explanatory and protective documentation from athletes’ point of view, so as to regulate its use in ADRV procedures.
63. Moreover, while Professor Saugy stated that the Method was WADA-approved, and is being used in its accredited laboratories for its anti-doping purposes, the Sole Arbitrator is not satisfied that this necessarily brings it within IAAF Rule 33.1(a) but neither does it seem to him to matter.
64. Rule 33.1(a) provides begins
- ... The following rules of proof (a) Analytical methods or decision limits approved by WADA after consultation with the relevant scientific community and which have been the subject of peer review are deemed to be scientifically valid. Any Athlete or other Person seeking to rebut this presumption of scientific validity shall, as a condition precedent to any such challenge, first notify WADA of such challenge....*
65. This does not mean that that an analytical method not approved by WADA cannot serve as a reliable means of proof under IAAF Rule 33.1. It means that, if it is not WADA-approved, the presumption and procedure set out in Rule 33.1(a) applies. This does not purport to be an exhaustive list of possible means of reliable proof, and the preceding Rule 33.1 makes entirely clear.
66. As for the absence of specific reference guidelines and other related documents, the Sole Arbitrator rejects the Athlete’s submission that without such materials the Athletes’ rights of defence have been significantly prejudiced. Athletes are able and entitled to question the scientific evidence presented against them, to present their own evidence, and otherwise to challenge the results allegedly proved by use of the Method.
67. If the Method does not fall within IAAF Rule 33.1(a), the consequence in the athletes’ favour is that it is *not deemed* scientifically valid. They may still be proved as such and the fact that resulting procedural provisions in Rule 33.1(a) do not apply carries no inherent prejudice.

C. The ADRVs

68. The Sole Arbitrator therefore turns to the reliability of the results in this case and whether the ADRVs (use of a prohibited substance contrary to IAAF Rule 32.2(b) are established against the Athletes to the level of comfortable satisfaction.
69. According to Professor Saugy, the measurement uncertainty for the Method (or the precision expressed in %) is between 4% and 13%, depending on the absolute concentration of testosterone in serum: *“We can therefore say that, even making the most conservative assumptions, the maximum measured uncertainty could not be greater than 30%”*.
70. A 2018 peer-reviewed study by Professor Handelsman and others on *“Circulating Testosterone as the Hormonal Basis of Sex Difference in Athletic performance”* found that the normal level of testosterone for healthy women is between 0 and 1.7 nmol/L
71. In his report, Professor Handelsman stated among other things that:
- (a) *“there are no known pharmacological methods to effectively increase serum testosterone in women other than administration of exogenous testosterone, a testosterone precursor (e.g. DHEA or androstenedione) or an aromatase inhibitor, all of which are prohibited substances”*;
 - (b) serum testosterone concentrations in other samples from the Athletes, ranging from 0.72 to 1.43 nmol/L for Zemliak and 0.79 to 1.36 nmol/L for Povh, were *“consistent with those of a normal female athlete based on the laboratory’s reference interval stated in the Swiss lab report where the upper limit of normal is 1.8 [nmol/L] and the extensive database of serum testosterone concentrations measured by LC-MS developed by the IAAF from healthy female athletes”*;
 - (c) the probability is less than 1 in 10,000 that a serum testosterone measurement of only 3.0 nmol/L by the LC-MS method would occur by chance and *“the extremity of the outlying results [10.1 nmol/L for Zemliak and 7.3 nmol/L for Povh] between massive deviations above the population mean would lead to a probability of such a finding as reported occurring by chance being so extreme (less than 1 in a trillion) as to be virtually impossible”*.
 - (d) there is *“no known pathology (including endocrine disorders) that could account for this set of blood testosterone concentrations in a single female athlete”* and such extreme elevation of serum testosterone concentrations is known only in cases of steroid-producing adrenal or ovarian tumours (an explanation which can be excluded as subsequent serum testosterone concentrations for the Athletes were again normal without any intervening diagnosis).
72. Thus, Professor Handelsman concluded that *“it is highly likely, almost certain, that the results are due to the athlete’s use of exogenous testosterone, and are unlikely to be the result of any other cause”*. Such exiguous testosterone would have been used in the lead up to the Rio Olympics and explained results so greatly different from the Athletes’ other, normal results.

73. For his part, Professor Saugy concluded that *“Not only do both athletes have non-physiological values of s-T in comparison to the normal female population, but it is also that those high values of s-T are completely abnormal in comparison to their normal individual values”*.
74. On 6-7 August 2018, the Seibersdorf accredited laboratory conducted a quantitative analysis on Ms. Zemliak’s sample no. 305404 and Ms. Povh’s sample no. 304860, and - in order to demonstrate the accuracy of the testosterone quantification - certified reference materials with a similar concentrations to the Athletes’ samples.
75. The results of the quantification analysis confirmed the initial values measured two years prior: the testosterone concentration (a) in Ms. Zemliak’s sample (305404) was reported at 11.1 nmol/L, and (b) in Ms. Povh’s sample (304860) at 8.1nmol/L. When compared with the previous values of 10.1 and 7.3 nmol/L respectively, these were within the measurement uncertainty range of the method of 12%, that is between 9.768 and 12.432 nmol/L for M. Zemliak and 7.128 and 9.072 nmol/L for Ms. Povh.
76. The Athletes have never submitted any explanation for their abnormal results other than to challenge the Method. As regards to Professor Handelsman’s reports, their appeal briefs stated in terms:
- ... The numbers [10.1 and 7.3 nmol/L] are too high. Such testosterone concentration is dangerous even for male health. The Athlete did not use any prohibited substance, has no serious sickness and under no circumstances can physiologically have such a high level of testosterone. Even if to try to put forward a kind of truthful version of the presence in the female organism of such a high testosterone level, it is impossible to find an adequate explanation....*
77. Accordingly, on the basis that there is no explanation other than administration of exogenous testosterone (or precursor) for the values analysed by the Method in the Athletes’ blood serum sample, the Sole Arbitrator is more than comfortably satisfied that the Athletes committed the ADRVs charged. Their appeals as regards to the findings to that effect are dismissed.

D. Sanctions

78. According to Rule 40.2 of the IAAF Rules, a violation of Rule 32.2(b) leads to a period of ineligibility of 4 years where an anti-doping rule violation does not involve a Specified Substance, unless the Athlete can establish that the anti-doping rule violation was not intentional; and under IAAF Rule 40.8(a), for an athlete’s second anti-doping rule violation, the period of ineligibility shall be the greater of twice the period of ineligibility otherwise applicable to the second anti-doping rule violation treated as if it were a first violation, that is, 8 years.
79. As the athlete bears the burden of establishing that the violation was not intentional, a series of CAS cases has held that he or she must usually establish how the substance entered his or her body (see, for example CAS 2016/A/4662, subject to the “rarest” cases in which an athlete

might be able through “narrowest of corridors” to demonstrate a lack of intent even where he or she cannot establish the origin of the prohibited substance (CAS 2016/A/4534, CAS 2016/A/4919).

80. In the present cases, such questions do not arise. There are no exceptional circumstances. The Athletes have not attempted to establish the origin of exogenous testosterone in their systems but rather, unsuccessfully, to challenge the presence of such prohibited substances.
81. The Athletes have requested that their periods of ineligibility be backdated to the dates of sample collection (5 July 2016 and 15 June 2016, respectively) and that their competitive results in the period leading up to the provisional suspension on 3 August 2017 are left “*untouched*”.
82. WADA has submitted, on the other hand, that it is an automatic consequence of backdating the commencement of ineligibility periods that any results during the relevant period are disqualified, with all resulting consequences including forfeiture of medals, points and prize money (see, for example CAS 2011/A/2615 & 2618).
83. The Sole Arbitrator does not accept this submission (in the case of testing out of the particular competition in respect of which the results must be automatically disqualified under Articles 9 and 10.1 of the WADA Code). Article 10.8 of the WADA Code specifically allows results subsequent to sample collection out of the relevant competition to stand “*if justice requires*”. This is a question to be considered primarily with regards to fairness as regards to the athlete in violation, but without regarding the effect on other athletes who have been or may feel “*cheated*” by the violation (see CAS 2016/O/4469).
84. There are cases (for example CAS 2009/A/1782) where significant and prejudicial delay between testing and notification makes it unfair to disqualify all of the athlete’s results in the interim, for example where it known that the athlete failed a test but he or she is allowed to compete for years (or in many events) before notification, at events where he or she was or may have been “*clean*”.
85. The present is not such a case, and moreover it is the Athletes who seek to backdate the commencement of the ineligibility periods. In view of the delay between sample collection and notification to the Athletes, WADA accepted that the periods of ineligibility might commence as early as the date of sample collections if the Athletes accepted such disqualifications of their competitive results since then.
86. While the Athletes were not prepared to do, their representative stressed that the backdating of the commencement of their ineligibility periods was of greater importance to them. The Sole Arbitrator therefore considers it just to order that the prescribed ineligibility periods commence from the dates of the sample collections (5 July and 15 June 2016, respectively) - thereby allowing the appeals in part - but only if, as he also orders, all their competitive

results from then are disqualified. The Athletes put forward no factual basis for contending otherwise and to that extent their appeals as regards to the sanctions are denied.

ON THESE GROUNDS

The Court of Arbitration for Sport rules that:

1. The appeals filed by Ms. Olha Zemliak and Ms. Olesia Povh against the Ukrainian Athletic Federation and the World Anti-Doping Agency against the decision of the Ukrainian Athletic Federation dated 2 February 2018 are partially upheld.
2. In the case of the Ms. Zemliak (CAS 2018/A/5654) it is ordered that:
 - (a) Ms. Zemliak has committed an anti-doping rule violation in accordance with IAAF Rule 33.2 (b).
 - (b) Ms. Zemliak is declared ineligible and excluded from all sporting competitions for 8 years as from 5 July 2016; and
 - (c) all her results in sporting competitions as from 5 July 2016 through the commencement of her provisional suspension are disqualified, and all titles, awards, medals, and financial rewards are annulled and must be returned.
3. In the case of Ms. Povh (CAS 2018/A/5655):
 - (a) Ms. Povh has committed an anti-doping rule violation in accordance with IAAF Rule 33.2 (b).
 - (b) Ms. Povh is declared ineligible and excluded from all sporting competitions for 4 years from 15 June 2016; and
 - (c) all her results in sporting competitions as from 15 June 2016 through the commencement of her provisional suspension are disqualified, and all titles, awards, medals, and financial rewards are annulled and must be returned.
4. (...).
5. (...).
6. All and any other and further prayers and requests for relief are dismissed.