Arbitration CAS 2018/A/5520 Svetlana Karamasheva v. International Association of Athletics Federations (IAAF) & All Russia Athletic Federation (ARAF), award of 24 January 2019

Panel: Mr Ken Lalo (Israel), President; Prof. Luigi Fumagalli (Italy); Mr Markus Manninen (Finland)

Athletics (middle distance)
Doping (Athlete Biological Passport (ABP))
ABP as reliable and accepted means of evidence
Requirement to invalidate ABP results
Timeframe for analysis of samples under IAAF Blood Testing Protocol

1. **The Athlete Biological Passport (ABP) has been generally accepted as a reliable and accepted means of evidence to assist in establishing Anti-Doping Rule Violations (ADRV). In case an athlete does not succeed in establishing an acceptable pathological, physiological, environmental or similar explanation for the abnormalities established by the results of the ABP, an ADRV is established.**

2. **According to the IAAF Competition Rules, establishing, on the balance of probabilities, a departure from the ABP testing protocol does not invalidate an analytical result or negate an abnormality in the ABP, unless the athlete can also demonstrate on the balance of probabilities that this departure could reasonably have caused the abnormality in the ABP. *I.e.* the Athlete has a two pronged burden: (i) to establish the departure from the testing or analytical guidelines and (ii) to establish that the departure(s) could reasonably have caused the Adverse Analytical Finding. In case the athlete succeeds in meeting this burden of proof, the IAAF is still entitled to demonstrate that the departure did not cause the abnormality.**

3. **The IAAF Blood Testing Protocol, stipulating that blood samples for screening purposes should be analysed as soon as possible and, in any event, within thirty-six (36) hours of sample collection, contains a recommendation of an ideal period from sampling to analysis, but does not mandate it.**

I. THE PARTIES

1. Ms Svetlana Olegovna Karamasheva (the "Appellant" or the "Athlete") is a Russian athlete, specialising in the discipline of middle-distance running. The Athlete was born on 24 May 1988. The Athlete competed, *inter alia*, in IAAF international competitions including the IAAF World Championships and the IAAF Indoor World Championships.

2. The International Association of Athletics Federations (the "First Respondent" or "IAAF") is

the international federation governing the sport of athletics worldwide. For such purposes, IAAF has enacted various regulations, including the IAAF Anti-Doping Rules to implement the provisions of the World Anti-Doping Code (the "WADC") established by the World Anti-Doping Agency ("WADA"). IAAF has its registered seat in Monaco.

3. The All Russia Athletic Federation (the "Second Respondent" or "ARAF") is the national governing body for the sport of athletics in Russia and has its registered seat in Moscow, Russia. ARAF is a member federation of the IAAF but is currently suspended from membership.

4. The First Respondent and the Second Respondent are hereinafter referred to as the "Respondents" and the Appellant and the Respondents are hereinafter referred to as the "Parties".

II. FACTUAL BACKGROUND

5. Below is a summary of the main relevant facts and allegations based on the Parties' written submissions, pleadings and evidence adduced during these proceedings. Additional facts and allegations may be set out, where relevant, in connection with the legal discussion that follows. Although the Panel has considered all the facts, allegations, legal arguments and evidence submitted by the Parties in the present proceedings, it refers in this award only to the submissions and evidence it considers necessary to explain its reasoning.

A. Blood Doping

6. Blood doping is defined by WADA as *"the misuse of certain techniques and/or substances to increase one's red blood cell mass, which allows the body to transport more oxygen to muscles and therefore increase stamina and performance"*.

7. There are three widely known substances or methods used for blood doping, namely: (i) injecting recombinant human erythropoietin ("rEPO") to trigger erythropoiesis (the stimulation of red blood cells); (ii) infusing synthetic oxygen carriers to increase haemoglobin ("HGB") well above normal levels; and (iii) blood transfusions (from a matching donor or of the athlete's own previously extracted red blood cells) to increase the HGB well above normal levels.

8. rEPO is a Prohibited Substance and is included in class S2. on the WADA Prohibited List. Synthetic oxygen carriers and blood transfusions are Prohibited Methods under class *"M1. Enhancement of oxygen transfer"* on the WADC Prohibited List.

9. As part of the fight against doping, IAAF introduced in 2009 the Athlete Biological Passports ("ABPs") as developed by WADA.

10. The fundamental principle of the ABP is explained by WADA as monitoring *"selected variables ('biomarkers of doping') over time that indirectly reveal the effect of doping, as opposed to the traditional direct detection of doping by analytical doping controls"*.

11. ABPs consist of an electronic record included in the web-based database, the Anti-Doping Administration and Management System ("ADAMS"), which compiles and collates a specific athlete's tests results and other data over time, and is unique to that particular athlete. The haematological module of the ABP records the values of haematological parameters in an athlete's blood samples that are known to be sensitive to changes in red blood cell production.

12. The values collected and recorded include HGB concentration (HGB) and percentage of reticulocytes or immature red blood cells ("RET%"). The ratio of the HGB and the RET% values is also used to calculate a further value, known as the "OFF-score", which is sensitive to changes in erythropoiesis.

13. For example, if an athlete takes rEPO (thereby artificially simulating erythropoiesis) in the lead-up to a competition, there is an increase in the percentage of reticulocytes and then a rapid increase in the level of HGB. However, when the athlete suddenly stops taking the rEPO a number of days before the event to avoid detection at an in-competition doping control, the stimulation of erythropoiesis will stop abruptly and, as a consequence, this will lead to a significant decrease of RET%. The combination of the high HGB and low RET% causes a high OFF-score.

14. The marker values from the blood samples collected in the ABP programme are fed into a statistical model, known as the "Adaptive Model". The Adaptive Model uses an algorithm that takes into account both (i) variability of such values within the population generally (*i.e.*, blood values reported in a large population of non-doped athletes) and (ii) factors affecting the variability of the athlete's individual values (including gender, ethnic origin, age, altitude, type of sport, and instrument related technology).

15. The selected biological markers are monitored over a period of time and a longitudinal profile that establishes an athlete's upper and lower limits within which the athlete's values would be expected to fall, assuming normal physiological conditions (*i.e.*, the athlete is healthy and has not been doping) is created.

16. The upper and lower limits have been calculated, with a "specificity" of 99%. The Adaptive Model also calculates the probability of abnormality of the sequence of values in the ABP profile.

17. The athlete becomes his/her own point of reference and each time a blood sample is recorded, the Adaptive Model calculates where the reported HGB, RET% and OFF-score values fall within the athlete's expected distribution. After each new test, a new range of expected results for the athlete is determined.

B. Initial Review of the Athlete's ABP by the Expert Panel

18. From 14 July 2012 until 14 November 2016, the IAAF collected twelve (12) ABP blood samples from the Athlete.

19. Each of the samples was analysed by a WADA-accredited laboratory and logged in ADAMS

using the Adaptive Model.

20. A summary table of the Athlete's ABP sample results (the "Samples") – showing the Athlete's HGB, RET% and OFF-scores for the twelve (12) samples – is set out below:

Sample #	Date of Sample	HGB (g/dL)	RET%	OFF-score
1	14 July 2012	14.80	0.27	116.80
2	12 October 2012	14.40	1.24	77.20
3	12 October 2012	13.70	1.15	72.70
4	20 January 2013	14.70	1.70	68.80
5	19 February 2013	15.40	0.89	97.40
6	28 February 2013	15.10	1.09	88.40
7	8 May 2013	13.60	1.11	72.80
8	4 July 2013	14.40	1.11	80.80
9	10 August 2013	13.80	1.14	73.90
10	6 March 2014	15.20	1.07	89.90
11	6 August 2014	14.20	1.24	75.20
12	14 November 2016	13.10	1.30	62.60

21. The Athlete's ABP was submitted to a panel of experts for review on an anonymous basis. The expert panel was comprised of: Dr Yorck Olaf Schumacher, Professor Giuseppe d'Onofrio and Professor Michel Audran (together the "Expert Panel").

22. The Expert Panel examined the Athlete's anonymised ABP (identified by a code number only) and produced a joint opinion dated 22 February 2017 (the "First Expert Panel Joint Opinion").

23. The First Expert Panel Joint Opinion concluded that it was *"highly likely that a prohibited substance or prohibited method has been used and that it is unlikely that the passport is the result of any other cause"*.

C. The Athlete's Explanation for her Abnormal ABP Profile

24. On 10 April 2017, the Anti-Doping Administrator of the IAAF Athletics Integrity Unit ("AIU") reported to the Athlete the alleged abnormalities detected in her ABP profile. The letter advised that the IAAF was considering bringing charges against the Athlete and gave her the

opportunity to provide an explanation for the alleged abnormalities until 24 April 2017.

25. On 14 April 2017, the Athlete sent an email to the AIU, together with related medical documentation (the "Athlete Explanation").

26. On 20 April 2017, the Athlete provided certain translations related to the Athlete Explanation which had been requested by the AIU on 18 April 2017.

27. In the Athlete Explanation, the Athlete sought to explain the abnormality in Sample 1 with the fact that she had a first-term miscarriage on 19 May 2012.

28. The Athlete Explanation also mentioned that she had given birth on 17 November 2015 and had breast-fed the baby after the delivery.

D. Review by the Expert Panel of the Athlete Explanation

29. On 29 May 2017, the Expert Panel issued a joint report that considered and dismissed both explanations set out in the Athlete Explanation (the "Second Expert Panel Joint Opinion").

30. With respect to the submission that Sample 1 could be explained by a first-term miscarriage, the Expert Panel dismissed the explanation for the following reasons:

- An uncomplicated first-term miscarriage is not expected to cause any significant change in haematological parameters.
- The time between the miscarriage and the collection of Sample 1 was almost two months, which would be sufficient to re-equilibrate any possible haematological alteration.
- The haematological anomaly observed in Sample 1 (low reticulocytes, indicating, suppressed red blood cell production, with high OFF-score and HGB) is the opposite of what would have occurred in a hypothetical case of a recent and heavy blood loss associated with a miscarriage (low haemoglobin with reactive increase in reticulocytes).
- The type of haematological anomaly observed in Sample 1 is characteristic of the off-phase subsequent to the discontinuation of an erythropoietic stimulating agent ("ESA") such as EPO, or to a blood transfusion.

31. The Athlete's explanation based on giving birth in November 2015 was dismissed as it was not relevant in terms of timing. More particularly, the ABP did not include any samples from 2015 and the 2016 sample was normal.

32. The Second Expert Panel Joint Opinion confirmed the First Expert Panel Joint Opinion in the following terms:

"In summary, the arguments forwarded by the Athlete cannot explain the hematological abnormalities in

the BPD4135A25 ABP Passport. In contrast, it is typical to observe such features assuming blood manipulation, notably an artificial increase in red blood cell mass, likely caused by intake of erythropoiesis stimulating substances and/or blood transfusion.

We therefore confirm our previous opinion that it is highly unlikely that this profile is the result of a normal physiological or pathological condition, and it is likely that it was caused by the use of prohibited substances or prohibited methods".

E. Initiation of Disciplinary Proceedings

33. On 7 June 2017, the AIU notified the Athlete, *inter alia*, of the alleged Anti-Doping rule violation ("ADRV") and her right to request a hearing within 14 days of the notification.

34. The AIU letter of 7 June 2017 also advised the Athlete that, in view of the suspension of ARAF's membership with the IAAF, her case would be referred to the Court of Arbitration for Sport ("CAS").

35. More particularly, the Athlete was advised that her case could either be referred to (i) a Sole Arbitrator of CAS (with the possibility of a further appeal to CAS against such Sole Arbitrator's decision) or (ii) subject to the consent of all relevant parties, to a CAS Panel for a single hearing in accordance with Rule 38.19 of the IAAF Competition Rules 2016 – 2017, in force as from 1 November 2015 ("IAAF Competition Rules"). The Athlete was given a deadline of 21 June 2017 to state her preference.

36. Pursuant to the same letter, the Athlete was provisionally suspended as from 7 June 2017.

37. On 18 June 2017, the Athlete sent an email (in six parts) to the AIU in which she did not state her preference as to who would hear the case, but provided a number of additional explanations for the abnormalities in her ABP (the "Additional Athlete Explanation").

F. Additional Explanation by the Athlete

38. In the Additional Athlete Explanation, the Athlete mentioned again the first-term miscarriage that she had suffered. She clarified that, although she did not know the precise amount of blood that she had lost, it was *"not a big blood loss".*

39. The Athlete also mentioned that she had been training at altitude in Kyrgyzstan in the period from 21 March 2012 until 25 April 2012. More particularly, she mentioned that she had stayed in a village named Bostery, located at an altitude of 1,650 metres, and that she had trained at an altitude of between 1,650 and 2,000 metres.

40. The Athlete also mentioned that she had been diagnosed with *"RV GE (rotavirus)"* on 9 July 2012, some five days before Sample 1 was taken. The Athlete indicated that she had been treated at the Clinical Medico-surgical Center after experiencing *"stomach-ache, bdelygmla and diarrhea".*

41. The Athlete stated further that there had been a departure from the ABP testing protocol as the

time between her arrival at the doping control station and the blood withdrawal was only one hour and fifty minutes and, therefore, less than the requisite two hours.

G. Additional Review by the Expert Panel - Third Expert Panel Joint Opinion

42. The Expert Panel issued a joint report dated 19 July 2017 addressing the Additional Athlete Explanation (the "Third Expert Panel Joint Opinion").

43. In the Third Expert Panel Joint Opinion, the Expert Panel dismissed the relevance of the Athlete's pregnancy and miscarriage on Sample 1, *inter alia*, for the following reasons:

> *"Collection of sample 1 was carried out on 14.7.2012, more than two months after both the diagnosis of early pregnancy and the date of the first term miscarriage. We can thus exclude that any hypothetical and extremely unlikely interference of such events could have been still visible in the Athlete's blood. Moreover, as stated in our previous report, such hypothetical effects of pregnancy or excessive blood loss would have induced a blood picture of anemia with reactive increase of reticulocytes, which is the opposite of the suppression pattern (relatively high HB with low reticulocytes and increased OFF score) observed in sample 1".*

44. In the Third Expert Panel Joint Opinion the Expert Panel also dismissed altitude as a cause of the blood picture seen in Sample 1 for the following reasons:

> *"Even if one or two weeks after the end of an altitude stay a slight increase of the OFF score has been described [3, 4], the hypothesis of any residual effect of altitude on sample 1 can be dismissed, owing to the simple fact that it was collected two and half months after the end of the Athlete's sojourn at relatively low elevation in Kyrgyzstan".*

45. With respect to the gastroenteritis consequent to a rotavirus infection, the Expert Panel observed that, save for possible diarrhea-related dehydration in infants, the blood profile is not subject to alteration. In this regard the Third Expert Panel Joint Opinion noted that *"even in the case of dehydration caused by severe diarrhea and vomiting, the physiologic fluid regulation keeps plasma volume is [sic] constant and avoids excessive hemoconcentration".* Finally, the Third Expert Panel Joint Opinion noted that, *"the most abnormal result in sample 1 is the low reticulocyte count (indicating suppressed red cell production), which is a proportional, concentration-independent measure unaffected by the hydration status [9]".*

46. With respect to the Athlete's argument that Sample 1 was collected less than two hours after the cessation of exercise, the Expert Panel noted that this contradicts the information recorded in ADAMS; that the Doping Control Form ("DCF") indicated that two hours passed between notification (which is necessarily after the cessation of exercise) and blood collection; and that the slightly elevated white blood cell count is consistent with the passage of several hours after intense training.

47. The Expert Panel also noted that the Athlete had provided no explanation in respect of the allegedly suspicious sequence from Sample 4 to Sample 6.

48. In the Third Expert Panel Joint Opinion, the Expert Panel opined that *"the new arguments cannot explain the hematological aberrations"* and confirmed their *"opinion that it is highly unlikely that this profile*

is the result of a normal physiological or pathological condition, and it is likely that it was caused by the use of prohibited substances or prohibited methods".

H. First Instance CAS Proceedings

49. The IAAF initiated proceedings before CAS with reference number CAS 2017/A/5268 International Association of Athletics Federation (IAAF) v. All Russia Athletic Federation (ARAF) & Svetlana Karamasheva, by filing on 31 July 2017 its Request for Arbitration with the CAS pursuant to Rule 38.3 of the IAAF Competition Rules.

50. On 5 September 2017, the Athlete filed her Answer and a hearing was set for 14 November 2017 in Lausanne, Switzerland.

51. On 14 November 2017, a few hours before the hearing, the Athlete filed a "Position Statement" which included, *inter alia*, a number of new arguments. The Athlete challenged the reliability of the Samples based on alleged departures from the IAAF Blood Testing Protocol (Athlete Biological Passport) 2012 Version ("BTP"). The Athlete argued that some Samples may not be utilized as one was analysed outside of a 36 hour window, their temperature during transportation could not be verified and that there have been other departures from the BTP and other rules and regulations.

52. The Sole Arbitrator, Mr Murray Rosen QC, declared the new documents and arguments to be inadmissible, as they could have been raised months before and because raising them only on the day of the hearing deprived the IAAF counsel and its experts of a fair opportunity to consider and respond to them.

53. On 20 December 2017, the Sole Arbitrator rendered an Arbitral Award in the case CAS 2017/A/5268 International Association of Athletics Federation (IAAF) v. All Russia Athletic Federation (ARAF) & Svetlana Karamasheva (the "Challenged Decision"), making the following findings in establishing the ADRV:

    i. The ABP is a reliable means of detecting doping;

    ii. Sample 1, which combined high HGB with a low RET%, was a clear example of the so-called off-phase that is symptomatic of a recent discontinuation of an ESA;

    iii. The high RET% value in Sample 4 followed by the two high HGB values in Samples 5 and 6 were indicative of erythropoietic stimulation;

    iv. The OFF-score sequence was abnormal at a specificity of more than 99%;

    v. The Athlete had offered no acceptable pathological or environmental explanation for the abnormalities. In particular, the Expert Panel *"adequately refuted any realistic possibility that her miscarriage, high altitude training and/or rotavirus affected Sample 1 results and even Professor Victorova did not, in the hearing, consider them significant".*

vi. The *"taking and testing of the Samples complied with the relevant testing Protocols"* and *"Sample 1 was indeed taken 2 hours after the Athlete finished her race event at Yerino"*.

54. The Sole Arbitrator found that there was evidence of aggravating circumstances. The Sole Arbitrator found that there was a repeated use of Prohibited Substances and/or Methods; he referred to the multiple indications of doping in Sample 1 and the sequence in Samples 4-6 and also to the fact that erythropoietic stimulation through EPO is administered over a course of weeks. The Sole Arbitrator also found that blood doping, which is necessarily administered with the *"advice and support from medical personnel and other third Parties"* and organised in such a way as to avoid direct detection in competition, constituted a doping plan or scheme.

55. The Challenged Decision sanctioned the Athlete with (i) a period of ineligibility of two and a half years from 7 June 2017, the date of the Athlete's provisional suspension, and (ii) the disqualification of all her competitive results (including forfeiture of medals, points and prizes) from 14 July 2012 until 6 August 2014.

III. PROCEEDINGS BEFORE THE CAS

56. On 7 January 2018, the Athlete filed a Statement of Appeal dated 6 January 2018 with the CAS against the Challenged Decision, pursuant to Articles R47 and R48 of the Code of Sports-related Arbitration (the "Code").

57. The Statement of Appeal contained, *inter alia*, the nomination of Professor Luigi Fumagalli as an arbitrator.

58. On 17 January 2018, the Athlete filed a letter with the CAS requesting that the matter be referred to a sole arbitrator, indicating that she had just been made aware of the costs of arbitration and that her financial circumstances would not allow her to pay the arbitration costs of a panel of three. The Athlete further advised that she wishes to *"call back my previous nomination of Mr. Luigi Fumagalli"* and that if she had the right to appoint an arbitrator, she wished to nominate Mr Efraim Barak.

59. On 18 January 2018, the Athlete filed an Appeal Brief dated 17 January 2018 pursuant to Article R51 of the Code.

60. On 18 January 2018, IAAF advised the CAS Court Office of its preference that this matter be submitted to a panel of three arbitrators. IAAF advised that it wished to nominate Mr Markus Manninen as an arbitrator, and that ARAF has agreed that the nomination of an arbitrator by the Respondents be made by IAAF.

61. On 29 January 2018, the Athlete again submitted a request that the President of the CAS Appeals Arbitration Division submit this case to a sole arbitrator, highlighting her financial hardship due to her provisional suspension from athletics' competitions.

62. On 7 February 2018, the Parties were advised that the President of the CAS Appeals Arbitration Division, after having taken into consideration all relevant circumstances and the Parties'

positions had decided that, pursuant to Article R50 of the Code, this matter will be submitted to a panel of three arbitrators. The same letter also noted the apparent nomination of Mr Efraim Barak by the Athlete.

63. On 8 February 2018, IAAF highlighted to the CAS Court Office that it did not understand on what basis the Athlete was permitted to switch arbitrators as she had nominated another arbitrator in her Statement of Appeal. This position was accepted by the CAS Court Office in a letter dated 20 February 2018, indicating that the Athlete was bound by her initial nomination. The Athlete's counter arguments on this point in her letter of 22 February 2018 were rejected in the CAS Court Office letter of 26 February 2018, in which it was highlighted that the conditions for replacement of an arbitrator pursuant to Article R36 of the Code were not fulfilled.

64. On 2 March 2018, following a granted extension, IAAF filed its Answer to the appeal, pursuant to Article R55 of the Code.

65. ARAF did not submit an answer to the appeal.

66. On 15 March 2018, the Athlete submitted a letter dated 14 March 2018 in which she requested that a hearing be held in this matter.

67. On 16 March 2018, IAAF advised that it did not believe that a hearing was required in this matter as the Athlete had called no witnesses or experts.

68. On 26 March 2018, pursuant to Article R54 of the Code, the CAS Court Office, on behalf of the President of the Appeals Arbitration Division, informed the Parties that the Panel appointed to hear the dispute between the Parties was constituted as follows: Mr Ken Lalo, President; Professor Luigi Fumagalli and Mr Markus Manninen, arbitrators.

69. On 5 April 2018, the Athlete submitted a further written submission, including an expert statement. The IAAF contested the admissibility of the expert statement and indicated that additional submissions were not authorized under Article R56 of the Code as also advised to the Parties in the CAS letter of 6 March 2018; that the Panel had not authorized the Parties to make additional submissions; and that the Athlete could have filed the same documents with her initial filings.

70. On 2 May 2018, the Panel decided to admit the Athlete's 5 April 2018 submission to the case file and granted the Respondents a deadline of fifteen (15) days to comment on such submission.

71. On the same day, the Parties were advised by the CAS Court Office on behalf of the Panel that the Panel had decided to hold a hearing in this case pursuant to Article R57 of the Code.

72. On 21 May 2018, IAAF provided its comments, including an expert report, to the Athlete's 5 April 2018 submission. ARAF did not submit any comments to the Athlete's 5 April 2018 submission.

73. On 23 May 2018, the Parties were advised by the CAS Court Office that the hearing would be held on 11 June 2018.

74. On 29 May 2018, the CAS Court Office, on behalf of the President of the Panel, issued an order of procedure (the "Order of Procedure"). The Order of Procedure was signed by the Athlete and returned on 4 June 2018 (the document is mistakenly dated 4 May 2018) and on behalf of IAAF on 6 June 2018. The Second Respondent did not return a signed Order of Procedure.

75. On 11 June 2018, a hearing was held in Lausanne. The Panel was assisted by Ms Carolin Fischer, Counsel to CAS. In addition to the members of the Panel, the following persons attended the hearing for the Parties:

i.	for the Appellant:	Ms Svetlana Olegovna Karamasheva, the Appellant; Mr Mikhail Anatolyevich Moskvin, counsel; Mr Petr Romanovich Kozdrin, interpreter.
ii.	for the First Respondent:	Mr Ross Wenzel, counsel; Mr Nicolas Zbinden, counsel; Mr Rafael Dan Cesa, observer.

The Second Respondent was not represented.

76. At the opening of the hearing, both Parties confirmed that they had no objection to the appointment and constitution of the Panel. The Panel, thereafter, heard opening statements by counsel. This was followed by hearing the expert testimonies of Professor Inna Anatolyevna Victorova, called by the Athlete, appearing in person, and of Professor Giuseppe d'Onofrio and Dr Yorck Olaf Schumacher, called by IAAF, both heard by Skype. The three experts testified together in a manner which allowed them to hear and react to opinions made by the other experts. Thereafter, the Athlete provided a declaration/testimony. Any witness who had submitted a written witness statement to the CAS confirmed such statement.

77. The contents of the respective written witness statements and testimonies can be summarised as follows:

- Professor Inna Anatolyevna Victorova:
    - The results of Sample 1 cannot serve as the basis for any conclusion since Sample 1 was delivered to the laboratory more than 36 hours after sample collection. The scientific literature confirms that the RET% counts are stable only for 24 hours. After that, the reticulocytes value reduces over time, and should not be reported.
    - Furthermore, there was no recording of the temperature conditions in which Sample 1 was transported and stored. The reticulocyte's count when storing the whole blood at room temperature for 24 hours decreases progressively. Changes in mean corpuscular volume ("MCV"), erythrocytes and leucocytes values happen

when storing the whole blood sample for 48 hours and longer at room temperature. Noting the outside temperature on the relevant dates and the duration of storage, Sample 1 cannot be relied upon.

- The OFF-score count in Sample 1 cannot be considered to be the result of using EPO, because it has been compromised by the long-term storage in unrecorded temperature conditions.

- In the Instructions for Use of the Sysmex XT-2000i/XT-1800i, the automated hematology analyzer used by the laboratory, it is noted that when there is a difference between the results of the same blood sample of 15% or more, it is necessary to make a third analysis. In the present case the difference between the first and the second measures was 15.6% (RET 0.23 and RET 0.27), but there was no third analysis.

- The diarrheal disease (rotavirus) three days before the blood test is an acute infection which may have changed the haematic picture of Sample 1 and lead to the increase of the leucocytes and the postprimary decrease of the red blood shoot. It could have caused the strong formation of the neutrophilous alignment and decreasing of the red blood shoot of the hemogenesis.

- The OFF-score of Samples 4, 5, and 6 is normal and should not be considered as evidence of an ADRV.

- IAAF failed to provide the required level of independence of the laboratory's tests which is not compliant with the relevant ISO standards and invalidates the tests.

- All the tests conducted by the laboratory of the Russian Anti-Doping Agency ("RUSADA") that had later lost its accreditation should be ignored.

- She had no connection to the Athlete.

- Professor Giuseppe d'Onofrio and Dr Yorck Olaf Schumacher:
  - Confirmed the First, Second and Third Expert Panel Joint Opinions, some of the key elements of which are repeated below.

  - Confirmed the additional expert statement dated 1 March 2018 and issued by Professor d'Onofrio and Dr Schumacher (the "CAS Appeal Expert Statement"), some of the key elements of which are repeated below.

  - The key anomalies of the profile pertain to Sample 1, displaying a pattern of erythropoietic suppression typical of the wash-out phase of doping with ESA, as well as to the suspicious sequence of Samples 4, 5 and 6.

  - A spontaneous abortion, with cessation of pregnancy, would have a low likelihood of any possible effect on the Athlete's ABP.

- Collection of Sample 1 was carried out on 14 July 2012, more than two months after both the diagnosis of early pregnancy and the date of the first term miscarriage. *"We can thus exclude that any hypothetical and extremely unlikely interference of such events could have been still visible in the Athlete's blood"*.

- Such hypothetical effects of pregnancy or excessive blood loss would have induced a blood picture of anemia with reactive increase of reticulocytes, which is the opposite of the suppression pattern (relatively high HGB with low reticulocytes and increased OFF-score) observed in Sample 1.

- The hypothesis of any residual effect of altitude on Sample 1 can be dismissed, owing to the simple fact that it was collected two and a half months after the end of the Athlete's sojourn at relatively low elevation in Kyrgyzstan.

- An exhaustive review of rotavirus infection in adults has been published in 2004. No hematological alterations have been described, except for possible diarrhea-related dehydration in infants. In general, it has been demonstrated that gastroenteritis is unlikely to cause significant biological passport abnormalities. Even in the case of dehydration caused by severe diarrhea and vomiting, the physiologic fluid regulation keeps plasma volume constant and avoids excessive hemoconcentration. The most abnormal result in Sample 1 is the low reticulocyte count (indicating suppressed red blood cell production), which is a proportional, concentration-independent measure unaffected by the hydration status. A significant causal effect of a gastroenteric ailment on the genesis of Sample 1 results is unlikely.

- Based on the Blood Collection Form and the DCF it appears that at least two hours elapsed between exercise and the Athlete's notification, in full compliance with the required two-hour interval. The Sysmex instrument report shows that the white blood cell count in Sample 1 was slightly increased, as expected for several hours after intense exercise. Furthermore, exercise does not have any effect on reticulocyte percentage.

- Sample 1 shows clear indications of blood manipulation. *"It is our opinion that the values of the relevant hematological parameters have not been caused by any pre-analytical issue, including the conditions and duration of storage"*.

- While the stability of refrigerated blood samples, such as for samples stored in a laboratory refrigerator, would be ensured for longer periods of time, the stability of hemoglobin concentration and reticulocyte percentage, as demonstrated by all studies in the scientific literature, is such that the results of Sample 1 could not have been affected to any major degree by the lapse of time and temperature as claimed by the Athlete.

- *"We have evaluated the available scientific literature on the subject of stability of samples collected for the blood cell count in the appropriate anticoagulant (K2 or K3-EDTA) in the absence of*

refrigeration (room temperature) …. All these data provide irrefutable evidence that HGB, when analyzed with a Sysmex blood cell counter, is stable in samples stored for at least 72 hours both at room temperature (RT) and at 4°C; and reticulocyte percentage, when analyzed with a Sysmex blood cell counter, is stable for at least 48 hours both at room temperature and refrigerated".

- This is also evident by the absence of indirect evidence of damage to blood cells after storage. Abnormal storage is mainly indicated by red blood cell swelling with unexpected increases of MCV. Red blood cells which have been stored improperly or for too long tend to swell as their energetic capacity fades and the membrane loses the ability to maintain the red blood cell volume (measured as MCV). MCV in Sample 1 is 90.8 fl, which is one of the lowest MCVs of the hematological profile. The average MCV value is 92.97 fl. This excludes the possibility of red blood cell swelling due to abnormal storage and confirms that the blood sample was valid from a pre-analytical point of view.

- It is *"our opinion that it is highly unlikely that this profile is the result of a normal physiological or pathological condition, and it is likely that it was caused by the use of prohibited substances or prohibited methods".*

- The relevant parameters indicate that Sample 1 was perfectly reliable:

  (i) According to numerous studies, HGB and RET% are stable, even at room temperature, for at least 72 and 48 hours respectively.

  (ii) The non-elevated MCV value for Sample 1 *"excludes the possibility of red cell swelling due to abnormal storage and confirms that the blood sample was valid from the pre-analytical point of view".*

  (iii) The white blood cell distribution is a further indication that Sample 1 was well-preserved.

- Therefore, the conclusion in regard to Sample 1 is:

  "In conclusion, it is our opinion that no pre-analytical factors have altered the quality of the above mentioned blood sample or interfered with the quality of the results to the disadvantage of the athlete. In particular, no issues concerning the sample storage can have determined the low reticulocyte percentage and the high OFF score in sample 1 of the passport. This is confirmed by both the experimental data from the literature and the characteristics of red blood cells and white blood cells in the Sysmex report".

- Professor d'Onofrio:
  - Professor Victorova misunderstood the documents relating to the collection, transport and storage of Sample 1. The entire document pack indirectly evidences that Sample 1 was transported for less than 4 hours and then kept in the laboratory's refrigerator for analysis after the weekend.

- The literature shows that samples are stable and can give consistent results also after 40 hours in room temperature.
- There was no need for a temperature monitoring of Sample 1 at the laboratory as it was placed in the fridge upon arrival.
- In regard to Sample 1 there was no sign of any derogation of the sample:
  - No swelling;
  - No issue with shape or distribution of the red blood cells;
  - Clean graphs; and
  - No signs of abnormalities.
- The literature provided by Professor Victorova shows change due to storage only after 48 hours. Evidenced changes amount to some 16% between results measured after 4 hours and after 48 hours, while in the case at hand the change is of 500%.
- Sample 1 was stored in the laboratory's fridge. Even at room temperature it would have been a 15% change and not a 500% one.
- Highlighting his 40 years of experience working in laboratories, Professor d'Onofrio underlined that there was no need of a third analysis as argued by Professor Victorova. WADA's specific rule on this point says that an absolute difference of 0.15% is required before holding a third analysis and not a difference of 15% of the % value. This is the governing rule and not any guidelines relating to instrument checks even if they provide otherwise.
- *"All internal and external quality controls in all samples were ok"* based on the sample documentation pack, including in regard to Sample 1.
- It is likely that following the results of Sample 1 evidencing EPO doping, the Athlete changed tactics and used micro dosages. Therefore, a year later there was high HGB but RET% was not so high.
- The sequence of Samples 4 to 6 presents clear and strong evidence even without relying on Sample 1.
- In response to a question, indicated that the RUSADA laboratory accreditation was lifted in 2015 under circumstances which do not relate to this case and do not place doubt on the findings relating to these proceedings.

- Dr Schumacher:
  - A third analysis is required when there is a difference between the results of the

same blood sample of an absolute number of 0.15% points or more and not a difference of 15% of one of the results and the other. This is the clear language of the relevant regulation.

- Certain virus infections may affect bone marrow but not rotavirus and therefore this cannot explain the results of Sample 1.
- The ADRV is very clear from review of Sample 1 which is *"stronger"* than the sequence of Samples 4 to 6, but this sequence is complementary to the analysis of Sample 1.
- Usually there is no temperature monitor during transport, but a *"gun"* is used to check the temperature before transport. Here the transport was for a short duration of less than 4 hours.

- The Athlete:
  - She is a "moral" athlete and did not use any Prohibited Substances.
  - She has a clean record and never tested positive to Prohibited Substances.
  - She acts in accordance with IOC principles and believes in "fair play" and an "honest struggle" to obtain the best results.
  - Athletics is her love and also provides her livelihood.

78. At the conclusion of the hearing, after concluding pleadings by counsel, the Parties expressly stated that their rights to be heard and to be treated equally in the proceedings have been fully respected.

IV. THE POSITION OF THE PARTIES

79. The following outline of the Parties' positions is illustrative only and does not necessarily comprise every submission advanced by the Appellant and by the Respondents. The Panel has nonetheless carefully considered all the submissions made by the Parties, whether or not there are specific references to them in the following summary.

A. The Position of the Appellant

80. In her Appeal Brief the Appellant reiterates with further detail the request made in her Statement of Appeal, requesting this Panel:

"In regard to all the above-mentioned information I ask the Appeal Court to overturn the Award issued on 20 December, 2017 by the Court of Arbitration for Sport (Lausanne, Switzerland) in the matter CAS 2017/O/5268 International Association of Athletics Federations (IAAF) v. All Russia Athletic Federation (ARAF) & Svetlana Karamasheva and to deliver a new Award, fully denying the claims of the

IAAF".

81. The Appellant's contentions regarding the mistakes contained in the Challenged Decision which require the Panel to set it aside may be summarized as follows:

- Pursuant to Rule 33.1 of the IAAF Competition Rules, the standard of proof required from IAAF is more than *"balance of probabilities"*. However, the First, Second and Third Expert Panel Joint Opinions and the experts presented by IAAF only use expressions such as *"probably"* or "*likely*" and cannot confirm their opinions on the *"balance of probabilities"*.

- The sampling process and hence the test results are not valid since there were two main "irregularities" that occurred in relation to the Athlete's sampling process.

- The Batch Registration document at section 2.3 of the Laboratory Documentation Package ("LDP") for Sample 1 indicates that the Sample was both collected from the Athlete and delivered to the laboratory at 20:30. Since this is clearly impossible it follows that the sampling process of Sample 1 was faulty and the laboratory results relating to Sample 1 ought to be disregarded.

- This, while according to the accompanying papers of the blood sample A 794968 (page 7, art. 2.2, paragraph 3) Sample 1 was collected on 14 July 2012 at 19:30 and delivered to the laboratory at 20:30. This discrepancy between the documents is enough to render the results of Sample 1 inadmissible.

- The DCF indicates that the temperature of the storage device was 7 degrees Celsius whereas section 2.5 of the LDP for Sample 1 states that the *"[d]ata from the temperature ID monitor is absent (delivery without ID monitor)"*. This indicates that the information on the DCF has been falsified.

- According to the championship protocol the temperature on the day of the championship (14 July 2012) was +26° Celsius, which is higher than the permissible temperature for storage of blood samples.

- Sample 1 was delivered to the RUSADA laboratory by courier at 20:30 on 14 July 2012. The analysis of this sample was accomplished only on 16 July 2012 (after the weekend) at 9:50. Thus, the time that has passed from the blood sample collection to the sample analyses was 38 hours 20 minutes; which exceeds the allotted time of 36 hours permitted by the provisions of the BTP. The results of such analyses, in turn, cannot be considered valid and cannot be regarded as evidence in this case. The sample RET% count goes down following such a duration before testing.

- The results of Sample 1 are not reliable since the Chain of Custody Form was not completed and there is no confirmation of the conditions of storage of Sample 1. This is in contradiction to the requirements of Article 5.7 of part II of the BTP requiring that

"[t]he BCO/other responsible official shall complete the Chain of Custody Form".

- There are issues with all other Samples except Sample 6, since the Samples were analysed at the problematic RUSADA laboratory which has not respected the correct procedures. Only Sample 6 was analysed correctly by another WADA accredited laboratory.

- All tests except for the ones connected with Sample 6 are faulty with departures from the required internal quality standards for laboratories, with no proper quality controls, no temperature being recorded and without all the required forms being completed. For the analysis of the ABP all 6 Samples are needed.

- The tests carried out on Samples 1 through 5 are also not in accordance with Sysmex equipment instructions, which is the equipment used by the relevant laboratories.

- The article titled "How Long can we Store Blood Samples: A Systematic Review and Meta-Analysis" published in the medical journal EBioMedicine (October 24, 2017) by Dong-wen Wu, Yu-meng Li and Fen Wang, considered that *"… Specimens stored > 12 h. for CMP may generate unreliable results. For CBC, samples could reliably be stored for 24 h. For longer storage, refrigeration (at 4 °C) would be a better choice".*

- The requirement of storage at a controlled room temperature environment of +22°C ± 2°C for no longer than 24 hours and thereafter at +4°C ± 2°C also appears in the ISBT Science Series (2008) 3, 177-196, in the article "Blood storage and transportation" by J. Hardwick.

- According to Article 3.2.2 WADC it is presumed that WADA-accredited laboratories, and other laboratories approved by WADA conduct sample analysis and custodial procedures in accordance with the International Standard for Laboratories ("ISL"). The Athlete or other Person may rebut this presumption by establishing that a departure from the ISL occurred which could reasonably have caused the Adverse Analytical Finding ("AAF"). If the Athlete or other Person rebuts this presumption by showing that a departure from the ISL occurred which could reasonably have caused the AAF, then the Anti-Doping Organization shall have the burden to establish that such departure did not cause the AAF.

- The evidence proves the departures of the RUSADA laboratory from the ISL and the BTP in regard to the analysis of Sample 1 and indeed all Samples except Sample 6. Therefore, the IAAF had the burden to establish that these departures did not cause the AAF in Sample 1 and in Sample 4.

- The Doping Control Officer, when collecting Sample 1, and the RUSADA laboratory representatives, when transporting and storing that Sample failed to meet various regulations, thus falsely calling an AAF, including:

    - Article 4.3 of part II of the BTP requiring that *"[t]he storage device shall be capable of*

maintaining blood samples at a cool and constant temperature during storage (ideally between 2 and 12° C)".

- Article 4.5 of part II of the BTP requiring that *"[a] temperature data logger is recommended for use to determine whether temperature conditions are met".*
- Article 5.5 of part II of the BTP requiring that *"[a] temperature data logger is recommended to determine whether temperature conditions are met".*
- Article 6.1 of part III of the BTP requiring that *"[b]lood samples for screening purposes should be analysed as soon as possible and, in any event, within 36 hours of sample collection".*

- Sample 1 had RET% readings of 0.23 and 0.27. These two readings have a difference of over 15% and therefore it was required to conduct a third reading which was never conducted invalidating Sample 1.
- The Athlete's urine never tested positive.
- A systematic use of Prohibited Substances would have yielded different results to the ones in Samples 1 through 6.

B. The Position of the First Respondent

82. In its answer to the appeal, the First Respondent requested the Panel to issue an award confirming that:

"(i) The appeal is dismissed;

(ii) The arbitration costs be borne entirely by the Appellant; and

(iii) The IAAF is awarded a contribution to its legal costs".

83. The First Respondent's answers to the *"legal arguments"* of the Athlete may be summarized as follows:

- The indication on the Batch Registration document that the sample was collected from the Athlete and delivered to the laboratory at 20:30 is necessarily a clerical mistake, as simultaneous sample collection and delivery to the laboratory are impossible. It is clearly stated on the Chain of Custody Form contained in the LDP that transport commenced at 19:30 and took one hour and that the Sample was delivered at 20:30.
- It is clear from the case law that clerical mistakes in an LDP will not invalidate the analytical results (CAS 2014/A/3639 at para. 70 et seq.).
- There is no departure from any standard or protocol and clearly none that would have reasonably caused the abnormality in Sample 1.

- The Athlete has no evidence whatsoever for her assertion that the 7 degrees Celsius on the DCF has been falsified. If the blood collection officer set out the specific temperature on the form, the inference must be that he had a device to measure temperature, allowing him to record the same on the form.

- Sample 1 was stored at 7 degrees Celsius, which is within the parameters that are set out at Article 4.3 part II of the BTP. There is no basis to infer that a forgery or falsification took place.

- The Athlete's claim that the analysis of Sample 1 was performed outside the 36 hour window is based on the provisions of the March 2010 BTP that are not applicable to these proceedings. The provisions of the 2012 BTP apply, and these indicate that the 36 hour window was a recommended target, but not a hard deadline which, if not met, would constitute a departure. Article 4.1 of part II of the 2012 BTP states that *"[b]lood samples shall be transported rapidly to a laboratory so that analysis can be performed as soon as possible and, ideally, within no more than 36 hours of the sample collection"*. Article 6.1 of part III of the 2012 BTP repeats the same *"ideally"* language and indicates how to analyze samples delivered to the laboratory after 36 hours.

- According to the Athlete's calculations, the 36-hour window was exceeded by two hours and twenty minutes. Therefore, the target 36 hours was only slightly exceeded and analysis occurred shortly thereafter. There is therefore no departure from the BTP.

- The Chain of Custody Form was completed, as set out at section 2.2 of the LDP.

- Even if the Athlete was able to establish that a technical departure had occurred, she is required to go further and to demonstrate that such departure could reasonably have caused the abnormality.

- The CAS Appeal Expert Statement regarding the stability of blood values confirms the fact that the relevant parameters indicate that Sample 1 was perfectly reliable.

- Therefore, even if the Athlete were to be successful in establishing one or more of the alleged technical departures, these could not reasonably have caused the abnormality in Sample 1.

- Rule 32.2(b) of the 2012-2013 IAAF Competition Rules effective from 1 November 2011 (the "2012 IAAF Rules") forbids the use (or attempted use) of Prohibited Substances or Prohibited Methods.

- ADRVs under Rule 32.2 may, according to Rule 33.3, be proved by any reliable means *"including, but not limited to, evidence of third persons, witness statements, experts' reports, documentary evidence and conclusions drawn from longitudinal profiling"*. The ABP model is a *"reliable means"* of establishing ADRVs.

- The Athlete's ABP profile constitutes clear evidence that the Athlete has committed an ADRV in breach of Rule 32.2(b) of the 2012 IAAF Rules as follows:

  (i) Sample 1 is a clear example of the so-called off-phase. The sample combines a relatively high HGB value (14.8 g/dL) and low RET% (0.27), resulting in a very high OFF-score value (116.80). These values are symptomatic of the use and discontinuation of an ESA. Sample 1 was taken after the Athlete competed in the 1500m in Yerino.

  (ii) The high RET% value in Sample 4 followed by the high HGB values in Sample 5 and 6 is indicative of erythropoietic stimulation.

  (iii) The OFF-score sequence of the Athlete in general is abnormal at a specificity of more than 99%.

- The Expert Panel have opined that there is no indication of any irregularity in Sample 1 that would cast doubt on the reliability of the analytical results.

- The expert opinions contained in the First, Second and Third Expert Panel Joint Opinions and the CAS Appeal Expert Statement are at a probability of over 99% which is well above the *"comfortable satisfaction"* standard and therefore easily meets the evidentiary requirement to prove the ADRV.

- Professor Victorova's testimony does not support the Athlete's position that the technical matters she complains of could have caused (and did in fact cause) the abnormalities in the Athlete's samples.

- Article 6.13 of part III of the BTP clearly confirms that an absolute difference of 0.15% of RET% between the two tests is accepted.

- The Athlete has abandoned the physiological and environmental explanations that she gave during the results management phase and relies entirely on technical objections. However, her complaints do not amount to departures at all, and certainly not ones that might reasonably have caused (and did in fact cause) the abnormalities in her ABP.

- In short, there are clear abnormalities in the ABP that are indicative of blood doping.

- In the absence of any relevant explanation or departure, the ADRV is established. The Sole Arbitrator was therefore right to find in the Challenged Decision that the Athlete was guilty of blood doping.

- The Athlete has made no submissions in her Statement of Appeal or in the Appeal Brief regarding the length of the period of ineligibility or the disqualification of results. Therefore, there is no basis to disturb the findings of the Sole Arbitrator on these issues.

C. The Position of the Second Respondent

84. The Second Respondent did not provide any answer to the Appeal.

V. JURISDICTION

85. Article R47 of the CAS Code provides in its pertinent part as follows:

> *"An appeal may be filed with CAS against an award rendered by CAS acting as a first instance tribunal if such appeal has been expressly provided by the rules of the federation or sports-body concerned".*

86. The Athlete has filed an appeal against the Challenged Decision issued by CAS sitting as First Instance.

87. The jurisdiction of CAS to hear an appeal against an award rendered by a CAS arbitrator acting as a first instance body is contemplated by Rules 38.3 and 42 of the IAAF Competition Rules.

88. Rule 38.3 of the IAAF Competition Rules states in its pertinent part that:

> *"If in either case the deadline is not met, the IAAF may elect, if the Athlete is an International-Level Athlete, to have the case referred directly to a single arbitrator appointed by CAS. … the decision of the single arbitrator shall be subject to appeal to CAS in accordance with Rule 42".*

89. Rule 42.2 of the IAAF Competition Rules states in its pertinent part that:

> *"42.2 The following is a non-exhaustive list of decisions regarding anti-doping rule violations and Consequences that may be appealed under these Rules: … the decision of a single CAS arbitrator in a case referred to CAS in accordance with Rule 38.3".*

90. While here, in view of ARAF's suspension, the "Member" was not able to hold a first instance hearing, even if it had been able to do so, the appeal would have been to CAS pursuant to Rule 42.3 of the IAAF Competition Rules which states:

> *"In cases arising from an International Competition or involving International-Level Athletes or their Athlete Support Personnel, the first instance decision of the relevant body of the Member shall not be subject to further review at national level and shall be appealed exclusively to CAS in accordance with the provisions set out below".*

91. The jurisdiction of CAS is also confirmed by the Order of Procedure, signed by the Appellant and by the First Respondent without any reservation, and not objected to by the Second Respondent who chose not to file an answer and not to attend the hearing.

92. No objections were lodged to the Panel's jurisdiction, despite the invitation by the Panel to the Parties to do so at the start of the hearing.

93. CAS' jurisdiction over the current proceedings is therefore confirmed.

VI. ADMISSIBILITY

94. The Statement of Appeal was filed on 7 January 2018, *i.e.* within 45 days of the date the Challenged Decision was issued, namely 20 December 2017.

95. The Statement of Appeal was therefore filed within the deadline set in Rule 42.15 of IAAF Competition Rules and complies with the requirements of Articles R48 and R64 of the Code, including the payment of the CAS Court Office fee. The admissibility of the appeal is not challenged by the Respondents. Accordingly, the appeal is admissible.

VII. SCOPE OF THE PANEL'S REVIEW

96. According to Article R57 of the Code,

> *"The Panel has 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. …".*

97. According to Rule 42.1(a) of the IAAF Competition Rules:

> *"Scope of Review Not Limited: the scope of review on appeal includes all issues relevant to the matter and is expressly not limited to the issues or scope of review before the initial decision maker".*

98. According to Rule 42.22 of the IAAF Competition Rules:

> *"All appeals before CAS shall take the form of a re-hearing and the CAS Panel shall be able to substitute its decision for the decision of the relevant tribunal of the Member or the IAAF where it considers the decision of the relevant tribunal of the Member or the IAAF to be erroneous or procedurally unsound. The CAS Panel may in any case add to or increase the Consequences that were imposed in the contested decision".*

VIII. APPLICABLE LAW

99. The law applicable in the present arbitration is identified by the Panel in accordance with Article R58 of the Code.

100. Article R58 of the Code provides the following:

> *"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".*

101. In the present case the *"applicable regulations"* for the purposes of Article R58 of the Code are, indisputably, those contained in relevant regulations of IAAF because the appeal is directed against the Challenged Decision, which applied the IAAF Competition Rules.

102. In addition, Article 13.9.4 of the IAAF Anti-Doping Rules, which entered into force on 3 April 2017 (the "IAAF ADR"), states as follows:

> *"In all CAS appeals involving the IAAF, the CAS Panel shall be bound by the IAAF Constitution, Rules and Regulations (including the Anti-Doping Rules and Regulations)".*

103. Article 13.9.5 of the IAAF ADR further provides as follows:

> *"In all CAS appeals involving the IAAF, the governing law shall be Monegasque law and the appeal shall be conducted in English, unless the parties agree otherwise".*

104. The Athlete is an International-Level Athlete for the purposes of the IAAF Competition Rules, defining an *"International-Level Athlete"* as *"an athlete who is in the Registered Testing Pool (as defined in Chapter 3) or who is competing in an International Competition under Rule 35.7."*. The Athlete was part of the IAAF Registered Testing Pool. The Athlete is also an International-Level Athlete participating in IAAF events, for the purposes of the IAAF ADR.

105. Pursuant to Article 21.3 of the IAAF ADR, ADRVs committed prior to 3 April 2017 are subject, for substantive matters, to the rules in place at the time of the alleged ADRV and, for procedural matters, to the version of the rules in place immediately prior to the effective date of the IAAF ADR (*i.e.*, 3 April 2017).

106. As a consequence, with respect to procedural matters, the 2016-2017 IAAF Competition Rules, which is the version of the Anti-Doping rules in force immediately prior to the effective date of the IAAF ADR, shall be applicable.

107. The substantive matter relates to alleged ADRVs committed in 2012 and 2013 evidenced by the Athlete's ABP. The relevant IAAF rules in force at the time of the ADRVs were the 2012-2013 IAAF Rules effective from 1 November 2011 and in particular Chapter 3 thereof.

108. Rule 42 of the IAAF Competition Rules states in its pertinent parts:

> *"23. In all CAS appeals involving the IAAF, CAS and the CAS Panel shall be bound by the IAAF Constitution, Rules and Regulations (including the Anti-Doping Regulations). In the case of any conflict between the CAS rules currently in force and the IAAF Constitution, Rules and Regulations, the IAAF Constitution, Rules and Regulations shall take precedence.*
>
> *24. In all CAS appeals involving the IAAF, the governing law shall be Monegasque law and the arbitrations shall be conducted in English, unless the parties agree otherwise".*

109. It follows, therefore, that the IAAF rules and regulations, in particular, the IAAF Competition Rules and the 2012 IAAF Rules, are the applicable rules in this case. Monegasque law shall apply on a subsidiary basis.

110. The provision of the IAAF rules and regulations which are relevant in this case include primarily the following:

Regarding the violations:

Rule 32.2 of the 2012 IAAF Rules states in its pertinent part:

"The following constitute anti-doping rule violations: ….

(b) Use or Attempted Use by an Athlete of a Prohibited Substance or a Prohibited Method.

(i) it is each Athlete's personal duty to ensure that no Prohibited Substance enters his body. Accordingly, it is not necessary that intent, fault, negligence or knowing Use on the Athlete's part be demonstrated in order to establish an anti-doping rule violation for Use of a Prohibited Substance or a Prohibited Method.

(ii) the success or failure of the Use or Attempted Use of a Prohibited Substance or Prohibited Method is not material. It is sufficient that the Prohibited Substance or Prohibited Method was Used, or Attempted to be Used, for an anti-doping rule violation to be committed".

Regarding the respective burdens and standards of proof:

Rule 33.3 of the 2012 IAAF Rules states in its pertinent part:

"Facts related to anti-doping rule violations may be established by any reliable means, including but not limited to admissions, evidence of third Persons, witness statements, experts reports, documentary evidence, conclusions drawn from longitudinal profiling and other analytical information.

The following rules of proof shall be applicable in doping cases:

(a) WADA-accredited laboratories are presumed to have conducted Sample analysis and custodial procedures in accordance with the International Standard for Laboratories. The Athlete or other Person may rebut this presumption by establishing that a departure from the International Standard for Laboratories has occurred which could reasonably have caused the Adverse Analytical Finding.

If the Athlete or other Person rebuts the preceding presumption by showing that a departure from the International Standard for Laboratories occurred which could reasonably have caused the Adverse Analytical Finding, then the IAAF, the Member or other prosecuting authority shall have the burden of establishing that such departure did not cause the Adverse Analytical Finding.

(b) Departures from any other International Standard or other anti-doping rule or policy which did not cause an Adverse Analytical Finding or other anti-doping rule violation shall not invalidate such results. If the Athlete or other Person establishes that a departure from another International Standard or other anti-doping rule or policy has occurred which could reasonably have caused the Adverse Analytical Finding or other anti-doping rule violation, then the IAAF, the Member or other prosecuting authority shall have the burden of establishing that such departure did not cause the Adverse Analytical Finding or the factual basis for the anti-doping rule violation.

(c) The facts established by a decision of a court or professional disciplinary tribunal of competent jurisdiction which is not the subject of a pending appeal shall be irrefutable evidence against the Athlete or other Person to whom the decision pertained of those facts unless the Athlete or other Person establishes that the decision violated principles of natural justice.

(d) The hearing panel in a hearing on an anti-doping rule violation may draw an inference adverse to the Athlete or other Person who is asserted to have committed an anti-doping rule violation based on the Athlete's or other Person's refusal, after a request made in a reasonable time in advance of the hearing, to appear at the

hearing (either in person or by telephone as directed by the hearing panel) and to answer questions from the hearing panel or the IAAF, Member or other prosecuting authority asserting the anti-doping rule violation".

Rules 33.1 and 33.2 of the IAAF Competition Rules state:

*"**Burdens and Standards of Proof***

1. The IAAF, Member or other prosecuting authority shall have the burden of establishing that an anti-doping rule violation has occurred. The standard of proof shall be whether the IAAF, Member or other prosecuting authority has established an anti-doping rule violation to the comfortable satisfaction of the relevant hearing panel, bearing in mind the seriousness of the allegation which is made. This standard of proof in all cases is greater than a mere balance of probability but less than proof beyond a reasonable doubt.

2. Where these Anti-Doping Rules place the burden of proof upon the Athlete or other Person alleged to have committed an anti-doping violation to rebut a presumption or establish specified facts or circumstances, the standard of proof shall be by a balance of probability".

Rule 33.3 of the IAAF Competition Rules states in its pertinent part:

"Facts related to anti-doping rule violations may be established by any reliable means, including 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. The following rules of proof shall be applicable in doping cases:

(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 the challenge and the basis of the challenge. CAS on its own initiative may also inform WADA of any such challenge. At WADA's request, the CAS Panel shall appoint an appropriate scientific expert to assist the Panel in its evaluation of the challenge. Within ten days of WADA's receipt of such notice, and WADA's receipt of the CAS file, WADA shall also have the right to intervene as a party, appear amicus curiae or otherwise provide evidence in such proceeding.

(b) WADA-accredited laboratories and other laboratories approved by WADA are presumed to have conducted Sample analysis and custodial procedures in accordance with the International Standard for Laboratories. The Athlete or other Person may rebut this presumption by establishing that a departure from the International Standard for Laboratories occurred which could reasonably have caused the Adverse Analytical Finding.

If the Athlete or other Person rebuts the preceding presumption by showing that a departure from the International Standard for Laboratories occurred which could reasonably have caused the Adverse Analytical Finding, then the IAAF, Member or other prosecuting authority shall have the burden of establishing that such departure did not cause the Adverse Analytical Finding.

(c) Departures from any other International Standard or other anti-doping rule or policy set out in these Anti-Doping Rules or the rules of an Anti-Doping Organisation which did not cause an Adverse Analytical Finding or other anti-doping rule violation shall not invalidate such evidence or results. If the Athlete or other Person establishes a departure from another International Standard or other anti-doping rule or policy which could reasonably have caused an anti-doping rule violation based on an Adverse Analytical Finding or other anti-doping rule violation, then the IAAF, Member or other prosecuting authority shall have the burden of

establishing that such departure did not cause the Adverse Analytical Finding or the factual basis for the anti-doping rule violation".

Regarding the sanction:

Rule 40 of the 2012 IAAF Rules states in its pertinent part:

"Disqualification of Results in the Competition during which an Anti-Doping Rule Violation Occurs

1. An anti-doping rule violation occurring during or in connection with a Competition shall lead to the disqualification of all of the Athlete's results from the Competition, with all resulting consequences for the Athlete, including the forfeiture of all titles, awards, medals, points and prize and appearance money, except as provided below.

If the Athlete establishes that he bears No Fault or Negligence for the violation, the Athlete's individual results in the other Events shall not be disqualified unless the Athlete's results in Events other than the Event in which the anti-doping rule violation occurred were likely to have been affected by the Athlete's anti-doping rule violation.

Ineligibility for Presence, Use or Attempted Use or Possession of Prohibited Substances and Prohibited Methods

2. The period of Ineligibility imposed for a violation of Rules 32.2(a) (Presence of a Prohibited Substance or its Metabolites or Markers), 32.2(b) (Use or Attempted Use of a Prohibited Substances or Prohibited Method) or 32.2(f) (Possession of Prohibited Substances and Prohibited Methods), unless the conditions for eliminating or reducing the period of Ineligibility as provided in Rules 40.4 and 40.5, or the conditions for increasing the period of Ineligibility as provided in Rule 40.6 are met, shall be as follows:

First Violation: Two (2) years' Ineligibility.

Aggravating Circumstances which may Increase the Period of Ineligibility

6. If it is established in an individual case involving an anti-doping rule violation other than violations under Rule 32.2(g) (Trafficking or Attempted Trafficking) and Rule 32.2(h) (Administration or Attempted Administration) that aggravating circumstances are present which justify the imposition of a period of Ineligibility greater than the standard sanction, then the period of Ineligibility otherwise applicable shall be increased up to a maximum of four (4) years unless the Athlete or other Person can prove to the comfortable satisfaction of the hearing panel that he did not knowingly commit the anti-doping rule violation.

(a) Examples of aggravating circumstances which may justify the imposition of a period of Ineligibility greater than the standard sanction are: the Athlete or other Person committed the anti-doping rule violation as part of a doping plan or scheme, either individually or involving a conspiracy or common enterprise to commit anti-doping rule violations; the Athlete or other Person used or possessed multiple Prohibited Substances or Prohibited Methods or used or possessed a Prohibited Substance or Prohibited Method on multiple occasions; a normal individual would be likely to enjoy performance-enhancing effects of the anti-doping rule violation(s) beyond the otherwise applicable period of Ineligibility; the Athlete or other Person engaged in deceptive or obstructing conduct to avoid the detection or adjudication of an anti-doping rule violation. For the avoidance of doubt, the examples of aggravating circumstances referred to above are not exclusive and other aggravating

factors may also justify the imposition of a longer period of Ineligibility.

(b) An Athlete or other Person can avoid the application of this Rule by admitting the anti-doping rule violation as asserted promptly after being confronted with the anti-doping rule violation (which means no later than the date of the deadline given to provide a written explanation in accordance with Rule 37.4(c) and, in all events, before the Athlete competes again).

Disqualification of Results in Competitions Subsequent to Sample Collection or Commission of an Anti-Doping Rule Violation

8. In addition to the automatic disqualification of the results in the Competition which produced the positive sample under Rules 39 and 40, all other competitive results obtained from the date the positive Sample was collected (whether In-Competition or Out-of-Competition) or other anti-doping rule violation occurred through to the commencement of any Provisional Suspension or Ineligibility period shall be Disqualified with all of the resulting Consequences for the Athlete including the forfeiture of any titles, awards, medals, points and prize and appearance money.

Commencement of Period of Ineligibility

10. Except as provided below, the period of Ineligibility shall start on the date of the hearing decision providing for Ineligibility or, if the hearing is waived, on the date the Ineligibility is accepted or otherwise imposed. Any period of Provisional Suspension (whether imposed or voluntarily accepted) shall be credited against the total period of Ineligibility to be served.

(a) Timely Admission: where the Athlete promptly admits the anti-doping rule violation in writing after being confronted (which means no later than the date of the deadline given to provide a written explanation in accordance with Rule 37.4(c) and, in all events, before the Athlete competes again), the period of Ineligibility may start as early as the date of Sample collection or the date on which another anti-doping rule violation last occurred. In each case, however, where this Rule is applied, the Athlete or other Person shall serve at least one-half of the period of Ineligibility going forward from the date the Athlete or other Person accepted the imposition of a sanction, the date of a hearing decision imposing a sanction or the date the sanction is otherwise imposed.

(b) If a Provisional Suspension is imposed and respected by the Athlete, then the Athlete shall receive a credit for such period of Provisional Suspension against any period of Ineligibility which may ultimately be imposed.

(c) If an Athlete voluntarily accepts a Provisional Suspension in writing (pursuant to Rule 38.2) and thereafter refrains from competing, the Athlete shall receive credit for such period of voluntary Provisional Suspension against any period of Ineligibility which may ultimately be imposed. In accordance with Rule 38.3, a voluntary suspension is effective upon the date of its receipt by the IAAF.

(d) No credit against a period of Ineligibility shall be given for any time period before the effective date of the Provisional Suspension or voluntary Provisional Suspension regardless of whether the Athlete elected not to compete or was not selected to compete".

Regarding the storage, transport and analysis of the Samples:

The BTP states in its pertinent parts:

"BLOOD STORAGE AND TRANSPORT

4. ***Sample Storage***

4.1 The BCO/assistant shall place the sample collection container in a suitable storage device pending analysis on-site or pending transportation to the laboratory off-site. Blood samples shall be transported rapidly to a laboratory so that analysis can be performed as soon as possible and, ideally, within no more than 36 hours of the sample collection

4.2 In choosing the storage device, the BCO/assistant shall take into account the time of storage, the number of samples to be stored in the device and the prevailing environmental conditions (hot or cold temperatures). The storage device may be:

- *a refrigerator*
- *an insulated cool box*
- *an isotherm bag*
- *any other device that possesses the capabilities in 4.3 below.*

4.3 The storage device shall be capable of maintaining blood samples at a cool and constant temperature during storage (ideally between 2 and 12° C).

4.4 Whole blood samples must not be allowed to freeze.

4.5 A temperature data logger should be used to determine whether temperature conditions are met.

4.6 The storage device shall be located in the Doping Control Station and shall be kept under secured conditions.

5. ***Sample Transport*** *(where samples to be analysed off site)*

5.1 Blood samples shall be transported in a device that ensures the integrity of samples during transportation and minimises the potential for sample degradation due to factors such as time delays and extreme temperature variations.

5.2 In choosing the transport device, the BCO/assistant shall take into account the time of transport, the number of samples to be stored in the device and the prevailing environmental conditions (hot or cold temperatures). The transport device may be:

- *a portable refrigerator*
- *an insulated cool box*
- *an isotherm bag*
- *any other device that possesses the capabilities in 5.3 below.*

5.3 The transport device shall be capable of maintaining blood samples at a cool temperature during transport (ideally between 2 and 12° C).

5.4 Whole blood samples must not be allowed to freeze.

5.5 A temperature data logger should be used to record the temperature during transportation.

5.6 The transport device shall be transported by secure means using an authorized means of transportation. The samples should be placed in a suitable outer container for dispatch to the laboratory.

5.7 The ECO/assistant shall complete the Chain of Custody Form.

PART III BLOOD ANALYSIS

6. Blood Screening Analysis

6.1 The blood samples must be analysed at a satellite facility (mobile unit or ISO-accredited hematology laboratory approved by WADA/IAAF), at a WADA-accredited laboratory or at another laboratory that is approved by WADA/IAAF. Blood samples for screening purposes should be analysed as soon as possible and, ideally, within 36 hours of sample collection. If a laboratory takes delivery of a sample after 36 hours from the time of sample collection, it shall be analysed as soon as possible and the IAAF shall be advised of the delay that has occurred so that it may assess the validity of the result.

6.12 Each blood sample shall be analyzed twice ….

6.13 Absolute differences between the results of the two analyses shall be equal or less than the following for the relevant analyses to be accepted: …

- *0.15% absolute difference for %Ret analysis if first measurement lower or equal to 1.00 % (e.g. 0.8% and 0.95% = OK; 0.8 % and 0.96 % = not OK); ….*

The data from the second injection is used to confirm the first injection data.

6.14 If the absolute differences between the results of the analyses are within the above criteria, then only the first injection data is reported. If the absolute differences between the results of the two analyses are greater than those defined above for a specific sample, the analysis shall be started again. The reason for the repetition shall be recorded".

IX. THE MERITS

111. The object of this arbitration is the Challenged Decision, which found the Athlete responsible for ADRVs contemplated by Rule 32.2(b) of the 2012 IAAF Rules and imposed on her a period of ineligibility of two and a half years starting from 7 June 2017 pursuant to Rule 40 of the 2012 IAAF Rules. The Athlete and ARAF, jointly and severally, were also required to pay to the IAAF CHF 3,000 as contribution towards its legal costs. The Athlete disputes the finding of ADRVs and requests that the Challenged Decision be set aside, and that the period of ineligibility be cancelled. The IAAF, on the other hand, requests this Panel to dismiss the appeal and to confirm the Challenged Decision.

112. As a result of the Parties' requests and submissions, there are three issues that need to be addressed by this Panel:

i. Is there a finding of an ADRV?

ii. Should the AAF be set aside due to irregularities in the sampling process?

iii. Is the Athlete otherwise entitled to a cancellation or a reduction of the period of ineligibility?

113. The Panel will consider each of those issues separately.

i. Is there a finding of an ADRV?

114. Rule 32.2(b) of the 2012 IAAF Rules forbids the use (or attempted use) of Prohibited Substances or Prohibited Methods.

115. A finding of an ADRV for Use of a Prohibited Substance or a Prohibited Method does not require a demonstration of *"intent, fault, negligence or knowing Use on the Athlete's part"*. Similarly, *"the success or failure of the Use or Attempted Use of a Prohibited Substance or Prohibited Method is not material"*.

116. ADRVs under Rule 32.2 of the 2012 IAAF Rules may, according to Rule 33.3 of the IAAF Competition Rules governing procedural matters, be established *"by any reliable means, including 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"*. Rule 33.3 of the 2012 IAAF Rules uses similar language and confirms that an ADRV under Rule 32.2 may be proved *"by any reliable means, including but not limited to admissions, evidence of third Persons, witness statements, experts reports, documentary evidence, conclusions drawn from longitudinal profiling and other analytical information"*.

117. The ABP model is a *"reliable means"* of establishing blood doping, namely, the use of a Prohibited Substance or Prohibited Method and thus an ADRV. This is well settled in CAS jurisprudence. See for example, CAS 2012/A/2773; CAS 2014/A/3561 & 3614. The reliability of the ABP has also been confirmed in CAS 2016/O/4463, CAS 2016/O/4464, CAS 2016/O/4469 and CAS 2016/O/4481.

118. In CAS 2012/A/2773 it was held that: *"Systems which make use of these longitudinal profiles have evolved to become widespread and highly effective means of detecting EPO doping"* (see para. 13). In CAS 2014/A/3561 & 3614 the panel stated that it was *"convinced that the ABP model is a reliable and valid mean of establishing an ADRV. … numerous peer-reviewed applications have confirmed the ABP's reliability"* (see paras. 278 and 279).

119. In establishing the Athlete's ABP IAAF applied its ABP procedures designed to afford athletes their due process rights. IAAF provided an assessment by the Adaptive Model to determine whether the Athlete's blood profile is normal or abnormal; the Expert Panel comprised of three highly reputable scientific experts who did not know the Athlete's identity; the Expert Panel analysed the Athlete's ABP, together with other relevant information; it provided the Athlete a number of opportunities to challenge the Expert Panel's conclusions and for the Expert Panel to consider and assess the Athlete's explanations; and it initiated disciplinary proceedings against the Athlete only once the Expert Panel, after consideration of the record including the Athlete's submissions, unanimously confirmed its position that it is likely that the Athlete had used a Prohibited Substance or Prohibited Method and it is highly unlikely that the profile was the result of any other cause.

120. The Panel confirms that the Athlete's ABP profile constitutes clear evidence that the Athlete has committed an ADRV in breach of Rule 32.2(b) based on the Experts' First, Second and

Third opinions concluding *"that it is highly unlikely that this profile is the result of a normal physiological or pathological condition, and it is likely that it was caused by the use of prohibited substances or prohibited methods"*.

121. The opinions contained in the First, Second and Third Expert Panel Joint Opinions and the CAS Appeal Expert Statement are at a probability of over 99% which is well above the *"comfortable satisfaction"* standard required under Rule 33.1 of the IAAF Competition Rules and therefore easily meets the evidentiary requirement to prove the ADRVs.

122. The experts in their First, Second and Third opinions addressed the Athlete's physiological and environmental explanations provided during the results management phase (a miscarriage, altitude training, a rotavirus and a failure to observe the two-hour rest window). No new or convincing evidence was provided in support of these apparent explanations. Professor Victorova provided additional expert testimony regarding the possible effects of the diarrheal disease (rotavirus) three days before the blood test and the possibility that it had changed the haematic picture of Sample 1 and lead to the increase of the leucocytes and the postprimary decrease of the red blood shoot. The Panel was convinced by and accepts the testimony of Professor d'Onofrio and Dr Schumacher who confirmed that gastroenteritis is unlikely to cause significant passport abnormalities.

123. The Panel thus concludes that the Athlete had committed numerous ADRVs in breach of Rule 32.2(b) of the 2012 IAAF Rules, as evidenced in particular by:

    i. Sample 1, which provides a clear example of the so-called off-phase, combining a high HGB value (14.8 g/dL) with a low RET% (0.27), resulting in a very high OFF-score value (116.80), that is symptomatic of the use and a recent discontinuation of an ESA;

    ii. The high RET% value in Sample 4 followed by the two high HGB values in Samples 5 and 6 which are indicative of erythropoietic stimulation;

    iii. In addition to Sample 1 and the sequence of Samples 4 – 6, the OFF-score sequence of the Athlete in general is abnormal at a specificity of more than 99%, evidencing the use and discontinuation of an ESA.

124. The Athlete has offered no acceptable pathological or environmental explanation for the abnormalities. In particular, the Panel agrees with the Sole Arbitrator that the Expert Panel *"adequately refuted any realistic possibility that her miscarriage, high altitude training and/or rotavirus affected Sample 1 results"* and further notes that even Professor Victorova in her testimony at the hearing did not consider them significant and only briefly repeated the arguments regarding the rotravirus which were rejected by Professor d'Onofrio and Dr Schumacher and cannot be accepted by the Panel as providing any serious explanation to the results of Sample 1.

ii. Should the alleged AAF be set aside due to irregularities in the sampling process?

125. The Athlete raises various objections regarding the way in which certain Samples were collected and analysed, and in particular Sample 1:

i. A faulty testing process and lack of controls in the chain of custody of Sample 1, evidenced for example by the indication on the Batch Registration document that the sample was both collected from the Athlete and delivered to the laboratory at 20:30.

ii. Transportation and storage of Sample 1 at a temperature that does not comply with the BTP.

iii. A period between obtaining Sample 1 and testing it of over 36 hours, again in violation of the BTP.

126. The Panel highlights Rule 33.3 of the IAAF Competition Rules which follows similar language to Rule 33.3 of the 2012 IAAF Rules, and states in its pertinent part that:

"(b) WADA-accredited laboratories and other laboratories approved by WADA are presumed to have conducted Sample analysis and custodial procedures in accordance with the International Standard for Laboratories. The Athlete or other Person may rebut this presumption by establishing that a departure from the International Standard for Laboratories occurred which could reasonably have caused the Adverse Analytical Finding.

If the Athlete or other Person rebuts the preceding presumption by showing that a departure from the International Standard for Laboratories occurred which could reasonably have caused the Adverse Analytical Finding, then the IAAF, Member or other prosecuting authority shall have the burden of establishing that such departure did not cause the Adverse Analytical Finding.

(c) Departures from any other International Standard or other anti-doping rule or policy set out in these Anti-Doping Rules or the rules of an Anti-Doping Organisation which did not cause an Adverse Analytical Finding or other anti-doping rule violation shall not invalidate such evidence or results. If the Athlete or other Person establishes a departure from another International Standard or other anti-doping rule or policy which could reasonably have caused an anti-doping rule violation based on an Adverse Analytical Finding or other anti-doping rule violation, then the IAAF, Member or other prosecuting authority shall have the burden of establishing that such departure did not cause the Adverse Analytical Finding or the factual basis for the anti-doping rule violation".

127. Therefore, establishing a departure on the balance of probabilities does not invalidate an analytical result or negate an abnormality in the ABP, unless the Athlete can also demonstrate on the balance of probabilities that this departure could reasonably have caused the abnormality in the ABP. If the Athlete does that, the IAAF is still entitled to demonstrate that the departure did not cause the abnormality. The Athlete has a two pronged burden: (i) to establish the departure from the testing or analytical guidelines and (ii) to establish that these could reasonably have caused the AAF.

128. The Panel finds that the Athlete did not meet her burden to establish on the balance of probabilities that her complaints amounted to departures from the sampling or analytical processes. The Panel is satisfied that:

i. Checking the entire documentation package, it is clear that the collection time of Sample

1 recorded on the documentation package (20:30) was a typo.

ii. The Chain of Custody and other required forms were completed.

iii. It is likely that the temperature was measured upon placing Sample 1 in transport; in any event it is clear that it was stored at the required temperature while at the laboratory.

iv. The period between obtaining and testing Sample 1 exceeded the ideal period of 36 hours by just over two hours and is not a violation of Article 4.1 of part II of the 2012 BTP which recommends an ideal period from sampling to analysis but does not mandate it.

129. Even if any of these were considered as departures from the BTP (*e.g.*, any technical inaccuracies in the forms, a possible failure to record and ensure the temperature of Sample 1 while on short transport to the laboratory or exceeding the 36-hour window between sampling and analysis by two hours and twenty minutes) the Athlete is also required to demonstrate that such departures could reasonably have caused the abnormality. Here, there is absolutely no evidence that any of these alleged technical departures did in fact cause, or even could reasonably have caused, the abnormalities in the Athlete's ABP. To the contrary, ample evidence was presented that a degradation of a sample may only happen with a lapse of more than 48 hours at room temperature and that HGB and RET% are stable, even at room temperature, for at least 72 and 48 hours respectively.

130. The CAS Appeal Expert Statement concludes in the following terms:

> *"In conclusion, it is our opinion that no pre-analytical factors have altered the quality of the above mentioned blood sample or interfered with the quality of the results to the disadvantage of the athlete. In particular, no issues concerning the sample storage can have determined the low reticulocyte percentage and the high OFF score in sample 1 of the passport. This is confirmed by both the experimental data from the literature and the characteristics of red blood cells and white blood cells in the Sysmex report".*

131. The testimony by the IAAF's experts highlighted the stability of blood values in Sample 1 confirming that Sample 1 was perfectly reliable and that it was not affected to any material degree by the conditions between testing and analysis. This is accepted by the Panel.

132. The Panel accepts the testimony by the IAAF's experts that any possible technical mistake in the process did not cast any doubt regarding the reliability of the analytical results.

133. Therefore, in the absence of any relevant explanation or departure, the ADRVs are established to the comfortable satisfaction of the Panel. The Sole Arbitrator was therefore entirely right to find in the Challenged Decision that the Athlete was guilty of blood doping.

iii. The proper sanction: is the Athlete entitled to a cancellation or a reduction of the period of ineligibility?

134. In the first instance proceedings before CAS the IAAF requested that CAS impose a sanction

of between two and four years' ineligibility on the Athlete in accordance with Rules 40.2 and 40.6 of the 2012 IAAF Rules.

135. The Sole Arbitrator considered that some aggravating circumstances were present: (i) evidence of repeated use of Prohibited Substances or Prohibited Methods as presented in Sample 1 as well as the sequence of Samples 4 – 6; (ii) the fact that EPO is typically taken over a course of many weeks and not a single injection; (iii) the sophisticated nature of blood doping necessarily administered with the advice and support from medical and other personnel; and (iv) the evidence of a doping plan or scheme with an off-phase around competitions dates organised in such a way as to avoid direct detection in competition. The Sole Arbitrator therefore decided to increase the standard two-year ineligibility period in accordance with Rule 40.6 of the 2012 IAAF Rules and also in reliance on other CAS cases which have increased the two year sanction in cases of blood doping.

136. The Sole Arbitrator limited the sanction to a period of ineligibility of two and a half years indicating that while giving due weight to the aggravating factors *"it is better to guard against any risk of excessive or harsh punishment and to err if at all on the side of caution in fixing the period of ineligibility"*. It appears that the Sole Arbitrator considered that there was a limited amount of specific information available regarding the exact nature of those aggravating circumstances.

137. The Athlete has made no submissions in her Statement of Appeal or in the Appeal Brief regarding the length of the period of ineligibility or the disqualification of results. The relief sought by the Athlete was to *"overturn"* the Challenged Decision *"fully denying the claims of the IAAF"*. No alternative relief was sought by the Athlete.

138. The IAAF requested to uphold the decision and similarly made no arguments regarding the sanction imposed on the Athlete.

139. The Panel cannot conclude that the sanction imposed on the Athlete is not reasonable and in accordance with Rule 40.6 of the 2012 IAAF Rules. Similarly, the timing of the period of ineligibility and the consequences regarding the Athlete's competitive results are also in accordance with the provisions of Rules 40.8 and 40.10 of the 2012 IAAF Rules.

140. Therefore, the Panel finds that there is no basis to disturb the findings of the Sole Arbitrator regarding the length of the period of ineligibility, its starting date and the disqualification of the Athlete's competitive results.

ON THESE GROUNDS

The Court of Arbitration for Sport rules that:

1. The appeal filed by Ms Svetlana Olegovna Karamasheva on 7 January 2018 against the decision rendered on 20 December 2017 by a first instance decision of the Court of Arbitration for Sport is dismissed.

2. The first instance decision of the Court of Arbitration for Sport rendered on 20 December 2017 in the case relating to Ms Svetlana Olegovna Karamasheva is confirmed and upheld in full.

(…)

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