SR/236/2025

IN THE MATTER OF PROCEEDINGS BROUGHT UNDER THE ANTI-DOPING RULES OF WORLD ATHLETICS

Before:
Dr. Tanja Haug (Chair)
Paul-Filip Ciucur
Parth Goswami

BETWEEN:

WORLD ATHLETICS ***Anti-Doping Organisation***

and

BENARD KIBET KOECH ***Respondent***

DECISION OF THE DISCIPLINARY TRIBUNAL

A. INTRODUCTION

1. World Athletics ("**WA**") is the international federation governing the sport of Athletics worldwide. It has its registered seat in Monaco.

2. World Athletics is represented in these proceedings by the Athletics Integrity Unit ("**AIU**"), which has delegated authority for Results Management and Hearings on behalf of World Athletics, pursuant to Rule 1.2 of the World Athletics Anti-Doping Rules, effective 1 January 2025 ("**2025 ADR**").

3. The Respondent, Mr. Benard Kibet Koech (the "**Athlete**"), is a 26-year-old Kenyan long-distance runner. He has achieved considerable success in his sporting career. Most notably, he finished fifth in the 10.000m event at the 2024 Olympics in Paris, and he holds the World Best Performance in the 10-mile road race, achieved on 4 December 2022 in

Japan. The Athlete is an International-Level Athlete for the purposes of the WA Anti-Doping Rules ("**ADR**"[1]).

4. The Athlete has been charged by the AIU with an Anti-Doping Rule Violation ("**ADRV**") in connection with abnormalities in the haematological module of his Athlete Biological Passport ("**ABP**"). In particular, the matter concerns several abnormalities detected in blood samples collected from the Athlete between 15 February 2020 and 15 August 2024 that are alleged to indicate blood manipulation.

5. The Athlete denies having used any Prohibited Substances or Prohibited Methods that could have caused the abnormalities detected in his ABP and advances an alternative explanation. The Athlete requested that the matter be determined by way of a hearing before the Disciplinary Tribunal.

6. It is not in issue that:

   a) the ADR are applicable to the Athlete,

   b) the AIU has jurisdiction for Results Management of the Athlete's samples, and

   c) the Disciplinary Tribunal has jurisdiction to determine the ADRV alleged against the Athlete.

7. Hereafter, WA and the Athlete are referred to collectively as the "**Parties**".

B. FACTUAL BACKGROUND

8. The relevant facts and allegations concerning the merits of this case, as derived from the Parties' written and oral submissions, and the evidence adduced, are summarised below. While the Panel has considered all submissions, arguments, and evidence presented, it refers only to those matters it considers necessary to explain its reasoning.

I. The ABP programme

[1] Unless otherwise stated, ADR refers to the 2024 World Athletics Anti-Doping Rules, in force from 1 January 2024.

9. To combat blood doping, the ABP programme was developed and refined by the World Anti-Doping Agency ("**WADA**") and formally introduced by World Athletics in 2009. It is an electronic record that monitors selected variables (i.e. biomarkers) from an athlete over a period of time that indirectly reveal the effect of doping. Thus, it compiles and collates a specific athlete's test results and other data over time, and is unique to that particular athlete.

10. The specific values collected and recorded in the ABP include haemoglobin concentration ("**HGB**"), a molecular carrier in red blood cells transporting oxygen from the lungs to body tissue, and the percentage of immature red blood cells viz. reticulocytes ("**RET%**"). The ratio of these two (2) values, the HGB and the RET%, is also used to calculate a further value, known as the "**OFF-score**", which is sensitive to changes in erythropoiesis.

11. An electronic record of an athlete's biomarker variables is maintained on WADA's database known as the Anti-Doping Administration and Management System ("**ADAMS**").

12. The biomarker values from the blood samples collected in the ABP programme are logged into a statistical model known as the **Adaptive Model**. The Adaptive Model uses an algorithm that takes into account (i) the variability of these values within the general population and (ii) factors affecting the variability of individual values, such as gender, ethnic origin, age, altitude, type of sport, and instrument-related technology.

13. These markers are monitored over a certain time to create a longitudinal profile that establishes an athlete's upper and lower limits, to a specificity of 99%, within which the athlete's values are expected to fall, assuming normal physiological conditions. While the limits are initially set based on the general population, they become unique to the athlete's values over time. In other words, an athlete is his/her own point of reference every time a blood sample is collected.

14. If the Adaptive Model flags an Atypical Passport Finding ("**ATPF**"), this does not, by itself, constitute a basis for a charge, instead it serves as a trigger requiring an expert interpretation.

15. WA implements the ABP in accordance with the International Standard for Results Management ("**ISRM**") through a procedure that is designed to afford the athlete due

process in establishing whether an ADRV has been committed. The procedural steps to review an athlete's passport are set out in Article C.1.3 ISRM and can be roughly summarised as follows: (1) Application of the Adaptive Model; if an ATPF is identified, then: (2) a review of the passport is conducted by a single expert; if the expert concludes that the reason for the ATPF is *"likely doping"*, then (3) a review of the passport is conducted by three (3) experts, including the expert who conducted the initial review, forming a panel; if the expert's consensus is that the ATPF stems from *"likely doping"*, then (4) an ABP Documentation Package is created and is reviewed by the expert panel; if their opinion is maintained that the ATPF resulted from *"likely doping",* then (5) the athlete is notified of the Adverse Passport Finding ("**APF**") and given the chance to respond; once the athlete's response is received, (6) the athlete's explanations are reviewed by the expert panel; if the expert panel maintains their unanimous conclusion that it is "*highly likely*" that the athlete Used a Prohibited Substance or a Prohibited Method, then (7) an ADRV is asserted.

16. With regard to the expert evaluation, Article C.2.2.5.1 ISRM provides:

> *"When evaluating a Passport, an Expert weighs the likelihood that the Passport is the result of the* Use *of a* Prohibited Substance *or* Prohibited Method *against the likelihood that the Passport is the result of a normal physiological or pathological condition in order to provide one of the following opinions: "Normal", "Suspicious", "Likely doping" or "Likely medical condition". For a "Likely doping" opinion, the Expert shall come to the conclusion that the likelihood that the Passport is the result of the* Use *of a* Prohibited Substance *or* Prohibited Method *outweighs the likelihood that the Passport is the result of a normal physiological or pathological condition."*

II. The Athlete's ABP

17. As an International-Level Athlete, the Athlete participated in WA competitions throughout the period covered by his ABP profile and was subject to the ADR and the Results Management of the AIU.

18. From 15 February 2020 until 15 August 2024, the AIU collected 27 ABP blood samples (the "**Samples**") from the Athlete. 23 of these Samples were considered valid[2] and used in the evaluation process of the Athlete's ABP.

19. Each of the Samples was analysed by a WADA-accredited laboratory and the results were logged on ADAMS. Using the Adaptive Model, the Athlete's longitudinal profile of haematological values was constituted and identified anonymously as Blood Passport BPID 1PAY86DL (the "**Passport**").

20. A summary table and graphs of the Athlete's ABP, showing the Athlete's HGB, RET% and OFF-scores for each of the 23 valid Samples, is set out below:

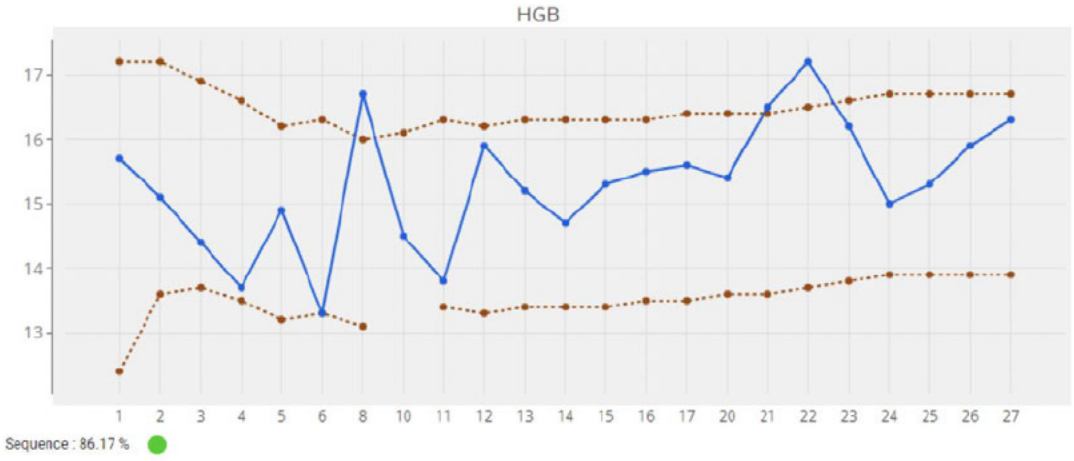
No.	Date of Sample	HGB (g/dl)	RET%	OFF-score
1	15 February 2020	15.7	1,37	86.8
2	3 February 2021	15.1	1.95	67.2
3	16 June 2021	14.4	1.89	61.5
4	22 June 2021	13.7	1.50	63.5
5	21 January 2022	14.9	1.39	78.3
6	31 May 2022	13.3	1.85	51.4
7	invalid			
8	17 February 2023	16.7	1.54	92.5
9	invalid			
10	21 May 2023	14.5	1.53	70.8
11	7 June 2023	13.8	1.33	68.8
12	6 July 2023	15.9	1.50	85.5
13	3 August 2023	15.2	1.67	74.5

[2] Samples No. 7, 9,18 and 19 were declared invalid by the Expert Panel, see below at paragraph 25.

14	18 August 2023	14.7	1.53	72.8
15	23 January 2024	15.3	1.71	74.5
16	3 February 2024	15.5	2.13	67.4
17	12 March 2024	15.6	2.04	70.1
18	invalid			
19	invalid			
20	10 June 2024	15.4	1.92	70.9
21	26 Jun 2024	16.5	1.69	87.0
22	4 July 2024	17.2	1.03	111.1
23	9 July 2024	16.2	0.91	104.8
24	23 July 2024	15.0	1.67	72.5
25	30 July 2024	15.3	1.47	80.3
26	6 August 2024	15.9	1.32	90.1
27	15 August 2024	16.3	1.51	89.3

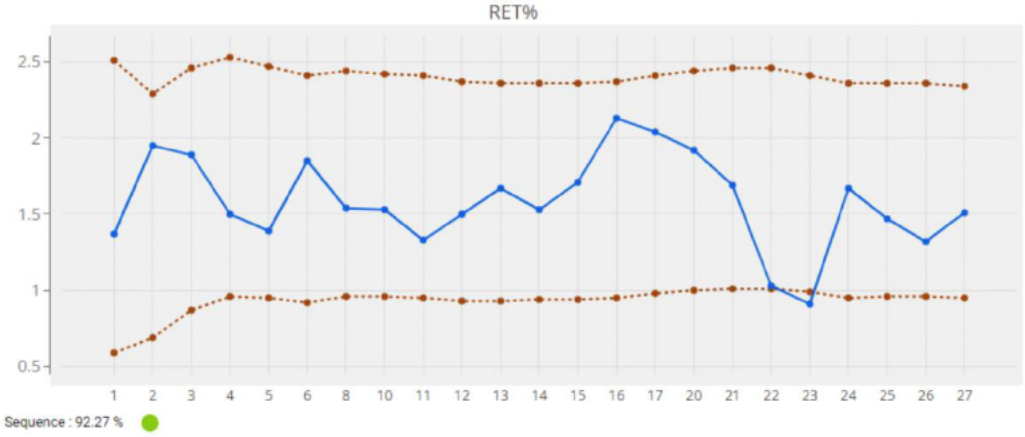
21. The Athlete's biological markers (in blue) and the individualised upper and lower limits at a specificity of 99% (in red) are reflected as follows in the Athlete's ABP:

Hemoglobin concentration (full profile)



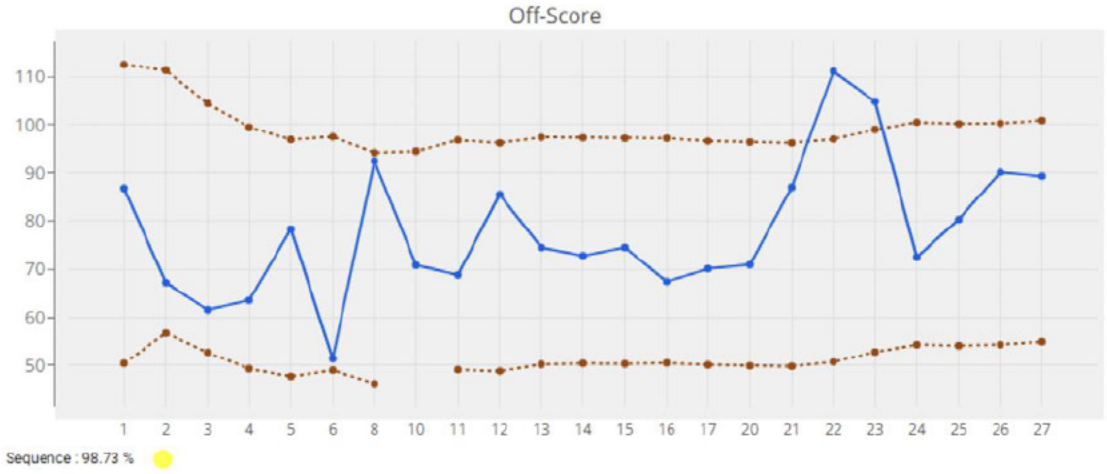
Sequence : 86.17 %

Reticulocytes percentage (full profile)



Sequence : 92.27 %

OFF-Score(full profile)



22. The Passport was submitted for review to three independent experts with knowledge in clinical and laboratory haematology, sports medicine, and exercise physiology, as relevant to blood doping: Prof. Giuseppe d'Onofrio, Dr. Laura Lewis, and Dr. Jakob Mørkeberg (collectively, the "**Expert Panel**"). Prof. d'Onofrio is haematologist and ABP expert for WADA; Dr. Lewis is a sports scientist with particular expertise in the effects of altitude exposure and (de)training on haematological parameters; and Dr. Mørkeberg is an expert sports scientist. All three have vast experience with the ABP and serve as members of ABP expert panels for various APMUs.

23. The Expert Panel reviewed the Athlete's anonymised ABP Documentation Package (identified as BPID 1PAY86DL), and its appendices, including competition and altitude information, as well as the relevant Laboratory documentation packages ("LDPs") and Laboratory certificates of analysis for the rest of the samples.

24. On 7 January 2025, the Expert Panel issued a Joint Expert Panel Opinion (the "**First Joint Expert Opinion**"), identifying abnormalities in the blood Samples collected from the Athlete and confirming their unanimous opinion *"that a prohibited substance or prohibited method has highly likely been used and that it is unlikely that the Passport is the result of any other cause, such as environmental factors or a medical condition".*

25. The Expert Panel invalidated four (4) Samples due to improper storage temperature (Samples 7, 9, and 18) or delayed processing (Sample 19). It noted that the quality assessment confirmed overall accuracy and precision, while identifying some minor issues. However, the Expert Panel concluded that these analytical nonconformities did not affect the key ABP markers (HGB, RET% and OFF-score) and did not undermine the validity of the Samples.

26. In its quantitative analysis of the ABP profile, the Expert Panel noted *inter alia:*

Statistical analysis in the adaptive ABP model

The adaptive model compares each sample's HGB, reticulocyte percentage and OFF score 20 against the Athlete's historical values. Results falling outside the 99% range are flagged as atypical, indicating possible blood doping or unphysiological changes. The 1PAY86DL Passport includes 23 valid samples collected between 2020 and 2024. In the automated analysis by the adaptive model, the profile is flagged with abnormalities at the 99% level for:

- *Elevated HGB values for samples 8, 21 and 22 (above the upper limit) 25*
- *Elevated OFF score for samples 22 and 23 (above the upper limit)*
- *Suppressed reticulocyte percentage for sample 23 (below the lower limit).*

Notably, sample 22 HGB and OFF score are abnormally high outliers even if the adaptive model specificity is set at 99.9% and 99.99%, respectively. Moreover, the Adaptive Model statistical analysis identifies the HGB and OFF score sequences as abnormal. Sequence abnormality is statistically assessed using the adaptive model on the last five profile samples.

[…]

Hematological evaluation

A distinct sequence of abnormalities was observed in samples 21, 22 and 23 (June and July 2024), collected over two weeks, about one month before the Athlete participated in the Paris 2024 Olympic Games.

<u>The period from February 2020 until June 10, 2024</u>

Looking at the HGB trends in this Passport, in the period from February 2020 until June 10, 2024 (samples 1 to 20), the majority of the HGB results ranged between a minimum of 13.3 (sample 6, taken at sea level) and a maximum of 15.9 g/dl in July 2023 (sample 12, taken at altitude), showing a moderate, possibly physiological variation. Sample 8, taken in February 2023, represents an isolated outlier with an unphysiological high HGB of 16.7 g/dl: this anomalous and suspicious result was not followed up effectively. Most of the lowest HGB values were often observed in in-competition or pre-

competition samples collected at sea level (i.e., 13.3 g/dl in sample 6, 14.5 g/dl in sample 10, 13.8 g/dl in sample 11, 14.7 g/dl in sample 14), in agreement with the plasma volume expansion described after descent from altitude to sea level [Prommer et al., 2009]. The reticulocyte percentage also showed some variability, with only two values above 2% in February and March 2024 (samples 16 and 17) and no results below 1.3%. The OFF score reflected such fluctuations of HGB and reticulocytes, with mild variation below 90 (except for sample 8).

The period from June 26 to July 23, 2024

In the above-described context, the anomaly of the high OFF score outliers observed in samples 21, 22 and 23 in July 2024 is outstanding. Sample 21 shows increased HGB with reticulocytes in the mid-range for the Athlete (1.69%), similar to the one observed in sample 8. In this case, however, the follow-up samples 21 and 22 were rapidly and timely obtained: they display the combination of a markedly increased HGB (17.2 and 16.2 g/dl, respectively) combined with suppression of reticulocyte production (1.03% and 0.91%, respectively).

In particular, sample 21 was collected out of competition on 26.6.2024 at 14.00. In the follow-up sample on 04.07.2024, the HGB markedly increased to 17.2 g/dl whilst the reticulocytes showed a sharp decrease, highlighting an erythropoietic suppression caused by increased HGB in blood and oxygen availability in tissues (Semenza et al., 2009). Sample 23, collected on 9.7.2024, five days after sample 22, confirmed the low reticulocytes (0.91%).

The OFF score was increased in samples 22 and 23 due to the combination of high HGB and low reticulocytes. The high OFF scores (111.1 and 104.8) are consistent with the cessation of ESA use. On such a basis, the most likely doping scenario in the ABP passport includes ESA stimulation at least in June 2024, which was subsequently stopped before samples 22 and 23, leading to reticulocyte suppression [Haile et al., 2019]. The urine analysis for ESA was negative on 10.6.2024 and 26.6.2024, which is compatible with several injections in the intermediate period, but even before sample 20 with its relatively high reticulocytes. It is well known that the negativity of urine tests for ESA does not exclude recent ESA injections, given the limited half-life of most ESAs in the circulation and the possibility of masking techniques [Morkeberg et al., 2014; Martin et al., 2016]. Alternatively, the reticulocyte suppression with high HGB in samples 22 and 23 could be due to blood transfusion before and/or after the collection of sample 21 (Morkeberg et al., 2009).

Confounding factors

Based on the available documentation, we assessed the possible role of confounding factors on the Athlete's Passport, particularly altitude. In the suspect period, the Athlete consistently resided in Kenya at an altitude of around 2000 m. His hematological abnormal values were not influenced by variations in the oxygen content in the ambient air (consistent level of altitude-related hypoxia) and far exceeded

the expected physiological variation in an altitude resident. They highly indicate blood manipulation aimed at doping for training and performance improvement.

The Athlete declared iron intake in May and June 2024 because of an alleged anemia condition. Samples with anemia (low HGB) are never observed in this Passport. Iron is used in subjects receiving ESA to support the erythropoietic acceleration, which requires iron for the increased production of HGB molecules. Even in the case of iron deficiency, the erythropoietic response to iron would never have led to reticulocyte suppression.

Conclusion

The consistent pattern of high HGB with suppressed reticulocytes and elevated OFF scores in July 2024 strongly supports the likelihood of blood doping. No alternative physiological or environmental explanations adequately account for these anomalies. We, therefore, conclude, considering the information within the Passport at this stage and in the absence of 25 appropriate explanation, that a prohibited substance or prohibited method has highly likely been used and that it is unlikely that the Passport is the result of any other cause, such as environmental factors or a medical condition."

27. By letter of 8 January 2025, the Nordic APMU informed the AIU that, based on the First Joint Expert Opinion, the passport BPID 1PAY86DL is declared as an APF in accordance with the ISRM.

III. Notice of an APF and Initial Explanation

28. On 6 February 2025, the AIU notified the Athlete of the APF, which enclosed *inter alia* the ABP Documentation Package, the First Joint Expert Opinion, the Doping Control Forms, and the ABP and Laboratory Documentation Packages/Certificates of Analysis. The Athlete was invited to provide an explanation for the abnormalities detected in his ABP profile pursuant to Article C.5.2 of the ISRM and was informed that any such explanation would be submitted to the Expert Panel for review prior to the bringing of charges.

29. On 13 March 2025, the Athlete, through his appointed counsel, filed his detailed written explanation to the allegations against him, enclosing statements of the Athlete (dated 10 March 2025), [redacted], the Athlete's wife (dated 10 March 2025), [redacted], the Athlete's roommate in June/July 2024 (dated 5 March 2025), and [redacted], the Athlete's coach at the Team Kenya national team camp in June/July 2024 (dated 8 March 2025), together with an expert opinion of Prof. Dr. Stephen J. Brandt,

haematologist and Professor Emeritus of Medicine in the Division of Hematology-Oncology at Vanderbilt University Medical Center in Nashville, Tennessee, USA (dated 12 March 2025), and further references (the "**Initial Explanation**").

30. The Athlete denied having ever taken EPO or engaged in blood doping and advanced a combination of three factors as a plausible explanation for the abnormalities in his Passport. Specifically, he submitted that he suffered an acute COVID-19 infection beginning on 30 June 2024, that he completed a medically prescribed 30-day course of oral iron supplementation ("**OIS**") commencing on 10 May 2024, and that the abnormalities were further influenced by his exposure to and training at altitude in Kenya after his return from a competition in Eugene, Oregon, USA on 25 May 2024.

31. Relying on the expert opinion of Dr. Brandt, the Athlete submitted that each of these factors is recognised in the scientific literature as a potential confounding factor affecting ABP parameters and that, when acting cumulatively, they were capable of producing elevated HGB concentrations and abnormal OFF-scores comparable to those observed in Samples 21- 23. On that basis, the Athlete maintained that this combined physiological explanation constituted a plausible alternative to the hypothesis of the Use of a Prohibited Substance or Prohibited Method.

IV. Review of the Athlete's Initial Explanation by the Expert Panel

32. On 28 May 2025, the Expert Panel, having considered the Athlete's Initial Explanation and the supporting documentation in accordance with Article C.6.1 ISRM, issued a second Joint Expert Opinion reasserting its unanimous opinion of "*Highly Likely Doping*" (the "**Second Joint Expert Opinion**").

33. In the Second Joint Expert Opinion, the Expert Panel concluded *inter alia*:

Infectious illness and samples 22–23

The Athlete reports severe illness starting on June 30, 2024, including anosmia, dysgeusia, fever, and myalgia. […] Sample 22 was collected on July 4, 2024, during the illness; Sample 23 was collected on July 9, 2024. Sample 21 (June 26, 2024) shows an elevated HGB of 16.5 g/dL; therefore, the abnormalities began before the onset of the illness. The scientific literature on hematological abnormalities is extensive, and these abnormalities primarily concern white blood cells of different

types. Erythropoiesis is altered only in severe, long-lasting cases, in which mild anemia, rather than erythrocytosis, with reticulocyte suppression, is observed. Viral infections, including COVID-19, are not known to increase hemoglobin or induce the sequence of high HGB followed by suppressed reticulocyte production. The referenced U-shaped mortality studies on HGB in COVID-19 patients apply to hospitalized individuals, not elite athletes [Kuno et al., 2022; Chen et al., 2020].

No PCR or inflammatory data confirm a diagnosis, and the hematological profile is not characteristic of parvovirus B19 or other marrow-suppressive infections [Young & Brown, 2004]. COVID-19 PCR testing was available in Eldoret, Kenya, in July 2024. Specifically, the Moi Teaching and Referral Hospital (MTRH) in Eldoret offered SARS-CoV-2 (COVID-19) PCR tests at no cost to patients during that time [internet data]. MTRH is approximately 3.5 kilometers from the Eldoret Main Stage, a central point in the town. Training centers, such as the Kipchoge Keino Stadium and the Nike Training Center, are located within Eldoret, and their distances from MTRH are comparable, typically ranging from 3 to 5 kilometers. This proximity means that athletes training in Eldoret have convenient access to MTRH, located 3–4 km away, which offers medical services, including COVID-19 PCR testing, as of July 2024. A test would have been straightforward in the case of a possible COVID-19 infection suspicion, which is crucial for a community of athletes. In other words, the Athlete lived near a COVID-19 PCR testing facility in Eldoret but did not obtain any diagnostic confirmation. COVID-19 was not prevalent in Kenya at that time, and no other runner in Eldoret was reported by the athlete, his expert, or witnesses as being infected.

While the witness accounts add credibility to the illness narrative, they do not explain the hematological sequence and pattern. To sum up the chronology of the events, HGB began to rise prior to the illness on June 26; the illness began on June 30; on July 4, we observed the peak of HGB with initial reticulocyte suppression; on July 9, after the illness, the erythropoietic suppression worsened with the lowest reticulocytes. Thus, the hematological anomalies began at least 5 weeks before the Olympic 10,000 m event, where the Athlete finished fifth, with a personal best of 26:43.98. The peak effect (Sample 22, July 4) is consistent with a post-doping phase, where HGB is maximally elevated, and bone marrow erythropoietic activity is suppressed, making it ideal for performance without detection of the actual substance. The reticulocyte nadir (Sample 23) suggests continued physiological adaptation to the augmented RBC mass, with sustained elevation of the OFF score. This hematological advantage likely persisted into the Olympic period, where the Athlete ran a personal best (26:43.98) and placed fifth, a highly competitive result globally.

Iron supplementation

The Athlete was prescribed oral sodium ferrous citrate 50 mg three times daily for 30 days, beginning on May 10, 2024, due to a borderline low serum ferritin level (32.2 ng/mL) and a low serum iron level (41 µg/dl). Such results, paired with HGB in the high range and normal red cell volume (MCV), were

not indicative of latent or functional iron deficiency and did not mandatorily require iron treatment: the Athlete's iron stores were not exhausted, and his erythropoiesis was not limited in any way by iron availability. However, the supplementation of iron, which is frequently used by athletes even in the absence of iron deficiency and is often used to support exogenous erythropoietic stimulation, ceased around June 10 and was declared on the Doping Control Form of the June 10 test.

Oral iron supplementation is not known to suppress reticulocyte production and is unlikely to cause rapid hemoglobin elevation in a subject without depleted iron stores and efficient erythropoiesis. Even athletes with ferritin levels in the low normal range (as presented by the Athlete) will not experience an increase in the HGB after several weeks of oral iron administration [Garvican et al. 2014] […]

Its gradual and progressive effect in iron-deficient individuals is associated with an increase in reticulocytes. In this Athlete, iron supplementation does not explain an abrupt HGB of 17.2 g/dL and reticulocytopenia with a concurrent OFF-score of 111.1 [Garvican-Lewis et al., 2018; Clénin et al., 2015]. Therefore, this argument is not supported by physiology.

Altitude and training effects

The Athlete trained in Eldoret, Kenya (~2,100 m) throughout June and July. The altitude exposure was continuous, with no recent transitions or return to sea level. Chronic residence at 2000 m is considered the physiological baseline for Kenyan athletes, and when many samples are collected from an altitude resident, the limits of the adaptive model adapt towards these increased HGB values.

Furthermore, Garvican-Lewis et al. (2018) demonstrated that combined iron (IV or oral) and altitude exposure resulted in mild and inconsistent ABP changes, but did not augment the erythropoietic response to altitude.

Dr. Brandt's Expert Opinion

Dr. Brandt attributes the ABP findings to the combined effect of oral iron supplementation, chronic moderate altitude, and viral illness. He relies heavily on speculative mechanisms and misapplies published data. In particular, he cites the study by Kuno et al. (2022) to suggest that elevated HGB may be a result of COVID-19. However, the study investigates mortality risk stratification in hospitalized COVID-19 patients rather than the pathophysiology of hemoglobin elevation and is therefore irrelevant to healthy, ambulatory elite athletes. The reference to Karimi Shahri et al. (2021) review on hematological findings in COVID-19 does not support polycythemia or the OFF-score pattern observed in this profile. The short paragraph this last paper dedicates to erythropoiesis literally reports the following statements: "So far, studies of COVID-19 did not address the role of RBCs in the pathogenesis of the diseases, and only a few limited studies were conducted that considered hemoglobin levels (the main constituent of RBCs). Huang et al. 31 demonstrated that in COVID-19

patients, the increased level of inhibitory cytokines such as interleukin 4 (IL-4) and IL-10 was responsible for the inhibition of erythropoiesis and lymphopenia. In another study by Omrani-Nava et al., they reported that hemoglobin levels were lower in COVID-19 patients than in the control group, although the difference was not statistically significant. In addition, Guo et al. observed that hemoglobin levels were not significantly different in COVID-19 patients with a history of myocardial injury….". No increased HGB is mentioned.

Moreover, Dr. Brandt refers to a Garvican-Lewis et al. (2018) study to support the notion that iron plus altitude could result in ABP flags. In reality, this study documents only mild, physiologically plausible fluctuations and explicitly confirms the robustness of the ABP model. […]. Hence, none of the test subjects exhibited a profile resembling the one seen in this case.

The opinion fails to account for the fundamental ABP principles of sequence, magnitude, and adaptive modeling. It overlooks the high pre-illness increase in HGB, the post-peak reticulocyte suppression, and the elevated OFF scores that characterize an artificial manipulation pattern. In particular, he suggests that the suppressed reticulocyte values during Sample 23 are attributable to infection or recovery; however, such an interpretation disregards the normal-to-high reticulocyte levels during Sample 21 and the subsequent hallmark post-ESA profile.

In summary, Dr. Brandt's conclusions are speculative, misinterpret the cited literature, and do not provide a plausible physiological or pathological alternative to doping. None of the explanations presented by the Athlete account for the observed hematological abnormalities.

We therefore confirm our previous opinion. It is highly likely that a prohibited substance or method was used and highly unlikely that the abnormalities resulted from other causes."

V. Notice of Charge

34. On 10 June 2025, the AIU issued a Notice of Charge to the Athlete. The charge was based on alleged abnormalities in the Athlete's Passport involving Use of a Prohibited Substances and/or Prohibited Method during the period from February 2020 to August 2024, which was said to constitute a breach of Rule 2.2 ADR (the "**Charge**"). The Notice of Charge enclosed the documents on which the AIU relied in support of the Charge.

35. The Notice of Charge also confirmed the imposition of a Provisional Suspension upon the Athlete pending the determination of the Charge for an alleged violation of the ADR and

invited the Athlete to admit the Charge and/or to request a hearing before the Disciplinary Tribunal.

36. On 23 June 2025, the Athlete formally denied the Charge against him and exercised his right to a hearing before the Disciplinary Tribunal.

C. PROCEEDINGS BEFORE THE DISCIPLINARY TRIBUNAL

37. On 9 July 2025, the Chair of the Disciplinary Tribunal, Mr. Charles Hollander KC, appointed Dr. Tanja Haug as Chair of the panel (the "**Chair**") to hear this matter.

38. On 18 July 2025, a preliminary meeting was held via video conference between the Chair and the Parties in accordance with Rule 8.10 2025 ADR. The Parties agreed that the matter should be determined by a panel of three (3) members of the Disciplinary Tribunal. On the same day, the Chair issued procedural Directions, setting the procedural agenda and scheduling the hearing, to be held via video conference, for 18 November 2025, as agreed by the Parties.

39. On 28 July 2025, Mr. Paul-Filip Ciucur and Mr. Parth Goswami were appointed as members of the panel (the "**Panel**") in these proceedings.

40. On 18 August 2025, the Athlete submitted a request to extend the deadline for the Athlete's Answer Brief until 29 September 2025 and to adjust the procedural timetable accordingly.

41. On 20 August 2025, the AIU confirmed that it did not object to the extension requested and the amended timetable proposed.

42. By Directions of 22 August 2025, the requested extension was granted and a new procedural timetable set. The hearing was scheduled for 25 November 2025.

43. On 29 September 2025, the Athlete filed his answer, which incorporated Dr. Brandt's second expert opinion (the "**Answer Brief**").

44. On 31 October 2025, the AIU filed the Reply of World Athletics (the "**WA Reply Brief**").

45. On 7 November 2025, the Athlete submitted a request that the hearing scheduled for 25 November 2025 be vacated due to the unavailability of his Expert Witness, Dr. Brandt. The Athlete also requested an extension of the deadline to file his response to the WA Reply Brief until 14 November 2025. The AIU agreed to vacate the hearing and to extend the deadline as requested.

46. By Directions issued on 7 November 2025, the extension of the deadline was granted.

47. On 12 November 2025, the Athlete filed his "Second Witness Statement" as his response to the WA Reply Brief.

48. On 21 November 2025, the Parties agreed that the hearing would take place on 13 January 2026, and this date was subsequently approved by the Panel.

49. On 13 January 2026, a hearing was held by video conference. The Panel, composed of Dr. Tanja Haug (Chair), Mr. Paul-Filip Ciucur, and Mr. Parth Goswami, was assisted by Ms. Freya Pock, Case Manager at Sport Resolutions. The Panel is very grateful for the excellent support and assistance by Sport Resolutions.

50. The following individuals attended the hearing:

<u>For World Athletics</u>:

a) Mr. Adam Taylor, Counsel
b) Mr. Tony Jackson, AIU Deputy Head of Case Management
c) Prof. Dr. Giuseppe d'Onofrio, Expert Witness
d) Dr. Laura Lewis, Expert Witness

<u>For the Athlete</u>:

a) Mr. Benard Kibet Koech
b) Mr. Samuel Cuthbert, Counsel
c) Mr. Alastair Campbell, Counsel
d) Prof. Dr. Stephen J. Brandt, Expert Witness

e) [redacted], the Athlete's wife, Witness

f) [redacted], the Athlete's coach, Witness

g) Mr. Wataru Ogushi, the Athlete's Agent

51. The Panel is grateful for the highly professional assistance provided by counsel for both Parties and wishes to express its particular appreciation to the Athlete's counsel, who acted on a pro bono basis.

52. At the outset of the hearing, the Parties confirmed that they had no objection to the jurisdiction of the Disciplinary Tribunal and the composition of the Panel.

53. During the hearing, the Athlete gave evidence.

54. The Panel further heard the testimony of [redacted], the Athlete's wife, and [redacted], the Athlete's coach at the Kenya Team training camp before the 2024 Olympics.

55. As proposed by the Panel and agreed by the Parties, expert evidence was given in an Expert Witness Conference. The Conference opened with a presentation from each expert, which was followed by a "hot-tub session", during which all experts were present. At the outset of the hearing, the Panel communicated the general rules governing the conduct of the Expert Witness Conference, which were accepted by the Parties. Counsel for both Parties were given the opportunity to question the experts, with discretion to choose which expert to question on each issue. The experts were also permitted, at any time, to raise points or to put questions to one another.

D. SUBMISSIONS OF THE PARTIES

I. WA's position

56. WA's position as set out in its Brief of 10 June 2025 (which the Notice of Charge stands as), its Reply Brief of 31 October 2025, and its counsel's oral submissions at the hearing may be summarised as follows.

57. The Panel's task is to determine whether it is comfortably satisfied that the Athlete Used a Prohibited Substance or Prohibited Method in violation of Rule 2.2 ADR. While WA acknowledges that the burden of proof remains with WA, ABP cases necessarily rely on expert interpretation of longitudinal blood data and must be assessed on the basis of the totality of the evidence.

a) Consistent CAS jurisprudence confirms that an abnormal ABP does not, in itself, establish an ADRV, but does require a convincing explanation from the athlete. These principles are well established in CAS jurisprudence, including CAS 2010/A/2235 UCI v.T. & OCS, CAS 2016/O/4464 IAAF v. RAF & Ekaterina Sharmina, CAS 2020/A/7509 Evgeny Ustyugov v IBU, and CAS 2023/A/9731 Kenderesi v HUNADO, and are also reflected in *Lewis & Taylor, Sport: Law and Practice*[3].

b) Where a duly constituted expert panel concludes that an ABP profile is consistent with doping, the athlete bears an evidential burden to advance a detailed, specific and objectively credible alternative explanation, supported by evidence. Speculative hypotheses or general possibilities are insufficient. In particular, the athlete must establish both the factual basis of any explanation relied upon and a scientifically credible causal link between that explanation and the ABP abnormalities. Only competent and reliable counter-evidence is capable of displacing a unanimous expert finding of likely doping.

c) The Panel must assess the evidence as a whole, including the ABP data, the qualitative assessment of the Expert Panel, and the Athlete's explanations and supporting evidence. While WA is not required to establish a specific motive or method of doping, the existence of a coherent *doping scenario* - particularly where abnormalities coincide with major competitions - may strengthen the inference of doping. The rejection of one alternative explanation does not oblige the Panel to accept another.

58. The Athlete's Passport constitutes clear and reliable evidence that the Athlete committed an ADRV in breach of Rule 2.2 ADR.

[3] *Lewis, Adam* and *Taylor, Jonathan*, Sport: Law and Practice, 4th edition 2021, page 840.

a) The Athlete's Passport was reviewed in accordance with the ISRM by a panel of highly experienced and independent experts, each of whom regularly provides opinions for multiple APMUs worldwide. Each expert independently reviewed the Passport and concluded that it was "likely doping", following which a joint assessment was conducted, resulting in a unanimous conclusion of "*highly likely doping*".

b) The abnormalities identified in the Passport are neither isolated nor random. They include significant deviations in key haematological parameters, including haemoglobin-related markers and reticulocyte indices, which are consistent with the use or recent cessation of erythropoiesis-stimulating agents ("**ESAs**"), rather than normal physiological variation.

59. The explanations advanced by the Athlete - an alleged COVID-19 infection, altitude exposure, and oral iron supplementation - are unsubstantiated and incapable of explaining the observed abnormalities, whether considered individually or cumulatively.

a) The Athlete has failed to provide credible factual or scientific evidence to substantiate any of these explanations. In particular, the Athlete has not established that he suffered from COVID-19 at the relevant time - no contemporaneous medical diagnosis of COVID-19, no reliable prescription or treatment records were presented. The Athlete has further not provided credible scientific evidence demonstrating a causative link between the asserted confounding factors and the specific ABP abnormalities observed. Even taken at their highest, the explanations do not scientifically account for the Athlete's Passport profile.

b) The Expert Panel carefully examined and systematically rejected each explanation advanced by the Athlete and maintained its opinion of "*highly likely doping*" in the Second Joint Expert Opinion and in its oral testimony.

60. A coherent and plausible *doping scenario* has been established. The Expert Panel correlated the abnormal ABP values with periods of major competition, specifically, the period immediately preceding the Paris 2024 Olympic Games, where the Athlete achieved a Personal Best and finished fifth. This temporal proximity enhances the probative value of the ABP abnormalities.

61. The CAS award in *Jeruto*[4], on which the Athlete relies, concerned an exceptional factual scenario and is materially distinguishable. The case involved strong contemporaneous evidence of possession of COVID-19 medication, a more severe illness occurring during a peak of COVID-19 infections in Kenya, and the absence of a credible doping scenario. None of these features is present in the current case.

62. In light of the totality of the evidence, and in particular the two Joint Expert Opinions, WA submits that the Athlete's Passport constitutes reliable, robust and persuasive evidence of blood doping, the Athlete's explanations do not constitute a reasonable alternative to doping, and that WA has discharged its burden of proof to the standard of comfortable satisfaction required under the ADR.

63. WA requests that the Panel: (i) impose a period of Ineligibility of four (4) years upon the Athlete for an intentional violation of Rule 2.2 ADR; (ii) give credit for the period of Provisional Suspension imposed from 10 June 2025; and (iii) order Disqualification of any results obtained by the Athlete since 26 June 2024, with all resulting Consequences, pursuant to Rule 10.10 ADR.

II. The Athlete's position

64. The Athlete's position, as set out in his Initial Explanation dated 13 March 2025, his Answer Brief dated 29 September 2025, his Second Witness Statement dated 12 November 2025, the expert opinions of Dr. Brandt, as well as his counsel's oral submissions at the hearing, may be summarised as follows.

65. The Athlete denies having committed any ADRV and maintains that he has never used EPO or engaged in blood doping. He contends that the abnormalities identified in his ABP were caused by a combination of physiological, medical, and environmental factors, rather than by the Use of a Prohibited Substance or Prohibited Method.

66. The abnormalities observed in his Passport can be explained by the cumulative effects of (i) an acute COVID-19 infection beginning on 30 June 2024, (ii) a medically prescribed 30-day course of oral iron supplementation ("**OIS**") commencing on 10 May 2024, and (iii)

[4] CAS 2023/A/10180 World Athletics v. Norah Jeruto.

altitude exposure and training in Kenya following his return from competition in Eugene, Oregon, USA on 25 May 2024.

67. In relation to COVID-19, the Athlete states that he became ill on 30 June 2024 after returning from a short visit to his family home, where a family member was suffering from a respiratory illness. He reports experiencing high fever, severe fatigue, muscle and joint pain, sore throat, cough, loss of appetite, and, in particular, loss of taste and smell. He relies on the proposition that anosmia (loss of smell) and dysgeusia (altered taste) are especially predictive of COVID-19 infection and can be considered as 'key symptoms' for the clinical diagnosis of COVID-19, especially in settings with limited testing. Because the Athlete experienced both, he had an almost 200-fold higher risk of having COVID-19 relative to other respiratory infection endemic at the time. The absence of confirmatory testing (PCR test) does not establish that he did not have COVID-19, particularly having regard to the circumstances at the training camp in Eldoret and the medical care available at the time. He also should not be criticised for gaps in medical documentation and deficiencies in medical care that were beyond his control while he was acutely unwell.

68. With respect to OIS, the Athlete explains that while training in Japan in early May 2024 he was experiencing [redacted]. On 8 May 2024, his coach accompanied him to Suematsu Hospital in Fukuoka, where a blood test was conducted. The results showed that his iron level (41) was below the lower limit of the reference range (51-198), and that his ferritin level (32.2 ng/mL) was at the lower end of the reference range (31 – 325 ng/mL). On that basis, he was prescribed sodium ferrous citrate, which he took for a period of 30 days beginning on 10 May 2024. The Athlete emphasises that the supplementation was medically indicated, taken for legitimate health and training purposes, and duly declared on his doping control form. Iron supplementation is commonly recommended for endurance athletes, particularly in preparation for altitude training, and is recognised in the scientific literature as a potential confounding factor capable of affecting ABP parameters.

69. With regard to altitude exposure, the Athlete reported that after a competition on 25 May 2024 in Eugene, Oregon, USA, he returned to altitude in Kenya and resumed training in his hometown Kericho (elevation approx. 2000 m) until 23 June 2024, when he moved to

the Kip Keino Training Camp (the "**Training Camp**") in Eldoret (elevation approx. 2100 m) where the Kenyan national athletics team was preparing for the Olympics.

70. The effects of these factors must be considered in combination, not in isolation. Based on Dr. Brandt's expertise, OIS, altitude exposure, and COVID-19 infection are each capable of influencing erythropoiesis and, when acting cumulatively, can lead to elevated HGB concentrations, suppressed RET%, and abnormal OFF-scores comparable to those observed in Samples 21 - 23. The Expert Panel failed to give adequate consideration to the combined effect of these factors and instead assessed them individually and in isolation.

71. Two urine samples collected from him during the relevant period were negative and the Expert Panel reasoned backwards from the ABP abnormalities to a doping hypothesis.

72. As regards the burden and standard of proof, the Athlete emphasises that, pursuant to Rule 3.1 ADR, the burden of proof rests with WA to establish an ADRV to the Panel's comfortable satisfaction. This burden is not reversed or displaced merely because the Athlete advances an alternative explanation for the ABP abnormalities. Instead, where plausible confounding factors are raised, WA must establish that those factors cannot explain the abnormalities observed.

73. Where the factual record and expert medical evidence provide a coherent and plausible alternative explanation for the ABP findings, the Panel cannot be comfortably satisfied that an ADRV has occurred.

74. WA has failed to establish, on the balance of comfortable satisfaction, that an ADRV has occurred. Any residual scientific uncertainty must be resolved in favour of the Athlete.

75. The Athlete requests that the Panel: (i) decline to find that the Athlete committed an ADRV under Rule 2.2 ADR and dismiss the Charge; and (ii) set aside all other Consequences that have been imposed by the AIU in connection with the alleged violation.

E. APPLICABLE LAW

76. The Athlete was charged on 10 June 2025 with an ADRV based on ABP Samples collected between 26 June and 9 July 2024. Pursuant to Rule 1.7.2 (b) of the 2025 ADR, proceedings initiated after their entry into force in respect of alleged violations occurring earlier are governed, as to substance, by the applicable anti-doping rules at the time of the alleged violation and, as to procedure, by the rules in force at the time of the proceedings, subject to the application of the principle of *lex mitior*.

77. Accordingly, and as accepted by the Parties, the present proceedings are governed by the 2025 ADR in respect of procedural matters, and by the 2024 ADR in respect of substantive matters.

F. JURISDICTION

78. The Disciplinary Tribunal is duly constituted in accordance with Rule 1.3 2025 ADR.

79. Pursuant to Rule 8.2(a) 2025 ADR, the Disciplinary Tribunal has jurisdiction to hear and determine all matters in which an ADRV is asserted by the AIU against an International-Level Athlete. The AIU's responsibility for the Results Management is set out in Rule 7.1.3 2025 ADR.

80. The Athlete has not challenged the application of the ADR, the jurisdiction of the AIU, or the jurisdiction of the Disciplinary Tribunal.

G. BURDEN AND STANDARD OF PROOF

81. WA bears the burden of establishing that an ADRV has been committed, pursuant to Rule 3.1 ADR[5]:

> *"The Integrity Unit or other Anti-Doping Organisation will have the burden of establishing that an anti-doping rule violation has occurred. The standard of proof*

[5] 2024 and 2025 version.

will be whether the Integrity Unit or other Anti-Doping Organisation has established an anti-doping rule violation to the comfortable satisfaction of the hearing panel, bearing in mind the seriousness of the allegation that has been made. This standard of proof in all cases is greater than a mere balance of probability but less than proof beyond a reasonable doubt. Where these Anti-Doping Rules place the burden of proof upon the Athlete or other Person alleged to have committed an anti-doping rule violation to rebut a presumption or establish specified facts or circumstances, except as provided in Rules 3.2.3 and 3.2.4, the standard of proof will be by a balance of probability."

82. Rule 3.2 ADR further provides that an ADRV may be established by "*any reliable means, including admission".* It is well established in CAS jurisprudence and accepted by the Parties that the ABP constitutes such a reliable means.

83. The Panel notes that the Parties differ as to the practical application of the burden of proof in ABP cases, where an athlete advances alternative explanations for the observed abnormalities. The Athlete maintains that the burden of proof rests at all times on WA, while WA submits that, once an ABP profile is assessed by experts as consistent with doping, the athlete bears an evidential burden to advance a sufficiently detailed and credible alternative explanation.

84. The Panel considers that consistent CAS jurisprudence[6] recognises that, in ABP cases, an athlete who relies on alternative physiological or environmental explanations assumes an evidential burden to substantiate both the factual basis of such explanations and their scientific capacity to account for the abnormalities observed.

85. The Panel will assess the evidence in accordance with these principles, bearing in mind that speculative or theoretical possibilities are insufficient, and that the assessment must be conducted on the basis of the totality of the evidence, including ABP data, the expert opinions, and the Athlete's explanations and supporting material.

H. MERITS

[6] See the CAS jurisprudence referenced in paragraph 57a).

86. The Panel has considered the Parties' submissions in their entirety. In setting out its reasoning on the merits below, however, it addresses only those matters it considers necessary for the determination of whether an ADRV has been committed.

87. Before turning to the substantive assessment whether an ADRV has been established, the Panel must first address a procedural issue that arose at the hearing and was discussed by the Parties.

I. Procedural unfairness

88. The Athlete contends that the absence of Dr. Mørkeberg, a member of the Joint Expert Panel, at the hearing resulted in procedural unfairness and undermined the probative value of the expert evidence relied upon by WA. He submits that the unanimous opinions of "*highly likely doping*", issued by the three members of the Expert Panel, form the scientific foundation of WA's case.

89. The Athlete relies on the fact that the two testifying experts, Prof. d'Onofrio and Dr. Lewis, confirmed that Dr. Mørkeberg participated in all stages of drafting the Joint Expert Opinions and that they were unable to identify which aspects of the reasoning were attributable to him. On that basis, the Athlete argues that procedural fairness required Dr. Mørkeberg to be available for cross-examination, and that his absence weakened both the evidential basis of the Joint Expert Opinions and the Athlete's ability to challenge them effectively.

90. WA responds that the absence of Dr. Mørkeberg does not give rise to procedural unfairness and does not diminish the evidential weight of the Joint Expert Opinions. It argues that it is not unusual in ABP proceedings for fewer than all Expert Panel members to testify, and that the two experts who gave evidence were fully competent to explain, defend, and endorse the collective reasoning and conclusions of the Expert Panel. WA further notes that the Athlete has not identified any specific issue, assumption, or conclusion that could only have been addressed by Dr. Mørkeberg.

91. The Panel is not persuaded that Dr. Mørkeberg's non-attendance resulted in procedural unfairness or affected its ability to assess the expert evidence. The Panel notes that the two testifying experts expressly endorsed the Joint Expert Opinions in their entirety and

were able to explain and defend the methodology, assumptions, and conclusions underpinning those opinions, which were subjected to extensive cross-examination and expert discussion.

92. The Panel further observes that the Joint Expert Opinions are collective panel opinions rather than divisible individual analyses. The Athlete did not identify any specific reasoning, factual premise, or scientific conclusion uniquely attributable to Dr. Mørkeberg that could not be addressed by Prof. d'Onofrio or Dr. Lewis. In the absence of any demonstrated concrete prejudice, the Panel is satisfied that the Athlete was not deprived of a fair opportunity to challenge expert evidence.

93. Accordingly, the Panel concludes that the absence of Dr. Mørkeberg neither resulted in procedural unfairness nor affects the weight accorded to the Joint Expert Opinions in the Panel's assessment of the merits.

II. Has the Athlete committed an ADRV?

1. Legal basis

94. The Athlete is charged with an ADRV based on Rule 2.2 ADR:

> ***"2.2 Use or Attempted Use by an Athlete of a Prohibited Substance or a Prohibited Method***
>
> *2.2.1 It is the Athlete's personal duty to ensure that no Prohibited Substance enters their body and that no Prohibited Method is Used. Accordingly, it is not necessary to demonstrate intent, Fault, Negligence or knowing Use on the Athlete's part in order to establish an anti-doping rule violation for Use of a Prohibited Substance or a Prohibited Method.*
>
> *2.2.2 The success or failure of the 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."*

2. Evidence before the Disciplinary Panel

95. The Panel notes the Athlete's consistent denial of having ever Used EPO or engaged in blood doping.

96. However, the Panel observes that, when athletes are confronted with an ADRV, a denial of wrongdoing is frequently encountered in practice, irrespective of whether the violation was knowingly committed. In the Panel's view, no reliable inference can be drawn from a denial alone. Rather, such denial must be assessed, together with all other relevant and admissible evidence, in its overall context, and is ultimately a matter for the Panel's final assessment.

a. ABP Blood Profile

97. The analysis of the Passport by the Expert Panel was *inter alia* that:

a) The Passport is flagged with abnormalities at the 99% level for:

(i) Elevated HGB values for Samples 21 and 22 (above the upper limit)

(ii) Elevated OFF-score for Samples 22 and 23 (above the upper limit)

(iii) Suppressed RET% for Sample 23.

b) The HGB value and OFF-score recorded in Sample 22 are abnormally high outliers, even when the Adaptive Model specificity is set at 99.9% and 99.99 %, respectively.

c) In the context of the HGB trends observed in the Passport between February 2020 and 10 June 2024 (Samples 1 - 20), the anomaly of the high OFF-score outliers recorded in Samples 22 and 23 is outstanding.

d) This distinct and coherent sequence of abnormalities was observed in Samples collected over a period of two weeks, about one month prior to the Athlete's participation in the 2024 Olympic Games.

e) The high OFF-scores in Samples 22 and 23 are consistent with the cessation of ESA use. The most likely doping scenario in the Passport includes ESA stimulation at least in June 2024, which was subsequently stopped before Samples 22 and 23, leading to reticulocyte suppression. Alternatively, the reticulocyte suppression with high HGB

in Samples 22 and 23 could be due to blood transfusion before and/or after the collection of Sample 21.

f) The negative result of the urine analyses for ESA on 10 June 2024 and 26 June 2024 are compatible with several ESA injections in the intermediate period, including prior to Sample 20 with its relatively high reticulocytes. It is well established that negative of urine tests do not exclude recent ESA injections, given the limited half-life of most ESAs in the circulation and the possibility of masking techniques.

g) None of the explanations presented by the Athlete account for the observed haematological abnormalities. It is therefore *highly likely* that a Prohibited Substance or Prohibited Method was used, and highly unlikely that the abnormalities resulted from other causes.

98. In the Expert Witness Conference, Prof. d'Onofrio provided further context to the ABP programme. He explained that the ABP, specifically its haematological module, monitors selected blood markers over time to help detect possible blood doping.

- The two key markers are HGB and reticulocytes. HGB is the molecule in red blood cells responsible for transporting oxygen to body tissues. Oxygen availability regulates HGB levels through a finely tuned biological system: when oxygen levels drop, the body produces erythropoietin (EPO), a hormone that stimulates the bone marrow to produce more red blood cells. Reticulocytes are young red blood cells recently released from the bone marrow (within approximately 24 - 48 hours). Their presence reflects the current production of new red blood cells, while HGB reflects the overall oxygen-carrying capacity of the blood.

- Under normal, healthy conditions, blood composition is very stable. Red blood cells live for about four months, and production simply replaces aging cells. Because of this stability, unusual changes in HGB or reticulocyte levels may indicate external influences, including possible doping.

- The ABP combines HGB and RET% values into a mathematical indicator, the OFF-score. This is not a medical diagnosis, but a screening tool designed to detect abnormal patterns consistent with blood manipulation.

- The system uses an adaptive Bayesian algorithm to establish individualised upper and lower limits for values expected in future samples. These limits are initially based on general population data but progressively adapt to each athlete's own biological profile. HGB and RET% are selected as the primary markers because of their stability and robustness in healthy individuals. A pattern characterised by high HGB combined with suppressed RET% is considered indicative of possible blood doping.

99. Turning to the Athlete's ABP profile, Prof. d'Onofrio emphasised that the interpretation in this case is based not on isolated values, but on the sequence and magnitude of changes observed in Samples 21, 22 and 23. He described a clear rise of HGB in Sample 21, followed by a further rise in Sample 22, which coincided with a marked suppression of reticulocyte and a sharp rise in the OFF-score. This pattern persisted into Sample 23. According to Prof. d'Onofrio, this combination - high HGB together with suppressed reticulocyte production - is typical of the "wash-out" phase following ESA use and is also observed after blood transfusion, but is not consistent with normal physiological responses.

100. Central to the Expert Panel's explanation was the longitudinal assessment of the Athlete's Passport rather than any isolated data point. Prof. d'Onofrio explained that earlier in the Passport there had been an isolated HGB spike without reticulocyte suppression, which, in the absence of a confirming sequence, could not support a finding of doping. By contrast, the recent cluster of Samples 21 - 23 demonstrates a coherent and sustained pattern of abnormalities, which is precisely the type of sequence the ABP is designed to detect.

b. The Athlete's explanations

101. The Athlete and his Expert, Dr. Brandt, acknowledged that the elevated HGB concentration and OFF-scores, as well as the decreased RET% observed in Samples 21 - 23 constitute abnormalities within the meaning of the ABP model.

102. The Athlete relied on the explanation that the abnormalities resulted from the combined effect of OIS, altitude training, and a COVID-19 infection, emphasising that these factors must be considered cumulatively.

(i) Oral iron supplement

103. Dr. Brandt, alleged that OIS constitutes a potential confounding factor in the interpretation of the Athlete's ABP because iron availability is a necessary physiological prerequisite for erythropoiesis. Even in the absence of overt iron deficiency, OIS may increase functional iron availability to the bone marrow and thereby support enhanced red blood cell production. This mechanism is capable of producing ABP-relevant variations in HGB and reticulocyte dynamics, particularly when OIS coincides with other erythropoietic stimuli.

104. The Expert Panel, however, rejected OIS as a relevant confounding factor in the circumstances of this case.

a) OIS is not known to induce reticulocyte suppression and does not cause a rapid or pronounced elevation of HGB in athletes who do not suffer from depleted iron stores and whose erythropoiesis is otherwise efficient.

b) Dr. Lewis further clarified that the scientific literature relied upon by Dr. Brandt does not support the physiological mechanism he proposes. In particular, even athletes with ferritin values in the low-normal range would not be expected to experience a meaningful increase in HGB following several weeks of OIS. Where OIS has a measurable effect, it is typically gradual in nature and is accompanied by an increase, rather than a suppression of reticulocyte production.

c) The Athlete's reported iron indices, when assessed together with elevated HGB values and normal red cell indices, were not indicative of latent or functional iron deficiency. In such circumstances, iron availability was not a limiting factor for erythropoiesis, and OIS cannot account for the ABP variations observed.

d) OIS cannot explain the specific pattern observed in the Passport, namely an abrupt elevation of HGB to 17.2 g/dL combined with reticulocytopenia and a markedly elevated OFF-score. This pattern is inconsistent with known physiological responses to OIS and is not supported by the scientific literature.

e) Finally, Dr. Lewis highlighted during the Expert Witness Conference that, if OIS were capable of producing ABP abnormalities of the nature observed here, comparable patterns would be expected to occur with some frequency across ABPs, given the

widespread and routine use of OIS among endurance athletes. The absence of such patterns in practice further undermines the contention that OIS constitutes a plausible confounding factor in this case.

(ii) Altitude exposure

105. The Athlete further relied on altitude exposure as a confounding factor and contended that training and residing at altitude enhanced erythropoiesis and - in combination with OIS and COVID-19 - contributed to the ABP variations observed.

106. Dr. Brandt, stated the following:

a) Altitude exposure, particularly when combined with OIS, provides a physiologically plausible explanation for the elevated HGB values and associated OFF-scores.

b) Hypoxic exposure is a recognised stimulus for erythropoiesis. Altitude exposure increases erythropoietin production and red blood cell mass and, where iron availability is sufficient, this stimulus may result in elevated HGB concentrations and ABP-relevant fluctuations.

c) The timing of the Athlete's haematological changes is entirely consistent with an effect of (moderate) altitude training enhanced by several weeks of OIS before arriving at altitude.

d) The Garvican-Lewis et al. (2018)[7] study shows that iron supplements and simulated hypoxia can result in ABP parameters or values that fall outside the reference ranges determined by the Adaptive Model. As the participants in this study could not have doped while enrolled, the ones who did show significant abnormalities in their ABP had, by definition, a confounding condition. This is why the study's authors recommended that "altitude training and iron supplementation [...] be carefully considered by experts evaluating abnormal ABP profiles," even absent the additional confounding factor of COVID-19.

[7] Garvican-Lewis, L. A., V. L. Vuong, A. D. Govus, Y. O. Schumacher, D. Hughes, G. Lovell, D. Eichner, and C. J. Gore. 2018. Influence of combined iron supplementation and simulated hypoxia on the haematological module of the athlete biological passport. Drug Test Anal 10: 731-741.

107. The Expert Panel rejected altitude exposure as a plausible confounding factor in the circumstances of this case.

a) The Athlete is a chronic altitude resident who trained continuously in Eldoret, Kenya (approximately 2,100 m) throughout June and July 2024. There was no recent transition from sea level to altitude capable of producing an acute erythropoietic response.

b) Chronic residence at approximately 2,000 m constitutes the physiological baseline for Kenyan athletes. Where multiple samples are collected from an altitude resident, the Adaptive Model progressively adjusts its individual limits to reflect higher baseline HGB values. In this case, altitude exposure was continuous and stable and therefore cannot account for the abrupt and pronounced ABP variations observed.

c) The Garvican-Lewis et al. (2018) study does not support the conclusion Dr. Brandt draws. That study demonstrated only mild and inconsistent ABP changes in response to combined iron supplementation (oral or intravenous) and altitude exposure and explicitly confirmed the robustness of the ABP model. It did not demonstrate an augmentation of the erythropoietic response to altitude capable of producing the magnitude and pattern of abnormalities observed in this case.

(iii) COVID-19 infection

108. The Athlete alleged that he suffered from COVID-19 during the relevant period and that this infection – in combination with the OIS and altitude – was responsible for the abnormal values in his Passport in Samples 21 – 23.

109. Dr. Brandt, relied, in essence, on the following arguments:

a) The latency between exposure (contact to the Athlete's sick family member) and the reported clinical symptoms, including fever, fatigue, cough, and particularly dysgeusia (altered taste) and anosmia (loss of smell) are characteristic of COVID-19 infection.

b) The reported transmission pattern (roommate and friend) also supports an infectious cause.

c) The Athlete's blood count abnormalities are typical of a clinically mild or early COVID-19 infection, relying on the hematological review of Karimi Shahri et al. (2021)[8] , and support the diagnosis and its relevance to the ABP variations.

d) A COVID-19 infection can be associated with erythrocytosis and elevated HGB concentrations. Kuno et al. (2022)[9] have demonstrated that around 6.2 % of COVID-19 patients exhibited HGB values exceeding 16 g/dL, including outside cases of severe disease. While the study addressed mortality risk in hospitalized COVID-19 patients, it did so as a function of HGB concentration. Furthermore, the patients in this study with a HGB higher than 16 g/dl, shared many characteristics with the Athlete as they were younger, more likely to be male, and had fewer comorbidities. The HGB concentrations observed in the Athlete's Samples are therefore compatible with COVID-19 infection.

e) The effects of the Athlete's documented OIS were additive with the effects of COVID-19 infection on the ABP abnormalities in Samples 21-23. Absent iron supplementation, the rise in HGB concentrations and OFF-scores in Samples 21-23 produced by COVID-19 infection would have been attenuated and the resulting values for these red cells markers might even have been within the Athlete's normal range.

110. The Expert Panel opposed this position and argued that Dr. Brandt relies heavily on speculative mechanisms and misapplies published data.

a) The reliance on Kuno et al. (2022) is misplaced, as this study concerns mortality risk stratification in hospitalised COVID-19 patients and does not address the pathophysiology of HGB elevation in healthy, ambulatory elite athletes.

b) Also, the Karimi Shahri et al. (2021) study does not support the presence of polycythaemia or the OFF-score pattern observed in the Athlete's profile. The review does not report increases in HGB in the context relied upon by Dr. Brandt and does not address longitudinal ABP-relevant patterns.

[8] Karimi Shahri, M., H. R. Niazkar, and F. Rad. 2021. COVID-19 and hematology findings based on the current evidences: A puzzle with many missing pieces. Int J Lab Hematol 2021 Apr;43(2): 160-168.

[9] Kuno, T., M. So, M. Takahashi, and N. N. Egorova. 2022. U shape association of hemoglobin level with in-hospital mortality for COVID-19 patients. J Thromb Thrombolysis 2021 Jul 2;53(1): 113-117.

c) None of the studies relied upon by Dr. Brandt describe a haematological profile resembling that of the Athlete. His analysis fails to account for the fundamental ABP principles of sequence, magnitude, and adaptive modelling, and overlooks the high pre-illness haemoglobin values, the subsequent reticulocyte suppression, and the elevated OFF-scores which are indicative of an artificial manipulation pattern.

d) The scientific literature on haematological abnormalities is extensive, and these abnormalities primarily concern white blood cells of different types. Erythropoiesis is altered only in severe, long-lasting cases, in which mild anemia, rather than erythrocytosis, with reticulocyte suppression, is observed. Viral infections, including COVID-19, are not known to increase haemoglobin or induce the sequence of high HGB followed by suppressed reticulocyte production.

e) The explanations given by the Athlete and his expert, Dr. Brandt, do not provide a plausible physiological or pathological alternative to doping.

c. Considerations

111. Considering the disagreements between the Parties and their respective experts, the Panel will address the following issues in the subsections that follow before reaching its conclusion on whether WA has proven, to the Panel's comfortable satisfaction, that the Athlete committed an ADRV in violation of Rule 2.2. ADR.

- Whether abnormalities are present in the Athlete's ABP;
- Whether the Athlete suffered from a COVID-19 infection beginning on 30 June 2024;
- Whether the high HGB observed in Sample 21 can be explained by OIS and altitude training;
- Whether the abnormalities observed in Samples 22 and 23 can be explained by the combination of an alleged COVID-19 infection, OIS and altitude training;
- Whether a doping scenario supports a finding of an ADRV;
- Whether any inference can be drawn from the CAS award in the matter *WA v Jeruto* for the purpose of the present case.

(i) Abnormalities in the Athlete's ABP

112. The Panel is satisfied that the values observed in Samples 21, 22 and 23 constitute haematological abnormalities. It notes the elevated HGB values in Samples 21 and 22, the elevated OFF-score in Samples 22 and 23, and the suppressed RET% in Sample 23. The Panel further observes that the HGB and OFF-score recorded in Sample 22 represent abnormally high outliers, even when the specificity of the Adaptive Model is set at the exceptionally stringent levels of 99.9 % and 99.99 %, respectively, and that these values were interpreted by the Expert Panel as *"highly likely doping"*. The Panel also notes that the Athlete and his Expert, Dr. Brandt acknowledged that these values are to be considered as abnormal.

(ii) Did the Athlete suffer from COVID-19?

113. At the outset, the Panel wishes to emphasise that the present analysis is strictly limited to the question of whether the Athlete suffered from a COVID-19 infection beginning on 30 June 2024, and not whether he may have experienced some other non-specific illness. This distinction is necessary because the Athlete's explanation for the abnormalities in his Passport is expressly founded on the premise that he was affected by COVID-19, and his scientific and medical arguments are constructed on that basis.

114. On the basis of the evidence before it, the Panel is not satisfied, on a balance of probabilities, that the Athlete suffered from COVID-19 during the relevant period. In reaching this conclusion, the Panel has taken into account the following factors.

115. First, the Athlete did not provide any contemporaneous objective medical evidence confirming a COVID-19 infection. In particular, no medical records or PCR test results were presented to substantiate a COVID-19 infection. As submitted by WA and not disputed by the Athlete, PCR testing was readily available in Eldoret in June/July 2024. Notably, the Moi Teaching and Referral Hospital, located not far from the training camp, offered PCR tests at no costs. The Athlete therefore had a clear and feasible opportunity to undergo PCR testing, but failed to do so.

116. Second, despite asserting that he was seriously ill, reporting a body temperature of 40°C, and describing the illness as "*the worst illness I ever had in my life*," the Athlete did not

seek medical treatment from a qualified medical doctor. Instead, he relied exclusively on treatment by [redacted], whom he knew to be a physiotherapist. The Panel notes in this regard that both the Athlete and his coach initially referred to [redacted] as the "*team doctor*" in these proceedings. However, after [redacted] medical qualification was questioned by WA in its Reply Brief, the Athlete clarified in his statement of 12 November 2025: "*the reason I trusted* [redacted] *to treat me is because he was the only medically trained member of the staff at the training camp – he was my best option when I was ill*". The Athlete's coach likewise acknowledged in his testimony that he had always known [redacted] to be one of two physiotherapists with the national team, and that the team's medical doctor was, at the relevant time, in Nairobi with another group of athletes.

117. Having regard to the severity of the illness as described by the Athlete, and to the proximity of the imminent Paris Olympic Games as the pinnacle of the sporting season, the Panel finds it difficult to reconcile why neither the Athlete, nor his coach, nor [redacted] sought medical assessment or treatment from a qualified medical doctor at one of the several hospitals located nearby. This is all the more notably given that the Athlete and [redacted] were driven by the Athlete's coach to the pharmacy at St Luke's Hospital in Eldoret, yet confined their actions to the purchase of medication without any medical consultation.

118. For these reasons, and in light of the undisputed fact that the team's medical doctor was in Nairobi at the time, the Panel does not find the Athlete's argument advanced at the hearing that seeking medical treatment elsewhere would have constituted a breach of camp rules or a refusal to accept [redacted] authority persuasive. This contention is further weakened by the fact that the Athlete's coach did not confirm the existence of any such rule during his testimony.

119. It is undisputed that the medications taken by the Athlete and declared on the doping control form on 4 July 2024 (Panadol, Augmentin, and Amoxicillin) are not medications used to treat COVID-19.

120. The Panel also considers it significant that, despite the alleged severity of the illness and the purported diagnosis of COVID-19, the Athlete did not isolate himself nor take precautions to protect other members of the national team. He did not wear a mask,

continued to share a room with another athlete, took meals in the common dining area, and travelled with the team by bus to Iten on 2 July 2024, initially intending to participate in speed training. Notwithstanding these circumstances, no evidence was presented that any other athlete, apart from his roommate and a visiting friend, became infected.

121. The Panel has nevertheless considered the Athlete's argument that he should not be criticised for the inadequacy of the medical care he received, given that he was unwell at the relevant time. While the Panel accepts that illness may impair an individual's ability to take initiative, it considers that elementary considerations of caution and responsibility aimed at avoiding the potential spread of infection may reasonably be expected of an adult athlete who considers himself to be seriously ill. This is particularly so in the context of a national training camp during the immediate pre-competition phase for elite athletes preparing for a major sporting event. In the Panel's view, the Athlete was well capable of forming such an assessment and of acting accordingly.

122. The Panel is further not persuaded by the coach's assertion that he did not concern himself with medical matters. Given the proximity of the Olympic Games and the collective preparation of the elite athletes at the Training Camp, the Panel considers it implausible that a national coach would not be attentive to the risk of a potentially highly contagious like COVID-19 illness spreading within the team and potentially jeopardising Olympic participation or peak competitive condition.

123. However, the Panel notes these considerations are consistent with the fact that both the Athlete and his coach stated at the hearing that, at the relevant time, they themselves did not consider the illness to be COVID-19, as they believed that COVID-19 "*had gone away*". When questioned on this point at the hearing, the Athlete explained that he only began to consider COVID-19 as a possible explanation after receiving the AIU's notification of the APF, having learned previously that COVID-19 could affect blood values.

124. This account is difficult to reconcile with the Athlete's later assertion that he experienced loss of smell and taste, symptoms upon which Dr. Brandt relied heavily on in concluding that the illness was COVID-19. The Panel considers that, had such hallmark symptoms been present, both the Athlete and his coach would likely have contemplated COVID-19

at the time. Their failure to do so is consistent with Mr. Langat's testimony that the Athlete did not report these symptoms to him during the illness.

125. Moreover, the alleged loss of smell and taste is supported solely by the Athlete's own testimony. The Panel notes that [redacted], who would have been in a position to testify from contemporaneous personal observation, was not called as a witness. The Panel does not accept the Athlete's argument that [redacted] was unreachable. To the contrary, the Athlete confirmed that he spoke with [redacted] as recently as March 2025, and his coach confirmed that [redacted] remains active with the Kenyan national team. Furthermore, evidence submitted by WA indicating that [redacted] practices independently as a physiotherapist in Eldoret was not disputed. In short, the Panel is satisfied that [redacted] remained available, and no plausible reason was provided for his absence as a witness.

126. The Panel further notes that the Athlete did not call either his roommate or the friend whom he claimed to have infected, despite the fact that both could have testified as to their own symptoms and whether they underwent PCR testing.

127. The Panel is therefore not persuaded by Dr. Brandt's conclusion that the reported symptoms clearly indicate COVID-19. His assessment relied predominantly on the alleged loss of smell and taste, the existence of which was not sufficiently established. His further argument that other infections could be ruled out because such infections are rare in summer was convincingly countered by Prof. d'Onofrio at the hearing, who explained that would apply equally for COVID-19, which is known to share a similar seasonal distribution with other respiratory viruses, or at least shows a strong tendency in that direction. Furthermore, the Panel notes that COVID-19 was not prevalent in Kenya in June 2024.

128. The Panel also observes that, according to his own account, the Athlete felt sufficiently recovered by the morning of 2 July 2024, thus after only two days of illness, to travel with the team to Iten and initially plan to undertake speed training. Even though he ultimately refrained from training due to weakness, this account does not align with his description of a severe and debilitating illness.

129. Finally, the Athlete identified a family member as the source of the alleged infection. The Panel observes, however, that the family member was not tested for COVID-19 either,

despite being taken to hospital on 1 July 2024. According to the Athlete's wife's statement, the attending doctor diagnosed an infection accompanied by an allergic reaction and prescribed medication and dietary advice. Neither this diagnosis nor the family member's blood values, which were submitted as evidence, indicate a COVID-19 infection. As the Panel is therefore not persuaded that the family member suffered from COVID-19 and could have transmitted it to the Athlete, it is unnecessary to determine whether the Athlete in fact travelled home on 28 June 2024, a fact disputed by WA on the basis that the Athlete did not update his whereabouts information accordingly.

130. In conclusion, the Panel recalls that it is for the Athlete to substantiate, in response to the abnormalities identified in his ABP, the factual basis of his explanation. This includes establishing, on a balance of probabilities, that he suffered from COVID-19 during the relevant period as a matter of fact. The Panel finds that the Athlete has failed to discharge that burden.

(iii) Can the abnormalities in the Passport be explained by the Athlete's explanations?

131. Even if the Panel were to accept - *quod non* - that the Athlete suffered from a COVID-19 infection, it would remain for the Athlete to demonstrate a clear and credible causal link between the factors and conditions he relied upon and the haematological values observed in his Passport. With this in mind, the Panel examines below whether the combination of COVID-19, OIS, and altitude exposure, as advanced by the Athlete and Dr. Brandt, is capable of explaining both the magnitude and the sequence of the specific haematological values observed in the Athlete's Passport.

(iv) Can the high HGB in Sample 21 be explained by OIS and altitude training?

132. Sample 21 was collected on 26 June 2024, i.e. prior to the onset of the illness later characterised by the Athlete as COVID-19. That alleged infection is therefore incapable of explaining the values observed in Sample 21.

133. The Panel acknowledges that Dr. Brandt accordingly based his explanation for the elevated HGB of 16.5 g/dL observed in Sample 21 solely on the combined effects of OIS and altitude exposure, primarily relying on the study of Garvican-Lewis et al. (2018).

134. In response, the Expert Panel explained that OIS is not known to suppress reticulocyte production and is unlikely to cause a rapid elevation of HGB in an athlete who does not have depleted iron stores and whose erythropoiesis is otherwise efficient. Athletes with ferritin levels in the low-normal range, such as those presented by the Athlete, would not be expected to experience a significant increase in HGB even after several weeks of OIS. Rather, where iron supplementation has an effect, its gradual and progressive influence in iron-deficient individuals is typically associated with an increase, not a decrease, in reticulocyte production. In any event, OIS does not explain an abrupt rise in HGB to 17.2 g/dL accompanied by reticulocytopenia and a concurrent OFF-score of 111.1, as observed later in the Athlete's profile.

135. The Panel further recognises that Dr. Lewis, one of the authors of the Garvican-Lewis et al. (2018) study relied upon by Dr. Brandt, explained in detail and credibly that the study demonstrated that combined iron supplementation (whether intravenous or oral) and altitude exposure resulted only in mild and inconsistent changes in ABP parameters and did not augment the erythropoietic response to altitude. Indeed, the study explicitly confirmed the robustness of the ABP model.

136. Moreover, the Panel notes the Expert Panel's explanation that chronic residence at approximately 2,000 m constitutes the physiological baseline for Kenyan athletes, and that where multiple samples are collected from an altitude resident, the limits of the Adaptive Model adjust accordingly to these higher HGB values. It also considered that the Athlete was not only an altitude resident but had returned to altitude at the end of May 2024, and that his altitude exposure thereafter was uninterrupted, with no recent transitions or return to sea level that could account for a sudden haematological response. The Panel further noted that Dr. Brandt's response in this regard was rather speculative.

137. Finally, during the Expert Conference, two further considerations were raised that reinforced the Expert Panel's opinion and undermined Dr. Brandt's assertion that altitude constituted a relevant confounding factor. First, as pointed out by Dr. Lewis, no comparable fluctuations were observed elsewhere in the Athlete's Passport when he had previously returned to altitude. Second, Dr. Brandt was unable to provide a plausible explanation as to why Sample 20 - collected on 10 June 2024, i.e. at an earlier point

following the Athlete's return to altitude and immediately after the end of the OIS - did not already show a corresponding elevation in HGB.

138. Having considered these arguments, the Panel accepts the Expert Panel's conclusion that Dr. Brandt's argument is not physiologically tenable. Consequently, the Panel finds that the abnormalities observed in Sample 21 cannot be explained by altitude exposure combined with oral iron supplementation as advanced by the Athlete.

(v) Can the abnormalities in Samples 22 and 23 be explained by the combination of an (alleged) mild COVID-19 infection, OIS and altitude training?

139. Sample 22 was collected on 4 July 2024, during the period in which the Athlete alleges that he was suffering from COVID-19. Sample 23 was collected on 9 July 2024, at a point when, according to the Athlete's own account, the illness had already subsided.

140. Before addressing Dr. Brandt's explanation and the Expert Panel's response, the Panel wishes to emphasise that both Parties proceed on the common assumption that, if the Athlete suffered from COVID-19 at all, the infection was at most mild in nature. The Panel therefore assesses the competing explanations on that agreed premise.

141. Dr. Brandt attributed the abnormalities observed in Samples 22 and 23 to the combined effects of OIS, chronic moderate altitude exposure, and viral illness, submitting that the haematological effects of COVID-19 were amplified by the Athlete's altitude exposure and prior iron supplementation. In support of this position, he relied in particular on the studies by Kuno et al. (2022) and Karimi Shari et al. (2021).

142. The Expert Panel unequivocally rejected this explanation, stating that Dr. Brandt's opinion relies on speculative mechanisms and a misapplication of the scientific literature.

143. In relation to the study by Kuno et al. (2022), which primarily investigates mortality risk stratification in hospitalised COVID-19 patients rather than pathophysiology of HGB regulation, the Expert Panel questioned its relevance to the present case involving a healthy, ambulatory elite athlete. Prof. d'Onofrio emphasised that the Kuno et al. (2022) study population consisted exclusively of patients suffering from severe COVID-19

infections, which stands in clear contrast to the undisputed characterisation of the Athlete's illness as mild. Only approximately 6% of patients in that cohort exhibited elevated HGB values, a proportion which is not to be considered as not persuasive. Moreover, HGB levels exceeding 16 g/dL are not uncommon in male individuals and cannot, in themselves, be regarded as exceptional.

144. While Dr. Brandt acknowledged that the study population differs from healthy, ambulatory elite athletes, he nonetheless argues that this does not render the findings irrelevant. He contended that the study demonstrates that COVID-19 can be associated with clinically significant erythrocytosis and that elevated HGB values comparable to those observed in the Athlete are therefore not implausible.

145. The Panel is not persuaded by Dr. Brandt's reasoning. In the Panel's view, the comparison is fundamentally flawed, as the physiological circumstances of severely ill, hospitalized patients cannot be meaningfully equated with those of a healthy, high-performance endurance athlete. The severity of illness, clinical context, and underlying physiological responses differ substantially. Accordingly, the Panel finds that the Kuno et al. (2022) study does not support Dr. Brandt's contention that the abnormalities observed in Samples 22 and 23 can be attributed to a mild COVID-19 infection, whether alone or in combination with altitude exposure and OIS.

146. With respect to the review by Karimi Shahri et al. (2021), the Expert Panel explains that the publication does not support the hematological pattern observed in the Athlete's Passport. The review does not report erythrocytosis, polycythaemia, or OFF-score patterns comparable to those seen in this case, nor does it address longitudinal ABP-relevant profiles.

147. The Panel further notes that, during the Expert Witness Conference, Dr. Brandt accepted that there is no scientific evidence demonstrating how a mild COVID-19 infection affects haemoglobin values in healthy athletes, and that this concession significantly undermines his reliance on COVID-19 as a causal explanation for the abnormalities observed in the Passport.

148. The Panel, having considered the arguments presented, is not satisfied that the explanations relied upon by the Athlete - whether individually or in combination - provide

a plausible physiological or pathological explanation for the sequence, magnitude, and timing of the abnormalities observed in Samples 22 and 23.

(vi) Does a doping scenario support an ADRV finding?

149. The Panel accepts that the Expert Panel identified a coherent and internally consistent doping scenario capable of explaining both the haematological pattern and the timing of the abnormalities observed in Samples 21 - 23. In particular, the combination of elevated HGB values with suppressed RET%, resulting in markedly increased OFF-scores, represents a pattern classically associated with blood manipulation, including the "OFF-phase" following cessation of ESA use. The temporal proximity of this abnormal sequence to the Paris 2024 Olympic Games further reinforces this interpretation, as the timing is consistent with achieving a performance benefit during the final preparation phase and maintaining residual effects into the Games, while reducing the risk of detection close to competition.

150. While WA is not required to establish a specific motive or method, the Panel considers that the existence of such a coherent doping scenario materially strengthens the inference that the observed abnormalities are attributable to doping rather than physiological or environmental factors.

151. In this context, the Panel has also considered the role of the Athlete's OIS. While the Expert Panel explained that iron supplementation may, in some circumstances, be used to support erythropoietic stimulation and could therefore be compatible with a doping scenario, the Panel is not prepared to conclude that the Athlete's OIS in May/June 2024 was undertaken for a doping-related purpose. The Athlete produced contemporaneous documentation of the prescription following laboratory testing, and although the reported values did not demonstrate iron deficiency, the Panel accepts - consistent with the evidence of both Dr. Lewis and Dr. Brandt - that the use of OIS in athletes with low or borderline-normal iron indices is not uncommon in elite endurance sport.

(vii) Jeruto case

152. The Panel does not consider the CAS award in *Jeruto* (CAS 2023/A/10180 World Athletics v. Norah Jeruto) to be relevant for the determination of the present case. As a preliminary

matter, the Panel recalls that CAS jurisprudence is not binding and that there is no doctrine of binding precedent; each case must be decided on its own facts. The factual matrix in *Jeruto* differs materially from the present proceedings in several decisive respects. In *Jeruto*, the alleged COVID-19 infection occurred at a peak phase of the pandemic, when diagnostic testing in Kenya was not routinely available. Ms. Jeruto provided contemporaneous photographic and corroborating evidence of possession of Rhinathiol, which was accepted as the primary medication used to treat COVID-19 at that time. Moreover, the CAS panel accepted that Ms. Jeruto suffered a moderate to serious COVID-19 infection, explicitly noting that the potential haematological effects of COVID-19 were considered only in cases of sufficient severity. The absence of a positive test was excused precisely because testing was not readily available, and the panel further emphasised the absence of a credible and specific doping scenario. By contrast, the present case concerns, at most, a mild COVID-19 infection, occurred at a time when PCR testing was easily available, is unsupported by comparable contemporaneous medical evidence, and arises in a context where a coherent doping scenario was identified by the Expert Panel. For these reasons, the Panel accepts WA's submission that *Jeruto* represents an exceptional case based on distinct elements that are not present here and therefore cannot influence the outcome of the present proceedings.

3. Conclusion

153. Having reviewed and considered carefully the totality of the Parties' evidence, the Panel is comfortably satisfied that WA has discharged its burden of proof and established that the Athlete has committed an ADRV. In the Panel's view, the Athlete's ABP profile, interpreted in light of the Expert Panel's unanimous opinions and the longitudinal analysis of the haematological data, demonstrates abnormalities that are more likely than not attributable to blood manipulation rather than to the physiological or environmental factors advanced by the Athlete.

154. In reaching this conclusion, the Panel places decisive weight on the Expert Panel's clear, consistent, and evidence-based assessment of the sequence, magnitude, and timing of the abnormalities observed. By contrast, the explanations advanced by the Athlete rely

on general medical propositions and theoretical possibilities that are not supported by a demonstrated causal link to the specific values recorded in the Passport. When tested during the Expert Witness Conference, these explanations increasingly required recourse to speculative assumptions rather than verifiable physiological mechanisms capable of explaining the observed ABP profile. Assessed against the applicable burden of proof, the Athlete's explanations therefore remain speculative and do not provide a sufficiently concrete or plausible alternative to doping.

155. WA was not required to establish the precise method of blood manipulation or to prove intent to cheat. It was sufficient for WA to establish, to the Panel's comfortable satisfaction, that the abnormalities observed in the Athlete's ABP are consistent with the Use of a Prohibited Substance or Prohibited Method and cannot be satisfactorily explained by permissible causes. That standard has been met.

156. Accordingly, the Panel is comfortably satisfied that the Athlete committed an ADRV in breach of Rule 2.2 ADR.

III. Consequences for the ADRV

1. Period of Ineligibility

157. Having found that the Athlete has committed an ADRV, the Panel must now decide what is the appropriate sanction that should be imposed.

158. Rule 10.2 ADR provides:

> *"**10.2 Ineligibility for Presence, Use or Attempted Use, or Possession of a Prohibited Substance or Prohibited Method***
>
> *The period of Ineligibility for a violation of Rule 2.1, Rule 2.2 or Rule 2.6 will be as follows, subject to potential elimination, reduction or suspension pursuant to Rules 10.5, 10.6 and/or 10.7:*
>
> *10.2.1 Save where Rule 10.2.4 applies, the period of Ineligibility shall be four years where:*

(a) The anti-doping rule violation does not involve a Specified Substance or a Specified Method, unless the Athlete or other Person can establish that the anti-doping rule violation was not intentional.

[…]"

159. WA submits that the Athlete has failed to meet his burden to establish that his ADRV was not intentional, and in any event that any form of blood manipulation is necessarily intentional. The fact that blood can only be manipulated intentionally due to its form of administration by injection or blood withdrawal is also recognised in various arbitral decisions[10] and the Panel agrees.

2. Commencement of the period of Ineligibility

160. WA requests that, in accordance with Rule 10.13 ADR, the period of Ineligibility should commence on the date of the Panel's award. However, WA accepts that the Athlete may gain credit for the period of Provisional Suspension served since 10 June 2025 against the period of Ineligibility imposed, pursuant to Rule 10.13.2(a) ADR, provided it has been effectively served.

161. The Panel has no evidence on the record that the suspension has not been served by the Athlete. Therefore, in accordance with Rule 10.13.2(a) ADR, the four-year period of Ineligibility shall run from 10 June 2025, and end on 9 June 2029.

3. Disqualification of Results and Other Consequences

162. WA has requested that, pursuant to Rule 10.10 ADR, the Athlete's competitive results from 26 June 2024 (the date of collection of Sample 21) to 10 June 2025 (the date of his Provisional Suspension) should be Disqualified.

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[10] See e.g., CAS 2020/A/7377 El Mahjoub Dazza v WA, the Panel concluded that since "*the use of erythropoietic stimulant (rEPO) or a blood transfusion can exclusively be done by injections, the ADRV at hand has, in the Panel's view, to be considered as having been committed intentionally"* (para 94).

163. Rule 10.10 ADR provides as follows:

> *"In addition to the automatic Disqualification of the results in the Competition that produced the positive Sample under Rule 9, all other competitive results obtained by the Athlete from the date a positive Sample was collected (whether In-Competition or Out-of-Competition) or other anti-doping rule violation occurred through the commencement of any Provisional Suspension or Ineligibility period, will, unless fairness requires otherwise, be Disqualified with all of the resulting Consequences including forfeiture of any medals, titles, points, prize money, and prizes."*

164. The first evidence of an ADRV in the Passport is Sample 21. The Athlete has not put forward any argument to prove to the Panel's satisfaction that fairness would require that not all of his results since the date of the collection of Sample 21 be Disqualified.

165. Consequently, the Athlete's results from 26 June 2024 to 10 June 2025 will be Disqualified with all of the resulting Consequences.

4. Costs

166. No request for costs was made by either Party.

167. Costs are a matter for the Panel's discretion, pursuant to Rule 8.9.1(j) ADR, taking into account the principle of proportionality, in accordance with Rule 10.12.1 ADR. In the absence of any request for costs, the Panel makes no order as to costs and directs that each party shall bear its own costs.

I. ORDER

168. For the reasons set out above, the Panel rules the following:

1. The Disciplinary Tribunal has jurisdiction to decide on the subject matter of this dispute.

2. The Athlete has committed an ADRV pursuant to Rule 2.2 ADR.

3. A period of Ineligibility of four (4) years is imposed upon the Athlete for the ADRV, commencing on the date of the Disciplinary Tribunal's Award.

4. The period of Provisional Suspension imposed on the Athlete from 10 June 2025 until the date of this decision shall be credited against the total period of Ineligibility.

5. All competitive results obtained by the Athlete from 26 June 2024 to 10 June 2025 shall be Disqualified with all resulting Consequences, including forfeiture of any titles, prizes, medals, points and prize and appearance money, pursuant to Rule 10.10 ADR.

6. Each party shall bear its own legal costs and expenses incurred in connection with these proceedings.

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

J. RIGHT OF APPEAL

169. This decision may be appealed to the Court of Arbitration in Sport ("CAS"), located at Palais de Beaulieu, Av. des Bergières 10, CH-1004 Lausanne, Switzerland (procedures@tas-cas.org), in accordance with Rule 13 2025 ADR.

170. In accordance with Rule 13.6.1(a) 2025 ADR, the deadline for filing an appeal with the CAS is 30 days from the date of receipt of this decision.

Dr. Tanja Haug

Paul-Filip Ciucur

Parth Goswami

On behalf of the Disciplinary Tribunal
London, UK
29 January 2026