2024/ADD/96 International Weightlifting Federation (IWF) v. Xiaojun Lyu

ARBITRAL AWARD

delivered by the

ANTI-DOPING DIVISION
OF THE COURT OF ARBITRATION FOR SPORT

sitting in the following composition:

Sole Arbitrator: Mr Markus Manninen, Attorney-at-Law in Helsinki, Finland

in the arbitration between

International Weightlifting Federation (IWF), Switzerland

Represented by the International Testing Agency (ITA), Lausanne, Switzerland, appearing through Mr Nicolas Zbinden, Attorney-at-Law, and Ms Louise Reilly SC, Barrister, Kellerhals Carrard, Lausanne, Switzerland

Claimant

and

Mr Xiaojun Lyu, China

Represented by Mr Mike Morgan, Mr Tom Seamer, Mr Richard Martin, and Ms Ellen Kerr, Morgan Sports Law, London, United Kingdom, and Ms Julie Xie, Grandall Law Firm, Tianjin, China

Respondent

I. PARTIES

1. The International Weightlifting Federation ("IWF" or the "Claimant"), headquartered in Lausanne, Switzerland, is the world governing body for the sport of weightlifting.

2. Mr Xiaojun Lyu (the "Athlete" or the "Respondent") is a Chinese weightlifter born in 1984. He has competed, inter alia, in the Tokyo 2020 Summer Olympics and the 2019 IWF World Cup and is a three-time Olympic gold medallist.

3. The Claimant and the Respondent are hereinafter referred to as the "Parties" and individually as a "Party".

II. FACTUAL BACKGROUND

4. Below is a summary of the relevant facts and allegations based on the Parties' written submissions, pleadings, and evidence adduced in this procedure. Additional facts and allegations found in the Parties' written submissions, pleadings, and evidence may be set out, where relevant, in connection with the legal discussion that follows. While the Sole Arbitrator has considered all the facts, allegations, legal arguments, and evidence submitted by the Parties in the present proceedings, he only refers to the submissions and evidence he considers necessary to explain his reasoning.

5. On 30 October 2022, the Athlete was the target of an out-of-competition doping control, where urine samples no. A-3172752 (the "A Sample") and B-3172752 (the "B Sample") were collected from him (the A Sample and the B Sample together referred to as the "Sample").

6. The analysis of the A Sample was conducted by the World Anti-Doping Agency ("WADA") accredited laboratory in Beijing, China (the "Laboratory").

7. On 14 November 2022, the Laboratory sent an e-mail to WADA noting that *"Here's an IWF sample which was found suspicious of quite low concentration of rEPO."* On the same day, WADA instructed the Laboratory to *"seek second opinion and advice when received. Do not report."*

8. On 15 November 2022, the Laboratory replied that *"Considering the low concentration of rEPO in SAR-PAGE and SDS-PAGE, we went for IEF-PAGE as additional evidence. We'll seek for second opinion as soon as the IEF result is obtained."*

9. On 16 November 2022, a second opinion was requested from Dr Yvette Dehnes of the WADA-accredited Norwegian Doping Control Laboratory of the Oslo University Hospital.

10. On 27 November 2022, Dr Dehnes provided her second opinion. She submitted that *"The initial testing analysis by SAR-PAGE shows a faint smear above the endogenous erythropoietin (EPO)-band, different from what is expected to be seen in samples containing solely endogenous EPO. The confirmation analysis by SDS-PAGE and single-blotting shows the presence of a diffuse signal (smear) above the endogenous EPO-band and stretching above the Dynepo-reference line (lane 4). This is typical for the presence of a combination of recombinant and endogenous EPO, as seen in the positive control samples (lanes 2 and 3), and different from the mobility of endogenous EPO, as seen in the negative control sample (lane 5). The additional IEF-PAGE analysis shows an isoelectric profile where the two most intense bands are in the basic area, as seen in the positive control samples (lanes 5 and 6) and different from the negative control sample (lane 3), supporting the SDS-PAGE results.*" After describing her interpretation of the analyses, she concluded that *"As the sample complies with the identification criteria described in TD2022EPO, it is justified to conclude that sample 22K02034 contains recombinant EPO."*

11. On the same day, the Laboratory sent an e-mail to WADA noting that Dr Dehnes *"has replied her Second Opinion to us. Please see in the attachment. There's also a concern of B confirmation repeatability from both*

[Dr Dehnes] and myself: the signal of rEPO in ITP of SAR-PAGE and CP of SDS-PAGE is really weak. The IEF-PAGE in this case is more definitive though, but it is just an 'additional evidence' defined in TD." Still on the same day, WADA replied that *"The observation about the weak signal is noted, but the second opinion looks conclusive. Please advise when reported."*

12. On 30 November 2022, the Laboratory issued a test report according to which the analysis of the A Sample has shown the presence of recombinant erythropoietin ("rEPO"), which belongs to the peptide hormones, growth factors, related substances, and mimetics prohibited under S2 of the WADA Prohibited List, 2022 edition.

13. On 20 December 2022, the ITA, on behalf of the IWF, informed the Athlete of the adverse analytical finding ("AAF") and imposed a provisional suspension with immediate effect. The Athlete was invited to provide a first explanation of the AAF and was given the possibility to request the opening of the B Sample.

14. On 30 December 2022, the Chinese Weightlifting Federation's Anti-Doping Department forwarded the Athlete's challenge of the AAF and his request for the opening of the B sample to the ITA.

15. On 9 January 2023, the B Sample was opened at the Laboratory, in the presence of the Athlete and his representative. The Laboratory concluded that *"The band of sample B3172752 shows a diffuse area above the corresponding band for endogenous EPO on the SDS-PAGE gel. Therefore, the presence of recombinant EPO is confirmed according to the current WADA TD EPO. Meanwhile, a second opinion for this sample shall be requested."*

16. On 12 January 2023, Dr Dehnes issued her second opinion regarding the B Sample. She concluded that *"The confirmation analysis by SDS-PAGE and single-blotting shows the presence of a diffuse signal above the endogenous EPO-band, stretching above the Dynepo-reference line (lane 4). This is typical for the presence of a combination of recombinant and endogenous EPO, as seen in the positive control samples (lanes 2 and 3), and different from the mobility of endogenous EPO, as seen in the negative control sample (lane 5)."*

17. On 16 January 2023, the Laboratory issued a test report according to which the analysis of the B Sample showed the presence of rEPO.

18. On 10 February 2023, the ITA informed the Athlete that the analysis of the B Sample had confirmed the AAF for rEPO and that, accordingly, the Athlete was charged with a violation of Article 2.1 and/or 2.2 of the 2021 IWF Anti-Doping Rules ("IWF ADR").

19. On 28 February 2023, the Athlete submitted a first statement to the notice of charge (the "First Statement").

20. On 16 May 2023, a further statement by the Athlete (the "Second Statement") was submitted together with an expert report dated 14 May 2023 by Mr Ihar Nekrashevich and an expert report dated 15 May 2023 by Dr D.Y. Chen. In his expert report, Mr Nekrashevich states that rEPO should not have been reported as present in either the A Sample or the B Sample. He notes, among other issues, that although there is a diffuse or faint area of the band above the corresponding endogenous band, *"the diffuse/faint area of a band associated with an athlete sample which extends beyond the Dynepo Line is less prominent than that for the associated Negative Control Sample"* and, therefore, *"such extension is to be tolerated, and deemed not to satisfy this second limb of the Dynepo Criterion."* In Dr Chen's expert report, he confirms that he agrees with the conclusions presented in the expert report of Mr Nekrashevich.

21. On 8 August 2023, the Athlete referred the ITA to two publicly available expert reports from anti-doping proceedings against Mr Peter Bol, suggesting parallels to his own case.

22. On 8 September 2023, in response to the Athlete's Second Statement and correspondence dated 8 August 2023, the ITA informed the Athlete that his case would be referred to the Anti-Doping Division of the Court of Arbitration for Sport ("ADD") for adjudication.

III. PROCEEDINGS BEFORE THE COURT OF ARBITRATION FOR SPORT

23. On 8 May 2024, the Claimant filed with the ADD a Request for Arbitration (the "Request for Arbitration") in accordance with Article 8 of the IWF ADR 2024 (in force as of 1 January 2024) and Article A13 of the Arbitration Rules applicable to the CAS Anti-Doping Division (2021 edition, the "ADD Rules"). The Request for Arbitration was accompanied with two expert reports, one from Dr Dehnes and one from Dr Naud. In the Request for Arbitration, the IWF waived its right to appoint a sole arbitrator by mutual agreement pursuant to Article A16 of the ADD Rules.

24. On 13 May 2024, the ADD invited the Respondent to file with the ADD an Answer to the Request for Arbitration (the "Answer"). The ADD also invited the Parties to liaise with each other with the aim of reaching an agreement on the appointment of the sole arbitrator in the matter.

25. On 13 May 2024, the ADD also informed WADA of the Request for Arbitration pursuant to Article A14 of the ADD Rules and provided WADA with an opportunity to file an application to participate as a party in the arbitration.

26. On 14 May 2024, WADA responded that it did not wish to participate in the arbitration.

27. On 28 May 2024, the ADD informed the Parties that since they had failed to jointly nominate a sole arbitrator, the sole arbitrator would be appointed by the President of the ADD in accordance with Article A16 of the ADD Rules.

28. On 31 May 2024, the ADD informed the Parties that Mr Markus Manninen, Attorney-at-Law, Helsinki, Finland, had been appointed by the President of the ADD to act as the sole arbitrator (the "Sole Arbitrator") in the present matter.

29. On 2 September 2024, the Respondent filed "Requests for Information and Documentation" ("Document Production Request") where he requested that the Claimant provide (1) all correspondence between WADA and the Laboratory relating to the Sample, as well as (2) certain images referred to in the letter from Dr Dehnes to the ITA dated 26 January 2024.

30. On 3 September 2024, the ADD invited the Claimant to comment on the Document Production Request and/or to produce the requested materials by 10 September 2024.

31. On 10 September 2024, the Claimant filed its response to the Document Production Request, requesting that the requests made therein be denied.

32. On 11 September 2024, the Respondent filed a response to the Claimant's response to the Document Production Request.

33. On 18 September 2024, the Claimant filed its reply to the Respondent's letter of 11 September 2024, where the Claimant maintained its request for the Sole Arbitrator to reject the Document Production Request.

34. On 20 September 2024, the ADD, on behalf of the Sole Arbitrator, informed the Parties of the Sole Arbitrator's decision regarding the Document Production Request. Based on the grounds presented in the ADD's letter, the Sole Arbitrator: (1) ordered the Claimant to provide the ADD with the two e-mail chains parts of which are copied on p. 37 of the laboratory documentation package ("LDP")

of the A Sample with subjects: *"RE: Re:RE: RE: Suspicious rEPO case uploaded in Sharefile"* and *"RE: Leo Zhang Has Created a New Item in ShareFile"*; and (2) dismissed the Respondent's request as regards certain images referred to in a letter from Dr Dehnes to the ITA dated 26 January 2024.

35. On 3 October 2024, the Claimant filed the relevant e-mail chains in compliance with the Sole Arbitrator's document production order of 20 September 2024.

36. On 13 November 2024, and further to several granted extensions of time, the Respondent filed his Answer.

37. On 13 November 2024, the Respondent submitted a challenge to WADA pursuant to Article 3.2.1 of the IWF ADR regarding the analytical method used to generate/report the AAF of the Sample.

38. On 14 November 2024, the ADD invited the Parties to state whether they considered an oral hearing necessary in the proceedings.

39. On 19 November 2024, WADA requested a full case file from the ITA.

40. On 29 November 2024, the Claimant noted that the Respondent had on 13 November 2024 submitted a challenge to WADA. The Claimant further noted that WADA had requested a full case file from the ITA on 19 November 2024 and that the case file had been transferred to WADA on 29 November 2024. The Claimant further noted that as per Article 3.2.1 of the IWF ADR, WADA has a right to intervene as a party, appear as *amicus curiae*, or otherwise provide evidence in the proceedings within ten days of receiving the case file. Based on this, the Claimant requested that the Parties would be allowed to comment on the next steps of the proceedings upon WADA's input or the expiry of the deadline for WADA's action.

41. On 9 December 2024, WADA submitted a letter as *amicus curiae* in support of the Claimant, expressing that it agrees on the position of the Claimant and the opinions provided by Dr Dehnes and Dr Naud. WADA stated that it "*finds that the Respondent's experts misinterpreted the identification criteria when providing their opinion. Namely, there is no diffuse band/smear, in the negative QC, migrating beyond the apex of the Dynepo band which serves as a reference for determining the gel migration pattern of recombinant EPO (rEPO) and represented by the blue line. The SDS-/SAR-PAGE identification criteria for rEPO includes not only the migration beyond this reference line, but also that the rEPO band is a diffuse (smear) band, which is not characteristic of endogenous EPO. To be positive for rEPO, the band smear has to extend beyond this reference line, which it clearly does in this case. Whether the rEPO signal is strong or weak depends on many factors (dosage, frequency and time of sample collection from last administration) and is irrelevant (except for the risk of substance degradation during storage) for a substance that is classified as a non-threshold substance with no associated minimum reporting level (MRL). Therefore, the laboratory correctly reported the finding as an Adverse Analytical Finding.*"

42. On 16 December 2024, the Claimant requested that a hearing be held in the matter and submitted that it did not consider further written submissions necessary. On the same day, the Athlete informed the ADD that it did not consider further written submissions or a hearing necessary in the matter.

43. On 17 December 2024, the Sole Arbitrator decided to hold a one-day hearing in the matter.

44. On 23 January 2025, the ADD sent the Parties a letter setting the hearing for 2 April 2025.

45. On 20 March 2025, the ADD sent the Order of Procedure to the Parties for their signatures.

46. On 24 March 2025, the Claimant signed and returned the Order of Procedure to the ADD.

47. On 27 March 2025, the Respondent signed and returned the Order of Procedure to the ADD with slight revisions.

48. On 1 April 2025, the Claimant submitted a copy of a recent CAS award, noting that it may refer to it in the hearing.

49. On 2 April 2025, the hearing was held by video conference. The Sole Arbitrator was assisted by Mr Fabien Cagneux, Managing Counsel of the ADD, and joined by the following:

For the Claimant:

- Mr Nicolas Zbinden, counsel for the Claimant
- Ms Louise Reilly SC, counsel for the Claimant
- Dr Yvette Dehnes, expert witness
- Dr Jean-François Naud, expert witness

For the Respondent:

- Mr Xiaojun Lyu, the Athlete
- Mr Mike Morgan, counsel for the Respondent
- Mr Tom Seamer, counsel for the Respondent
- Mr Richard Martin, counsel for the Respondent
- Ms Ellen Kerr, counsel for the Respondent
- Ms Julie Xie, counsel for the Respondent
- Xue Leng, official for the Tianjin Sport Bureau
- Mr Ihar Nekrashevich, expert witness
- Dr David Chen, expert witness
- Ms Yue Wang, interpreter for the Respondent
- Ms Feng Zhang, interpreter for the Respondent

50. At the end of the hearing, the Parties confirmed that their right to plead their cases had been respected and that they had been treated equally.

IV. SUBMISSIONS OF THE PARTIES

A. The Claimant

51. The IWF's submissions, in essence, may be summarised as follows:

ADRV – presence of a prohibited substance

- Pursuant to Article 2.1.1 of the IWF ADR, it is each athlete's personal duty to ensure that no prohibited substance enters their body. Athletes are responsible for any prohibited substance or its metabolites or markers found to be present in their sample. The presence of a prohibited substance or its metabolites or markers constitutes an anti-doping rule violation ("ADRV"). According to Article 2.1.2 of the IWF ADR, sufficient proof of an ADRV under Article 2.1 of the IWF ADR is established, inter alia, where the athlete's B sample is analysed and confirms the presence of the prohibited substance or its metabolites or markers found in the athlete's A sample.

- A sample collected from the Athlete on 30 October 2022 returned an AAF for rEPO. The analysis of the B Sample conducted on 9 January 2023 in the Laboratory, in the presence of the Athlete and his representative, confirmed the A Sample's finding.

- The identification of rEPO and other EPO-receptor agonists (ERAs) is described in the WADA Technical Document – TD2022EPO ("TD2022EPO"), whose purpose is to "*harmonize the detection and reporting of erythropoietin (EPO) and other EPO-receptor agonists (ERAs) by Laboratories when analyzed using polyacrylamide gel-electrophoretic (PAGE) Analytical Methods*".

- The TD2022EPO distinguishes between an analysis using an IEF-PAGE, or a SAR- or SDS-PAGE instrument. Where a SAR-PAGE instrument is involved (as in the present case), the TD2022EPO explains that "*ERAs can be distinguished from endogenous EPO (uEPO, bEPO) based on their characteristic band shape and different apparent molecular mass. The migration behaviour (band) of each ERA, i.e., its position and shape (width, focused or more diffused) can be used to confirm the identity and/or exogenous origin of the substance. The position of the band apex (as determined by the lane profile plot retrieved in the image processing software) or the boundaries of the width of the band can be used to ascertain that its position and shape differs from the position of endogenous EPO run in parallel (…).*"

- The TD2022EPO adds that *"the following identification criteria define the requisites that the SAR- or SDS-PAGE image from the CP shall fulfil to consider an AAF for the presence of ERAs with a structure related to EPO (rEPO, NESP, CERA, EPO-Fc): (…) b. Mixed Bands from Different ERA(s) Detected*

  - In the case of rEPO, a mixed band consisting of endogenous EPO (uEPO, bEPO) and rEPO not completely resolved can be detected: the band shape resembles that of the rEPO plus parts of the total of the uEPO/bEPO band;

  - A diffuse or faint area of the band above the corresponding endogenous band, which extends beyond the band apex of Epoetin-δ (Dynepo), is also indicative for the presence of epoetin-a and -β (Fig. 4 and 5).

  - A mixed band will change depending on the relative amount of rEPO and uEPO present in the Sample, as happens at different times after rEPO administration (Fig. 4 and 5)."

- In the present case, both the Athlete's A Sample and B Sample were found to meet the identification criteria for rEPO, because a smear could be observed above the Dynepo band. This is not challenged by Mr Nekrashevich and Dr Chen and in itself constitutes sufficient evidence of presence of rEPO per the TD2022EPO. Mr Nekrashevich and Dr Chen nonetheless argue that they observe a similar (allegedly stronger) smear in the negative control and for that reason the Sample should not have been reported as an AAF. Dr Dehnes and Dr Naud consider this evidence misguided. There is no smear in the negative control sample ("NCS").

- In addition, an IEF-PAGE analysis was conducted. The results of this analysis were equally positive. As noted by Dr Naud, *"[t]he profile obtained from sample 3172752 on IEF-PAGE clearly deviates from that of endogenous EPO […]",* concluding that the *"Results from IEF-PAGE bring additional scientific evidence that the sample contains rEPO*".

- The ADRV is established. The Athlete has committed an ADRV under Article 2.1 of the IWF ADR.

ADRV – use of a prohibited substance

- Pursuant to Article 2.2.1 of the IWF ADR, it is each athlete's personal duty to ensure that no prohibited substance enters his or her body and that no prohibited method is used. Accordingly, it is not necessary that intent, fault, negligence, or knowing use on the athlete's part be demonstrated in order to establish an ADRV for use of a prohibited substance or a prohibited method.

- In respect of Article 2.1, the Athlete has committed an ADRV because both his A Sample and B Sample returned an AAF. Article 2.1 is essentially a strict liability offence when the conditions therein are satisfied. In respect of Article 2.2, the Athlete has committed an ADRV because he has returned AAFs for both his A Sample and his B Sample and his commission of the ADRV is supported by the expert reports of Dr Dehnes and Dr Naud.

Determining the sanction: period of ineligibility

- According to Article 10.2.1 of the IWF ADR, the period of ineligibility shall be four years where the ADRV does not involve a specified substance, unless the athlete can establish that the ADRV was not intentional.

- According to the WADA Prohibited List, all substances under S2, i.e. including rEPO, are non-specified substances. Therefore, the applicable period of ineligibility shall be four years, unless the Athlete proves a lack of intent when committing the violation.

- According to Article 10.2.3 of the IWF ADR "*the term 'intentional' is meant to identify those Athletes (…) who engage in conduct which they knew constituted an anti-doping rule violation or knew that there was a significant risk that the conduct might constitute or result in an anti-doping rule violation and manifestly disregarded that risk*".

- As the athlete bears the burden of establishing that the violation was not intentional, CAS jurisprudence is clear that save in the most exceptional circumstances, athletes cannot rebut the presumption of intentional use unless they can prove the source of the prohibited substance.

- In the present case, the Athlete has not established the source of the prohibited substance or given any substantiated explanation as to the origin of the prohibited substance, which would have been his burden based on the IWF ADR. In his First Statement, the Athlete invoked the possibility of "*transdermal absorption of erythropoietin*", stating that "*there might remain a possibility of skin care products causing test positive for EPO*". However, the Athlete did not provide any further information or evidence supporting this theory (and this argument was no longer mentioned in his Second Statement). The IWF also notes that there is no other objective circumstance in this case, which would rule out an intentional violation without any explanation of source. Given that EPO is taken by courses, the very idea that EPO could be taken unintentionally is non-sensical.

- It follows that a four-year period of ineligibility has to be imposed.

Determining the sanction: Disqualification

- According to Art. 10.10 of the IWF ADR, *"(…) all (…) competitive results of the Athlete obtained 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, shall, unless fairness requires otherwise, be Disqualified with all of the resulting Consequences including forfeiture of any medals, points and prizes.*"

- As the first evidence of doping dates back to 30 October 2022, when the Athlete provided the Sample, the principle is that all results obtained by him from such date until the date of his provisional suspension on 20 December 2022 shall be disqualified. Bearing in mind the inherent severity of an EPO ADRV, there is no reason of "fairness" which would justify departing from the principle.

52. IWF's requests for relief, as set out in the Request for Arbitration, read as follows:

"The International Weightlifting Federation hereby respectfully asks the CAS Anti-Doping Divison to rule that:

1) The International Weightlifting Federation's request for arbitration is admissible.

2) Mr Xiaojun Lyu is found to have committed anti-doping rule violations under art. 2.1 and / or 2.2 of the IWF ADR.

3) Mr Xiaojun Lyu is sanctioned with a period of ineligibility of four years starting on the date on which the CAS Anti-Doping Division decision enters into force. Any period of provisional suspension effectively served by Mr Xiaojun Lyu before the entry into force of the CAS Anti-Doping Division decision shall be credited against the total period of ineligibility to be served.

4) All competitive results obtained by Mr Xiaojun Lyu from and including 30 October 2022 are disqualified, with all resulting consequences (including forfeiture of medals, points and prizes).

5) The costs of the proceedings (if any) shall be borne by Mr Xiaojun Lyu.

6) The IWF is granted an award for its legal and other costs."

B. The Respondent

53. The Athlete's submissions, in essence, may be summarised as follows:

- The Athlete has never used rEPO or knowingly used any other banned substance. The IWF has not established, and cannot establish, the presence of rEPO in the Sample, and certainly not to the relevant standard of proof.

- The case must be dismissed on one or more of the following alternative grounds: (1) No AAF should have been reported, as the relevant criteria for reporting an AAF for EPO were not satisfied. (2) The method which was used to generate the relevant analytical results is scientifically invalid. There is no presumption of scientific validity in respect of that method, and even if there were such a presumption, it is rebuttable, and the method is scientifically invalid on three separate basis. (3) When the Laboratory performed the method, there was a departure from WADA's International Standard for Laboratories 2021 ("ISL"), which caused the reported AAF. (4) A procedure which the Laboratory relied on in concluding that A Sample was positive for EPO was not performed in respect of B Sample, such that B Sample cannot be deemed positive for EPO.

Assessing evidence of the alleged ADRVs

- Pursuant to Article 3.1 of the IWF ADR, burden of proving any ADRV lies with the IWF and any ADRV has to be proved to the comfortable satisfaction of the hearing panel. The allegation in this case is serious, and the potential consequences for the Athlete severe. The IWF will thus need to establish all the requisite components of the alleged ADRVs to a very high degree of certainty if it is to succeed.

- Pursuant to Article 3.2.1 of the IWF ADR, the Athlete is entitled to challenge the scientific validity of the procedure, and if that challenge is successful, the case against him automatically falls away. According to Article 3.2.2 of the IWF ADR, if the Athlete can establish that a departure from the ISL occurred which could reasonably have caused the AAF, then the IWF shall have the burden of establishing that such departure did not in fact cause the AAF. If the IWF cannot do so, then the case against the Athlete automatically falls away.

- Presence violations require an AAF (in respect of both the A and the B sample), and the definitions make clear that any AAF must be reported in compliance with the ISL. If sample results do not meet the criteria for a "presence" charge, they cannot be used as the sole basis for a "use" charge. This was confirmed in CAS 2015/A/3977. Therefore, where (as here) the only evidence on which an anti-doping organisation ("ADO") relies in support of a use charge is analytical evidence from a laboratory (i.e. alleged positive test results), that analytical evidence must meet the same validity criteria which would apply to such evidence if it were being relied on to support a presence charge.

- Pursuant to Article 2.1.2 of the IWF ADR, if the requirements of a presence violation under Article 2.1 of the IWF ADR are not satisfied in respect of a B sample, and no other relevant reliable evidence has been provided in respect of alleged use (as is the case here), then both the alleged presence ADRV and any alleged use ADRV must be dismissed.

"Eyeballing" of results and disregarding negative control samples

- No workable system can allow an arbitrary and subjective "eyeballing" of results, or the implementation of a method which fails to properly consider NCS results, to be the basis upon which an athlete is found to have committed an ADRV. Nevertheless, both occurred here.

- The Sole Arbitrator must be mindful of the fact that WADA-accredited laboratories and experts employed by ADOs do make mistakes, including in terms of how a scientific method should be implemented in practice and how results should be interpreted. When there is scope to do so, as in the current case, their evidence should be scrutinised as extensively as possible, as that is the quid pro quo for a system based on strict liability.

Concealment of exculpatory evidence

- The IWF, its experts, and the Laboratory have each concealed exculpatory evidence in respect of the Athlete's Sample results. The IWF presented its case as there being a categorical AAF (and associated ADRV). However, based on the email correspondence disclosed by the IWF upon the Sole Arbitrator's order, the Laboratory does not in fact consider A Sample to be positive for EPO but merely considers it "suspicious".

- Given such concealment, all evidence by the Laboratory and Dr Dehnes, and the IWF's associated submissions, must be treated with great caution.

Invalid method and invalid results: the applicable methods

- The methods employed in testing the Sample included the following: (1) an initial testing procedure ("ITP") – using a method known as SAR-PAGE; (2) a confirmation procedure ("CP") performed following the ITP – using a method known as SDS-PAGE; and (3) an additional procedure, performed following the CP – using a method known as IEF-PAGE. Only the A Sample was subjected to IEF-PAGE. The focus of the Athlete's submissions concerns the CP.

- In the SDS-PAGE method, portions of an athlete's urine sample, and a sample from an individual which is known not to contain EPO (i.e. an NCS), are processed and transferred to a gel with lanes dedicated to each such sample. The gel is subjected to an electrical field (in a process known as gel electrophoresis), and the EPO proteins from the relevant samples move down the gel within their lane, where the EPO proteins are visible as dark bands. A blue line (the "Dynepo Line") is then drawn horizontally across all bands on the gel image to separate a deemed "recombinant area" from an "endogenous area". According to the IWF, the relevant

criterion for reporting an AAF in a matter such as this is the presence of a *"diffuse or faint area of the band above the corresponding endogenous band, which extends beyond the [Dynepo Line]"* (the "Dynepo Criterion").

- In terms of how the Dynepo Criterion should be interpreted and applied, the IWF takes the following approach: if the NCS satisfies the Dynepo Criterion to the same degree as an athlete's sample, then the athlete's sample will still be reported as positive. According to the IWF, it does not matter if the concentration of endogenous EPO is high in an athlete's sample and lower in the NCS and if this disparity in endogenous EPO concentration will make the athlete's sample look suspicious upon a laboratory's naked eye review. According to the IWF, a determination of whether the Dynepo Criterion is satisfied is to be performed in respect of band images with the naked eye and without assistance from the available objective data.

- The IWF suggests that the results of the IEF-PAGE procedure performed in respect of the A Sample (but not the B Sample), after the CP, are relevant to this matter and support that the A Sample was positive. The Athlete disagrees. The IEF-PAGE results are irrelevant in this matter, and the only results relevant to confirming the presence of rEPO in the Sample are the SDS-PAGE CP results.

- To the extent that the IWF contends that the technical document provides that IEF-PAGE results are relevant to confirming that a sample contains rEPO, the Athlete submits that any such conflict within the technical document in this regard must be resolved in his favour pursuant to the *contra proferentem* rule. It is a principle of *lex sportiva* that any ambiguity as to the meaning of sports regulations is to be resolved against the sports governing body that drafted the regulations.

- Despite the IEF-PAGE procedure results being incapable of (1) confirming that the A Sample contained rEPO, and/or (2) converting a negative SDS-PAGE CP result into a positive one, the reason why the IEF-PAGE procedure was performed is of fundamental importance for two separate reasons, each of which is fatal to the IWF's case.

- First, the Laboratory and Dr Dehnes considered that the SDS-PAGE results were inconclusive, such that they considered that they required some supportive IEF-PAGE results to report the A Sample as positive. However, as IEF-PAGE results cannot be used in the manner suggested, that leaves the IWF with only a suspicious SDS-PAGE CP result, which does not amount to a positive test in respect of the A Sample.

- Second, the IEF-PAGE procedure was performed in respect of the A Sample only, and the Laboratory and the IWF's experts considered the IEF-PAGE results a necessary component in reporting an AAF for the A Sample. However, that supposedly necessary component for reporting an AAF was not performed for the B Sample, despite the B Sample SDS-PAGE results being almost identical to the equivalent A Sample SDS-PAGE results. Accordingly, even if the A Sample IEF-PAGE result did somehow render the A Sample positive, the IWF cannot reasonably claim that the B Sample was positive. With no positive B Sample, the case against the Athlete falls away.

The scientific invalidity of the method: no presumption of scientific validity

- As a threshold matter, in light of the matters described below, the SDS-PAGE CP as performed and described by Dr Dehnes has not, in its entirety, been the subject of "*consultation with the relevant scientific community or (…) peer review*", as required by Article 3.2.1 of the IWF ADR. The IWF will not be able to establish this, and therefore there will be no rebuttable presumption of scientific validity and the IWF will have the burden of establishing that the method is

scientifically valid. If the IWF can establish the foregoing, the Athlete can nonetheless rebut that presumption.

Scientific invalidity reason 1: degree of tolerance in applying the Dynepo Criterion

- The Athlete does not dispute that, technically, both the A Sample and the B Sample meet the Dynepo Criterion as explicitly written. However, the NCSs also did so, to an even greater extent than the A Sample and the B Sample, which has to render the Sample negative for rEPO. The Dynepo Criterion is routinely satisfied by NCS bands.

- A scientific method which results in a conclusion that all athlete samples which satisfy the Dynepo Criterion contain rEPO, without reference to the respective NCSs, is clearly scientifically invalid. This is because of the risk of false positives, demonstrated by the frequent satisfaction of the Dynepo Criterion by NCSs. As a minimum, where both an athlete's sample and its NCS satisfy the Dynepo Criterion, then the extent to which the NCS does so must define a degree of tolerance in respect of the extent to which the athlete sample band's diffuse area must cross the Dynepo Line before it can be deemed positive.

- A naked-eye comparison of the Sample band against its associated NCS band indicates that the Sample is at least as negative as the NCS. A review of the densitometric profiles associated with the same images confirms the same position but with more clarity and objectivity.

- Had a degree of tolerance been applied when applying the Dynepo Criterion to the Sample, by reference to the NCS, then both the A Sample and the B Sample would have been reported as negative.

Scientific invalidity reason 2: for visual assessments of band images, a NCS band must be of similar intensity to that of an athlete's sample

- Bands from samples with high endogenous concentrations will have a broad band and broad surrounding diffuse area. Therefore, it is essential that, when comparing an athlete sample band against a NCS band with the naked eye, the two have the same or similar endogenous EPO concentrations and therefore similar band apex intensities. Otherwise, one may appear more suspicious than the other as a result of natural variation in endogenous EPO concentrations. As the method used by the Laboratory, and as the interpretation of the Dynepo Criterion adopted by the Laboratory, the IWF, and its experts, does not properly take into account this issue, the method is scientifically invalid and the case against the Athlete must be dismissed.

- The NCS had an endogenous EPO concentration and band apex intensity of, respectively, 2.2 and 2.6 times less than their equivalents in the A Sample and the B Sample. Therefore, a naked-eye comparison of the associated bands is scientifically invalid as the reviewer is not comparing like for like. Instead, the densitometric profiles have built into them an adjustment in respect of the EPO concentrations, such that they are comparable with one another. When a densitometric profile comparison is done as between the A Sample and its NCS and the B Sample and its NCS, the conclusion is that both the A Sample and the B Sample are at least as negative as their respective NCS and therefore should have been reported as negative.

- Dr Dehnes emphasises that "*images of different exposure times*" are essential for a "*[p]roper evaluation*" and comparison of samples with different endogenous EPO concentrations. However, based on the correspondence exchanged between the CAS, the Athlete, and the IWF, neither the IWF nor Dr Dehnes possesses such "*images of different exposure times*" in respect of the Athlete's Sample, and according to Dr Dehnes, it is not possible to perform the "proper evaluation" that

requires these "images of different exposure times". Therefore, Dr Dehnes' assertion that the Sample contains rEPO is not valid – the requisite "*[p]roper evaluation*" has not been performed.

Scientific invalidity reason 3: naked eye evaluation of band-characteristics is inappropriately subjective and inaccurate

- The IWF's interpretation of the Dynepo Criterion is that a determination of whether the Dynepo Criterion is satisfied must be performed by evaluating band images with the naked eye and without assistance from objective data. The second report by Mr Nekrashevich explains why such an approach is scientifically invalid: "*46. (…) What is seen with the naked eye is subjective. This is demonstrated by the fact that (…) Dr. Dehnes seemingly considers that the band appearing in the second column does have a "diffuse or faint area" above it, whereas she considers that the bands in the third and fourth columns do not. To my eye, it is clear that all three have such a "diffuse or faint area" above them, and the extent of those areas is virtually indistinguishable from each other. (…) 47. Additionally, the Laboratory, it seems, was uncertain as to whether or not it should report an AAF in respect of Sample A (…)*". The method used by the Laboratory is, accordingly, scientifically invalid, as it is entirely subjective, inaccurate, and prone to a high error rate.

- It is sufficient for the Athlete to demonstrate scientific invalidity of the method to invalidate the results and for this matter to be dismissed.

Failure to comply with the ISL

- The Laboratory did not conduct the analyses in accordance with the ISL (in which respect the requisite standard of proof is the balance of probability). This failure could reasonably have caused the AAF (in which respect the requisite standard of proof is lower than the balance of probability). The IWF thus has the burden of establishing to the Sole Arbitrator's comfortable satisfaction that that failure did not in fact cause the AAF. The IWF will not be able to establish this. There were two departures from the ISL in the analysis, and they caused the AAF: Firstly, under Dr Dehnes interpretation, the applicable method provides that the NCS does not provide or define any degree of tolerance, and secondly, when comparing an athlete's sample band against a NCS band with the naked eye, the two do not need to have similar apex intensities. These failures to properly use NCSs caused the AAF.

Even if the method and results are valid, the sample is still negative

- No IEF-PAGE procedure was performed for the B Sample. Accordingly, the B Sample cannot be considered positive because, while the B Sample SDS-PAGE result was almost identical to the equivalent A Sample SDS-PAGE result, the factor (i.e. IEF-PAGE results) – which supposedly converted an inconclusive SDS-PAGE result for the A Sample into a positive result – is absent for the B Sample. For a B Sample analysis to confirm the results of an A Sample analysis, the same method and reporting criteria must be used.

- The sample is in any event negative. There is, implied into the wording of the Dynepo Criterion, a requirement that, if a sample is as negative as its NCS, then it must also be deemed negative. Both the A Sample and the B Sample are as negative as the NCS.

Sanction, if any

- If any period of ineligibility is imposed, it should be deemed to have commenced on the date of sample collection (30 October 2022), owing to the various substantial delays throughout this case, per Article 10.13.1 of the IWF ADR. There has been a very substantial delay in this case in the period between the Athlete filing his explanation on 16 May 2023 and the IWF filing its

Request for Arbitration on 8 May 2024 – i.e. nearly one year later. This amounts to a "substantial" delay not attributable to the Athlete.

– If any period of ineligibility is imposed, credit must be given for the total period of provisional suspension served by the Athlete since the date of its imposition on 20 December 2022, per Article 10.13.2.1 of the IWF ADR. The Athlete's provisional suspension commenced on 20 December 2022, and he has respected it.

54. The Athlete's requests for relief, as set out in the Answer, read as follows:

"The Athlete respectfully requests the Sole Arbitrator to dismiss the Alleged ADRVs, on the following grounds:

(a) the Test Results are invalid (see Chapter D above); and/or

(b) the Sample is in any event negative for recombinant EPO (see Chapter E above).

If, contrary to the foregoing, any period of Ineligibility is to be imposed, it must be backdated to 30 October 2022, with credit being given for the period of Provisional Suspension.

The Athlete respectfully requests that the IWF be ordered to pay his costs in relation to these proceedings, and reserves the right to file submissions on the same in due course."

V. JURISDICTION

55. Article A2, paragraphs 1 and 2 of the ADD Rules provide as follows:

"CAS ADD shall be the first-instance authority to conduct proceedings and issue decisions when an alleged anti-doping rule violation has been filed with it and for imposition of any sanctions resulting from a finding that an anti-doping rule violation has occurred. CAS ADD has jurisdiction to rule as a first-instance authority on behalf of any WADC signatory which has formally delegated its powers to CAS ADD to conduct anti-doping proceedings and impose applicable sanctions.

These Rules apply whenever a case is filed with CAS ADD. Such filing may arise by reason of an arbitration clause in the Anti-Doping Rules of a WADC signatory, by contract or by specific agreement."

56. Pursuant to Article 8.1.1 of the IWF ADR 2024, the IWF has delegated its responsibilities under Article 8 of the IWF ADR to the ADD:

"IWF has delegated its Article 8 responsibilities (…) to the CAS ADD as an appropriate independent arbitration forum. The procedural rules of the arbitration shall be governed by the rules of the CAS ADD. CAS ADD will always ensure that the Athlete (…) is provided with a fair hearing within a reasonable time by a fair, impartial and Operationally Independent hearing panel in compliance with the Code and the International Standard for Results Management."

57. The jurisdiction of the ADD is not contested by the Athlete, who confirmed the jurisdiction by signing the Order of Procedure.

58. In consideration of the foregoing, the Sole Arbitrator confirms the jurisdiction of the ADD to decide this matter.

VI. APPLICABLE LAW AND PROCEDURAL RULES

59. Article A20 of the ADD Rules provides as follows:

"The Panel shall decide the dispute according to the applicable ADR or the laws of a particular jurisdiction chosen by agreement of the parties or, in the absence of such a choice, according to Swiss law."

60. The Sole Arbitrator observes that the IWF has adopted and implemented anti-doping rules, which are in effect from 1 January 2024 ("IWF ADR 2024"). Pursuant to Article 24.7.2 of the IWF ADR 2024, *"any anti-doping rule violation which occurred prior to [1 January 2024], shall be governed by the substantive anti-doping rules in effect at the time the alleged anti-doping rule violation occurred (…), unless the panel hearing the case determines the principle of "lex mitior" appropriately applies under the circumstances of the case"*. Hence, the IWF ADR, subject to *lex mitior*, and Swiss law are the laws applicable to this arbitration. The applicability of these substantive rules is undisputed by the Parties.

61. The Sole Arbitrator notes that the ADD Rules have been replaced during the present proceedings with *"Procedural Rules - CAS Anti-Doping Division"*, which *"are applicable to all procedures initiated by CAS ADD as from 10 June 2024"* (Article A26). Based on this provision and the fact that the present proceedings were initiated on 8 May 2024, they shall be governed by the 2021 edition of the ADD Rules. In addition, based on the principle of *tempus regit actum*, IWF ADR 2024 govern the procedural aspects of this matter.

VII. MERITS

62. In view of the Parties' submissions, the main issues to be resolved by the Sole Arbitrator are the following:

a. Did the Athlete commit an ADRV under Article 2.1 or 2.2 of the IWF ADR?

I. Is the method which was used to generate the relevant analytical results scientifically invalid?

II. Was there a departure from the ISL which caused the reported AAF?

III. Can the B Sample be deemed positive?

IV. Are the criteria for reporting an AAF for rEPO satisfied?

b. If the answer to question a. is in the affirmative, what are the appropriate consequences to be imposed on the Athlete?

I. What is the applicable period of ineligibility?

II. When should the potential ineligibility period commence?

III. Should the Athlete's competitive results be disqualified?

63. The Sole Arbitrator notes in this context that according to Article A21 of the ADD Rules, *"the award shall contain brief reasons."*

A. Did the Athlete commit an ADRV under Article 2.1 or 2.2 of the IWF ADR?

I. Is the method which was used to generate the relevant analytical results scientifically invalid?

Presumption of scientific validity?

64. First, the Athlete submits that there is no presumption of scientific validity. According to the Athlete, the SDS-PAGE CP has not, in its entirety, been the subject of consultation with the relevant scientific community or peer review. The Athlete's position is based on the statement of

Mr Nekrashevich, who accepts in his second expert report (page 19) that the general principles were the subject of appropriate consultation and/or peer review. However, he continues as follows: *"I can find no evidence in those papers (or elsewhere) that there has been any proper discussion on the relevant issues relating to scientific validity described above resulting in an endorsement of the method used by the Laboratory. Indeed, the reasons for lack of scientific validity identified above are so basic and fundamental in nature that (…) no competent scientist would approve them as valid."* The issues raised by Mr Nekrashevich are the following: (1) there should be, but there is not, a degree of tolerance in applying the Dynepo Criterion, (2) the lack of a requirement that an NCS and an athlete's sample must be of similar intensity, and (3) a naked-eye evaluation of band-characteristics is inappropriately subjective and inaccurate.

65. According to Article 3.2.1 of the IWF ADR, *"Analytical methods or Decision Limits approved by WADA after consultation within the relevant scientific community or which have been the subject of peer review are presumed to be scientifically valid. Any Athlete (…) seeking to challenge whether the conditions for such presumption have been met or to rebut this presumption of scientific validity shall, as a condition precedent to any such challenge, first notify WADA of the challenge and the basis of the challenge."* There is an identical rule in Article 3.2.1 of the IWF ADR 2024.

66. The Athlete has notified WADA of his challenge. WADA has in its *amicus curiae* letter submitted that the method is scientifically valid and referred to the expert reports of Dr Dehnes and Dr Naud.

67. Based on the above, the Sole Arbitrator needs to assess whether the analytical method for the detection and reporting of rEPO has been the subject of (1) consultation within the relevant scientific community or (2) peer review.

68. The Sole Arbitrator observes that Dr Dehnes has submitted in her expert report (page 6) on a general level that *"The analyses performed on [the Sample] by the laboratory are validated and accredited according to WADAs requirements (ISO-17025, ISL and TD2022EPO)."* The Sole Arbitrator also notes that the analytical method is not a novelty but has been the subject of extensive scientific scrutiny over a significant period. The TD2022EPO alone refers to more than twenty scientific articles, which include the assessment of the benefits and limitations of SDS-PAGE analysis as a method for application in doping control.

69. Furthermore, it did not transpire in the examination of Dr Dehnes or Dr Naud that the issues raised by the Athlete and his experts have not been considered by the scientific community. On the contrary, in the Sole Arbitrator's view, Dr Dehnes and Dr Naud were able to credibly respond to the questions of the Athlete's counsel in their examination. Dr Dehnes is the laboratory director of the Norwegian Doping Control Laboratory and the chairperson of the WADA EPO Working Group. She has co-authored at least three of the scientific articles referred to in the TD2022EPO. Dr Naud is the deputy director of the INRS Laboratoire de contrôle du dopage in Québec, Canada, and a member of the WADA EPO Working Group. The Sole Arbitrator finds no grounds to question their expertise regarding the analytical method in question or their statements relating to the presumed scientific validity of the same.

70. In summary, the Sole Arbitrator is comfortably satisfied that the analytical method, including the three issues raised by Mr Nekrashevich, has been the subject of appropriate consultation or peer review for the analytical method to enjoy the presumption of scientific validity. However, this presumption does not mean that the method will eventually be deemed scientifically valid. The presumption only means that the Athlete has the burden to prove that the method is scientifically invalid to be acquitted on this basis. In the following, the Sole Arbitrator will address the issues that the Athlete submits render the analytical method scientifically invalid.

Degree of tolerance?

71. As noted above, the Athlete submits that the analytical method is scientifically invalid because there is a degree of tolerance in applying the Dynepo Criterion. More precisely, he submits that the method as described by the IWF is scientifically invalid because the *"method does not take into account either of the following: (a) Negative Control Samples can, and often do, satisfy the Dynepo Criterion; and (b) Where both an athlete's sample and its Negative Control Sample both satisfy the Dynepo Criterion, then the extent to which the Negative Control Sample does so must define a degree of tolerance in respect of the extent to which the athlete sample band's diffuse area must cross the Dynepo Line before it can be deemed positive."*

72. The IWF, through its expert Dr Dehnes, submits that the NCSs do not satisfy the Dynepo Criterion. With respect to the A Sample, Dr Dehnes submits in her expert report (page 5) that *"[t]he negative control sample does not display this characteristic"* i.e. the diffuse area does not extend beyond the Dynepo reference line. Her view on the B Sample NCS is the same. This essentially means that the NCSs do not satisfy the Dynepo Criterion and, therefore, there is no degree of tolerance. In Dr Dehnes words, *"If a sample is negative, it is negative, it cannot be more negative."*

73. It is undisputed that according to the ISL, negative quality controls shall be used. By way of example, pursuant to Article 5.3.6.2 of the ISL (2021 edition), *"all batches undergoing a Confirmation Procedure shall include appropriate negative and positive quality controls prepared in the matrix of analysis."* It is also undisputed that the following identification criteria of the TD2022EPO are relevant in the present case:

> *"2.4.2.2 b. Mixed Bands from Different ERA(s) Detected*
>
> *- In the case of rEPO, a mixed band consisting of endogenous EPO (uEPO, bEPO) and rEPO not completely resolved can be detected: the band shape resembles that of the rEPO plus parts or the total of the uEPO/bEPO band;*
>
> *- A diffuse or faint area of the band above the corresponding endogenous band, which extends beyond the band apex of Epoetin-δ (Dynepo), is also indicative for the presence of epoetin-α and -β (Fig. 4 and 5).*
>
> *- A mixed band will change depending on the relative amount of rEPO and uEPO present in the Sample, as happens at different times after rEPO administration (Fig. 4 and 5)."*

74. The Sole Arbitrator first observes that the Parties have submitted different images of the Athlete's EPO analysis results. The images vary in their scopes, sizes, contrast adjustments, and types. Depending on the image, the same bands may look slightly or even significantly different. However, it is clear and undisputed that at least some of the images of the NCSs used in the Athlete's A Sample and B Sample analyses show a signal above the Dynepo Line.

75. This phenomenon was acknowledged by Dr Dehnes and Dr Naud in their examinations. Dr Dehnes testified that not even the NCSs have a sharp edge. Instead, all samples have a faint area, a smear, or a diffuse band. This is evident also from the TD2022EPO (see, e.g., Figures 2 and 4) and observed by a CAS Panel in a recent CAS Award involving rEPO (CAS 2023/A/9550, CAS 2023/A/9586, and CAS 2023/A/9607, paragraphs 176 and 233).

76. However, the mere existence of a faint area above the Dynepo Line does not seem to be the key question in the identification of rEPO in a sample in general or in the present matter in particular. Instead, based on the testimonies of Dr Dehnes and Dr Naud, the key questions with respect to the fulfilment of the identification criteria for a mixed band are (1) what is meant by a *"diffuse or faint area"* in the context of rEPO analyses and (2) whether the *"diffuse or faint area of the band [is] above the corresponding endogenous band"*. Indeed, the present dispute has largely boiled down to the definition of a *"diffuse or faint area"*.

77. Dr Dehnes noted that when EPO experts talk about the Dynepo Line, it is used as a reference for where the endogenous band ends and where the recombinant band starts. Dr Dehnes testified that if a sample immigrates past the Dynepo Line, it does not mean that it is considered positive. The essential factor is whether the *"diffuse or faint area"* stretches beyond the endogenous band. She emphasised that it is necessary to assess the athlete's band in context with a positive control sample and a NCS to see the mobility of the sample.

78. Dr Naud concurred with Dr Dehnes. He testified that EPO experts do not call the shadow that can be seen in a NCS a diffuse or faint area. Like Dr Dehnes, Dr Naud underlined the need to compare an athlete's sample to the positive control samples and NCSs.

79. The Sole Arbitrator concludes that the wording on the identification criteria for mixed bands in the TD2022EPO is not very clear. This has become apparent from the expert reports filed in the present matter and from the examinations of Dr Dehnes, Dr Naud, Mr Nekrashevich, and Dr Chen. However, the Sole Arbitrator finds that Dr Dehnes' and Dr Naud's clarifications regarding the identification criteria for mixed bands have been logical and credible.

80. Based on said clarifications, whether the sample and the NCS both have a signal beyond the Dynepo Line is not the single decisive factor in the analysis. The important elements to be assessed are whether an athlete's sample band extends beyond the endogenous band set by the NCS and whether an athlete's sample resembles the positive control samples. If an athlete's sample extends beyond the endogenous band set by the NCS and it resembles the positive control samples, the part of the sample exceeding the endogenous band is considered a *"diffuse or faint area"*. This analysis is done by comparing the positive control samples, the athlete's sample, and the NCS.

81. The above finding is supported by the introductory words of Article 2.4.2.2 of the TD2022EPO, which read as follows:

> *"2.4.2.2 SAR- or SDS-PAGE*
>
> *(…)*
>
> *ERAs can be distinguished from endogenous EPO (uEPO, bEPO) based on their characteristic band shape and different apparent molecular mass. The migration behaviour (band) of each ERA, i.e., its position and shape (width, focused or more diffused) can be used to confirm the identity and/or exogenous origin of the substance. The position of the band apex (as determined by the lane profile plot retrieved in the image processing software) or the boundaries of the width of the band can be used to ascertain that its position and shape differs from the position of endogenous EPO run in parallel, as illustrated in Fig. 2."*

82. The same conclusion is supported by the language of Dr Dehnes' second opinion on the Athlete's A Sample: *"The confirmation analysis by SDS-PAGE and single-blotting shows the presence of a diffuse signal (smear) above the endogenous EPO-band and stretching above the Dynepo-reference line (…)."*

83. It follows from the above that an NCS never satisfies the identification criteria of Article 2.4.2.2 b of the TD2022EPO. Therefore, an athlete's sample and an NCS cannot fulfil said criteria at the same time either. The potential diffuse area – as a layperson could understand it – of an NCS beyond the Dynepo Line does not form an area of tolerance.

84. Based on the above, the Sole Arbitrator finds that the Athlete has not established that the analytical method would be invalid because it does not take into account a degree of tolerance.

Significance of endogenous EPO concentrations?

85. The Athlete submits that the analytical method is scientifically invalid also because, for visual assessments of band images, an NCS must be of similar intensity to that of an athlete's sample. More precisely, the Athlete submits that *"it is essential that, when comparing an athlete sample band against a Negative Control Sample band with the naked eye, the two have the same or similar endogenous EPO concentrations and therefore similar band apex intensities (…). Otherwise, one may appear more suspicious than the other as a result simply of natural variation in endogenous EPO concentrations. As the method used by the Laboratory, and as the interpretation of the Dynepo Criterion adopted by the Laboratory, the IWF and its experts, does not properly take into account this issue, the method is scientifically invalid."*

86. The Sole Arbitrator is not convinced of the Athlete's argument.

87. First, the Sole Arbitrator finds that Dr Dehnes' expert report and examination, where the issue of different concentrations of endogenous EPO was thoroughly discussed (see, e.g., Dr Dehnes' expert report, pages 8-9), show that the issue is well acknowledged and considered in conducting EPO analyses in laboratories. This is supported by the fact that, according to Article 2.2.1.2 of the TD2022EPO, the volume adjustment is not mandatory, but discretionary.

88. Secondly, Dr Dehnes credibly explained, with the support of illustrative figures, that *"a band with a high concentration of endogenous EPO, will have a relatively high apex intensity, and the band will appear broader, but – and this is important – the diffuse area seen for rEPO will not be present"* and that *"a strong endogenous signal does not give a diffuse signal/a smear like we see in samples containing recombinant EPO"* (Dr Dehnes' expert report, pages 7 and 9, respectively). Therefore, the concentration of endogenous EPO in an athlete's sample is irrelevant in assessing a potentially mixed band of rEPO and endogenous EPO. It follows that the Athlete's position that the NCSs had an endogenous EPO concentration and band apex intensity of 2.2 and 2.6 times less than the equivalents in the A Sample and the B Sample do not invalidate the analytical result.

89. As such, Dr Dehnes acknowledges that a high concentration of endogenous EPO and a resulting strong signal leads to a broader band than where the concentration of endogenous EPO is lower. Furthermore, it is undisputed that the concentration of endogenous EPO was higher in the Athlete's Sample than in the NCS. However, according to Dr Dehnes, this does not lead to a risk of a false positive. On the contrary, a broad endogenous band can make it "*more difficult to detect a low concentration of rEPO in a sample with a high concentration of endogenous EPO."* (Dr Dehnes' expert report, page 8)

90. Also, Dr Naud has addressed the Athlete's argument. He has noted that *"[t]o test the hypothesis that the diffuse band could be created by EPO concentration, an image obtained using increasing amount of endogenous EPO from two different individuals was analysed. As it can be seen, no diffuse band could be detected in the recombinant area even when the signal is saturated for both individuals indicating that an elevated EPO concentration does not create a diffuse band in the recombinant area (…)."* (Dr Naud's expert report, (unnumbered) page 6)

91. The Sole Arbitrator concludes that the Athlete has not established that the analytical method is invalid because it has not taken the variation in the concentrations of an athlete's endogenous EPO into account.

Is the naked-eye evaluation subjective and inaccurate?

92. Finally, the Athlete submits that the analytical method is scientifically invalid because a naked-eye evaluation of band-characteristics is subjective and inaccurate. According to the Athlete, *"[t]he method utilised by the Laboratory is (…) scientifically invalid – as it is entirely subjective, inaccurate and prone to a high error rate (…)."* The Athlete is of the view that densitometric profiles provide an objective method.

93. The Sole Arbitrator acknowledges that a naked-eye evaluation involves some inaccuracy related to an individual's sight. For example, potential visual impairments of an individual or suboptimal observation conditions may affect the interpretation of the immunoblot images. However, the Sole Arbitrator is not persuaded by the Athlete's position that a naked-eye evaluation would be subjective and inaccurate. First, an athlete's sample is compared to both positive and negative control samples, which provide objective reference points and eliminate arbitrary interpretations. Second, as stipulated in Article 3.4 of the TD2022EPO, WADA requires that a second opinion for electrophoretic methods is provided by one of the experts of the WADA EPO Working Group before any AAF is reported in ADAMS. This means that an AAF cannot be based on a single individual's interpretation of the immunoblot images. The Sole Arbitrator concludes that the Athlete has not established that the analytical method would be inaccurate and prone to a high error rate.

94. With respect to the densitometric profiles, the Sole Arbitrator finds that they are not meant to be used as evidence of the existence or non-existence of rEPO in an athlete's sample. The Sole Arbitrator's finding is based on the testimonies of Dr Dehnes and Dr Naud in their expert reports, which read, respectively, as follows:

> *"The identification criteria for rEPO (TD2022EPO) are qualitative and based on visual evaluation of band-characteristics, not on densitometric profiles. The densitometric profiles in the GASepo software are used to identify the apex of the Dynepo band to correctly lay the reference line (the rEPO migration cut-off line) for each image. The densitometric analysis performed by Mr. Nekrashevich has not been validated with known negative and known positive samples in a WADA-accredited laboratory, according to WADA's validation requirements. Mr. Nekrashevich analysis can therefore not be applied to doping control samples for the evaluation of Negative Findings vs. Atypical Findings v. Adverse Analytical Findings."*
>
> *"GASepo was not created to evaluate properly the smear of the diffuse band of rEPO typical of a mixed band consisting of endogenous and rEPO not completely resolved on SAR-PAGE gels."*

95. The Sole Arbitrator has no reason to question the accuracy of the above statements. The Sole Arbitrator also notes that the same conclusion regarding the usability of GASepo software was made in CAS 2023/A/9550, CAS 2023/A/9586 and CAS 2023/A/9607 (paragraphs 234-235).

96. Based on the above, the Sole Arbitrator concludes that the Athlete has not established that the analytical method is invalid because it is based on a naked-eye evaluation.

II. Was there a departure from the ISL which caused the reported AAF?

97. The Athlete's position with respect to the departure from the ISL is essentially the following: Based on Articles 5.3.6.2 and 5.3.7 of the ISL, appropriate NCSs must be used. However, in this case (1) NCSs should have been utilised to define a degree of tolerance in relation to the application of the Dynepo Criterion, but that was not done, and (2) the Laboratory did not ensure that the NCS band image was of similar intensity to the band image obtained from the Athlete's sample.

98. The Sole Arbitrator rejected both arguments above. There is no degree of tolerance to be applied, and the endogenous EPO concentrations need not be the same in an athlete's sample and in an NCS. The Athlete has not established a departure from the ISL which could reasonably have caused the AAF as required by Article 3.2.2 of the IWF ADR.

III. Can the B Sample be deemed positive?

99. The Athlete has also submitted that the B Sample cannot be considered positive because *"the factor (i.e., IEF-PAGE results) – which supposedly converted an inconclusive SDS-PAGE result for Sample A into a positive result – is absent from Sample B."*

100. The Sole Arbitrator agrees with the Athlete on the basic principle that, in general, A and B samples shall be subject to same analytical methods. However, the Sole Arbitrator finds that there is no breach of this principle and the Athlete's position in this particular case is not supported by the applicable rules.

101. According to TD2022EPO, comment to Article 2.2.1.2.1, *"[t]he Laboratory may decide to apply a second, complementary confirmation PAGE Analytical Method, such as IEF-PAGE, as additional scientific evidence of the presence or absence of rEPO in the Sample (see also Article 3.0)."* Furthermore, Article 2.2.1.3 of the TD2022EPO and the comment to said article stipulate as follows:

> *"2.2.1.3 "B" Sample Confirmation Procedure (CP)*
>
> *- For the "B" Sample CP, the Laboratory shall use the same PAGE Analytical Method(s) used for the "A" Sample CP;*
>
> *[Comment: When the Laboratory has used a second, complementary confirmation Analytical Method as additional scientific evidence of the presence of ERA(s) in the "A" Sample, the application of the two (2) confirmatory Analytical Methods is not necessary during the "B" Sample CP. The use of any confirmation Analytical Method leading to conclusive results for the "A" Sample is sufficient to confirm the presence of the ERA(s) in the "B" Sample.]"*

102. The Sole Arbitrator finds that the IEF-PAGE analysis did not turn a negative or atypical finding into an AAF. The e-mails between the Laboratory and WADA invoked by the Athlete indicate that the Laboratory considered the IEF-PAGE as *"additional evidence"* of the presence of rEPO in the Athlete's sample within the meaning of the comment to Article 2.2.1.2.1 of the TD2022EPO. This becomes clear from the e-mails of the Laboratory to WADA on 15 and 27 November 2022. Put differently, there were conclusive results before the IEF-PAGE was carried out. While the Sole Arbitrator acknowledges that the Laboratory has noted that *"the signal of rEPO in ITP of SAR-PAGE and CP of SDS-PAGE is really weak"* and described the Athlete's Sample as *"suspicious"*, the Laboratory also refers to *"quite low concentration of rEPO"*.

103. In conclusion, the Sole Arbitrator finds that there are no grounds to find that the B Sample cannot be considered positive because the additional IEF-PAGE analysis was not applied on the Athlete's B Sample. Unlike in CAS 2001/A/343 invoked by the Athlete, the Laboratory has not applied different standards to the A Sample and the B Sample in the Athlete's case and all findings by the Laboratory are consistent.

IV. Are the criteria for reporting an AAF for rEPO satisfied?

104. Finally, the Athlete submits that both the A Sample and the B Sample are as negative as the NCS and therefore, the charges must be dismissed. The Athlete's position is based on the interpretation of different immunoblot images and on the densitometric profiles of the Athlete's Sample and the NCSs.

105. Referring to the above, the Sole Arbitrator first notes that the densitometric profiles are not suitable for the assessment of the fulfilment of the identification criteria for rEPO. Therefore, the Sole Arbitrator limits the following assessment on the immunoblot images contained in the LDPs of the Athlete's A Sample and B Sample and on the different interpretations of the images.

106. The Sole Arbitrator reiterates that the relevant identification criteria read as follows:

> *"2.4.2.2 b. Mixed Bands from Different ERA(s) Detected*

- In the case of rEPO, a mixed band consisting of endogenous EPO (uEPO, bEPO) and rEPO not completely resolved can be detected: the band shape resembles that of the rEPO plus parts or the total of the uEPO/bEPO band;

- A diffuse or faint area of the band above the corresponding endogenous band, which extends beyond the band apex of Epoetin-δ (Dynepo), is also indicative for the presence of epoetin-α and -β (Fig. 4 and 5).

- A mixed band will change depending on the relative amount of rEPO and uEPO present in the Sample, as happens at different times after rEPO administration (Fig. 4 and 5)."

107. With respect to the A Sample, the Laboratory has reported that *"The band of sample 3172752 shows a diffuse area above the corresponding band for endogenous EPO on the SDS-PAGE gel. Therefore, the presence of recombinant EPO is confirmed according to the current WADA TD EPO. Meanwhile, a second opinion for this sample shall be requested."*

108. In the second opinion concerning the A Sample, Dr Dehnes has concluded as follows:

"The initial testing analysis by SAR-PAGE shows a faint smear above the endogenous erythropoietin (EPO)-band, different from what is expected to be seen in samples containing solely endogenous EPO.

The confirmation analysis by SDS-PAGE and single-blotting shows the presence of a diffuse signal (smear) above the endogenous EPO-band and stretching above the Dynepo-reference line (lane 4). This is typical for the presence of a combination of recombinant and endogenous EPO, as seen in the positive control samples (lanes 2 and 3), and different from the mobility of endogenous EPO, as seen in the negative control sample (lane 5).

The additional IEF-PAGE analysis shows an isoelectric profile where the two most intense bands are in the basic area, as seen in the positive controls samples (lanes 5 and 6) and different from the negative control sample (lane 3), supporting the SDS-PAGE results.

As the sample complies with the identification criteria described in TD2022EPO, it is justified to conclude that sample 22K02034 contains recombinant EPO."

109. Apart from Dr Dehnes' comment regarding the IEF-PAGE analysis conducted only on the A Sample, the Laboratory's and Dr Dehnes' findings regarding the B Sample correspond with their findings regarding the A Sample.

110. During the present procedure, Dr Dehnes and Dr Naud had an opportunity to review the reports by the Athlete's experts. In their expert reports, Dr Dehnes and Dr Naud have assessed Mr Nekrashevich's and Dr Chen's arguments and concluded that the Laboratory correctly reported the presence of rEPO in the Athlete's Sample.

111. The Sole Arbitrator notes that Dr Dehnes and Dr Naud are acknowledged experts in EPO analyses. Nothing that has been presented in these proceedings gives the Sole Arbitrator a reason to question the contents of their statements and testimonies. While the Sole Arbitrator acknowledges the expertise of Mr Nekrashevich and Dr Chen as well, it is undisputed that they do not have as broad an experience with respect to the interpretation of EPO analyses (immunoblot images) as Dr Dehnes and Dr Naud.

112. The Athlete has pointed out that according to CAS, a sample cannot be declared positive or negative depending on the subjective opinion and/or experience of the laboratory staff according to the maxim *"I know it when I see it"*. Rather, it is imperative that the laboratory applies reliable and verifiable criteria, making it possible for third parties to objectively understand the conclusions reached (CAS 2001/A/343, paragraph 34). Even though CAS arbitrators are typically laypeople with respect to EPO analyses and their interpretation, a CAS Panel has recently interpreted the results of EPO

analyses in its award (CAS 2023/A/9550, CAS 2023/A/9586, CAS 2023/A/9607, paragraphs 199-202).

113. After having carefully reviewed different immunoblot images regarding the Athlete's A Sample and B Sample in the LDPs and their interpretations, the Sole Arbitrator is comfortably satisfied that the Laboratory's finding of an AAF is justified. There is a diffuse or faint area of the band above the corresponding endogenous band, which extends beyond the band apex of Epoetin-δ (Dynepo). Although the signal is weak, as the Laboratory has noted, it is visible in the immunoblot images contained in the LDPs. The immunoblot images of the Athlete's A Sample and B Sample resemble the positive control samples more than the NCSs.

114. Based on the above, the Sole Arbitrator is comfortably satisfied that the Athlete has committed an ADRV under Article 2.1 of the IWF ADR. This conclusion is supported by the (1) original findings by the Laboratory even before the second opinion was requested, (2) the second opinions by Dr Dehnes, and (3) the expert reports by Dr Dehnes and Dr Naud. Although the weight that can be attached to the additional IEF-PAGE analysis is limited, the results of the IEF-PAGE analysis also support the finding of an AAF.

115. The Sole Arbitrator makes the above conclusions bearing in mind the Athlete's denial of the use of any prohibited substances and the fact that there is no indication of any other positive doping control by the Athlete. Even though the Sole Arbitrator does not have a reason to question the content of the Athlete's statement as such, the Sole Arbitrator cannot ignore the consistent inculpatory scientific evidence presented in the matter.

B. What are the appropriate consequences to be imposed on the Athlete?

I. What is the applicable period of ineligibility?

116. Article 10.2 of the IWF ADR provides as follows:

> *"The period of Ineligibility for a violation of Articles 2.1, 2.2 or 2.6 shall be as follows, subject to potential reduction or suspension pursuant to Articles 10.4, 10.5 or 10.6:*
>
> *10.2.1 The period of Ineligibility, subject to Article 10.2.4, shall be four (4) years where:*
>
> *10.2.1.1 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."*

117. It is undisputed that rEPO is a non-specified substance. Therefore, Article 10.2.1 applies unless the Athlete can prove that the ADRV was not intentional. The Sole Arbitrator notes that the Athlete did not put forth any arguments with respect to a potential lack of intent. The Athlete's case was that he did not commit an ADRV and should be acquitted of all charges. The Athlete did not put forward any alternative reasoning based on which the period of ineligibility to be imposed on him should be reduced in the event that he is found guilty of an ADRV.

118. Consequently, the Sole Arbitrator finds that a four-year period of ineligibility shall be imposed on the Athlete.

II. When should the potential ineligibility period commence?

119. Article 10.13 of the IWF ADR reads in its essential parts as follows:

> *"10.13 Commencement of Ineligibility Period*

(…) except as provided below, the period of Ineligibility shall start on the date of the final hearing decision providing for Ineligibility (…).

10.13.1 Delays Not Attributable to the Athlete or other Person

Where there have been substantial delays in the hearing process or other aspects of Doping Control, and the Athlete (…) can establish that such delays are not attributable to the Athlete (…), IWF or CAS ADD, if applicable, may start the period of Ineligibility at an earlier date commencing as early as the date of Sample collection (…)"

120. Doping Control is defined in Appendix 1 of the IWF ADR to include *"[a]ll steps and processes from test distribution planning through to ultimate disposition of any appeal and the enforcement of Consequences, including all steps and processes in between, including but not limited to Testing, investigations, whereabouts, TUEs, Sample collection and handling, laboratory analysis, Results Management, and investigations or proceedings relating to violations of Article 10.14 (…)."*

121. The Athlete has submitted that there has been a substantial delay in the period between him filing the explanation on 16 May 2023 and the IWF filing its Request for Arbitration on 8 May 2024. The IWF has not addressed this issue in its submissions.

122. The Sole Arbitrator observes that the Athlete indeed filed his Second Submission on 16 May 2023 and on 8 September 2023, the IWF informed the Athlete that his case would be submitted to the CAS ADD for adjudication. However, this did not take place until on 8 May 2024, i.e. eight (8) months later. The Sole Arbitrator notes in this context that the IWF has considered the matter to be a straightforward rEPO case. Therefore, the Request for Arbitration should have been filed earlier.

123. The Sole Arbitrator agrees with the Athlete that the filing of the case to the CAS ADD has been delayed for reasons not attributable to the Athlete and that the delay of eight months is substantial. It follows that the Sole Arbitrator may backdate the ineligibility period to start as early as the date of the collection of the Sample on 30 October 2022.

124. The Athlete has been provisionally suspended since 20 December 2022, and there is not even an allegation of a violation of such provisional suspension. Therefore, the Athlete would in any case receive credit regarding the ineligibility period from 20 December 2022 onwards. In these circumstances, in the Sole Arbitrator's view, the only meaningful backdating of the ineligibility period means advancing it to the date of the collection of the Sample. In practice, this means advancing the ineligibility period by less than two (2) months.

125. In conclusion, the Sole Arbitrator finds that the ineligibility period of four (4) years imposed on the Athlete shall start on 30 October 2022.

III. Disqualification of results

126. According to Article 10.13.1 of the IWF ADR, *"[a]ll competitive results achieved during the period of Ineligibility, including retroactive Ineligibility, shall be Disqualified."*

127. The Sole Arbitrator has found immediately above that the Athlete's ineligibility period shall start on the date of the Sample collection. It follows that his competitive results, if any, shall be disqualified from 30 October 2022 until 20 December 2022, i.e. corresponding to the imposition of the provisional suspension on the Athlete.

VIII. COSTS

(…)

IX. APPEAL

134. Article 13 of the IWF ADR 2024 provides in its essential parts as follows:

> *"13.2 Appeals from Decisions Regarding Anti-Doping Rule Violations, Consequences, Provisional Suspensions, Recognition of Decisions and Authority*
>
> *A decision that an anti-doping rule violation was committed, a decision imposing Consequences or not imposing Consequences for an anti-doping rule violation or a decision that no anti-doping rule violation was committed (…) may be appealed exclusively as provided in this Article 13.2.*
>
> > *13.2.1 Appeals Involving International-Level Athletes or International Events*
> >
> > *In cases arising from participation in an International Event or in cases involving International-Level Athletes, the decision may be appealed exclusively to CAS.*
> >
> > *(…)*
> >
> > *13.6.1 Appeals to CAS*
> >
> > *The time to file an appeal to CAS shall be twenty-one (21) days from the date of receipt of the decision by the appealing party. (…)"*

135. Pursuant to Article A21 of the ADD Rules, this award may be appealed to the CAS Appeals Arbitration Division within 21 days from receipt of the notification of the final award with reasons. Such appeal is to be filed in accordance with Articles R47 *et seq.* of the Code of Sports-Related Arbitration, applicable to appeals procedures.

*****

ON THESE GROUNDS

The Court of Arbitration for Sport rules that:

1. The Request for Arbitration filed by the International Weightlifting Federation on 8 May 2024 against Mr Xiaojun Lyu is partially upheld.

2. Mr Xiaojun Lyu is found to have committed an anti-doping rule violation of Presence of a Prohibited Substance or its Metabolites or Markers in an Athlete's Sample pursuant to Article 2.1 of the 2021 IWF Anti-Doping Rules.

3. Mr Xiaojun Lyu is sanctioned with a period of ineligibility of four (4) years.

4. The period of ineligibility is deemed to have commenced on 30 October 2022, which is the date when the sample leading to the anti-doping rule violation was collected from Mr Xiaojun Lyu.

5. All competitive results of Mr Xiaojun Lyu from and including 30 October 2022 until 20 December 2022 are disqualified with all resulting consequences, including forfeiture of medals, points, and prizes.

6. (…).

7. (…).

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

Seat of arbitration: Lausanne, Switzerland
Date: 22 May 2025

THE ANTI-DOPING DIVISION
OF THE COURT OF ARBITRATION FOR SPORT

Markus Manninen
Sole Arbitrator