

## DECISION OF THE ATHLETICS INTEGRITY UNIT IN THE CASE OF MS CARINA HORN

### INTRODUCTION

1. World Athletics has established the Athletics Integrity Unit ("**AIU**") whose role is to protect the integrity of the sport of Athletics, including fulfilling World Athletics' obligations as a Signatory to the World Anti-Doping Code ("the "**Code**"). World Athletics has delegated implementation of the World Athletics Anti-Doping Rules ("**ADR**") to the AIU, including but not limited to the following activities in relation to International-Level Athletes: Testing, Investigations, Results Management, Hearings, Sanctions and Appeals.
2. Ms Carina Horn ("the **Athlete**") is a 32-year-old sprinter from South Africa<sup>1</sup>.
3. This decision is issued by the AIU pursuant to Rule 8.4.7 ADR<sup>2</sup>, which provides as follows:

*"8.4.7 In the event that the Integrity Unit withdraws the Notice of Charge, or the Athlete or Athlete Support Person admits the Anti-Doping Rule Violations charged and accedes to the Consequences specified by the Integrity Unit (or is deemed to have done so) a hearing before the Disciplinary Tribunal shall not be required. In such a case, the Integrity Unit:*

- (a) shall promptly issue a decision confirming (as applicable) its withdrawal of the Notice of Charge of the commission of Anti-Doping Rule Violation(s) and the imposition of the specified Consequences (including, if applicable, a justification for why the maximum potential sanction was not imposed);*
- (b) shall Publicly Report that decision in accordance with Rule 14;*
- (c) shall send a copy of the decision to the Athlete or other Person and to any other party that has a right, further to Article 13, to appeal the decision (and any such party may, within 15 days of receipt, request a copy of the full case file pertaining to the decision)."*

### THE ATHLETE'S COMMISSION OF ANTI-DOPING RULE VIOLATIONS

4. Article 2 ADR sets out that the following shall constitute Anti-Doping Rule Violations:

*"2.1 Presence of a Prohibited Substance or its Metabolites or Markers in an Athlete's Sample*

*[...]*

*2.2 Use or Attempted Use by an Athlete of a Prohibited Substance or a Prohibited Method"*

---

<sup>1</sup> <https://worldathletics.org/athletes/south-africa/carina-horn-14361361>

<sup>2</sup> IAAF 2019 Anti-Doping Rules in force from 1 January 2019.

5. On 20 August 2019, the Athlete underwent an out-of-competition doping control in Munzkirchen, Austria. The Athlete provided a urine sample with reference number 3144081 (the "**Sample**").
6. The Sample was analysed by the World Anti-Doping Agency ("**WADA**") accredited laboratory in Lausanne, Switzerland (the "**Lausanne Laboratory**") and revealed the presence of LGD-4033 and Ibutamoren (the "**Adverse Analytical Finding**").
7. LGD-4033<sup>3</sup> is a Selective Androgen Receptor Modulator ("**SARM**") and is expressly listed in S1.2 (Other Anabolic Agents) of the WADA 2019 Prohibited List. Ibutamoren<sup>4</sup> is prohibited under category S.2 (Peptide Hormones, Growth Factors, Related Substances and Mimetics) of the 2019 WADA Prohibited List. They are both non-specified substances prohibited at all times.
8. On 13 September 2019, the AIU notified the Athlete (on behalf of World Athletics) of the Adverse Analytical Finding, informing her that a Provisional Suspension had been imposed (effective immediately), of her right to have the B Sample analysed and inviting her to provide an explanation for the Adverse Analytical Finding.
9. On 20 September 2019, the Athlete responded to the Notice of Allegation requesting her B sample analysis, to be provided with the estimated concentrations of the two prohibited substances detected in her Sample<sup>5</sup> and for supplements to be tested at the WADA-accredited laboratory in Salt Lake City, United States (the "**Salt Lake City Laboratory**").
10. On 26 September 2019, the Lausanne Laboratory reported that the analysis of the B Sample had been completed and confirmed the A sample result.
11. On 23 October 2019, having been unable to ship supplements to the Salt Lake City Laboratory, the Athlete informed the AIU that the supplements would instead be analysed at the WADA-accredited laboratory in Bloemfontein, South Africa (the "**Bloemfontein Laboratory**").
12. On 29 October 2019, the Bloemfontein Laboratory confirmed that it had completed the analysis of four different supplements provided by the Athlete: (i) Evlution Nutrition EVL, (ii) SSA Creatine Supreme, (iii) Mutant Madness pre-workout ("**Mutant Madness**") and (iv) Evlution Nutrition BCAA energy (together the "**First Batch**"), and that it had detected LGD-4033 in both an un-sealed and a sealed bottle of Mutant Madness with lot number #50381 provided by the Athlete.

---

<sup>3</sup> LGD 4033, also known as Ligandrol or VK5211, is currently being investigated as a pharmaceutical treatment for muscle wasting and weakness associated with aging. It has not been approved by the US Food and Drug Administration for clinical use in humans. It is not legally available in medication anywhere in the world although there are laboratories that manufacture LGD-4033 and sell it as a "research chemical." The FDA has also clarified that LGD-4033 is not a legitimate dietary ingredient, and therefore it is illegal to sell this ingredient in supplements. Any dietary supplement that advertises to contain LGD-4033 would be considered an unapproved new drug by the FDA. See the following article published by the United States Anti-Doping Agency ("**USADA**") on this matter: <https://www.usada.org/spirit-of-sport/education/5-things-to-know-about-lgd-4033/>

<sup>4</sup> Also known as MK-677, MK-0677, L-163,191 and Oratropo

<sup>5</sup> The concentration of Ibutamoren in the A Sample was  $\approx 0.8$  ng/mL and of LGD-4033  $\approx 67$  ng/mL

13. On 5 November 2019, the Athlete provided the AIU with a sworn affidavit in which she confirmed, *inter alia*, that the disclosure of “*Coffeine [sic] 200mg last taken 16.08/19*” on her Doping Control Form (“**DCF**”) referred to the Mutant Madness supplement as she understood that caffeine was its main ingredient.
14. The Athlete confirmed that that she had purchased Mutant Madness on 10 August 2019 at a shop near her home in Gauteng, South Africa, and had used it every day in the morning until 16 August 2019, as recorded on the DCF.
15. The Athlete also confirmed that, since the Bloemfontein Laboratory had not identified any Ibutamoren in the First Batch, she had now purchased sealed items of the other supplements/products that she had been taking in July and August 2019, specifically: Amplify Whey Infusion (the “**Amplify Whey**”), Reckitt Benckiser Disprin, Adcock Ingram Regmakers, Novartis Voltaren, Brunel Laboratoria Aspen Trazodone and Animal Pak (together the “**Second Batch**”). Whereas the Amplify Whey had not been disclosed on her DCF, the Athlete specified that she had also used this product in July 2019.<sup>6</sup>
16. On 28 November 2019, the AIU contacted the manufacturer of Mutant Madness, FitFoods, with respect to the Athlete’s explanation and, in particular, the presence of LGD-4033 detected in the Mutant Madness supplement.
17. On 31 January 2020, FitFoods confirmed that it no longer had any remaining stock of Mutant Madness Lot number #50381, but that it had retained the two lots of retained blend powders that were used to make Mutant Madness Lot number #50381.
18. On 2 February 2020, FitFoods provided a copy of a QA Control Document dated 26 June 2018, confirming that retained blend powders with Lot numbers 47711 and 46590 (“the **Retained Blend Powders**”) had been used to produce the Mutant Madness with Lot number #50381. On the AIU’s request, FitFoods sent samples of the Retained Blend Powders to the WADA-accredited Laboratory in Montreal, Canada (“the **Montreal Laboratory**”) for analysis for the presence of LGD-4033 and Ibutamoren.
19. On 1 March 2020, the Montreal Laboratory confirmed that no LGD-4033 or Ibutamoren had been detected in the Retained Blend Powders.<sup>7</sup>
20. The Lausanne Laboratory analysed the First Batch (results reported on 5 March 2020) and the Second Batch (results reported on 30 October 2020) for the presence of LGD-4033 and Ibutamoren and provided the quantification of any traces found (in results reported on 5 February 2021). The table below summarizes the findings of the Lausanne Laboratory’s analyses:

---

<sup>6</sup> It was agreed with the Athlete’s legal representative that the First Batch and the Second Batch would be sent to the Lausanne Laboratory for analysis. The First Batch was received at the Lausanne Laboratory on 10 January 2020 and the Second Batch received on 5 June 2020.

<sup>7</sup> The AIU also made several attempts to contact the manufacturer of Amplify Whey directly but received no response to any of its enquiries.

Supplements analysed	Presence of Ibutamoren	Presence of LGD-4033
Mutant Madness Pre-workout open bottle	None	150 - 160 µg/g
Mutant Madness Pre-workout bottle labelled as “sealed”	None	40 - 80 µg/g
Amplify Whey bottle labelled as “sealed”	15 - 30 µg/g	None

21. On 13 November 2020, the AIU interviewed the Athlete (the “**Interview**”) in the presence of her then legal representative to clarify the Athlete’s explanation. During the Interview, the Athlete confirmed that she had used:
- 21.1. 1 or 2 scoops<sup>8</sup> of Mutant Madness before training and sometimes 1 scoop before going to the gym; and
  - 21.2. the Amplify Whey sporadically, sometimes to replace a meal or after training in July 2019.
22. On 1 December 2020, the Athlete provided screenshots of a message exchange with a third-party regarding her purchase of supplements, which evidenced a voice note from the third party (the “**Voice Note**”). On 21 December 2020, the Athlete sent the AIU a transcript of the Voice Note<sup>9</sup>.
23. On 12 March 2021, following review of (i) the results from the analysis of the First Batch and the Second Batch (including the quantifications of any traces found that were reported on 5 February 2021) and (ii) the Athlete’s explanations as to her alleged ingestion of the Mutant Madness and the Amplify Whey, the AIU issued the Athlete with a Notice of Charge for violations of Article 2.1 ADR and Article 2.2 ADR pursuant to Article 8.4.2 ADR (“the **Charge**”) and invited the Athlete to confirm how she wished to proceed with the matter.
24. On 6 April 2021, the Athlete (through counsel) confirmed that she requested a hearing before the Disciplinary Tribunal on the basis that she admitted the Anti-Doping Rule Violations but disputed the Consequences. The matter was therefore referred to the Disciplinary Tribunal for determination and Procedural Directions were issued accordingly.
25. On 24 June 2021, the Athlete filed an Answer in the proceedings before the Disciplinary Tribunal (“the **Answer**”). In summary, the Answer set out that the Athlete:
- 25.1. accepted the presence of LGD-4033 and Ibutamoren in the Sample and that she had committed Anti-Doping Rule Violations accordingly;
  - 25.2. denied that the Anti-Doping Rule Violations were intentional on the basis that she had ingested two contaminated supplements viz. Mutant Madness and Amplify Whey, which were analysed by two different WADA-accredited laboratories and which (i) detected LGD-4033 in the unsealed bottle of Mutant Madness with lot number #50381 used by the Athlete (ii) detected LGD-4033 in a sealed bottle of Mutant Madness with the same

<sup>8</sup> One scoop is 7.5g.

<sup>9</sup> The transcript recorded the date and time of the Voice Note being received as 10 August 2019 - 16h37.

- lot number #50381 and (iii) detected lbutamoren in a sealed bottle of Amplify Whey which had been purchased from the same store that the Athlete had previously purchased the Amplify Whey that she used; and
- 25.3. had therefore met her burden to establish a lack of intention on the basis that she had demonstrated, on the balance of probabilities, the most probable pathway of ingestion of LGD-4033 and lbutamoren detected in the Sample *viz.* Mutant Madness and Amplify Whey.
26. In support of the Answer, the Athlete filed a witness statement in which she recalled her ingestion of Mutant Madness and Amplify Whey in July and August 2019 in additional detail. In particular, the Athlete's witness statement confirmed:
- 26.1. that the Athlete had ingested Mutant Madness on 19 August 2019 (the day before Sample collection), along with creatine and melatonin in order to recover from a flight to Munich; and
- 26.2. that the Athlete had also ingested Amplify Whey as part of a high protein diet beginning on 19 July 2019 for a period of three weeks, using it as a meal replacement for up to three meals per day until 2 August 2019 and then more sporadically (not every day) during the last week of her diet until 11 August 2019. The Athlete also confirmed that she continued to use Amplify Whey sporadically after her diet, including on 18 August 2019 (two days prior to Sample collection), when she recalled using it as a meal replacement because she had not been able to eat a planned dinner at her mother's house after being stuck in a traffic jam, but had instead driven straight to the airport for the abovementioned flight.
27. To corroborate the Athlete's ingestion of Mutant Madness and Amplify Whey as set out above, the Athlete also filed a witness statement from her coach, which confirmed that:
- 27.1. he and the Athlete had discussed the Athlete's high-protein diet as part of a weight-loss strategy following a meeting with the Athlete's agent on 16 July 2019;
- 27.2. he had spoken with the Athlete by phone on 18 July 2019 during the Athlete's purchase of supplements at a store in South Africa to assist the Athlete decide which whey-protein product to buy as part of the weight-loss strategy and that they had selected Amplify Whey; and
- 27.3. he had also spoken with the Athlete by phone on 10 August 2019 during the Athlete's purchase of supplements at a store in South Africa and that they had selected Mutant Madness as her pre-workout supplement.
28. The Athlete also filed a witness statement from her mother confirming the circumstances of their plans to eat together in advance of the Athlete's flight on 18 August 2019, which were abandoned due to the Athlete experiencing a heavy traffic jam. The witness statement also confirmed that the Athlete's mother had met the Athlete at the airport to collect her vehicle and that she had seen different supplements and used empty water bottles in the Athlete's car.

29. In addition to the above factual evidence, the Athlete filed an expert report by a Mr Paul Scott. In summary, Mr Scott confirmed that, in his opinion, the Athlete's ingestion of Mutant Madness on 19 August 2019 explained the presence of LGD-4033 in the Sample and it was "*likely*" that the Athlete's ingestion of Amplify Whey on 18 August 2019 also explained the presence of Ibutamoren in the Sample.
30. The AIU took independent scientific advice in relation to the Scott report which confirmed that the Athlete's explanations, as described in her witness statement, could be consistent with the finding of LGD-4033 and Ibutamoren in the Sample.

## CONSEQUENCES

31. This is the Athlete's first Anti-Doping Rule Violation.
32. Article 10.2 ADR provides the sanction to be imposed for Anti-Doping Rule Violations under Article 2.1 ADR and Article 2.2 ADR as follows:

**10.2 *Ineligibility for Presence, Use or Attempted Use, or Possession of a Prohibited Substance or Prohibited Method***

*The period of Ineligibility to be imposed for an Anti-Doping Rule Violation under Article 2.1, 2.2 or 2.6 that is the Athlete or other Person's first Anti-Doping Rule Violation shall be as follows, subject to potential reduction or suspension pursuant to Article 10.4, 10.5 or 10.6:*

**10.2.1 *The period of Ineligibility shall be four years where:***

- (a) *The Anti-Doping Rule Violation does not involve a Specified Substance, unless the Athlete or other Person can establish that the Anti-Doping Rule Violation was not intentional.*
- (b) *The Anti-Doping Rule Violation involves a Specified Substance and the Integrity Unit establishes that the Anti-Doping Rule Violation was intentional.*

**10.2.2 *If Article 10.2.1 does not apply, the period of Ineligibility shall be two years.***

33. LGD-4033 and Ibutamoren are Prohibited Substances according to the WADA 2021 Prohibited List. They are non-Specified Substances prohibited at all times.
34. The period of Ineligibility to be imposed upon the Athlete is therefore a period of four (4) years, unless the Athlete demonstrates that the Anti-Doping Rule Violations were not intentional.
35. As to whether the Athlete has demonstrated the source of LGD-4033 and Ibutamoren in her case, the AIU notes the differences between the Athlete's contemporaneous recollection of her ingestion of Mutant Madness and Amplify Whey in July and August 2019 as recorded on the DCF (dated 20 August 2019), recalled by the Athlete in her sworn affidavit dated 3 November 2019 and then further in interview with the AIU on 13 November 2020, and the Athlete's account of her ingestion that she provided in her witness statement almost two years later.

36. However, when considered against the totality of the evidence in this case (and notably in the absence of any specific evidence to counter her case as presented in the Answer), the AIU has concluded that the Athlete's evidence is (by the very narrowest of margins) sufficient to demonstrate, on the balance of probabilities, the source of the LGD-4033 and Ibutamoren in the Sample.
37. In particular, although the analysis by the Montreal Laboratory of the Retained Blend Powders used to create lot number #50381 of Mutant Madness did not reveal the presence of LGD-4033, the Athlete's evidence is that the Mutant Madness supplement that she ingested, and a further sealed container of the same Mutant Madness supplement with the same batch number (Lot number #50381), were sent to two different WADA-accredited laboratories for analysis and both detected the presence of LGD-4033 in the unsealed and sealed containers.
38. In addition, the Athlete provided a sealed container of Amplify Whey that was purchased from the same store where she made her original purchase of Amplify Whey and which, when analysed by the Lausanne Laboratory, revealed the presence of Ibutamoren.
39. In weighing up the above evidence, the AIU considers that, on a balance of probabilities, the Athlete has established that the probable source of LGD-4033 and Ibutamoren is Mutant Madness and Amplify Whey respectively.
40. The AIU also notes the decision in *World Athletics v. Marina Arzamasova* dated 27 November 2020<sup>10</sup>, in which the Panel found that “[...] *in order to establish the non-intentional ADRV, it is necessary to establish (on a balance of probabilities) not only the existence and intake of a (contaminated) supplement, but also the causal link between the ingestion of such supplement and the AAF*”<sup>11</sup>.
41. In that respect, the Athlete has provided an expert opinion which concludes (i) that the Athlete's ingestion of Mutant Madness on 19 August 2019 explains the presence of LGD-4033 in the Sample and (ii) that it is “*likely*” that the Athlete's ingestion of Amplify Whey on 18 August 2019 explains the presence of Ibutamoren in the Sample. The AIU's independent scientific advice is that Mr Scott's first statement can be accepted and that his second statement cannot be excluded.
42. Accordingly, the Athlete's evidence in this case is sufficient to demonstrate, on the balance of probabilities, a causal link between the Mutant Madness and Amplify Whey supplements and the Adverse Analytical Finding.
43. Pursuant to the foregoing, the Athlete has provided sufficient evidence to demonstrate that she did not engage in conduct that she (i) knew constituted an Anti-Doping Rule Violation or (ii) knew that there was a significant risk that her conduct might constitute or result in an Anti-Doping Rule Violation in ingesting Mutant Madness and Amplify Whey before the Sample was collected on 20 August 2019.

---

<sup>10</sup> <https://www.athleticsintegrity.org/downloads/pdfs/disciplinary-process/en/201127-World-Athletics-v-Marina-Arzamasova-Decision.pdf>

<sup>11</sup> See para 64.

44. Based on the totality of the evidence in this case, the AIU considers that the Athlete has (albeit fractionally) therefore demonstrated that the Anti-Doping Rule Violations were not intentional.
45. The Athlete has made no submissions with respect to No Significant Fault or Negligence in her case.
46. The AIU therefore confirms by this decision the following Consequences for a first Anti-Doping Rule Violation:
- 46.1. a period of Ineligibility of two (2) years in accordance with Rule 10.2.2 ADR, with credit for the period of Provisional Suspension served by the Athlete since 13 September 2019 in accordance with Rule 10.10.2(a); and
  - 46.2. Disqualification of the Athlete's results from 20 August 2019 until 13 September 2019 in accordance with Rule 9 ADR and Rule 10.8 ADR respectively, with all resulting Consequences, including the forfeiture of any titles, awards, medals, points prizes and appearance money.
47. The Athlete has accepted the above Consequences for her Anti-Doping Rule Violations and has expressly waived her right to have those Consequences determined by the Disciplinary Tribunal at a hearing<sup>12</sup>.

## PUBLICATION

48. In accordance with Rule 8.4.7 ADR, the AIU shall publicly report this decision on the AIU's website.

## RIGHTS OF APPEAL

49. This decision constitutes the final decision of the AIU pursuant to Rule 8.4.7 ADR.
50. Further to Rule 13.2.4 ADR, WADA and the South African Institute for Drug-Free Sport ("SAIDS") have a right of appeal against this decision to the Court of Arbitration for Sport in Lausanne, Switzerland, in accordance with the procedure set out at Rule 13.7 ADR.
51. If an appeal is filed against this decision by WADA or SAIDS, the Athlete will be entitled to exercise her right of cross-appeal in accordance with Rule 13.9.3 ADR.

Monaco, 10 September 2021

---

<sup>12</sup> The Athlete signed and returned an Admission of Anti-Doping Rule Violations and Acceptance of Consequences Form on 31 August 2021.