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WORLD ANTI-DOPING AGENCY
Health, Medical & Research Committee (HMRC) Meeting Minutes
August 30-31 2016

Participants:

Dr. Valérie Fourneyron, Chair	Attending
Prof. Kamal Al-Hadidi	Attending
Prof. Alessia Di Gianfrancesco	Attending
Prof. Jiri Dvorak	Attending
Prof. Lars Engebretsen	Attending
Prof Theodore Friedmann	Attending
Prof. David Gerrard	Attending
Prof. David Handelsman	Attending
Dr. Manikayasagam Jegathesan	Attending
Dr. Audrey Kinahan	Attending
Dr. John Miller	Attending
Dr. Margo Mountjoy	Attending
Dr. José Antonio Pascual	Attending
Dr. Orlando Reyes	Attending
Prof. Jürgen Michael Steinacker	Attending
Prof. Christian Strasburger	Attending
Prof. Hidenori Suzuki	Attending

WADA Staff

Dr. Osquel Barroso	Attending
Dr. Irene Mazzoni	Attending
Dr. Olivier Rabin	Attending
Dr. Alan Vernec	Attending

Observers
Prof. Fabio Pigozzi (IUSM, University of Rome) representing FIMS.
Prof. Peter Van Eenoo (DoCoLab, Ghent University, Belgium) representing WAADS

1. Welcome and Review of the Agenda

- Dr. Valérie Fourneyron, Chairman of the Health, Medical and Research Committee (HMRC) welcomed the Committee members.
- Dr. Fourneyron introduced the three new members of the HMRC, Dr. Margo Mountjoy, Dr. Orlando Reyes and Prof. Christian Strasburger, as well as the new Ad Hoc member, Chair of the List Expert Group Dr. Audrey Kinahan and the observer from the World Association of Anti-Doping Scientists (WAADS) Prof. Peter van Eenoo. Dr. Fourneyron noted that the fight against doping was at a crossroads following the McLaren report on doping in Russia, the

suspension of several WADA accredited laboratories, the high number of *Adverse Analytical Findings* (AAF) following the prohibition of meldonium as well as criticisms received from different fronts. Dr Fourneyron stressed the importance of each of the scientific Expert Groups (List, Laboratories, Therapeutic Use Exemptions, Gene Doping Panel and Athlete Biological Passport) and the key role of the HMRC in supporting the credibility of WADA, basing the decisions exclusively on science and impartiality.

2. Conflict of Interest

- Profs. Pascual, Pigozzi, Friedmann, Strasburger and van Eenoo declared possible conflicts of interest for reviewing a few research grants, as they either had applied for grants, knew or collaborated with the principal investigators or had competing interests. They were asked to leave the meeting room when those projects were reviewed.

3. Review of 2017 Prohibited List, report from the List Expert Group and recommendation to the WADA Executive Committee

- The Draft of the 2017 Prohibited List, prepared by the List Expert Group (LiEG) was presented by Dr. Audrey Kinahan, Chair of the LiEG. There were 248 stakeholders' comments, some very valuable but not all could be incorporated.
    a) Proposal of prohibiting glucocorticoid (GC) "local" injections:
        - Dr. Fourneyron introduced the subject and informed the HMRC that in August 2015 she had requested the constitution of a Working Group to make recommendations on the inconsistency of allowing GC local injections even if the systemic GC concentrations attained were comparable to those of prohibited routes of GC administration.
        - Dr. Kinahan summarized the events that followed. The Working Group recommended that athletes using local injections of GC around the time of competition should request a Therapeutic Use Exemption (TUE). In view of this, the LiEG proposed for the 2017 Prohibited List to prohibit GC local injections 72 h prior to competition. Therefore, a TUE would be required for that period of time.
        - The draft 2017 List was sent for consultation to the stakeholders, the majority of whom rejected the idea mainly on the basis that it would increase the burden of TUE applications. There were also analytical and pharmacological arguments e.g. the 72 h may not be enough to eliminate the GC depending on the drug itself, individual variations, the sports discipline as well as the difficulty of distinguishing routes of administration in urine.
        - In view of this, the LiEG decided not to introduce any changes in the GC section for the 2017 List and decided to continue with the discussions with a larger group of experts and envisage more research to distinguish routes of administration.
        - Several members of the HMRC, including sports physicians, did not agree with the LiEG decision and wanted the HMRC to prohibit local GC injections, as it was known that many athletes were clearly using GC for doping. Local injections could be easily used as an argument to cover up intramuscular

injections or oral administration. It was also acknowledged that other athletes were using it legitimately for medical conditions. However, it was unreasonable to allow local GC injections when pharmacologically the blood levels attained were similar to prohibited routes. The increase in TUE burden was not seen as a solid excuse. Some HMRC members expressed the wish to introduce the prohibition of local injections of GC in the 2017 List and then educate the stakeholders.

- In spite of the above, Dr Fourneyron recommended that it would be unwise to go against the recommendations of the majority of the stakeholders. Nevertheless, it was clear that the inconsistency of the current situation with GC was unacceptable and that the issue had to be resolved. The HMRC instructed the LiEG that there should be changes for the 2018 List, so it was agreed to keep working on a solution, including further studies, but not to introduce changes for the 2017 List. ACTION POINT –LiEG 2018

b) S0: Non-approved drugs: The HMRC believed that the definition of "regulatory health authority" in the section left room for improvement, as different countries could have different standards of rigorousness for approving pharmaceutical products. Furthermore, it was difficult in practice to prove that every regulatory agency in the world had been checked as to whether any substance was approved for human use or not. The HMRC requested the LiEG to look into tightening the definition, perhaps adding "stringent regulatory health authority". ACTION POINT- LiEG 2018

c) S1: Anabolic steroids: In order to harmonize the List with several Technical Documents (Anabolic Steroids, 19-NA, IRMS) several anabolic androgenic steroids were transferred from the exogenous to the endogenous section, as they could be produced endogenously at low concentrations. Regarding clenbuterol meat contamination, the sample collection from the studies WADA had been conducting in collaboration with Mexico was finished and initially analyzed for clenbuterol levels, and samples would be also sent to a laboratory specialized in meat quality control in Europe to be analyzed for clenbuterol enantiomeric composition.

d) S2: Peptide hormones, growth factors, related substances and mimetics: It was noted by the HMRC that GATA inhibitors (e.g. K-11706) and TGF-beta inhibitors (e.g. sotatercept, luspatercept) were not included in the current wording of erythropoiesis-stimulating agents in the S2 section, so they were added. Molidustat was also added as example of HIF inhibitor. LDG 4043 should be added to the list. Additionally, it was pointed out that those "non-erythropoietic EPO-Receptor agonists" were in fact Innate Repair Receptor Agonists and that their very non erythropoietic nature made their inclusion on the list doubtful. The whole section should be reviewed by the LiEG for the 2018 List. ACTION POINT- LiEG 2018.

e) S3: Beta-2-agonists: It was clarified that selective and non-selective agonists were prohibited and examples were given. Dosing parameters of salbutamol were refined to make it clear that the full 24 hour dose should not be administered at one time; this would also serve to distinguish inhaled from nebulized salbutamol, since the doses for nebulization are higher. Finally the maximum dosage for salmeterol was stated.

f) Thyroid hormones: The LiEG received again a few requests to prohibit thyroid hormones. The LiEG still considered that they were not performance enhancing although it could be considered a risk for health if dosed improperly. The LiEG considered adding them to the Monitoring Program but it would be difficult to get any solid conclusions especially if they were being used in small doses to increase thyroid hormone levels to normal high. It was concluded to try to engage the stakeholders who report that thyroid hormones were being abused to share more information. In addition, there were considerations to fund research studies, for example, to measure T3/T4 by IRMS or longitudinally, or TSH. Presently, it was concluded that there were no compelling arguments to add these substances to the prohibited list.

g) S4: Hormone and metabolic modulators: Androsta-3,5-diene-7,17-dione (arimistane) was added as an example of aromatase inhibitor.

h) M1: Manipulation of blood and blood components: It was clarified that supplemental oxygen was allowed only by inhalation.

i) S6: Stimulants: Lisdexamfetamine was added to the list of non-specified stimulants because it was a pro-drug that converted to amphetamine, a non-specified stimulant.

j) S7: Narcotics: Nicomorphine was added because it was an inactive precursor of morphine. Tramadol was not included because the LiEG felt that if prohibited, athletes would choose other opioids to dope. The International Olympic Committee (IOC) Consensus Meeting on Pain Management, that would take place later in November, should be helpful in defining the future of Narcotics on the List.

k) P1: Alcohol: The LiEG proposed to eliminate Alcohol from the List by 2018 and dealt with by each Federation as safety issue. Federations had been already advised.

l) Monitoring Program: Codeine was added, as well as the simultaneous detection of beta-2-agonists to see if patterns of stacking could be established.

m) The draft 2017 List was put into consideration and approved by the HMRC. This draft would be presented to WADA Executive Committee for approval on September 21, 2016.

n) It was also agreed that starting from 2017, the draft List would be circulated to the HMRC members in April, simultaneously to the consultation with stakeholders. ACTION POINT.

- Dr Kinahan informed the HMRC of other issues discussed during the last LiEG meeting on 25-26 August 2016. The HRMC members further contributed to the discussion :

a) Unique List:

- The LiEG explored the possibility and willingness to have a Unique List with substances prohibited at all times.
- There were advantages, for example it would prevent doping during training, would avoid confusion to distinguish drugs administered in or out-of-competition, as well as disadvantages for example increased inadvertent doping, more TUEs.
- Some categories currently prohibited in-competition would probably disappear (e.g. narcotics, cannabinoids) and others restructured (e.g. maybe re-categorize some of the specified and non-specified Stimulants).
- The HMRC believed that it was not an easy task especially since there may be opposition to remove categories from the List or to prohibit others all the time. In view of this it was possible there may not be a final agreement. In general, however, the HMRC considered that it was worth exploring and a very good first step. It was recommended to expand the working group and cross-communicate with the Laboratory and TUE EG. ACTION POINT

b) Meldonium:

- Dr Rabin recapitulated the events surrounding the prohibition of meldonium
- In view of the high prevalence of use of meldonium by athletes, it was quickly transferred from the Monitoring Program to the Prohibited List after one year of monitoring.
- From February 2016 onwards, an unusually high number of meldonium AAF were reported.
- WADA investigated the reasons behind this and funded some excretion studies. It was found that meldonium presented an unusual pharmacokinetics and as such, the excretion was biphasic and the elimination phase was very long, unexpected for such a small molecule. In addition, the doses administered were quite high. Both facts combined resulted in many AAFs long after the athletes stopped using meldonium before the end of 2015.
- WADA issued 2 Notices on how to deal with the meldonium cases to help the Testing Authorities decide if an AAF was recent doping or a carry-over of use from 2015.
- The HMRC stood behind the prohibition of meldonium. The LIEG acknowledged that maybe there could have been a more proactive way of communicating with stakeholders to allow more time for educating athletes, but nobody predicted such a long excretion period. The issue should self-resolve soon as it was predicted that after September athletes who administered meldonium before January 1 2016 should have cleared it from the body.

4. Special research Fund on Autologous Blood Transfusion (ABT):

- Even though research is a key element in WADA's activities, the funding had steadily been decreasing along the years, dropping from $ 7 million in 2006-2007 to a historic low of only $ 1.8 million this year. Fortunately, in 2015 WADA received about $ 11 million from a combined fund granted by the IOC and governments of the world. $ 8.6 million were allocated to science research, $ 2 M to the Partnership for Clean Competition (PCC)-WADA and $ 1M to Social Science.
- Since doping control is in serious need of a way to detect ABT, a special call for ABT grants was issued in November 2015.
- The procedure was similar to the WADA annual regular call for grants. Once the grants were received they were sent to 3 external independent reviewers. Their evaluations were discussed by WADA Project Review Panel (PRP) composed of 2 external independent experts, 1 member of the HMRC (NOTE: for the annual call for grant there are 2 members) and 3 members of WADA Science Department. The recommendations from the PRP were distributed to the HMRC, who reviewed and recommended proposals to the WADA Executive Committee for approval in May.
- Only sixteen grants were submitted, implying the difficulty of detecting ABT. Although most grants required a considerable amount of innovation, there were no novel ideas/techniques proposed, suggesting that many of the possible options were already being explored. Three grants were funded, all of which presented very good preliminary results. The contracts and ethics had been cleared and all were already ongoing. It was clarified that WADA would receive further proposals for ABT in the regular annual call for grants.

5. Review and recommendation for the 2016 WADA Call for Scientific Research Projects

- Profs. Handelsman and Pascual, the HMRC members who were part of the PRP, presented the conclusions and recommendations of the PRP to the HMRC. The PRP had met on August 29 and had reviewed the grants based on the independent external reviewers' evaluations as well as the PRP's own assessment.
- 110 Investigators from 26 different countries and 4 continents submitted 83 research projects to WADA in 2016:

  A- 28 projects submitted in the category "*Detection of Prohibited Substances/Methods: Methodologies in Analytical Chemistry*"

  B- 10 projects submitted in the category "*Detection of Prohibited Substances/Methods: Affinity-Binding and Biochemical Methodologies"*

  C - 12 projects submitted in the category *"Pharmacological Studies on Doping Substances/Methods"*

  D - 21 projects submitted in the category "*The Athlete's Biological Passport*"

  E - 12 projects submitted in the category "*Detection of Doping Substances/Methods: Molecular Biology, Omics and Miscellaneous Methodologies*"
- The HMRC considered the recommendations from the PRP, proposed funding additional grants and discussed in more detail several applications.
- As a result, 21 projects were selected and recommended for funding. 8 of those would be supported by the Special Funds.
  - For 6 projects, budgetary revisions were recommended.

- 3 projects were considered to be potentially important but successful outcomes were considered to be uncertain. Therefore, pilot projects of one year duration were recommended with greatly reduced budgets, with further evaluation of the outcomes to be made at the end of the granting periods.
- The "omics' part of one project was not funded because it was redundant with previous grants.
- One project was approved in part to improve the methodology but not to fund its dissemination.
- 2 projects that were complementary and from the same research group were approved and merged but part of it was not funded since it was not a priority.
- For one project, it was requested to extend the length of the administration study.
- One project was requested to evaluate only the most used medications.
- One project was approved under the condition to completely redefine it to suit doping control analysis.
- One project that was considered important was not supported because it would be soon financed by other granting agency.

- The HMRC would recommend the funding of the 21 projects during the Executive Committee meeting on September 21 2016.

6. Report from the Therapeutic Use Exemption (TUE) Expert Group

- Prof. David Gerrard, Chair of the TUE Expert Group (TueEG) gave an update on the group's activities during 2016, informing that:
  1. Olympic Games 2016: There were no major TUE issues during the Rio Olympics Games.
  2. ADAMS: There was a 23% increase in the use of ADAMS by the stakeholders with respect to the previous year because there was more acceptance and software compatibility (10 new federations and anti-doping organizations).
  3. TUE: Glucocorticoids had the highest number of TUE requested, followed by stimulants (mainly for ADHD), hormone and metabolic modulators (mainly for insulin), S5 (diuretics and masking agents) and beta-2-agonists and finally narcotics.
  4. TUE Physician Guidelines: The TUE EG also worked on the annual update of the Medical Guidelines and was developing others (e.g. for renal transplants).
  5. TUE Reviews: Some especially difficult cases of review of TUE were presented to the HMRC as examples i.e. use of a beta blocker by a Paralympic shooter (IPC and WADA appeal rejected), application for use of meldonium by an athlete (refused for lack of evidence that it was needed) and use of tamoxifen by a Paralympic guide runner (rejected).

7. Report from the Laboratory Expert Group

- Dr. John Miller , Chair of the Laboratory Expert Group (LabEG), gave an update on the LabEG activities during 2016:
  1. The regular tasks of the LabEG consisted in directing the process of accreditation and re-accreditation of anti-doping laboratories, evaluating laboratory performance in accordance with the International Standard for Laboratories (ISL) and applicable

Technical Documents, assessing the laboratory results of the WADA External Quality Assessment Scheme (EQAS) rounds, providing information to the laboratories to ensure better practice and better harmonization, reviewing any technical issue on the operation of the anti-doping laboratories, taking part in the WADA laboratory site visits, preparing and revising as needed the ISL, Technical Documents and Guidelines and providing recommendations regarding laboratory performance to WADA decision bodies.

2. There were 34 WADA-accredited laboratories, including 4 currently under suspension (Almaty, Bloemfontein, Madrid, and Lisbon).
3. Regarding the Moscow laboratory, the LabEG recommended suspension in November 2013 for unsatisfactory quality management system. The Disciplinary Committee imposed a "suspended" suspension but following the WADA Independent Commission Report on doping in Russia, the laboratory was revoked in April 2016 and then was later accepted as a probationary laboratory. However, the process of lab reaccreditation was ultimately suspended by WADA following the publication of the subsequent McLaren's Report.
4. There were 2 Candidate Laboratories:
    i. Cairo (Egypt): Very slow progress observed and no recent information was available.
    ii. Santiago laboratory (Chile): Located in the Faculty of Pharmacy, University of Santiago. It was intended to become a "regional" laboratory, perhaps sub-contracting the testing of blood parameters to a laboratory in Uruguay. They were currently looking for additional sources for funding.
5. Back in 2013, the Rio laboratory had reported 3 false negatives within a 12 months period and the case was referred to the Disciplinary Committee by the LabEG, who revoked the laboratory accreditation in September 2013. In May 2015 the laboratory was reaccredited, but following 2 significant breaches of the ISL rules it was immediately suspended in June 2016 and further to an extensive "on site" visit and investigation, the suspension was lifted on July 20, 2016. One condition was imposed by the LabEG: The report of any AAF by the Rio laboratory would need to be confirmed by a second opinion from another WADA-accredited laboratory.
6. There were 2 new laboratory directors: Athens and Paris. The two directors were interviewed by the LabEG.
7. It was mentioned that there was a problem of delay between the conclusions of the Expert Group on non-compliance and the decisions of the Disciplinary Committee.
8. There were 12 site visits to the laboratories since the last HMRC meeting, including Beijing (2), Bucharest (2), Bloemfontein, Moscow Lisbon, Rio de Janeiro (3), Madrid and Helsinki. The reasons were varied: e.g. upcoming major events, unsatisfactory performance, failure to implement required analytical methodology, ISL/TD infringements, to gain accreditation and/or ABP Approval.
9. The EQAS in urine included 3 rounds of 5 samples for the Regular EQAS, 5 samples for the double-blind EQAS and 1-3 for the Educational EQAS. There were also EQAS for blood samples, which were showing good results from the laboratories.
10. Several Technical Documents were updated: TD2016NA (harmonization of analysis and reporting of 19-Norsteroids related to nandrolone); TD2016EAAS (endogenous anabolic androgenic steroids); TD2016IRMS (detection of synthetic forms of endogenous anabolic androgenic steroids by GC-C-IRMS); TD2015MRPL (minimum required performance levels); TD2015IDCR (minimum criteria for chromatographic-mass spectrometric confirmation of the identity of analytes); TD2015GH (Human Growth Hormone (hGH) isoform differential immunoassays).

11. Changes issued to the 2016 List were considered for incorporation into the WADA-EQAS list.
12. The ISL was currently under review to address several issues including reducing the size of the text, further harmonizing it with existing TDs and procedures, introduce penalties for late reporting of results or corrective actions Reports (CAR).
13. The LabEG also discussed and is looking for a solution for the screening of phenethylamine and derivatives, since there was a vast number of possibilities to produce these illegal psychoactive drugs and it was a huge burden to screen for and then characterize suspicious substances.
14. The HMRC discussed the future of accredited laboratories: some of the current ones may not survive due to high maintenance costs. It was believed that perhaps it would be wise to rationalize and combine different countries served by a regional laboratory (Superlabs) and this possibility would be explored. ACTION POINT. In addition, some specialized tests (e.g. gene doping test) would only be done in selected laboratories.

8. Report from the Gene Doping Panel

- Prof. Theodore Friedmann, Chair of the Gene Doping Panel (GDP) summarized the role of the Panel, the discussions that took place during the GDP meeting and the recommendations from the Panel:
    1. The gene doping test developed by Dr. Anna Baoutina (Australia) had been validated so the GDP recommended it for implementation. Some improvements were needed to optimize the test and would be addressed by a follow-up grant. Afterwards, laboratory personnel would need to be specifically trained for its application. Overall the GDP and the HMRC believed the test was fit-for-purpose and estimated that it will be replaced in the near future by better options like whole genome sequencing.
    2. The GDP was informed of 2 new gene manipulation techniques that may be attractive to athletes: a) use of exosomes to transport small molecules into cells although it did not seem to be very useful for doping due to limited delivery capacity; b) genome editing, rapidly growing, consisting in replacing a defective gene for a fully functional one. In the context of doping it would be difficult to “enhance” genes involved in performance and adequate delivery to the target tissues would always be an issue difficult to overcome.
    3. Finally the GDP was not fully satisfied with the current definition of gene doping and would try to improve it for the 2018 List.
- The HMRC agreed in general with the conclusions of the GDP.

9. Update on the Athlete’s Biological Passport

- Dr Alan Vernec updated the HMRC on the Athlete’s Biological Passport (ABP) program.
- The ABP had now become an integral part of the anti-doping program and was also useful for investigations. If the ABP triggered an Atypical Passport Finding (ATPF), the results were sent to experts to determine whether there was a likelihood of doping.
- The Hematological module was launched in 2009 and it had considerably improved the detection of the erythropoietin stimulating agents. The Steroid Profile was launched in 2014 and was being constantly improved. They were actively working in the development of the Endocrine Module, and there was a pilot project to follow the GH isoforms and IGF-I LC-MS/MS tests longitudinally to see if the sensitivity can be improved. There was also a search of new biomarkers mainly through “omics”.

- Testing of athletes during weekends or in remote areas was problematic for the stability of blood samples. Therefore a Blood Stability Score (BSS) was established, showing that samples could be transported up to 60 hr at approximately 4^{o} C.
- Another example of the usefulness of the ABP was the longitudinal analysis of the T/E ratio. There were a few cases where the T/E ratio produced an ATPF and the sample was subjected to IRMS and was found to contain exogenously administered testosterone or related steroids. ABP was also useful to detect if samples were switched between individuals and was used for the MacLaren report on Russia's doping scandal. However the steroidal module proved to be affected by several confounding factors and had to be further improved.

10. Update on Chairmanship of the HMRC

- Dr Fourneyron informed the HMRC that, as agreed in September 2014 following her election as Chair of the HMRC, she would be finishing her mandate and would not seek renewal. Her successor would probably be from the IOC Medical Commission.
- Dr. Fourneyron thanked the HMRC members, the Chairs of the different scientific Expert groups and their respective members as well as and WADA Science and Medical Departments. She affirmed the HMRC was at the heart of the fight against doping and needed to continue the good work to protect clean athletes and make WADA credible.
- The HMRC members in turn thanked Dr Fourneyron and congratulated her for her excellent job as Chair and expressed their gratitude and recognition with an applause.

11. Update on transgender issues

- The HMRC was updated with 3 presentations on possible issues with the use of prohibited hormones by transgender athletes
    - o Presentation by Prof. Engebretsen: addressed 2 problematic issues: Hyperandrogenism and transgender (male to female). In both cases there were questions on the upper levels of testosterone (T) that the athlete would be allowed. For the moment there were no rules, even after an IOC consensus meeting in November 2015.
    - o Presentation by Dr Vernec: WADA considered hyperandrogenism a natural genetic variant. For female to male transgender athletes (F2MTA) there were guidelines based on androgen deficiency, but not for male to female transgender athletes (M2FTA), because there was no clear accepted lower limit of normal T level in females. WADA experts found no compelling argument for the use of T in M2FTA and, therefore, there existed no TUE Guideline for orchidectomized athletes. For non-orchidectomized M2FTA there would be a need to address substances prohibited in males only. The ABP steroidal module would detect fluctuation in androgens if a transgender athlete wanted to cheat.
    - o Presentation Dr Handelsman: For pre-pubertal F2MTA, puberty could be suppressed with GnRH analogs (i.e. would require a TUE) or depot steroids (medroxyprogesterone acetate, i.e. did not require a TUE). For adults F2MTA, a TUE or monitoring for testosterone would be required to prevent excessive dosage. For adult M2FTA, male testosterone exposure after puberty created lasting changes in bones, muscle mass, hemoglobin and psychology that could provide an advantage in some sports despite shorter-term T suppression. There was an increasing preference to avoid orchidectomy and T suppression varied with estrogen dosage and

compliance, so it could be manipulated to allow T levels to rise. Compliance must be monitored. Measurements of T in serum by immunoassay were too inaccurate especially at low circulating testosterone concentrations (women, M2FTA) and would require mass spectrometry. According to the literature, normal female serum T values were much lower (upper confidence limit around 3 nM) than 10 nM established by the IOC for transgender M2FTA eligibility.

12. Medication abuse in sport.

- Prof. Dvorak informed the HMRC that there was extensive abuse of non-steroidal anti-inflammatory drugs (NSAID) even in young footballers (about 50% prevalence). He recommended prohibiting these substances and requiring a TUE for usage. Supplements were also a problem as they could contain prohibited substances. The HMRC noted that there may be some recommendations from the IOC Consensus Meeting on Pain Management to be held in November, as noted above.

13. Designer Drugs.

- The HMRC discussed the increasing problem of new psychoactive drugs (NPS). NPS were a challenge for society because they were readily available, there was a constant supply and would very likely be used by athletes as well. WADA partnered this year a symposium on NPS and would soon strengthen its collaboration with the United Nations Office of Drug Control (UNODC). There were about 30-40 NPS per year, and since the number was overwhelming the possible trend from regulating agencies would be to concentrate their efforts to eradicate the most dangerous ones.

14. Closing Remarks

- There was a request to provide more material beforehand for the preparation of the meeting. ACTION POINT
- Dr Fourneyron thanked the HMRC members for their commitment, hard work and the quality of the discussions noting it was a pleasure to work with the group.

15. Next meeting

- The next Project Review Panel and HMR Committee meetings were scheduled for **August 2017 (date TBD).**

- The meeting was adjourned.

ACTION POINTS HMR COMMITTEE MEETING- August 30-31 2016

Subject	Action Point	Responsible	Due date
S 9: Glucocorticoid "local injections"	Keep on working and introduce changes in 2018 List	LiEG	2017
S0 : Non-approved substances	Tighten definition of Regulatory Agency	LiEG	2017
S2: Peptides hormones, growth factors, related peptides and mimetics	Reorganize section	LiEG	2017
Draft 2018 List and subsequent years	Circulate to HMRC members	WADA-Science Department	Starting 2017
Unique List	Expand working group; cross-communicate with the Laboratory and TUE EG	LiEG	Starting 2017
Creation of Superlabs	Explore the possibility	Lab EG	Starting 2017
Preparation HMR Committee meeting	Circulate more material beforehand	WADA-Science Department	Starting 2017