



Right Honourable Jesse Norman, Member of Parliament

Chairman, Culture, Media, and Sport Committee

House of Commons

London SW1A 0AA, United Kingdom

Embargo of the Study “Doping in Elite Sports Assessed by Randomized-Response Surveys”- “Prevalence Study”; Assessment of the statements made by Lord Sebastian Coe at the hearing on 2nd December, 2015

Dear Chairman Norman,

The statements made by Lord Sebastian Coe and Thomas Capdevielle on the Study “Doping in Elite Sports Assessed by Randomized-Response Surveys”- “Prevalence Study” at the hearing of your subcommittee on December 2 cannot remain without comment.

Lord Coe and Mr. Capdevielle rejected to give clear answers to your questions why IAAF still withholds the release of the study for publication in a scientific journal. Their statements are contradictory and – from our point of view – in parts also untrue. They are suitable to damage the academic reputation of the study group and to increase the damage that Prof Ulrich and his colleagues have already suffered because of the embargo of their study. Further withholding the results of this study is also an enormous damage to the efforts of combatting doping and against scientific freedom.

Therefore I have asked Prof. Ulrich, the lead author of the study to comment on the statements made by Lord Sebastian Coe and Thomas Capdevielle. Please find attached an assessment of these statements and further background information.

The statements should also be read in the context of the recent disclosures and sanctions of ethical misdemeanor of Dr. Gabriel Dollé, until autumn 2014 Director of the IAAF's Anti-doping Department, made by the Panel of the IAAF Ethics Commission on January 7, 2016.

Therefore we kindly ask you for further consideration.

With kind regards



Georg Sandberger

Chancellor Emeritus



Rolf Ulrich

Professor of Cognitive Psychology



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10th January, 2016

Hearing Embargo of the Study “Doping in Elite Sports Assessed by Randomized-Response Surveys”- “Prevalence Study”

Dear Chairman Norman,

We¹ very much appreciate your continued support concerning our unpublished manuscript “Doping in Elite Sports Assessed by Randomized-Response Surveys”. We watched with great interest the hearing at December 2, 2015, and we were surprised to hear several misleading and incorrect claims about our research made by Lord Coe and also by Thomas Capdevielle during this meeting.

In the meeting you asked Lord Coe several times whether IAAF was still blocking the publication of our manuscript. He rotated in circles and never gave a clear answer, which is an answer in itself. We are therefore still unsure as to whether we can or cannot submit the paper to a journal. It is in the interest of the science of doping that this paper undergoes an independent review process by experts (as is the standard procedure for any paper that is submitted to a scientific journal). It is also in the interest of the public since the manuscript has now been repeatedly and publicly criticized and thus stigmatized by the IAAF, which affects negatively the scientific reputation of my colleagues. It should also be mentioned that this scientific work was performed by my colleagues and myself in the belief that our work would finally result in a scientific publication.

We would like to clarify the following points:

1. Lord Coe repeatedly claimed that the paper was rejected by several journals. (e.g., Answer to Q416, “they were turned down by a number of scientific journals”). This claim is wrong. The paper was never submitted to several journals (Q416). In an equally erroneous statement, Thomas Capdevielle (Q430) even claimed that “[i]t was published eight times. It was already published eight times...”

¹ The first author (Rolf Ulrich) of the unpublished manuscript has written this letter and verified its content with all available coauthors during the writing of this letter. Therefore, the letter is written in first person-plural.

2. It is true, however, that we once wrote a "pre-submission inquiry" to the journal *Science*. However, our request was turned down because the editor felt that it did not fit their categories of articles. It was therefore rejected before any scientific review, therefore the fact it was rejected has nothing to do with its scientific validity.
3. Thomas Capdevielle claimed that IAAF asked experts to review the soundness of the methodology and conclusions drawn in this paper. "We sought independent advice from social science specialists as to the methodology they had used" (Answer to Q427). Unfortunately, the IAAF never revealed these reviews to us --- it was not clear to us how many reviewers were asked and whether these reviewers were independent from the IAAF. This is an unusual and non-transparent review procedure. It was not until this July (31. July 2015) that the IAAF sent us a list of questions concerning our paper and asked us to address these questions. We immediately answered all of the questions, but IAAF never got back to us after we had returned the answered questions to them (our answers to their questions are attached to this letter). These questions were rather trivial and clearly indicated that those asking the questions were not specialists in the field.
4. Besides, the IAAF has no legitimate right in the first place to block a paper based on scientific arguments. It is hard for us to understand the arguments of the IAAF: on the one hand they say that they have no right to veto, but on the other hand they are claiming that it is legitimate to verify the validity of the article before they give permission to publish (thereby contending that they have power to veto). The only way to properly test the scientific validity of the article would be to release the study in order to submit it to a solid journal with an impartial and scientific and rigorous peer-review process. Should this impartial process turn the paper down, then the paper would not be published and this would protect the IAAF. On the other hand, should the paper be published by a rigorous scientific journal, then IAAF could be assured that it is of good quality and reveals important information for the IAAF to act upon. The only explanation we can have for the IAAF's actions is that the IAAF is afraid that these results are actually accurate, and will have a negative impact on the IAAF. Therefore blocking the report is a defensive mechanism by the IAAF, which makes sense but is not excusable.
5. After the paper was turned down publication in *Science* for above mentioned reasons, it was rewritten for publication in the journal *Nature*. The authors got a green light from WADA on February 12th, 2013. The manuscript was rewritten to conform to *Nature's* formatting requirements, and sent to WADA for approval on April 1st, 2013. WADA then wrote us to inform us that the paper would be forwarded to IAAF. Only at this point, more than one year after completion of the study, did it become clear to the authors that WADA could not act independently from IAAF, because WADA had made an agreement with IAAF which was not disclosed to the research group. According to this agreement, WADA would need permission from IAAF in order for us to submit this paper to *Nature* (email from WADA on May 22nd, 2013). Therefore, the claim by Lord Coe (Q417) that IAAF had not vetoed the paper is inconsistent with the information supplied by WADA, as expressed in the aforementioned email by WADA.

6. I would like to stress the point that Prof. Dr. Dr. Sandberger has been negotiating with WADA's lawyer for nearly three years regarding the release of the paper for publication (since July, 2013). It was only over the course of this long process (which involved more than 30 emails and several phone calls by Prof. Dr. Dr. Sandberger) that it became clear that IAAF was blocking the publication of this work. After many months of effort, after many conversations and exchanges of correspondence with IAAF involving WADA'S lawyer and WADA executives, it became clear this year that WADA had seemingly exhausted its efforts to assist in securing the permission of the IAAF for the members of the research group to publish their article.
7. Consequently, both IAAF and WADA had enough time to clarify their concerns with us. If these organizations – as they claim – are really concerned about doping, we don't understand why IAAF blocked the publication of our paper now for over three years and why IAAF officials did not respond to the successive emails of Prof. Dr. Dr. Sandberger who represents the University of Tübingen and thus the scientific community.
8. It is important that not only the main text, but also the 35 pages of supplementary material be published. This supplementary material includes data from a novel methodological approach for assessing the prevalence of doping. This approach was suggested and developed by Andrea Petroczi, who is a coauthor of the manuscript. When our team started the collaborative research at WADA, a major goal was to evaluate this novel procedure side-by-side with the more standard unrelated question model. The latter model became the basis of the survey method that is described in the main text. We chose this latter model, derived from mathematical statistics, because it is a well-established method. In fact, it has been cited 556 times according to Google Scholar and applied in many published surveys assessing sensitive questions. Moreover, in our study, the unrelated question model successfully passed a critical test (assessing the prevalence of nutritional supplements), thus causing the research team to agree that only the results from this standard model should be published in the main text.
9. Finally, I would like to comment on a statement made by the General Director David Howman at the hearing of 8th September 2015 (Blood Doping in Athletics). It concerns his answer to Q40 about signing retrospectively the confidentiality agreements. Mr. Howman replied to your question by saying "it was the first practical opportunity we could have to have people around the table sign the document. It was nothing to do with being retroactive." In fact, the research group had met at WADA before the 26th October 2011 (this was day when we were asked to sign the confidentiality agreement). Specifically, the group already met at 11th January 2011 and also at 10th May 2011. These two meetings took place before the data were gathered at the 13th World Championship in Daegu, South Korea (27th August 2011 to 4th September 2011).

In sum, the publication of the study in a scientific journal is necessary for the scientific discourse. The manuscript must undergo an independent review process before

publication, as it is standard for any renowned scientific journal. The publication of the manuscript by the Committee, without the 35 pages of critical supplementary material that was written to accompany it, is no substitute, because the supplementary material contains all of the major statistical and theoretical analyses, which are crucial for understanding the methodology of the paper.

Thanks to the excellent work of your commission inquiring into the background of the blockade of the publication of our paper, we now have more options to pursue as to what steps we will take now. We will continue to advocate submitting the paper to a peer-reviewed scientific journal, and for truth to overcome, as it should in science, however uncomfortable it may be and we will welcome any further support you can provide. We are thanking you for your consideration and your efforts.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'R. W. Ulrich'. The letters are cursive and somewhat stylized.

Prof. Dr. Rolf Ulrich

Appendix: Request from the IAAF

Von: Pierre-Yves Garnier [<mailto:Pierre-Yves.Garnier@iaaf.org>]

Gesendet: Freitag, 31. Juli 2015 12:44

An: Prof. Dr. Dr. h.c. Georg Sandberger

Cc: Thomas Capdevielle

Betreff: RE: Re: Prevalence Study

Dear Professor Sandberger,

Thank you for your last e-mail on 7 July 2015 attaching the proposed publication of your client authors. Since then, we have asked an expert who has been recommended to us in this field to review the draft publication and he has come up with a preliminary **list of questions** (please see below). I would kindly ask that you revert to your client and ask them to provide answers to the questions on the list so that we may consider the proposed publication in its overall context.

Thank you in advance and kind regards,

Dr Pierre-Yves Garnier

MD, Medical & Scientific Senior Manager

Acting Administrative Director / Medical & Anti-Doping Department

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Appendix: Questions from IAAF and our answers

Questions

- The authors affirm that "The true prevalence of doping remains unknown", would it mean that, thanks to this study, the true prevalence will be known? How can the authors be sure of that?

Response: In published scientific studies, the introductory paragraphs will often note that a given piece of information "remains unknown," or "remains poorly understood." However, it has not been our experience that readers interpret such statements to imply the new study automatically transforms the information from "unknown" to "known." For example, when submitting papers to peer reviewed journals in the past, we cannot recall any instances of being asked by a peer reviewer in the past to clarify this point. Moreover, both our paper and our supplemental materials provide extensive discussion of various potential sources of error in the estimates – thus emphasizing that we do not "know" the precise prevalence of doping. Nevertheless the data of our study provide clear evidence that doping is much more frequent than would be predicted by biological testing alone (i.e., 1-2%).

- It is said that in Daegu, South Korea, the reported prevalence was at least 29% and in Doha the prevalence was at least 45%. How do you explain such differences? Which element(s) of the sample can explain such differences?

Response: Unfortunately, because of the brevity of the survey questions and the need to ensure athletes' anonymity, we do not possess data that would allow us to explain these differences. Indeed, we specifically note in the text of the paper that "the reasons for the higher PAG estimate remain speculative." Nevertheless, as also noted in the paper and the supplementary materials, our results are consistent with the results on biological testing, in that only 0.5% of the athletes in Daegu displayed adverse analytical results, whereas this figure was 3.6% in Doha. This difference was highly significant.

- Self-incrimination is very rare in other fields but in doping it is especially complex. Can the authors be sure that the respondent did not answer <Yes> for doping when they used drugs that were not on the Wada list? Are you sure that all respondents were aware of the WADA definition of doping? How was that controlled? Notwithstanding that all athletes are supposed to know what doping is, what can be said of the representation and knowledge they have of doping?

Response: We acknowledge that this is a legitimate possibility. Although it would seem unlikely that world-class athletes would be unaware of the specific doping rules for the competition in which they are engaged, it remains conceivable that some athletes might have responded that they were "doping" when in fact they were using a substance that was not actually banned. We will certainly incorporate a comment on this potential methodological limitation and consider improvements for follow-up studies.

- How do you check what the respondent means by « using a prohibited substance or method »? What kind of prohibited substances and methods are they referring to? Are there any details to check and control their

declarations? What can be said on the influence of countries, athletic disciplines, age and gender on the declarations?

Response: This question is closely related to the question immediately above. As just noted, we cannot exclude the possibility that an athlete, despite competing at a world-class level, might be unaware of the specific doping rules for the competition. Thus, some athletes might erroneously claim to have been "doping" when in reality they were using a non-prohibited substance or method, and conversely some athletes may have claimed that they were not "doping" when in fact they were using a prohibited substance or method – but where they innocently believed that it was not prohibited. As noted above, we will incorporate a comment on this potential methodological limitation, which could bias the findings upwards or downwards depending upon the type of misinterpretation by the athlete.

Turning to the other portion of this comment, we do not have sufficient data to draw conclusions regarding the influence of countries, athletic disciplines, age, and gender – in part because we deliberately solicited only a minimum of information from respondents in order to maximize compliance and reassure them about their anonymity. We will include a notation in our manuscript or supplementary materials noting that the brevity of the survey questions limits our ability to perform more detailed analyses of this nature.

- Some athletes are known to have Therapeutic Use Exemptions, how was that aspect included in the questioning?

Response: This question is again closely related to the two questions immediately above. Conceivably, an athlete might erroneously claim to be "doping" when in fact that athlete had a legitimate Therapeutic Use Exemption, or, conversely, some athletes might deny "doping" because they believed that they had a legitimate Therapeutic Use Exemption, when in fact they did not.

- The authors say that the confidentiality of the athlete's response is visibly guaranteed. How can this be demonstrated? Even if you guarantee the confidentiality, how can you be sure that the respondent is confident in the process? Is there a measure of this confidence?

*Response: As mentioned above, we solicited only a minimum of information from respondents in order to maximize compliance and reassure them about anonymity. Thus, we possess no data that would allow us to measure the confidence of a given athlete when responding. That said, if there were respondents who lacked confidence in the process, and who still worried about their confidentiality, this phenomenon would almost certainly lead to an underestimate of the true prevalence of doping. In fact, we have addressed this possibility in our supplemental materials. It should also be noted that the UQM procedure is a well-studied, standard RRT survey technique to address sensitive questions. There now exists a substantial literature on the usefulness of this procedure (see for example, Chaudhuri, A. & Christophides, T. C. (2013) *Indirect questioning in sample surveys*. Heidelberg:Springer-Verlag.)*

- How can the authors be sure that asking if the athletes use "Herbal, mineral, or vitamin supplements in the past 12 months" does not create a confusion with doping?

Response: This is another subcategory of the earlier critique that athletes might have been confused by the definition of "doping" – that is to say what substances and procedures were or were not prohibited. We will

acknowledge that this is a limitation of the study, as noted in the sentences proposed above. Once again, however we feel that it is unlikely that elite athletes in world-class competitions would be naïve about the differences between herbal, mineral, or vitamin supplements and "doping" with prohibited substances.

- What was the method of validating the consistency of the questions? And the same question applies for the clarity of the questions?

Response: Certainly we cannot exclude the possibility that an athlete might misinterpret a question, but given the brevity of the questionnaire and the simplicity of the questions, this seems unlikely to represent a major source of error. Notably, when preparing the questions on the tablet for presentation to athletes in the WADA study, we initially tested the questions in various formats on a tablet with a small group of English-speaking students and also to Germans, in order to test the clarity of the presentation.

We also performed a study in Tübingen, Germany, using a paper-and-pencil equivalent of the WADA survey, except for the fact that the sensitive question involved plagiarism, as opposed to doping. In this study, we also asked, using the same UQM format, about whether respondents had turned out to vote in the recent "Stuttgart S21" election. We knew the official data for voting turnout for this election in Tübingen (62.3%). With the UQM technique, we obtained an estimate 61.3% for our respondents – showing that the UQM technique generated a very accurate result for a behavior where we knew the true prevalence.

- This population is very international, with various cultural and education backgrounds. Was the effect of this diversity measured? The questioning is complex, it means necessarily a translation, but no indications have been made on that point. In how many languages was it translated? Did all the responders have the possibility to respond in their native language?

Response: At WCA in Korea the athletes could choose among 21 languages. At PAG they could choose English, French, or Arabic. (These details are provided in the supplementary materials for the paper.) Therefore, the great majority of athletes were able to respond to the questionnaire in their native language or in a language that they spoke fluently. However, to preserve anonymity, we did not specifically ask athletes whether they were responding in their native language or not, and thus cannot calculate the percentage of athletes who were responding in their native languages.

- Was the validating of the translation made in all the languages? Were the differences between those allowed to use their native language and the others controlled?

Response: All of the questions were first written in English, and were phrased so that they would be understandable to a 12-year-old native speaker of English. The questions were then translated into all of the other languages by native speakers of the respective languages. The translations were then validated by the "back-translation" method, where an independent native speaker of each language translated the questions back into English. The translations were then re-worked until both language versions were identical.

As just explained above, we could not assess the proportion of athletes who were not answering in their native language, because the individual's native language was not elicited as part of the process.

- In which publication are the authors seeking to publish? Our understanding is that Science declined to publish the last version. Like the last one, this new version is presented as a short paper referring to "Supplementary information", which is rather technical. Have the authors considered integrating the material & methods in the paper itself (even if submitted to a less prestigious publication), in order for the reader to understand directly the full scope of the protocol and be able to make a more objective opinion accordingly.

Response: The manuscript is improved from the prior version submitted to Science, and has been prepared for publication in Nature. Thus the presentation, formatting, figures etc. have all been created to conform to Nature's requirements of style. Most importantly, Nature imposes a strict word limitation for the main text and, like many modern journals, encourages authors to provide technical details in the form of supplementary materials. Given ready access to online materials with today's technology, it has become increasingly preferred that researchers present a relatively brief primary paper, and then relegate technical material and details to online supplementary materials. It is for these reasons that we have chosen the present format.

The supplementary material provides information about the two sports events, presents the mathematical model underlying the survey (the Unrelated-Question Method), and gives details of how the survey instrument was administered. This information allows scientists to replicate the procedure of the survey. The supplementary material also provides additional detailed data (for example, which languages were chosen, data on response times, data on biological testing etc.) Finally, the supplemental material includes an extensive mathematical analysis of different forms of possible noncompliance in order to assess the robustness of the prevalence estimate generated by UQM under different scenarios (e.g., random responding, underreporting of doping). Understanding this mathematical material, however, requires some knowledge of mathematical statistics.
