

A response to Christiane Ayotte's WAADS statement on pages 26-27

“EPO Testing in Doping Control Laboratories is *Absolutely* No Joke”

In the previous issue of *Lab Times*, a group of Norwegian scientists questioned the credibility of some WADA-accredited anti-doping laboratories (“Borderline Analysis”, *Lab Times* 5/2016, page 16-19). On pages 26-27 of this issue, you can read the defending statement of a WADA antidoping lab official. Here, your *Lab Times* authors comment on this statement.

We have for some years been worried that the quality of the technical work performed in the laboratories accredited by the World Anti-Doping Agency (WADA) is not always what it should be. Because of the dramatic consequences of positive doping analyses – convicted athletes are excluded from competitions for two years, lose their income and are condemned in the public arena as cheats – their quality is of utmost importance. Our concerns have been expressed in several online fora and three articles published in *Lab Times* between 2013 and 2016 (see 1, 2 and 3). These matters aren't just crucial for athletes – they are also of tremendous importance for the public and for sports in general.

First sign of a meaningful response

For a long while, the WADA ignored our complaints. The first sign of a meaningful response to the *Lab Times* articles occurred on Oct 19, 2016, when the organisation representing scientists employed in WADA-associated laboratories (WAADS) placed a letter entitled, “EPO Testing in Doping Control Laboratories is no Joke” on their web site (www.waads.org), authored by the president of WAADS, Christiane Ayotte (see also pages 26-27 of this issue of *Lab Times*).

Ayotte argues against one of our articles (see *Lab Times* 5/2016, pages 16-19), where we discuss the data presented to convict an Irish sprinter, Steven Colvert, for the use of recombinant EPO (rEPO).

No scientific arguments presented

It is fair to say that Ayotte presents no scientific arguments against the assessments we make in our article. She claims that the scientists involved in analysing

Colvert's urine sample were highly competent and that the methods applied (PAGE, IEF) are widely used and have been the subject of many publications. We are not convinced that these matters determine whether the data were correctly obtained, interpreted and presented. More importantly, they certainly cannot determine whether or not problematic and inconsistent results should be subject to public discussion.

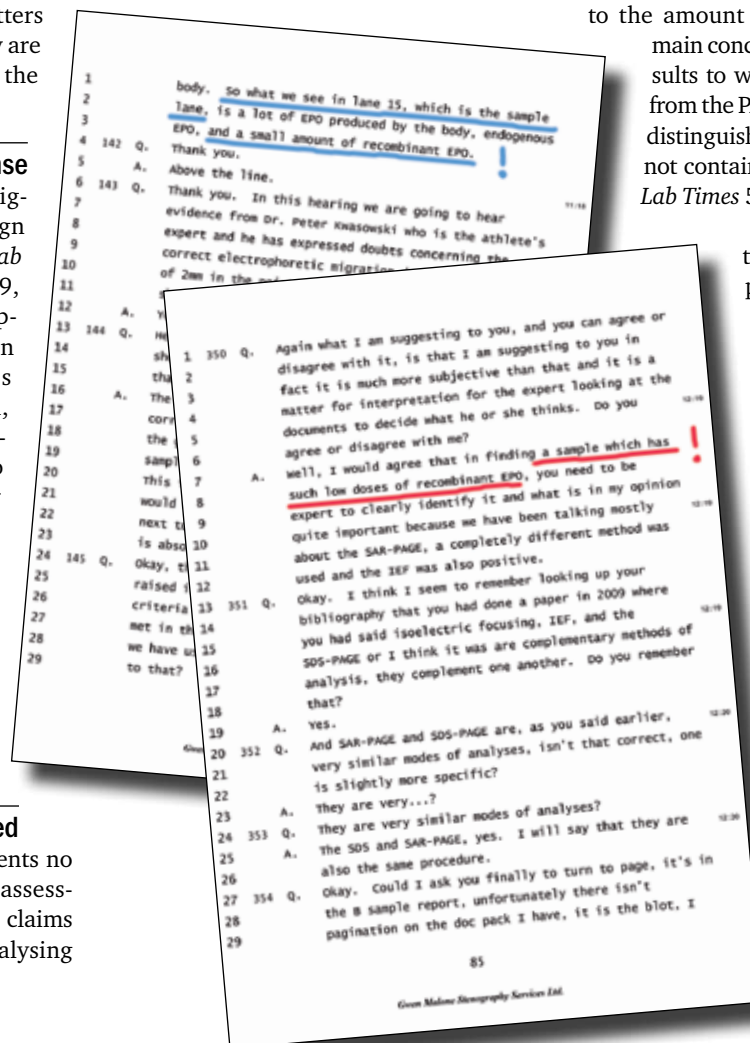
The expert from the Cologne laboratory, who analysed Colvert's sample stated in his witness testimony that, “I would agree that in finding a sample [i.e.

Colvert's sample] which has such low doses of recombinant EPO, you need to be expert to clearly identify it...” and, “...what we see in lane 15, which is the sample lane [i.e. Colvert's sample], is a lot of EPO produced by the body, endogenous EPO, and a small amount of recombinant EPO” (<http://stevencolvert.ie>: Hearing transcript 220615, pages 85 and 47).

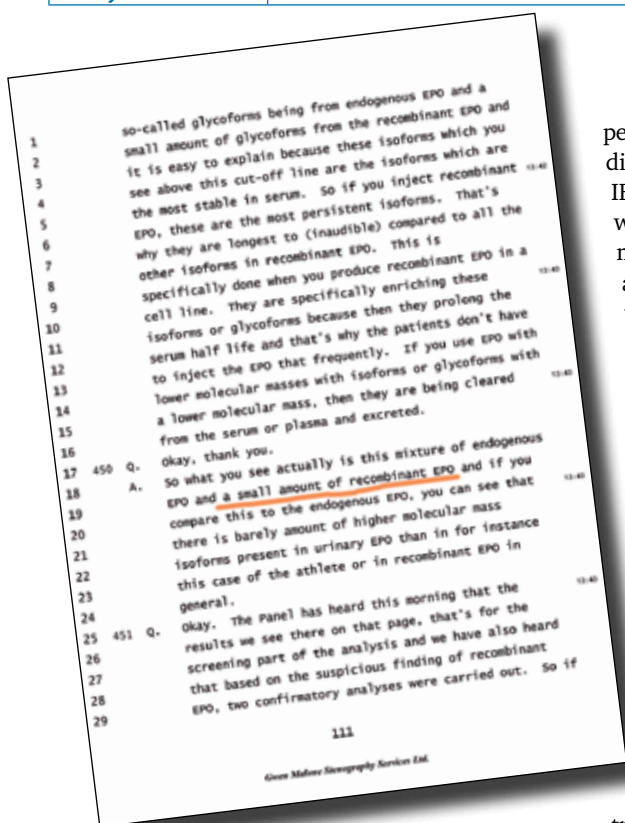
Just “a small amount of rEPO”

We agree with this expert's opinion. If there is any rEPO in Colvert's sample, it must certainly be a very small amount compared to the amount of endogenous EPO. Our main concern is, however, that the results to which the expert refers (i.e. from the PAGE tests) is, in our eyes, indistinguishable from samples that do not contain rEPO (as we described in *Lab Times* 5/2016, page 16-19).

Moreover, the band due to endogenous EPO unsurprisingly, but significant-



(left) Pages 47 and 85 of the transcript of Steven Colvert's official hearing, held by the Irish Sport Anti-Doping Disciplinary Panel on 22nd June 2015. The interviewed expert, whose opinion is quoted here, is Philipp Reihlen, a biochemist working in the Cologne (Germany) anti-doping lab as Head of the EPO department. Reihlen is part of the WADA's expert group and also co-author of the current Technical Document for EPO testing.



(above)

Page 111 of the Colvert hearing transcript. The expert interviewed here, whose opinion is quoted, is Christian Reichel, who has been testing for EPO in the Austrian WADA-accredited Seibersdorf anti-doping lab since 2003. Reichel also trained the staff of other WADA-accredited labs and has (in his own words), "large experience in EPO testing and method development". Why do Reichel and his colleague Reihlen confirm on the one hand that only "small amounts of rEPO" (compared to endogenous EPO) were found, but attest on the other hand that nearly twice as much rEPO as endogenous EPO was detected? This discrepancy is implausible.

ly, migrates somewhat differently in the different (negative) samples. Such deviations from the average are indeed expected when analysing many samples. Determining the variation that identifies a positive sample is not a trivial task.

Inconsistent results...

The large discrepancy between the PAGE tests and the isoelectric focusing (IEF) test, which the laboratory also performed in the Steven Colvert analysis, is also very troubling.

...obtained by PAGE and IEF

In her letter (see page 26-27), Christiane Ayotte nonetheless maintains that the analyses performed by the laboratory, "are clear and convincing". And she states, in what ap-

pears to be an attempt to explain the discrepancy between the PAGE and IEF tests, "If the laboratory expert was correctly quoted, he made a mistake when he stated that the amount of recombinant was small when compared to the endogenous EPO".

The laboratory expert was indeed correctly quoted and in his witness testimony he repeatedly made similar statements to that quoted above (see illustration on page 28). In addition, the other expert (from WADA's Seibersdorf laboratory, see adjacent document) stated several times in his witness testimony, too, that there were only small amounts of rEPO compared to endogenous EPO (<http://stevencolvert.ie>: Hearing transcript 220615, page 111 etc).

Experts (unintentionally) support critique

Ayotte clearly states in her letter that the laboratory experts are incorrect in their judgements of the PAGE results, and thus there is a disagreement among WAADS experts in the interpretation of the results used to convict an athlete for doping.

We maintain that if the experts in the hearing are correct about the low level of rEPO in the PAGE analyses, the hearing should have concluded that the analyses are not consistent with one another and the case should have been dismissed. Alternatively, Ayotte's interpretation is correct, in which case she has to explain how she can see such a large amount of rEPO in a gel where other people experienced in interpreting PAGE tests, including experts from two WADA labs, see little or nothing.

Either way, something is not right here.

Where is the mistake?

For a more rigorous evaluation of the results, the original gel image should have been presented in the hearing instead of the digitally manipulated gel pictures in the documentation package. In this package, each sample lane had been cut out and subsequently realigned next to the other lanes. The alleged cheat, Steven Colvert, has asked for the original gel images, but was (incorrectly) told that the pictures in the documentation package were the original images.

It appears to be a main argument in Ayotte's letter that we have not supplied

References

- (1) *Lab Times* 2013-1, 18-23.
- (2) *Lab Times* 2015-5, 18-23.
- (3) *Lab Times* 2016-5, 16-19.

any data of our own. In order to be able to do that we have for years tried to obtain the original, experimental, data from the respective WADA laboratories, with no success. We consistently and clearly stated our desire to perform our own evaluations of the data, but have been denied access to them.

Access to the relevant raw data denied

It is shocking that Colvert's urine samples have now been disposed of, so that there is no way to go back and retest his samples. Disposal of the samples occurred against the athlete's wishes. However, WADA should respect athletes' legitimate requests and, indeed, should store all samples that it deems positive. WADA already keeps many negative samples for future testing and is surely able to store a small number of positive results. This contrast between WADA's treatment of positive and negative samples suggests that WADA is geared more towards convicting as many athletes as possible than reducing the chance of convicting innocent athletes.

False accusations can ruin athletes lives

In conclusion, the quality of the data and the procedures of the WADA-accredited laboratories in Colvert's case are sufficient to demonstrate that WADA's laboratories cannot be given permanent permission to interpret the results of their own investigations without public insight.

To use the words of the WAADS, we do *absolutely* not argue that EPO testing is a joke. Being falsely accused of doping can ruin an athlete's life. WADA should be more concerned about the number of false positives that they generate, considering the many doping tests that they perform and the borderline and inconsistent results, on which some laboratories base their conclusions.

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