UiO : Department of Biosciences
The Faculty of Mathematics and Natural Sciences

Executive Summary

The Australian athlete Peter Bol delivered on the 11th of October, 2022, a urine sample that was tested for recombinant EPO (rEPO) at the WADA-accredited Australian Sports Drug Testing Laboratory. The four undersigned scientists have evaluated the laboratory's documentation packages that report the tests performed on Peter Bol's A- and B-sample. All four of us are experienced molecular biologists and biochemists and well versed in the techniques in question here. We have not and will not receive any compensation for this evaluation, and we have never met Peter Bol and have no relationship with him.

Notably, in all of Bol's EPO-tests, the amount of natural/endogenous EPO in the athlete's lane was found to be dramatically higher than that in the negative control lanes. That is problematic because the negative control test is thus less sensitive for detection of proteins than the athlete's test. The more sample added to a gel lane, the more protein bands may be detected and the bands become broader and blacker and the tailing edge of bands (that are generated upon electrophoresis) becomes more apparent. Moreover, the migration of proteins in PAGE gels may be influenced by the concentration/amount of protein put on the gel.

A reliable comparison of the athlete's lane and the control lanes thus necessitates that similar amounts are applied in all lanes; a negative control lane which does not have the same amount as the athlete's lane is definitely not a proper negative control.

The laboratory tries to some extent to correct for differences in the amounts applied to the various lanes by use of GASepo processing. By GASepo processing of the raw gel-images, the staining intensity in the lanes are adjusted so that the intensity becomes similar in all lanes and it thus appears as if similar amounts have been applied to all lanes. This enables to some extent lane comparison and makes interpretation of the results more reliable.

There is no obvious staining in athlete's lanes (or in the negative control lanes) in the "rEPO region" of the gels in any of the GASepo processed gel-images. Moreover, the athlete's band in all processed gel images is symmetric, indicating that it is not a mixed band that contains both natural EPO and synthetic EPO.

Curiously, in the second opinion of the A-sample test provided by the WADA-accredited laboratory in Cologne, it is concluded

> "*that the data from the Initial Testing Procedure …show a band indicating the presence of recombinant EPO. The confirmatory analysis…corroborates the presence of recombinant EPO in the sample*".

Remarkably, the data from the Initial Testing Procedure is not provided in the documentation package and there is no band in any of the confirmatory gels (nor does the laboratory specify such a band) that indicates the presence rEPO or confirms the alleged Initial Testing Procedure. In their "Adverse and Atypical Analytical Review Report" the laboratory refers only to "*small smear in rEPO region*". A small smear is not a band! Moreover, we have not been

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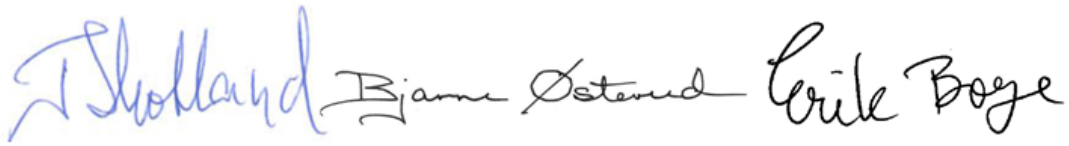
able to identify a significant small smear in the rEPO region of any of the GASepo processed gel images provided by the laboratory. Nor does the laboratory specify where it is. We can see a little faint staining in the “rEPO region” in **both** the athlete’s lanes and the negative control lanes in the **raw unprocessed** gel images, and there is a little more of it in the athlete’s lanes than in the negative control lanes. But that is evidently because of the larger amount of natural EPO - and thus a broad natural EPO band - in the athlete’s lane compared to the negative control lanes.

The second opinion of the B-sample test was provided by the WADA-accredited laboratory in Oslo, and it states that

> “*The “analyses show the presence of a very weak, diffuse signal (“smear”) above the strong endogenous EPO signal. Though this could be indicative of the presence of a low amount of recombinant EPO, a reliable identification of recombinant EPO in the sample is not possible in my opinion.*”

We conclude that there is **no scientific evidence provided by the laboratory which proves the presence of recombinant EPO in Bol's urine**. We refer to our evaluation more details.



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