

**STATEMENT**

Ref. no. O 8-2018

02/09/2019

**Institution that has requested a statement**

Linköping University  
581 83 Linköping

---

**Background**

Through a written request that was received on 17 December 2018, Linköping University requested a statement of opinion by the Expert Group for Misconduct in Research at the Ethics Review Appeals Board. The written request refers to information in social media and information from whistle-blowers that in December 2017 called on Linköping University to commence a preliminary investigation into misconduct in research with regard to [REDACTED], who was employed as research assistance and later senior lecturer at the university during the period 2011 to 2015. The request for a statement refers to two of the authors, [REDACTED] and [REDACTED].

Suspicion of misconduct in research in the part that was referred to the Expert Group refers to inaccuracies in the research article Detection of p53 gene point mutation using sequence-specific molecularly imprinted PoPD electrode, Biosensors and Bioelectronics, 35(1) 224-229 (2012). The accusations concern deliberate manipulation of the data shown in Fig. 3.

On 29 January 2019, the Expert Group decided to appoint professor Mikael Käll, Chalmers University of Technology, to make an expert scrutiny of the case.

Mikael Käll presented his report on 8 May 2019. [REDACTED] and [REDACTED] have been given the opportunity to respond to Mikael Käll's report. They presented their comments on 26 June 2019. Mikael Käll thereafter declined to give any viewpoints on these comments, stating that no new circumstances had been presented in the case.

It is noted that it has not been possible to present the original data, since both the computer containing the data and the computer that was used as back up were kept in the same bag, which was stolen in August 2015 (reported to the police on 21/08/2015).

### The Expert Group's assessment

Firstly, as regards the loss of the original data for the research, the Expert Group makes the following judgement. It is an absolute requirement that original data from research projects is kept so that it can be made available. There must therefore be satisfactory back up copies. The circumstance that [REDACTED] and [REDACTED], because of the theft, cannot present any of the original data that lay behind the research that was presented in the article means that the research cannot be checked. It is remarkable that original data from 2012 only existed on a laptop computer three years after publication. It is the view of the Expert Group that the irregularities with regard to original data are so serious from a research ethics point of view that [REDACTED] and [REDACTED] have been guilty of research misconduct.

Mikael Käll confirms that in the wavenumbers range from 800  $\text{cm}^{-1}$  to 3200  $\text{cm}^{-1}$  Fig. 3B and 3C show full agreement between the graphs, as far as can be judged. In the wavenumbers range over 3200  $\text{cm}^{-1}$  the graphs are also alike if they are drawn out vertically. That two different experiments give the same graphical representation is improbable, in the way that the expert report clarifies. In the representation of data in Fig. 3A, the graphs are also remarkable in terms of discontinuities.

Mikael Käll's conclusion is that the inaccuracies in Fig. 3 are the result not of a mistake but of deliberate manipulation for the purpose of supporting the article's conclusions. This conclusion means that Mikael Käll does not consider that submitting a corrigendum releases the authors from responsibility for the errors in the original article. Mikael Käll also points out that the corrigendum that was sent to the journal does not necessarily confirm that the conclusions in the original article are correct.

[REDACTED] and [REDACTED] have admitted that inaccuracies have been found with regard to the image in question. After the comments about the inaccuracies, [REDACTED] contacted the journal and sent in a corrigendum with new measurements, which was published on 12 June 2018, i.e. seven years after the original article was published. The corrigendum was said to demonstrate that the original conclusions in the original publication were correct.

The Expert Group shares Mikael Käll's assessment that the inaccuracies in Figure 3 are so obvious that they should have been detected without difficulty before the article was submitted for publication. This circumstance constitutes at any event gross negligence on the part of the authors. Further, the nature of the error means that deliberate manipulation can be strongly suspected. When suspicion of inaccuracies was pointed out, it should have been self-evident to withdraw the article from the journal because the original data was missing and the correctness of the conclusions in the original article could not therefore be checked. This also indicates gross negligence.

It is therefore the opinion of the Expert Group that it is evident that this is a case of gross negligence at the least. Like Mikael Käll, the Expert Group considers that the inaccuracies had a vital significance for the study's conclusions. Against the background of the above circumstances, the Expert Group considers that [REDACTED] and [REDACTED] have been guilty of misconduct in research.

This concludes the handling of the matter by the Expert Group for Misconduct in Research.

This statement has been decided by Lena Berke, Chair, Lena Halldenius, Jack Lysholm, Elisabeth Rachlew, Holger Luthman, Göran Sandberg and Elin Wihlborg. In the final hearing of the case, the following substitutes were also present: Sofia Feltzing, Aleksander Giwercman, Björn Petersson and Karin Sporre, administrative director Jörgen Svidén and administrative secretary Eva Kaaman Modig.

For the Expert Group for Misconduct in Research

Lena Berke