

Adelaide, South Australia
April 1st 2016

VTT Technical Research Centre of Finland Ltd.
Vuorimiehentie 3, Espoo
P.O. Box 1000, FI-02044 VTT, Finland

Dear President Vasara

Thank you for entrusting me with the task to evaluate a possible scientific misconduct in the article “Dysregulation of lipid and amino acid metabolism precedes islet autoimmunity in children who later progress to type 1 diabetes” by Matej Oresic, Olli Simell and co-authors. I found no unequivocal evidence that any data were fabricated, statistics tampered, or that data were misrepresented in a way that would deceive informed readers. The article had technical flaws and the title and abstract gave an overly optimistic account of the contents, but I found no consistent evidence of fraud in the work as a whole.

The controversial case study of a girl who developed type 1 diabetes after metabolic and autoantibody changes was introduced in the paper as an example with an extended sample series. Figure 6, which I interpreted as a hypothetical scenario, was an attempt by the authors to tie their findings, including the anecdotal case of the girl, into a new concept of type 1 diabetes etiology for the benefit of further investigations. In my opinion, showing Figure 2 within its full context was not misleading to an informed reader.

I remember the first time I read the article when it was published over seven years ago. I was excited at first by the title and the abstract, but found the results and conclusions complicated and difficult to interpret, and eventually concluded that perhaps the findings were not that exciting after all. This was a common story for many metabolomics papers then, and still is today. I find it unlikely that these scientists are all deceitful, but rather maintain that most problems stem from limited experience in conducting multi-disciplinary studies in metabolomics. Therefore, the signs of fraud would have to be clearly distinct from the signs of poor quality for me to declare scientific misconduct – that threshold was not crossed in this article.

Declaration of conflicts of interests: I have no current or past professional relationships with any of the study authors; I was an employee in the same institute as Mikael Knip, but in a different research group (Folkhalsan Research Center, 2004-2010); I was a research assistant in the same computational laboratory as Marko Sysi-Aho, but we did not work on the same projects (LCE, Helsinki University of Technology, 2000-2004).

Yours sincerely,



Ville-Petteri Mäkinen