

May 7, 2014

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Decision and final report for the Finnish Advisory Board  
on research and integrity

The documents has been sent to parties involved.

Anne-Christine Ritschkoff  
Executive Vice President, CTO

## VTT'S DECISION FOR THE FINNISH ADVISORY BOARD ON RESEARCH INTEGRITY

VTT has completed the investigation proper concerning a single study of Prof. Matej Oresic (Dysregulation of lipid and amino acid metabolism precedes islet autoimmunity in children who later progress to type 1 diabetes, Published December 15, 2008 in "The Journal of Experimental Medicine").

The chairperson of the investigation group has introduced the investigation group's report and attachments to the President and CEO of VTT Erkki KM Leppävuori on 6.5.2014.

The President and CEO of VTT Erkki KM Leppävuori has decided, that there is no evidence of falsification or tampering of the data which has been published in the article "Dysregulation of lipid and amino acid metabolism precedes islet autoimmunity in children who later progress to type 1 diabetes". However, there are exaggerated conclusions concerning the metabolomics part of the article.



Erkki KM Leppävuori  
President & CEO

25.4.2014

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Internal audit  
Laura Puronen

VTT's report for the Finnish Advisory Board on Research Integrity about Professor Matej Oresic's study: Dysregulation of lipid and amino acid metabolism precedes islet autoimmunity in children who later progress to type 1 diabetes, published on December 15, 2008, in "The Journal of Experimental Medicine."

#### Background:

The scientific and technological excellence of VTT's plasma and serum metabolomics (The QBIX group) research was recently evaluated by an international evaluation committee on behalf of FIMM (Finnish Institute of Molecular Medicine). The international evaluation committee led by Professor Kai Simmons expressed doubts on the quality of data processing in the VTT's QBIX research group. They stated in their evaluation report (11.11.2013), that the scientific practices within the research group give reasons for concerns on the quality of data processing performed. However, no specific cases/examples were given in the report.

Good scientific practices and integrity of findings are one of VTT's core values. VTT takes seriously all doubts about possible misconduct in its activities. Therefore an investigation according the Finnish Advisory on research Integrity was started by a mandate given by President & CEO Erkki KM Leppävuori. Internal investigation took place during 1.11.-3.12.2013. The internal auditor has interviewed 20 persons who have been or are working in the group. Additionally, the internal auditor studied supplementary materials provided by VTT's HR department.

Based on the internal investigation, the internal auditor requested Professor Anne-Christine Ritschkoff (EVP, CTO, VTT) and Professor Johanna Buchert (VP, Research, Solutions for Natural Resources and Environment, VTT) to evaluate the possible scientific misconduct of the research led by Professor Matej Oresic.

Several peer-reviewed publications were examined with the co-operation of Professor Oresic and with relevant experts. The initial internal investigation on possible scientific misconduct did not find any evidence of data falsification or tampering by Professor Oresic or Dr Tuulia Hyötyläinen, against whom suspicions were raised by the international evaluation committee. However, the internal auditor found some evidence about difficult HR relations with the QBIX group which has affected their working practices, and which would have required more determined leadership by the management.

On the basis of this internal audit, President & CEO of VTT Erkki KM Leppävuori has made a decision to launch investigation proper and use an external service provider for further investigation of the matter of Professor Oresic. All investigations of regarding Dr. Tuulia Hyötyläinen were stopped.

#### Investigation proper

Investigation group was established immediately. The group was: Professor Anne-Christine Ritschkoff (EVP, CTO, VTT), chairperson, Professor Johanna Buchert (VP Research, Solutions for Natural Resources and Environment, VTT), Laura Puronen (Internal Auditor, VTT), secretary, Dr. Maria Saarela (Principal Investigator, VTT), StatFinn Oy, Tuomas Kempainen (later replaced by Tale Ltd, Tommi Nurminen, Statistician) and Oy 4Pharma Ltd, Jouni Junnila, Senior Biostatistician.

The investigation group had first meeting in 13.1.2014 and all parties were introduced to the case (Attachment 1, "QBIX\_tutkintaryhmä\_aloituspalaveri\_230114.pdf"). After this meeting, other external service provider StatFinn Oy withdrew themselves from the group. Other external expert was found shortly after this and Tale Ltd, Tommi Nurminen was nominated to be groups other external expert.

Both external experts were introduced more deeply to the case by VTT's personnel (Attachment 2, "140212 meeting minutes.pdf"). After receiving the data of the case both parties delivered their workplans (Attachments 3 "Analyysisuunnitelma 20140218.pdf" and 4 "Analyysisuunnitelma JJVTT - QBIX - SAP.pdf") and began their work.

Both results were presented in the group meeting 13.03.2014 (Attachment 5, "QBIX\_ tutkintaryhmä\_ palaveri 130314.docx"). Both external experts gave their written reports of their findings to the group. Both of the experts had similar findings in the main issues of the study. Professor Johanna Buchert got to know the reports in written (absent from the meeting).

The group came to the conclusion that in the article there is exaggerated conclusions concerning the metabolomics part of the article. External experts both have stated in their reports that the conclusions described in the article's discussion are not reliable (Attachments 6 VTT - QBIX Evaluation report final\_4Pharma.pdf and 7 Tale\_Raportti\_engl\_20140318.pdf). Both reports have been sent to Professor Oresic and he has given his statement of defence (Attachment 8 "Oresic statement").

The investigation Group proposes that reports of the external experts will be concealed and only the decision of the President and CEO of VTT Erkki KM Leppävuori will be published. All parties who have financed or otherwise been involved with the DIPP- study, which the investigated article is about will be informed by VTT.



Anne-Christine Ritschkoff  
Executive Vice President, CTO