A Long Time Coming: Two Swedish Scientists are Found Guilty of Scientific Misconduct

By Julianna LeMieux — December 8, 2017

A story of misconduct surrounding a paper published last year in Science has been unraveling for over a year. The case can now be considered closed with the recent ruling that the two primary investigators involved did, indeed, commit scientific misconduct.

The paper was high profile, in large part because of its subject — the effect of plastic microbeads on fish. The authors claimed their data showed that young fish preferentially eat plastic microbeads instead of their other food options.

When other scientists close to the work blew the whistle by reporting a panoply of ethical concerns including missing data (due to a stolen laptop), data inconsistencies, problems with the data analysis and the hunch of flat out lying, red flags were raised.

Perhaps most curious were the specific comments that the primary investigator doing the work, Oona Lönnstedt, working in the lab from May 4th to May 15th, but the paper includes a three week long experiment. Also, the claim that the lab simply did not have the materials that Lönnstedt would have needed to perform the experiments that she reports in the paper, such as number of fish and supporting materials such as the number of beakers. There were so many inconsistencies, the only way that the data could have come about was to have been made up.

Science was slow to respond, first issuing an "expression of concern" where some thought that a retraction would have been more appropriate. Following a large investigation by Sweden's Central Ethical Review Board, the paper was found to be chock full of mistakes. The Board's conclusion and language did not leave much to question, saying that "According to the Expert Group’s assessment, it is remarkable that the article, given these deficiencies, was accepted by the journal Science"
" and "The Expert Group considers the deficiencies in terms of original data to be of such severity in a research ethics perspective, that Peter Eklöv and Oona Lönnstedt, by their inability to present original data for the research, have been guilty of scientific dishonesty."

Following this clear condemnation, Science finally retracted the paper in May [4] of this year.

The final nail in the coffin came from a newly established Board for Investigation of Misconduct in Research at the two researchers' own university, Uppsala University in Sweden which found the two researchers, Oona Lönnstedt and Peter Eklöv, guilty. Lönnstedt intentionally fabricated data and Eklöv, her supervisor, let it happen.

Honesty is a cornerstone of scientific research and misconduct goes far beyond one paper's false results but shakes our faith in the integrity of the scientific community.

Reference [5]: Quirin Schiermeier "Investigation finds Swedish scientists committed scientific misconduct" Nature

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