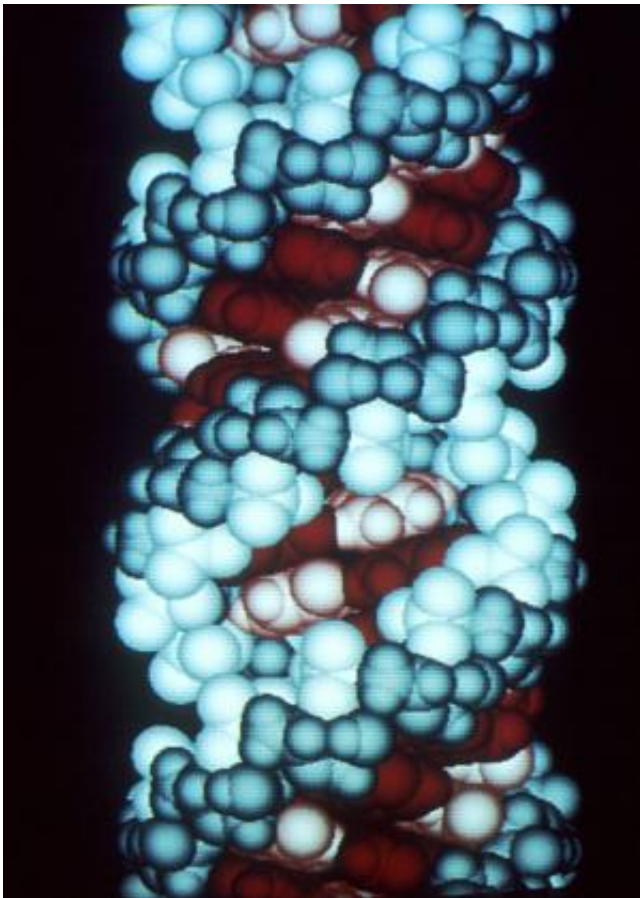


# Science journal issues expression of concern over chemistry paper

January 22 2016, by Bob Yirka

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This is a computer graphic of an RNA molecule. Credit: Richard Feldmann/Wikipedia

(Phys.org)—The journal *Science* has published an "editorial expression of concern" by its editor-in-chief, Marcia McNutt, regarding a research

paper the journal published back in 2004. The paper titled "RNA-Mediated Metal-Metal Bond Formation in the Synthesis of Hexagonal Palladium Nanoparticles" by Bruce Eaton and Daniel Feldheim, chemists at North Carolina State University and grad student Lina Gugliotti was partially discredited after a colleague at the same university, Stefan Franzen, filed a complaint with the school challenging the work done by the research trio.

The paper outlined a way to use RNA to grow crystals of [palladium](#) metal, which opened the door to the idea that RNA might be involved in processes in nature that resulted in the production of inorganic materials. After it was published in *Science*, Franzen alerted the university to discrepancies in the work, possibly due to intentional misconduct. After several months, the university conducted an investigation into the allegations made by Feldheim and eventually found that the researchers had failed to properly index their electron microscopy data, contradicting statements in their paper—more negligence than misconduct. Apparently not satisfied with that result, Feldheim contacted officers at the University of Colorado, after Eaton and Feldheim moved there—the university's research-integrity official looked into the matter and concluded that the issue was more one of a disagreement between colleagues than an example of misconduct.

Several years later, after the paper had been cited over 135 times, the National Science Foundation got involved—the work by the team was looked at in more detail and the result was a report that suggested the trio had overstated their findings and omitted details. A recommendation of [misconduct](#) was made. The agency did not make such a judgment but did produce a letter reprimanding the researchers and banned them from receiving research funds from the NSF until they take "specific actions to correct publications containing the misleading results," to remedy the errors.

The expression of concern by McNutt is meant to alert other researchers to the possibility of errors in the paper, warning them that it might not be a good idea to use or cite the paper in their own research efforts, and to notify readers that the journal is working with the authors to gain a better understanding of what occurred. Once that happens, the journal intends to either print a retraction or a correction.

**More information:** M. McNutt. Editorial expression of concern, *Science* (2016). [DOI: 10.1126/science.351.6271.348-a](https://doi.org/10.1126/science.351.6271.348-a)

L. A. Gugliotti. RNA-Mediated Metal-Metal Bond Formation in the Synthesis of Hexagonal Palladium Nanoparticles, *Science* (2004). [DOI: 10.1126/science.1095678](https://doi.org/10.1126/science.1095678)

NSF Office of Inspector General, Closeout Memorandum:  
[www.nsf.gov/oig/case-closeout/A06110054.pdf](http://www.nsf.gov/oig/case-closeout/A06110054.pdf)

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