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News

## Fusion verdict: misconduct

### Purdue committee upholds two charges.

Eugenie Samuel Reich

Nuclear engineer Rusi Taleyarkhan falsified the circumstances of high-profile experiments on bubble fusion, according to a Purdue University report released last week. The report by a Purdue committee that includes scientists from other institutes upheld two charges of research misconduct.

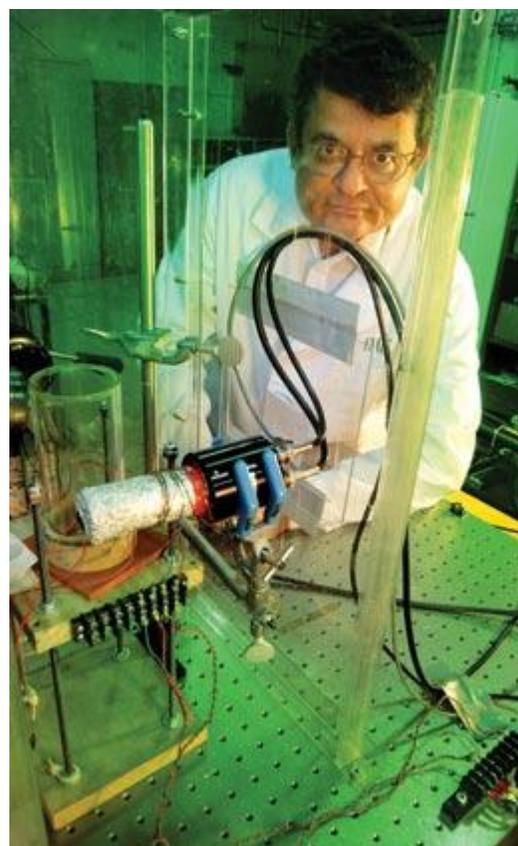
Taleyarkhan's work has been a source of controversy since 2002, when he claimed to have triggered nuclear fusion reactions by passing sound waves into a cell filled with deuterated acetone<sup>1</sup>. His work has been the subject of at least two inquiries by Purdue, which is based in West Lafayette, Indiana. But the latest one was run with oversight from a government agency, the Office of Naval Research (ONR) in Arlington, Virginia, which funded some of the research under question.

The report finds Taleyarkhan guilty of misconduct for citing a paper by junior researchers in his lab as if their work was an "independent" replication of his own findings. He is also found guilty of adding the name of a student who had not contributed to the paper as an author, apparently in order to counter a reviewer's comment that the replication effort seemed to lack witnesses.

The report stresses that corroborative information should be conveyed honestly, because reproducibility of results by independent experimenters is a crucial component of the scientific method.

Although the report's conclusion echoes concerns expressed<sup>2</sup> by Purdue faculty in 2006, it leaves others unaddressed. The committee

**"The committee clearly documents that there has never been any successful**



Rusi Taleyarkhan: found guilty of misconduct

*L. Freeny/US Dept. Energy*

of six scientists, chaired by Purdue biochemist Mark Hermodson, notes in its report that it was not sent allegations (from an earlier inquiry) of

**replication except when Taleyarkhan is present or supervising.”**

“intentional data fabrication” relating to the possibility that Taleyarkhan’s fusion signal might have come from a radioactive lab source. Two scientists told *Nature* last week that evidence they gave Purdue does not seem to have been considered either. Purdue has not released its charge to the committee; this is a key document that would reveal the questions officials asked investigators to examine.

C. K. Gunsalus of the University of Illinois at Urbana-Champaign, who is an attorney and an expert in research misconduct, says that it is good practice for a university to turn over all of its material to an investigation panel and to set a broad charge. “Their findings of fact are rigorous, but the committee clearly documents that there’s never been any successful replication except when [Taleyarkhan] is present or supervising, and they don’t explore the implications of that,” she says.

In a letter released by Purdue, the ONR inspector general Holly Adams calls Purdue’s investigation “prompt, thorough and objective”, but says she is still waiting to hear what corrective action the university will take. Unusually, Purdue floated news of the misconduct finding while Taleyarkhan still has 30 days to appeal. Taleyarkhan did not respond to *Nature*’s request for an interview, but in a statement released on 18 July, his attorney, John Lewis of Lewis and Wilkins in Indianapolis, Indiana, said that all charges except two had been “resoundingly” resolved in Taleyarkhan’s favour.

## References

1. Taleyarkhan, R. P. *et al. Science* **295**, 1868–1873 (2002).
2. *Nature* doi:10/1038/news060306-2 (2006).

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