

Fusion verdict: misconduct

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 acetone¹. 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,

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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.

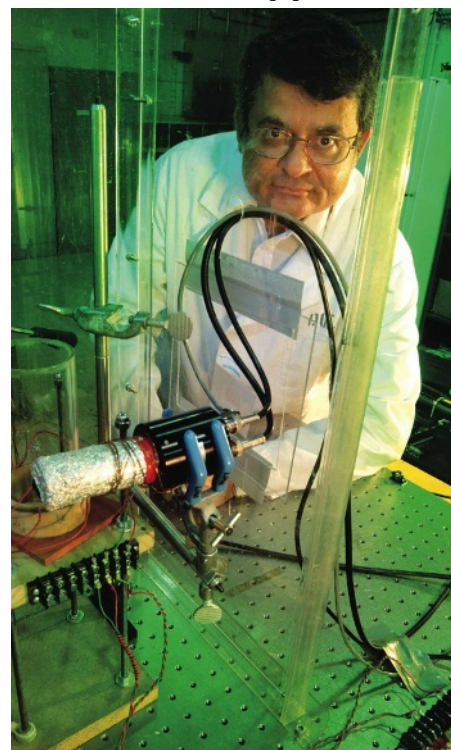
Although the report's conclusion echoes concerns expressed² by Purdue faculty in 2006, it leaves others unaddressed. The committee of six scientists, chaired by Purdue biochemist Mark Hermodson, notes in its report that it was not sent allegations (from an earlier inquiry) of "intentional data fabrication" 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. ■

Eugenie Samuel Reich

1. Taleyarkhan, R. P. et al. *Science* **295**, 1868-1873 (2002).
2. *Nature* doi:10.1038/news060306-2 (2006).



Rusi Taleyarkhan: found guilty of misconduct.

L. FREENY/US DEPT. ENERGY



ON THE RECORD

"When you're eating your sandwiches on the lawn you don't expect to find something that takes you by surprise."

Entomologist Max Barclay, a curator at London's Natural History Museum, on finding a mysterious insect in the museum garden. The tiny bug is not matched by anything in the museum's collection and might be a new species.



NHM

SCORECARD

Drinking
Loud music makes people drink more and faster, researchers report after visiting bars over three Saturday nights and messing with the sound levels. Sidelines is penning its grant proposal now.

Eating
New York City rules to curb obesity now force restaurants to post calorie information on their menus. The good news is that those too busy for a long dinner can satisfy their daily calorie intake with a couple of burgers.

SCORECARD (AGAIN)

Touchy-feely physicists
Hold a boson to your bosom. Physicists in need of a cuddle can now grab Subatomic Particle Plush Toys.

Touchy-feely PC users
An IT analyst says the computer mouse will be extinct within five years, replaced by facial recognition software and other devices.



THE PARTICLE ZOO

WORDWATCH

Make-make
The new name for the third dwarf planet discovered, which for the past three years has had only a licence-plate number and was saddled with the humiliating moniker 'Easterbunny' by astronomers wishing to reference it.

Sources: BBC, Reuters, AP, The Particle Zoo, www.mikebrownspanets.com