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Sonofusion research examination committee completes review

WEST LAFAYETTE, Ind. — A Purdue University examination committee reviewing issues concerning research on the use of sound waves to create nuclear fusion reactions has completed its work.

"The committee has submitted a report, and I will take appropriate action after studying the recommendations," said Charles O. Rutledge, vice president for research, who appointed the committee in March. "Any further action in this matter will be conducted as an internal matter under appropriate university procedures."

Rutledge appointed the examination committee after the British research journal *Nature* reported on its Web site that some researchers had raised questions about the research of Rusi Taleyarkhan, a Purdue professor of nuclear engineering.

Since joining the Purdue faculty in 2004 and previously at the Oak Ridge National Laboratory, Taleyarkhan has published research findings in several refereed journals showing evidence that "sonofusion" generates nuclear reactions by creating tiny bubbles that implode with tremendous force. Experimental nuclear fusion reactors have historically required large, multibillion-dollar machines, but sonofusion devices might be built for a fraction of the cost and theoretically could be an unlimited source of clean energy.

"Specific recommendations of the examination committee and any subsequent steps by the university will be treated as confidential internal matters," Rutledge said.

In a statement issued at the time the committee was appointed, Provost Sally Mason said: "Purdue is well aware that there are legitimate differences of scientific opinion about the theories behind Dr. Taleyarkhan's work. Those differences are the reason scientists share their findings.

"The research claims are very significant, and the allegations are very serious. As in any scientific endeavor, Purdue's ultimate goals are truth and integrity."

Taleyarkhan first reported observing the bubble fusion effect in March 2002 in the journal *Science*. In addition to its potential as a new source of clean energy, Taleyarkhan and other researchers believe sonofusion could be used in a wide range of applications from homeland security to the study of neutron stars and black holes.

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To the News Service home page