GLOBE EDITORIAL

Unknowns at MIT

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THE NEW president of the Massachusetts Institute of Technology, Susan Hockfield, has an opportunity she should not miss to put the institute on the right course in a matter that affects national security, the integrity of scientific research, and the institute's ability to maintain academic independence while receiving millions of dollars in research funds from the Defense Department.

After years of delay, her predecessor, Charles Vest, had acknowledged evidence suggesting a possible coverup of scientific fraud involving Lincoln Laboratory and early tests of the national missile defense system. An MIT inquiry had come to this conclusion last year, and, in accordance with federal rules and MIT policies, it recommended opening an investigation by MIT to determine whether there had indeed been scientific misconduct at Lincoln Laboratory, a federally funded research and development center over which MIT has supervisory responsibility.

But just before he left office last December, Vest suspended the investigation after the Missile Defense Agency informed MIT that it was classifying both MIT's inquiry and a 1998 Lincoln Lab report to federal investigators that is suspected of falsifying results of the first test flight, in 1997, of the missile defense system now being deployed.

Hockfield would be acting in the best interests of MIT and the country if she invested her prestige in persuading the Pentagon to reconsider its classification of materials that MIT's investigators have the security clearances to see. She should also approve creation of a panel of independent investigators -- people who have the technical and scientific background to judge the evidence and who have no ties to the Pentagon or MIT that might suggest a conflict of interest. Ideally, such a panel would be allowed to see the materials the Missile Defense Agency has now classified. But if not, some scientists contend that there is enough material in open, unclassified sources to determine whether there was a crucial failure of the infrared sensor in the first test of the missile defense system and whether the Lincoln Lab covered up that failure in its 1998 report.

This is a matter that goes beyond MIT's oversight of Lincoln Lab or its relations with the Pentagon. Because the Bush administration is betting that the system can protect Americans from nuclear attack by intercontinental ballistic missiles, Hockfield is also confronting a question that involves the security of all Americans as well as the economic wisdom of Bush's missile defense gamble. MIT officials have not responded to several requests for comment.

For several years, the MIT physicist Ted Postol, a professor of science, technology, and national security policy, has been calling for the institute to investigate the possibility that Lincoln Laboratory covered up fraud by the defense contractor TRW. In 1997 and 1998, TRW conducted early experiments for the missile defense system. A whistleblower from TRW later told the Defense and Justice departments that TRW tampered with data analysis, making it appear that the warhead in those tests was selected from among several decoys by an infrared sensor when in fact it was not. Plausible decoys were removed from subsequent tests. The sensor's ability to tell decoys from a warhead is crucial for a missile defense system because any country able to launch a nuclear weapon on a missile will also be able to surround it with decoys.

Federal agents looking into the whistleblower's charges asked Lincoln Lab for an analysis of the early TRW flight tests. In the summer of 1998, Lincoln Lab delivered to investigators from the Justice Department and the Defense Department a report entitled "Independent Review of TRW Discrimination Techniques." The 1998 Lincoln report claimed that the sensor had discriminated between the decoys and the mock warhead. But two reports produced in 2002 by the General Accounting Office (now the Government Accountability Office) found several flaws in the sensor caused by a failure of its cooling system. As a result, the sensor lost calibration, meaning that it could not match what it saw to what it was programmed to expect.

Like Postol, David Wright, senior scientist and codirector of the Global Security Program for the Union of Concerned Scientists, says that if such a failure prevented the sensor from cooling sufficiently, it could not have discriminated between a warhead and decoys, as TRW and the Lincoln Lab report claimed. The director of the Carnegie Endowment's nonproliferation project, Joseph Cirincione, says that Lincoln Lab "had the data and appeared to cherry-pick the data. It looks very clear to me."

A key question hovering over the argument between Postol and MIT's administration is whether it is possible to decide the question of scientific fraud at Lincoln Lab while its 1998 report and the MIT inquiry are classified.
Postol insists there is ample unclassified material that is "all over the Web."

Phillip Coyle, who was assistant secretary of state for test and evaluation from 1994 to 2000, believes, however, that it would be better for all concerned parties if the relevant materials were made available to investigators with the requisite security clearances. If an investigation is done without access to classified materials and it does not prove fraud, Coyle says, Postol and others who suspect fraud will be back to square one. If the Pentagon says that the key reports are classified or that people with the right clearances can't see them, Coyle contends, that raises questions about the level of trust between MIT and the Defense Department.

Cirincione explains MIT's lack of ardor to obtain a definitive answer to the question of fraud by saying, "They are seekers of contracts, not seekers of truth."

The challenge facing Hockfield did not originate on her watch, but she would be wise to address it forthrightly by insisting that the Pentagon allow a panel of independent, qualified people to examine the records and decide whether a scientific fraud has been committed involving a system that is supposed to protect Americans from a nuclear warhead.