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Science police needed?

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John Steinbruner is accustomed to getting a strong negative reaction from scientists when he pitches his proposal for mandatory international oversight of inherently dangerous areas of biomedical research. The University of Maryland (UM) arms control expert is calling for an international body of scientists and public representatives who would authorize scientific research that carries potential for grave social consequences.

It's an idea he has taken to meetings of the American Association for the Advancement of Science and the World Medical Association in recent months, and put forth again in London last Friday at a bioterrorism [meeting](#) sponsored by the Royal Society of Medicine and the New York Academy of Medicine.

The plan for a global authorizing body to decide in advance what scientists should be allowed to investigate is not an easy sell in a community where even voluntary self-regulation of potentially dangerous research results draws fire, and open publication is a core value.

"I have had experiences where people start climbing the walls," Steinbruner said. But response seemed more muted Friday. "There was no outrage," the former Brookings Institution foreign affairs director said.

He takes that as a hopeful sign that the controversial proposal is gaining some acceptance. Steinbruner describes his idea as "just an extension of the normal peer review process" that precedes publication in major science journals.

But the oversight system he envisions would be mandatory and it would operate before potentially dangerous life sciences experiments are conducted. Even if the line of inquiry wins approval, access to results could be limited to those whose motives had passed muster under the [proposed framework](#) he has developed as director of the UM [Center for International and Security Studies](#).

It has problems, he admits, including the fact that a blurring of lines in life sciences means the answers for one field often grow out of questions in another.

How would research findings of unexpected significance fare in the global oversight system?

"We admit there all kinds of surprises to arise, but the basic idea is that you develop standards for lines of research that are obviously highly consequential and when others prove to be so, you try to catch up," Steinbruner said.

Requiring scientists, institutions and even experiments to be licensed "would have a devastating chilling impact on biomedical research," said American Society for Microbiology president Ronald M. Atlas. He sees the answer in self-regulation, which is already in line with ethical requirements to prevent the destructive uses of biology.

The ASM orchestrated and supports a February 15 [statement](#) by a group of major life sciences editors and authors, acknowledging the need to block publication of research results that could be helpful to terrorists.

Critics say even the self-censorship espoused by the Journal Editors and Authors Group is an impediment to the rapid progress of science, which is the best way to defuse the lethal potential of some biological research. But Steinbruner fears the self-regulation does not go far enough to head off terrorists.

"That's a start, but it is completely voluntary and it only applies to work which results in published papers," he said. "We're trying to get the community thinking in advance of the work of the need to explicitly justify it when you have a combination of factors that have a potential for danger."

Both Steinbruner and Atlas agree, however, that any effort to keep good science out of the hands of ill-intentioned people must be international to be effective. And both point to existing [efforts](#) to push a treaty making bioterrorism an international crime, one long espoused by Harvard University microbiologist Mathew Meselson and chemist Julian Robinson of the University of Sussex.

"What John (Steinbruner) wants to do is to set up a very large arrangement that would check up on research being done and on pathogens being used and shipped," Meselson said. "That is an enormous undertaking, even in the United States, not to mention globally."

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