NASA

NRC Panel to Propose Station Institute

Researchers have long criticized NASA for giving scientists short shrift in funding facilities and experiments on the multibillion-dollar international space station now under construction. Now the space agency is about to get some controversial advice on how to fix the problem.

In a few weeks, *Science* has learned, a panel of the National Research Council (NRC) will recommend that NASA create a nongovernment institute to plan and manage science on the station. The report, requested by NASA, aims "to increase the visibility, voice, and clout of the research community" in the decade-long life of the station, says Cornelius Pings, president emeritus of the Association of American Universities and chair of the NRC panel drafting the document. Adds Michael Katovich, a physiologist at the University of Florida, Gainesville, and a panel member, "We scientists want to ensure that the best science gets done—that the station is used as a platform not for Mars exploration or for engineering goals, but for science." But the report's suggestion for an institute seems certain to spark opposition from NASA centers involved in the space station. It also presents a formidable challenge in trying to reconcile the competing research interests of scientists and engineers from different disciplines, sectors, and countries.

Shaky science? Pings, top, says institute would strengthen space station research, which includes vibration-reduction system.

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Although Pings declined to discuss details, others familiar with the draft report said the new organization should be designed to circumvent NASA's notorious bureaucracy. "It's awful; every experiment on Spacelab required a couple of truckloads of paper," says New Jersey space consultant and panel member Judith Ambrus of the lab module designed to ride in the space shuttle bay. The new institute would give researchers a mechanism for access to NASA ground facilities, says one source, as well as financial and technical help in building experiments and planning and managing research time on the station. The NRC report will also suggest that crew members be specially trained to do primarily science during a tour on the orbiting base.

The NRC report proposes creating the institute by around 2002—3 years before the station is ready. But the panel is still wrestling with whether the new entity should be chartered and funded directly by Congress, and therefore be independent of NASA, or function like the Space Telescope Science Institute in Baltimore, which contracts with NASA to manage the Hubble Space Telescope. NASA recently examined more than a half-dozen ways to structure the institute—from a university and industry consortium to a government corporation like Comsat—without reaching a conclusion, says Mark Uhran, a NASA life and microgravity sciences manager who was instrumental in requesting the NRC report.

Although the idea of a separate organization has won early rave reviews from some officials at NASA headquarters, the reception at two centers with key roles in station management—Johnson Space Center in Houston and Marshall Space Flight Center in Huntsville, Alabama—is likely to be chillier. "We have a sense they won't like it," a panel member says. "But the [NASA] administrator wants this to happen." Katovich believes that the institute would relieve pressure on the centers by looking after scientific matters: "The centers clearly are critical for station development, but once everything is up and running, they can move on to other things."

Some center officials support the need for changing current practices. "Everyone is very eager to make it simpler to do research," says John David Bartoe, a former astronaut and solar physicist who heads the station's research program at Johnson. And Katovich and others say that the lengthy process to put experiments into space demands that NASA act as quickly as possible. "Part of the problem is that it takes so long to get something done—there are so many hoops," he says. "And while safety is still paramount, there are ways to do this less bureaucratically."

–ANDREW LAWLER

PCR

Taq Polymerase Patent Ruled Invalid

Be careful with whom you pick a fight. Seven years ago the Swiss pharmaceutical giant Hoffmann-La Roche took a swing at Promega Corp., a small biochemicals supplier based in Madison, Wisconsin, suing it for infringing a Roche patent on a key enzyme for molecular biology research. The enzyme, called Taq polymerase, is a crucial element of the polymerase chain reaction (PCR), the ubiquitous technique used to replicate snippets of DNA. But last week it was Promega that was still standing after a federal judge in San Francisco, California, ruled that the patent for Taq is invalid because its original holder, the now defunct Cetus Corp., obtained it by deliberately misleading the U.S. Patent and Trademark Office (PTO).

"We were very glad to see the ruling," says Promega chief technical officer Randall Dimond. "We felt for a long time that the only reason the patent was issued in the first place was due to a misrepresentation of the science." The ruling means that, for now, Promega can continue to sell Taq without paying royalties to Roche. But the war between the companies is far from over. The invalidated patent governs only one form of Taq and a small part of the current Taq market, but Promega is challenging Roche's patents on PCR itself and may do the same with other Taq patents Roche holds. And it claims this ruling makes these patents vulnerable. Roche, meanwhile, says it will appeal last week's ruling and is pressing on with a suit charging Promega with encouraging academic researchers to violate Roche's PCR patents.

This David vs. Goliath battle started shortly after Roche bought rights for the Taq and PCR patents from Cetus for $300 million in 1991. At that time Promega had a license from Cetus to sell "native" Taq enzyme, purified from the bacterium *Thermus aquaticus*, for uses other than PCR. Roche argued that Promega, which was undercutting Roche's price, was in fact marketing Taq for use in PCR and asked the company to renegotiate