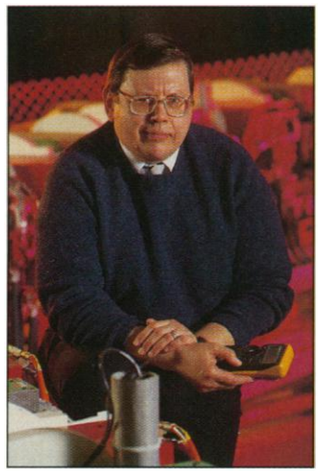
FREE ELECTRON LASER

Physicist Sues Duke Over Control of Lab

A federal court in North Carolina may soon have to answer a question that has vexed more than one big science project: Who calls the shots if the person who conceived the project has a falling-out with the university that oversees it? That issue has come up this fall at Duke University in Durham, North Carolina, where a scientist has sued to retain control of the Medical Free Electron Laser (MFEL) laboratory, a project that has received more than $40 million in federal funds.

Duke physicist John Madey, who invented, patented, and partly financed the first free electron laser more than a decade ago, has a 4-year, $19.7 million grant from the Office of Naval Research to develop medical applications for this device, which generates light from a beam of electrons forced to follow an undulating path. It differs from many lasers in that it can be tuned to operate at different frequencies, which in theory makes it a versatile tool for biomedical experimentation. But Duke, which manages the grant, earlier this year proposed naming physicist Berndt Mueller as principal investigator in Madey's place, offering Madey the title of chief scientist. Now, Madey is claiming that Duke made the change because the university wants to use "his" machine and lab for purposes he hasn't approved.



CHRIS HILDRETH/DUKE UNIVERSITY PHOTO

Whose grant? John Madey is contesting lab reorganization.

On 3 November, Madey filed suit in the federal court in Durham seeking an injunction to block Duke's management reorganization. In his legal brief, Madey claims that nuclear physicists on Duke's faculty who are short of funds are scheming to "take control of the MFEL project and to remove Dr. Madey from his position of authority in order to facilitate their nuclear research plans." The university, Madey claims, is supporting these changes because it wants to convert some of his lab space into a "user facility" for physicists and biomedical researchers. Madey says Duke tried to remove him as principal investigator after he refused to go along. He specifically accuses the university of patent infringement, violation of his constitutional rights, misappropriation of research opportunities, and violation of employment agreements.

Duke officials are not commenting on Madey's allegations. But some faculty members say privately that Duke took control of the MFEL lab after medical faculty members complained that they weren't getting access to the facility, as Duke had promised. An outside review panel in July had faulted Madey's management, recommending that Duke find a way to retain Madey as a scientific leader but appoint someone else to manage the lab. Duke followed that advice (*Science*, 19 September, p. 1769).

Madey does not challenge Duke's right to oversee management of the MFEL grant, and he concedes that last summer's visiting committee was critical of him. But he insists that he should retain control of the device he patented and direct the research on potential medical applications for which he received a grant. Duke's offer to let him continue as chief scientist, Madey says, would not give him adequate control over his own research. Duke's takeover, in his view, is a "violation of U.S. patent law" and an "out-and-out theft."

Mueller, Duke's physics department chair and the new principal investigator on Madey's grant, is named in Madey's lawsuit as one of those who want to acquire the FEL space for nuclear physics. Like other university officials, Mueller declines to comment because he fears his words might be used in court. However, John Burness, Duke's senior vice president for public affairs, issued a statement on 7 November praising Madey but suggesting that the university is not satisfied with his management of the MFEL lab. Burness said that Madey is "a first-rate scientist whose pathbreaking work ... has significantly advanced an important field of technology." Burness added, however, that "management of a complex research laboratory requires sets of skills that go beyond individual brilliance." Duke is "confident," he said, that the court will uphold the lab's reorganization.

Madey had a similar scrap with Stanford, where he received his Ph.D. and built the prototype infrared free electron laser that he later named the Mark III. There Madey clashed with administrators in 1988 over their attempt to charge his grant what he considered to be "excessive" overhead costs of $1.5 million. Madey had invested $142,000 of his own money in the machine at a time when many felt it couldn't succeed, and he didn't take kindly to Stanford's claims on his resources. Because he had obtained a patent on the FEL, and perhaps because Congress was battling with the university on overhead costs at the time, Stanford allowed Madey to depart with his machine.

The Defense Department, which is interested in the FEL because it may have military value someday, paid to move Madey and the Mark III to Duke. Now Madey is talking about picking up and moving again, but this time, his Defense sponsors may want the machine to stay put.

–Eliot Marshall

MALARIA

Consensus on African Research Projects

LONDON—A group of major biomedical research funding organizations and malaria researchers from around the world agreed last week on the outlines of a global initiative on malaria research. The initiative, a loose-knit collection of projects that will be run by individual agencies, will be focused on Africa, where 90% of the world's malaria cases occur. Its major objective will be to strengthen research in Africa itself and to build new ties between research institutions on the continent. "For the first time, the English-speaking and French-speaking researchers are talking together," says Maxime Schwartz, head of the Pasteur Institute in Paris. "It's a remarkable advance."

The harmony at last week's meeting was a welcome relief to many of the participants, for the initiative—known as the Multilateral Initiative on Malaria (MIM)—has sparked considerable wrangling behind the scenes since it was first proposed nearly a year ago at a meeting of malaria researchers in Dakar, Senegal. The original idea, backed largely by the U.S. National Institutes of Health and its director, Harold Varmus, was for a tightly coordinated program, run jointly by the major funders of malaria research and with its own pot of money. But that notion was shot down at a meeting in The Hague earlier this year, largely because some funding organizations were wary of creating a new bureaucracy that they feared would be dominated by NIH (*Science*, 18 July, p. 309). What emerged from last week's meeting is a less grandiose, more loosely structured effort in which each agency will take responsibility for a specific part of the program and raise money for it.

"We really feared there had been a loss of enthusiasm," says Robert Howells, director of international programs at London's Wellcome Trust. But there was "tremendous support for pushing ahead" at last week's meeting, he adds. "I'm very relieved it went smoothly," says