

# MIT Agonizes Over Links with Research Unit

*Edwin Whitehead's plan to establish a \$120-million institute at MIT has provoked sharp debate among the faculty*

Cambridge, Massachusetts. Passions are running high in the biology department of the Massachusetts Institute of Technology (MIT) over an extraordinary plan to link the university to a nonprofit biomedical research institute, which a wealthy industrialist hopes to establish on the fringe of the MIT campus. "What is being considered is a catastrophe for MIT and ultimately for science," says Sheldon Penman, a professor in the department. "It is a unique opportunity to expand research activities and bring new young faculty into the department," argues David Baltimore, the MIT biology professor who has been named director-designate of the proposed institute.

The focus of this heated debate is an institute which, if it is established, will be among the most lavishly endowed biomedical research facilities in the world. Its benefactor is Edwin C. Whitehead, a self-made businessman who amassed a fortune in a family company that pioneered in the development of precision instruments for use in clinical laboratories. In May 1980, the company, Technicon Corporation, was sold to Revlon for \$400 million in stock and cash—not a bad return on the \$5000 that Whitehead and his father put up to launch the company in 1939.

Whitehead wants to use a substantial chunk of his personal fortune to establish the Whitehead Institute for Biomedical Research, which he calls "a purely philanthropic enterprise." He is willing to spend \$20 million to build and equip the institute, provide \$5 million a year in operating funds, and leave an endowment of \$100 million when he dies. "There has certainly never been a gift like this before to biomedical research," says Baltimore.

It is not just the magnitude of the largesse that has drawn attention, however, for Whitehead has proposed a unique affiliation between the institute and MIT. The deal, which has been under negotiation for more than a year, would essentially leave the Whitehead Institute administratively separate from MIT, but most of its researchers would be full faculty members of the university. Like other MIT professors, they would

be expected to teach graduate and undergraduate students and serve on faculty committees. In other words, MIT would gain several new professors—up to 20 researchers will eventually be appointed to the Whitehead Institute—whose salaries would be paid from a source outside the university. In addition, Whitehead has agreed to donate \$7.5 million to MIT directly to cover any costs that may be incurred by the link with his institute.

Attractive as this may sound for an institution that is increasingly strapped for cash, the arrangement raises many prickly issues. In particular, opponents argue that it would require MIT to surrender an unprecedented degree of control over the selection of research areas and over the appointment of its own faculty members—perhaps two of the most jealously guarded rights that a university has. They also believe that it sets a dangerous precedent to have an institute so closely tied to MIT, yet remain outside the university's usual channels of government and, often bluntly, they have questioned Whitehead's motives for insisting on such an arrangement.

"If he really wants to support research, we have an excellent mechanism; he can establish the institute within MIT," says Jonathan King, a member of the university's biology department, who has openly opposed the scheme. In seeking to link the Whitehead Institute to MIT without making it a formal part of the university, Whitehead, according to King, "is buying a piece of something that has taken years to establish."

Whitehead insists, however, that the novel arrangement will benefit both MIT and the Whitehead Institute. In a lengthy telephone interview with *Science*, Whitehead made it clear that he is not interested in following the established patterns of philanthropic support for higher education by turning over a large sum of money to MIT to spend on biological research. "MIT and most other institutions of this sort have a dual function: a primary role of education and a secondary role of research. We have a primary role of research and a secondary role of teaching," he says.

Why link the facility to a university,

which will inevitably raise institutional problems and stir up all sorts of academic strife? "We don't believe that 20 people is a large enough critical mass to attract an elite corps of scientists," says Whitehead. A partnership with a prestigious university "can help provide that critical mass." In other words, the Whitehead Institute will benefit from MIT's prestige, and MIT will benefit from the opportunity to expand the size of its biology faculty without incurring additional costs. And this at a time when federal support for academic biomedical research is expected to dwindle.

MIT's senior officials believe that the benefits from an association with the Whitehead Institute outweigh the institutional difficulties that it poses. Francis Low, provost of MIT, argues, for example, that it will help create an "absolutely sparkling" life sciences community spread between the university and the institute and that "the whole will be greater than the sum of its parts." Low has led the negotiations with Whitehead, and a legal agreement is now being drafted. Final approval of the deal rests with the MIT Corporation, however, which does not meet again until December. In the meantime, MIT faculty members are debating, sometimes heatedly, the merits of this unusual arrangement.

Faculty concern revolves around three intertwined issues: the administrative structure of the Whitehead Institute, the appointment of faculty and the selection of research areas, and the potential links between the proposed institute and any commercial ventures. In addition, some faculty members are concerned about the fact that Whitehead had previously intended to establish his institute in association with Duke University, but for reasons that have never been fully explained, the deal there fell through.

The Whitehead Institute will be governed by a board of 14 trustees, of which one will be the director, three will be appointed by MIT, and three more will be chosen jointly by the board and MIT. An eight-member board has been functioning for some time, but since it is composed mostly of people with close ties to Whitehead—it includes three of his children, a former director of Techni-

con, and the inventor of one of Technicon's most successful products—MIT officials insisted that it be broadened. The new lineup will include Jerome Wiesner, former president of MIT, and Donald Fredrickson, former director of the National Institutes of Health. Whitehead himself is not a member.

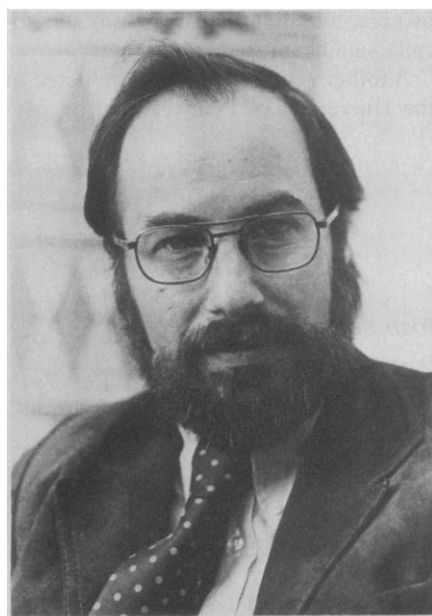
The board will be responsible for the overall financial policy and administration of the institute. Baltimore says that he has been given every assurance that he will have a free hand as director in setting the research agenda. (Under the terms of the draft agreement with MIT, the director will always be appointed from the university.) This expansion of the board has blunted some of the initial concern about the independence of the institute. Gene Brown, chairman of the biology department, says for example, that he was originally "very perturbed that the board would be under the control of the Whitehead family." Others are not convinced. King, for example, argues that there is still "a danger that the scientific direction of the institute will be influenced by the interests of the Whitehead family."

But even with cast-iron guarantees of academic freedom, some faculty members are worried that the arrangement will distort the usual mechanism for choosing research areas and selecting faculty members in the biology department. Although the agreement with MIT specifies that all those who are appointed jointly to the Whitehead Institute and to faculty positions in the university should be approved by the usual MIT selection process, the institute's director will make the initial choice of which areas of research should be pursued. In effect, this means that the biology department will gain new faculty members chiefly in those areas chosen by the Whitehead Institute. The biology department now has about 40 faculty members; those with joint appointments with the Whitehead Institute could thus eventually make up one-third of the department.

This prospect troubles Sheldon Penman, who has fought a long battle within the department to keep it from concentrating too heavily on molecular biology. He believes that the addition of the Whitehead Institute will reinforce the trend toward molecular biology to the exclusion of other areas, and that this will narrow rather than broaden MIT's biology department. Baltimore, who says that the research directions of the institute are not yet determined, counters that Penman is simply using the debate over the institute to fight a scientific battle that he has consistently lost in

departmental meetings. Nevertheless, underlying this dispute is the important principle that MIT will to some extent be turning over to an independent body some responsibility for selecting the research areas from which a part of the faculty will be drawn.

Much of the debate about the merits of the proposed link revolves around the question of how free the institute will be from commercial ventures. It is here that suspicions run deepest and where passions run highest. Opponents of the venture point out that Whitehead is the largest single stockholder of Revlon, which is moving rapidly into bioengi-



**Man in middle of commotion at MIT**

*Director-designate David Baltimore*

neering, and that he now owns a venture capital company, Whitehead Associates, which has made some investments in biotechnology companies. The suspicion is that Whitehead hopes to benefit in some way from the work of the institute, but exactly how is not clear.

Whitehead bristles at such suggestions. "I am getting awfully tired of having my motives questioned, especially when I think they are pure," he says. "If my intentions were to profit from biotechnology," says Whitehead, "I wouldn't give away \$120 million to a basic research institute." The Whitehead Institute, he maintains, "has no link with any commercial venture; it is purely a philanthropic enterprise."

One point of contention, however, is that the patent rights to any discovery made by Whitehead Institute researchers would be vested in the institute rather than MIT. "I believe that the institute should retain the rights to the patents for work that it finances, and that the re-

wards should go to the institute to finance further research," says Whitehead. "But I want to be sure that everybody knows that I will not hold the patent rights. They will go to the institute itself," he says. Both Whitehead and MIT officials acknowledged, however, that negotiations are still going on over the question of whether the institute or the university should be assigned the patent rights.

For Whitehead, the prospect of an agreement with MIT represents the end of a long struggle to establish his institute. About a decade ago, soon after Technicon went public, making him on paper a multimillionaire, Whitehead began to consider donating a large chunk of money to biomedical research.

In 1974, he began negotiations with Duke University to establish the Whitehead Institute in association with the Duke medical school, but after 3 years, the arrangements fell through. Although Whitehead and Duke officials refuse to discuss the details of what went wrong, it is understood that one problem was that Whitehead's fortune was then completely tied up with Technicon, whose shares were fluctuating in value. He also had no clear idea of how the institute should be structured, and he wanted more control over its scientific directions than Duke scientists were willing to accept.

In June last year, Baltimore was introduced to Whitehead by Joshua Lederberg, president of Rockefeller University. Baltimore offered advice on how the institute should be structured, insisting in particular that it should be affiliated with a major university, and Whitehead offered him the directorship of the institute if it becomes a reality. Negotiations with MIT began in August.

The fate of the institute now hangs largely on faculty reaction to the proposal. The biology department is the most deeply divided. Department chairman Brown says that he believes that only three people are adamantly opposed, three more have not yet decided whether they can support it, and the rest would go along, but with varying degrees of concern. Others say, however, that the opposition is more widespread. In any case, the proposal has inflamed feelings to such an extent that one department meeting is said to have degenerated to *ad hominem* attacks.

Faculty members outside the biology department have just begun to debate the proposal. Many concerns were raised at a special faculty meeting on 30 September, and two more meetings will be held before the MIT Corporation meets in December.—COLIN NORMAN