

## New building promises to be 'magnet' providing connectivity and education

By David Brand

The approval of the Alumni Field site for the life science technology building by the Cornell Board of Trustees sets in motion preparation of site criteria and the project budget, which will be presented to the board, perhaps in early summer.

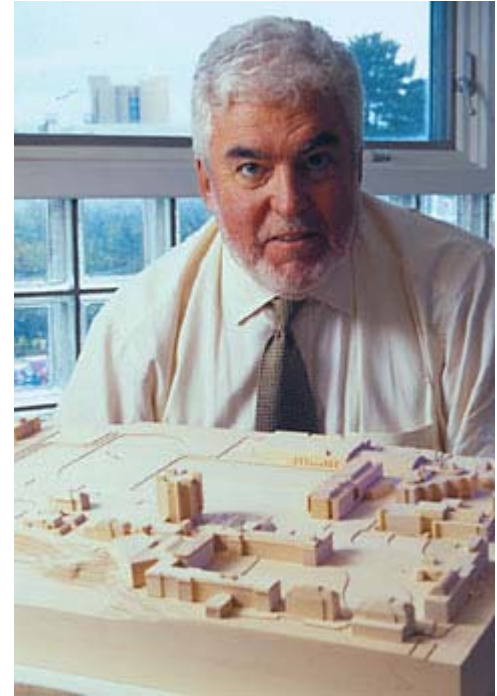
Design work by Cornell alumnus Richard Meier '56, the eminent architect who designed the Getty Museum in Los Angeles, will begin shortly. The scientific engineers for the project are CPR Lab Planners of Philadelphia and Bard Roe Athenus, Boston.

The building, which according to Peter Karp, university architect, is the Cornell administration's top building priority on campus, will be a focal point of the Cornell Genomics Initiative (CGI), the campuswide, faculty-driven research, development and educational program. The new building potentially will house research programs in biomedical and biological engineering, computational biology, biophysics, structural genomics, plant functional genomics and social, legal, ethical and business aspects of genomics.

"Connectivity, both physically and intellectually, is essential," said Stephen Kresovich, who as the director of the university's Institute for Biotechnology and Life Science Technologies and chairs the building's planning committee.

The greatest part of the usable space will be occupied by research and teaching labs. As such, there will be a strong focus on graduate and undergraduate research and education. It's expected that several hundred students, including undergraduates, will use the building every day.

Funds for the building are likely to come from two sources: New York state and private donors. The state, through its funding agency, the New York State Office of Science, Technology and Academic Research (NYSTAR) in May designated Cornell as the site for a Strategically Targeted Academic Research (STAR) center for Genomics Technologies and Information Sciences. No funding has yet been appropriated, but Kraig Adler, Cornell vice provost for life sciences, who has administrative responsibility for the building, is hopeful that the amount could be as high as \$15 million, of which about \$11 million would go towards the cost of the life sciences building.



**Peter Karp, Cornell University architect, displays an architectural model of the site for the university's new life science technology building, which was approved by the Cornell Board of Trustees Jan. 26. The model, which in the photograph is positioned to present a campus view looking south (or towards Karp) shows the long east-west rectangle of Alumni Field, with Bartels Hall and the curved roof of Lynah Rink at its southern edge. The Agriculture Quad is in the foreground. The life science technology building, which is represented as a simple block because the building has yet to be designed, stretches along the west end of Alumni Field from the rink to Tower Road. Robert Barker/University Photography**

In addition, the New York State Senate in March 2001 passed a bill to create a program, called GEN·NY·SIS, that would provide funding for biotechnology, with the goal of creating new jobs in the state. A key component of the program is to create research consortia around universities, including Cornell. The university has been designated as a Center of Excellence in the legislation and potentially would receive \$30 million. If that funding is finally approved by the state, Adler said, the university has decided to direct about \$15 million to construction of the life science building. In addition, Adler said, it is hoped that federal funding will be available for some specialized research equipment.

Although the building will be located on the west end of Alumni Field, to those who fear that research is about to take over the only athletic fields in central campus, Karp gives this assurance: "We are not planning to keep marching down Alumni Field -- this will remain a protected green space."

Adds Adler: "I share the strong feelings about open spaces in central campus. But when you look at the size of this building, which is approximately twice the size of the Biotechnology Building, and the desired connections to existing buildings, there is really only one site that meets our academic needs."



Kresovich



Adler

The new building will be a "first of its kind for Cornell because it is not being built for any single department or college, but for the university as a whole," said Adler, who also is professor of neurobiology and behavior.

The reason for that is that the building has been conceived as a truly interdisciplinary venture within the CGI. "There will be life scientists, computational people, engineers, physical scientists and social scientists all working and interacting together," Adler said.

"We want to build a facility that will act as a magnet to attract the best faculty, students and visitors to join us in the opportunity of a generation," said Kresovich. He added, "The facility has to be top-notch for science and education, but it also has to be aesthetically attractive."

Among the scientific magnets will be the Biomedical Engineering Program. Faculty in the new program will be drawn from engineering departments across campus. In addition, the creation of the Department of Biological Statistics and Computational Biology is being proposed in the College of Agriculture and Life Sciences and also is planned to be located in the building. Also, said Kresovich, "people from biophysics will be in and out of the building, as will people in structural genomics, mouse genetics and plant functional genomics."

The Institute for Biotechnology and Life Sciences Technology (including the Center for Advanced Technology in Biotechnology and the Biotechnology Resources Center) also will be located in the building.

Other currently planned facilities in the building will include a mouse vivarium, controlled environment facilities, a distance learning center, teaching labs and a business incubator in which Cornell-based research by faculty, students and staff can be exploited by fledgling companies with the help of on-site business experts.

The question is, why bring all these diverse researchers together under one roof? "Because we recognize a unity to biology and the need to build on Cornell's excellence in computational, engineering and physical sciences," said Kresovich. "We want to move aggressively into the 21st century through integrating basic disciplines to generate fundamental insights, solve problems and train the next

generation of life scientists.

Life scientists in the 21st century need access to powerful tools developed by physical scientists and engineers and data mining software developed by computational scientists, Kresovich points out.

Adler believes that the way biology is taught is going to change and that the new building will foster and lead this change.

"The building will focus our attention more and more on interdisciplinary areas where many of the most important discoveries will be made," he said. "If you have biologists working with engineers and physicists, it makes it more likely that courses will come out of these interactions between colleagues in different departments. And we will be exposing our students to their excitement."

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