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WHITMAN COLLEGE

## New Facility Brings Three Disciplines Into One Lab

What better way to make progress in science than by tearing down the walls that keep scientists apart? Funded by an \$800,000 HHMI grant, Whitman College is creating a new laboratory where students in biology, physics, and computer science can work together on shared problems.

The new laboratory at the Walla Walla, Wash., college will let students and faculty link tools for informatics—a field that analyzes and makes sense of data—with analytical instruments like spectrophotometers and x-ray diffraction tools that reveal the inner worlds of proteins and other biological molecules. Instead of bouncing from the computer lab to the lab bench, students will transition seamlessly from one to the other in one place. That ability will help them hone the skills they need to succeed in the life science workforce and in graduate school, says HHMI program director James E. Russo, professor of biochemistry.

Students will learn, for example, how to create molecular structures in the laboratory using designs generated by computer software. Or they might learn how to create the right conditions for a genetics experiment by accessing information contained in online databases. "It's crucial that our students learn how to design experiments using computational information," Russo says. "The new lab facility will allow our students to access that information in real-time. That's the model for biomedical research at major universities, and we want to apply it here at the undergraduate level."

Through a separate, HHMI-funded collaboration with the Fred Hutchinson Cancer Institute in nearby Seattle, students will also be able to work with some of the top biomedical scientists in the world. A newly-hired Whitman faculty member in bioanalytical chemistry will also be on hand, teaching courses that focus on detecting biomolecules and determining their structures. "That's an area of expertise missing in our curriculum so we're looking forward to having this new individual on board," Russo said.

Russo emphasizes that Whitman has a history of multidisciplinary science education, which HHMI began supporting with its biochemistry, biophysics, and molecular biology programs back in 1990. The new grant strengthens the school's commitment to breaking down barriers in traditional disciplines, he says.