MAKING AN INVESTMENT IN SCIENCE AND TECHNOLOGY AND IN SCIENCE EDUCATION

The House Science Committee

Kevin Stearns/CU

Sheila Marikar

sheila marikar '05 interviews congressman sherwood boehlert, chairman of the house science committee.

Cornell is widely known for its research in the sciences. In classrooms across campus and in institutions around the world, the university's students and scholars work to advance science and technology. Much of this is possible due to the work of the House Science Committee, an essential part of the nation's scientific community. The House Science Committee allocates more than $30 billion a year to programs like NASA and the National Science Foundation (NSF), which in turn funds academic research across the nation. Cornell expended $504.6 million in research for FY 2003, of which $94.9 million came from the NSF and $13.4 million from NASA.

At the helm of the House Science Committee is one man in Washington who is passionate about the sciences—Congressman Sherwood Boehlert, the Chairman of the House Science Committee. In April 2004, I visited Congressman Boehlert on Capitol Hill.

Though the Rayburn House Office Building is home to hundreds of congressional quarters, Boehlert's office is easily distinguished—his walls are lined with memorabilia from his favorite baseball team, the New York Yankees, as well as the autographs of notable scientists, including Cornell's own Steven Squyres, Astronomy. The congressman's office hummed with activity as staff members, constituents, and government officials vied for his attention. Between meetings, he sat down to talk about the House Science Committee, the importance of science education, and the future of scientific research.

Boehlert, an 11-term congressman from Utica, New York, has served on the House Science Committee since he first took office in 1983. He became head of the committee in 2001, and in his first speech as chairman, he pledged to "build the Science Committee into a significant force within the Congress," and "to ensure that we have a healthy, sustainable, and productive R&D establishment—one that educates students, increases human knowledge, strengthens U.S. competitiveness, and contributes to the well-being of the nation and the world."

Under Boehlert's leadership, the committee has helped to advance many of Cornell's scientific activities, such as the Grape Genetics Center and the Cornell NanoScale Science and Technology Facility. Last year, Cornell Vice Provost for Physical Sciences and Engineering Joseph A. Burns presented the congressman with a Public Service Award for "committed and sustained effort in support of science." Burns called Boehlert a great friend of the university, saying, "In many ways he's been like a caring parent to the sciences … always our cheerleader, helping out when we need assistance but also willing to tell us the facts of life and provide tough-minded advice."

What issues come before the House Science Committee? What issues are you currently considering?

The House Science Committee deals with all nonmilitary science activities on the part of the government. We work with NASA, the EPA (Environmental Protection Agency) research programs, along with the National Science Foundation and the National Institute of Standards and Technology.

We're concerned about the environment and global climate change. We're dealing with developing a comprehensive energy policy for America. Right now, we don't have one—the richest, freest nation in the world doesn't have a comprehensive energy policy! We're trying to fix that.

We're dealing with the pressing need to do a better job of K–12 science education, because our youngsters don't measure up with their counterparts around the world. By the 12th grade, our kids rank 15th and 16th in math and science proficiency. If we're going to retain our global position, we've got to do better. We had a key component in the "No Child Left Behind" legislation—the science and math partnership. It seeks to marry the talents of higher education with the needs of elementary and secondary education, which isn't measuring up. We want the model of higher education to be used as a guide for K–12.

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Robert Barker/CU

We're determining the future investment of the government in the National Science Foundation, which sponsors most university-based research. We want to invest money in good science so that we can have good, solid evidence to guide our decision makers.

Right now, we're talking about the future of the space program in the aftermath of the Columbia tragedy. The shuttle program has been grounded and we're wondering when we're going to resume flight.

We're trying to determine the future direction of humans in space. President Bush recently outlined his vision of humans in space—to stop at the Moon and eventually head to Mars. We're determining how to go forward with that program.

What precedent does the Mars Rover Mission set for future space and aeronautics research projects?

Mars Rover is absolutely thrilling, and a great guy is responsible—Steve Squyres from Cornell. The good thing about Mars Rover is, it's an unmanned space activity, and that's very important. Everyone thinks the space program is about rockets and astronauts but most of NASA's budget is about unmanned activity. Spirit and Hubble are other examples of that. Unmanned space activity allows us to engage in less costly and less risky research.

How has the House Science Committee's role in research evolved since you took office in the 1980s?

If you asked people on the Hill what the job of the Science Committee was when I became chairman in 2001, they would've said, "It takes care of the space program." Now, we're deeply involved in energy, education, and the environment. We have to coordinate all of the government's investment in science and technology research. Since 9/11, many wonderful ideas about science and technology have come up, and we're the ones who look at those ideas and figure out what to do with them.

What do you think are America's most pressing research issues?

Number one—people. We have to prepare the people to do the research that needs to be done. We need to make investments in people, and education is very important in that respect. You don't create a Ph.D. just by taking someone from undergraduate to graduate school. You've got to start the process back in kindergarten.

It's very important that we constantly be at the cutting edge of new technologies. We cannot rely on the manufacturing sector or the service sector for jobs. We've got to have the technology sector. The nanotechnology, cyber-technology, and hydrogen initiatives are important.

It is important to find alternative sources of energy. We are entirely too dependent on foreign-sourced oil to fuel America, and that's why the hydrogen initiative is so important for the auto industry to develop.

How does the public's interest factor into federal funding for academic research?

People want to know about the economy. I think, generally, the American people want us to tell them how to use their tax dollars wisely. Right now, they're concerned about the price of gasoline. We're not used to gas prices at the level where they now are, despite the fact that the prices are less than what they are in many foreign capitals. So, the American people say that we should support research that will give the country cheaper gasoline.

How can universities better help the public's understanding of scientific research and the importance of basic science?

I think we all have a role—corporate America, the universities, the popular press. We've got to develop a scientifically literate public and we've got a long way to go. Part of the reason is that we haven't been adequate in our science education or resources from the beginning.

In 1961, the computer really came into popular lexicon. That 1960s computer would have taken up half of this room. Today, my grandson has a handheld device that has greater capability than that huge machine. Why did that happen? It happened because the government made investments.

We're here to do more of that. Our investment in research and in graduate science education provides many opportunities for undergraduate research. We hope that these opportunities will lure undergraduates into jobs where they'll invent great things and help the public understand why science is so important.

Sheila Yasmin Marikar '05