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UC Santa Barbara, Mitsubishi Chemical Extend Partnership; Company to Provide More Than $8.5-Million in New Support

The Mitsubishi Chemical Corporation of Tokyo and the University of California, Santa Barbara today announced that they are extending their successful research and education alliance for a new term of four years.

With the support of Mitsubishi Chemical ? Japan's largest chemical company ? UC Santa Barbara, in 2001, form ed a highly productive research unit called the Mitsubishi Chemical Center for Advanced Materials (MC-CAM). In a very short time, the center established itself as an engine of innovation, responsible for a large number of research publications, new patents, and inventions. It is in recognition of this superb record of scientific achievement, as well as the mutual benefits generated by this partnership, that the campus and the company have agreed to extend and enhance their relationship.

Under the terms of the new agreement, Mitsubishi Chemical will invest between $8.5-million and $10-million at UCSB over the next four years. The funds will support research as well as the administration of the MC-CAM center. The total also includes a philanthropic contribution of $800,000 to permanently endow new graduate fellowships in materials and chemical engineering.

"UC Santa Barbara's partnership with Mitsubishi Chemical is a wonderful success story, and I am so very pleased that we are able to continue this productive arrangement," said UCSB Chancellor Henry T. Yang. "The MC-CAM has become an excellent model for university-industry collaboration across the Pacific, and I am extremely grateful to Mitsubishi's visionary leaders for reaffirming their commitment to this project, and to my campus colleagues for furthering basic science in advanced materials and developing new, breakthrough technologies."

Directed by Glenn Fredrickson, a professor of chemical engineering and materials, the MC-CAM is affiliated with UCSB's College of Engineering and Materials Research Laboratory, a national center supported by the National Science Foundation. The MC-CAM is housed in a new wing of the Materials Research Laboratory that was paid for in part by Mitsubishi Chemical. Of the $13.5-million initially provided by the company in 2001, $1-million was used to establish two endowed professorships in the College of Engineering and the balance was used to fund the MC-CAM's first five years of activity, including its facilities.

The center's researchers are involved in creating exciting new materials, devices, and advanced fabrication technologies for the specialty chemical and electronic materials marketplace. The center's main areas of focus are materials for display technologies, solid-state lighting, fuel cells and batteries, information storage media, and polymers for automotive applications, among others.

Ryuichi Tomizawa, president and chief executive officer of Mitsubishi Chemical, said his company has been gratified by how quickly its investment in the materials center has led to an impressive number of technology options and licenses. "This is a partnership that makes good sense for science and for business," he said. "We are confident that the next four years will yield even more opportunities for the university and our company."

MC-CAM is an example of a unique type of industrial-academic partnership that represents a close and comprehensive research collaboration between a single corporate sponsor and a university. The UCSB center maintains a portfolio of research projects that are selected and shaped by a steering committee from proposals submitted by UCSB researchers and scientists from Mitsubishi Chemical. The committee has 10 members, an equal number from each partner. While the University of California owns inventions developed by university employees that derive from the research funded by Mitsubishi Chemical, the company has first option for exclusive licenses to use the technology.

Matthew Tirrell, dean of the College of Engineering, said that having an industrial partner like Mitsubishi Chemical makes it possible for technological advances developed at UCSB to move quickly into the product development stream. "We want our research to break new ground, but it's really up to business and industry to take these technological breakthroughs and apply them to the development of new products and services," he said. "Having an industrial partner that places such a high premium on basic research and is also so adept at making use of the fruits of research is something to which we attach tremendous importance and value."

In its first five years, MC-CAM research has resulted in 33 scientific publications and 30 invention disclosures, which is considered a very high ratio of inventions to publications. Thus far Mitsubishi Chemical has taken options on 26 of those inventions. In addition, the center's research has led to 9 joint UCSB/Mitsubishi Chemical patent applications.

MC-CAM has also achieved its results with significantly lower levels of investment than is typical. While it expended an average of $340,000 for each invention it disclosed, the average spent by technology companies is $500,000 and by other research institutions, $2.4-million, according to the Association of University Technology Managers.

"Our efficient use of funding is, of course, much appreciated by our Mitsubishi Chemical partner," said Fredrickson, the center's director.

Fredrickson also noted that, to date, more than a dozen experimental projects initiated at MC-CAM have been discontinued. "This is a very focused research program, and if we aren't getting results, we move on," he explained. "I think that's something that Mitsubishi recognizes and appreciates."

What the company also appreciates, he added, is the strength and breadth of the research enterprise at UC Santa Barbara. "This center benefits from having access to some of the top minds in materials science, including Professor Alan Heeger, one of our Nobel Laureates," said Fredrickson. "Access to students and postdoctoral fellows is also an asset. Mitsubishi's local R&D office, MC Research and Innovation Center, has hired several Ph.D.s from the program. Additionally, we have been able to leverage the company's support with other grants and external funds."

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