

UC San Diego's Strategic Plans, Part 1



As UC San Diego enters its 51st year—a new era of innovation—the campus senior academic leaders have created bold strategic plans to identify research areas of strength and spark interdisciplinary collaboration among our world-class faculty. In a wide-ranging videotaped conversation at the Seuss Library in the Faculty Club on October 25, Executive Vice Chancellor for Academic Affairs Suresh Subramani, Vice Chancellor for Health Sciences and Dean of the School of Medicine David Brenner and Vice Chancellor for Marine Sciences and Director of Scripps Institution of Oceanography Tony Haymet shared their vision for the next decade and beyond.

“We have fewer academic departments and divisional structures than many other top universities. That means fewer of the usual barriers to integrated research,” Subramani said. “The campus has always been collaborative and interdisciplinary, and I’d like to see more and more of these interdivisional activities taking place.”

“At UC San Diego, we have a critical mass of really talented people who are highly collaborative and collegial,” Brenner said. Haymet added: “We have to count our blessings that we ended up in a little enclave north of San Diego. We offer the kind of collaborative environment that early career people love to be in.”

“UC San Diego is a research powerhouse with limitless potential,” said Subramani. “The challenge is to maintain our excellence, reputation and access despite the declining state contributions to the University of California budget and an unstable state, national and global economy. We absolutely will not compromise on quality.”

Faculty Hiring: Renewed Commitment for Growth Areas

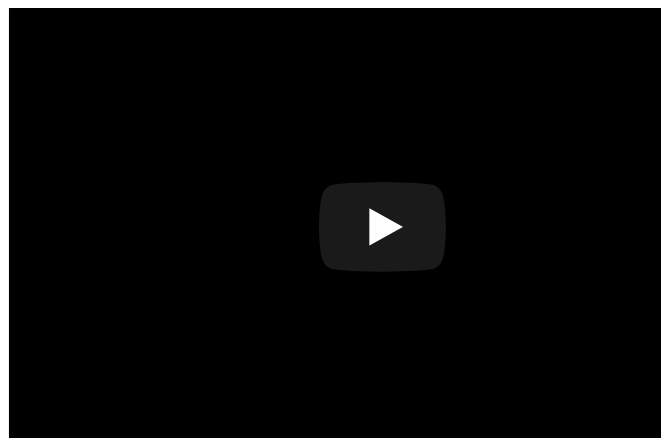
Aggressive faculty hiring plans have been initiated by Academic Affairs, Health Sciences and Marine Sciences to ensure UC San Diego’s prominence.

Through brainstorming sessions with the academic deans, Subramani developed a three-year hiring plan to recruit 125 to 130 new faculty with roughly one-fourth to be in quantitative/systems biology; a design center or design institute; and energy, particularly alternative sources of energy and sustainability. These areas were identified as “transformative research themes” for the divisions to pursue over the next 10 to 15 years.

In Health Sciences, Brenner launched a similar planning initiative for the recruitment efforts of approximately 50 new faculty hires per year. “The clinical plans say that there are three areas of growth that would be exciting for us and for San Diego: cardiovascular disease, oncology and advanced surgery. We’re specifically going to recruit key thought leaders in those areas as we make UC San Diego the medical destination in those areas.”

The Health Sciences faculty identified drug discovery/drug design, computational chemistry/systems biology and bioengineering/biomedical research as areas with opportunities to be the best. “We recognize that the collaboration with Scripps Institution of Oceanography and the general campus will present incredible opportunities to be the best in a few selected areas. For example, in drug discovery, there are incredible strengths in discovery from the ocean,” Brenner said.

At Scripps Institution of Oceanography, faculty-hiring decisions will focus on both collaboration and the initiatives identified through a recent faculty review process. In the coming months, Scripps will finalize its plans for new hires. “My colleagues and I think of three circles of collaboration, and we’re trying to craft our workforce to meet the exciting opportunities that those collaborations provide,” Haymet said. The first circle of collaboration is within Scripps with its faculty and researchers. The second

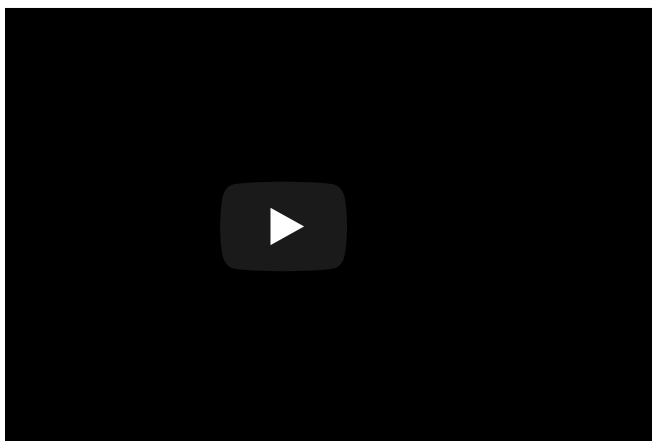


circle is among the community of CleanTech San Diego, and the third is with the county and internationally. “Discoveries and knowledge gained at UC San Diego have been exported off campus. I think our campus can do more in that area,” he said.

Research Directions: The Next Decade

Although UC San Diego recently sustained its largest budget cut in campus history, the campus’ margin of excellence remains intact. Fifty years of growth have produced a robust, diverse and resilient institution that can weather today’s economic crisis. In the general campus plan for new full-time employees, Subramani is looking in three unique research areas:

- Quantitative/systems biology will be the catalyst for future applications in medicine that will transform diagnosis and therapeutics. Driven by the physical and biological sciences – but with medical and engineering applications – the initiative will focus on scientific discovery and predictive understanding of biological functions.
- The broadly defined design initiative will include participants from Arts and Humanities, Social Sciences and Engineering in providing functional, informative and aesthetic solutions for the utility of products, processes, institutional structures and services.
- The energy initiative matches the nation’s desire to move away from a petroleum-based economy, seeking new products such as electric vehicles, fuel cells, biofuels and photovoltaics. “UC San Diego generates more than 85 percent of our energy initially and has a unique microgrid. The energy initiative will focus on the technologies, the science and policies of the new energy economy and its role in replacing an oil-based economy,” Subramani said.



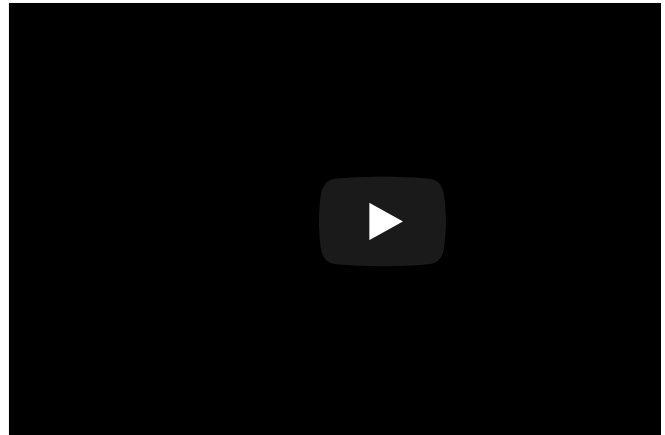
“We see energy as a huge focus for the UC San Diego campus,” Haymet said. “There is at least the possibility of providing a liquid fuel industry, based right here in Southern California.

“Systems biology, spans the terrestrial and marine world and is a great integrating project for the campus,” said Haymet. “Collecting data and understanding what it means often requires a view of the 71 percent of planet Earth that’s covered with water.”

In the Health Sciences, research priorities such as biomedical engineering and research, nanotechnology and drug discovery would stretch scarce dollars by combining Health Sciences, general campus and Scripps resources. “I think there are opportunities to co-recruit top faculty whenever we have interests that overlap,” said Brenner.

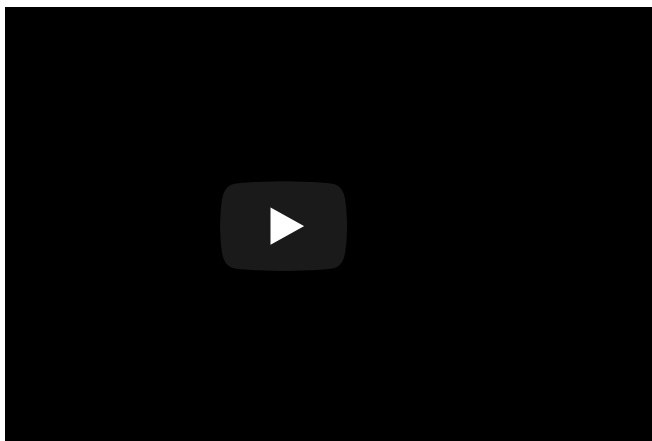
San Diego: An Academic Destination

Recruiting and retaining the best and the brightest faculty and students are more challenging in a tough economic environment. But Haymet believes that UC San Diego's oceanfront location is a formidable competitive advantage. And, with around 50 research institutes almost within walking distance on the Torrey Pines Mesa and 600 biotechnology companies in Greater San Diego, campus newcomers encounter a critical mass of talented people who are highly collaborative and collegial. "It's a welcoming atmosphere for new faculty – and one in which they can be successful," says Brenner.



As for working spouses and future career opportunities, "You can turn left or right out of your driveway for your next job," said Haymet. "Scripps has people, especially at the staff level, who have moved between UC San Diego and Salk and the other great institutes on the Mesa."

At the new Sanford Consortium for Regenerative Medicine, scientific teams from UC San Diego, the Sanford-Burnham Institute for Medical Research, the Salk Institute for Biological Studies and The Scripps Research Institute are using cutting-edge stem cell science and technology to address critical health issues. The J. Craig Venter Institute (JCVI), a not-for-profit genomics research institute, recently broke ground on a new facility located on the UC San Diego campus. These institutions improve UC San Diego's educational opportunities and research portfolio, and bring more economic power to the San Diego region.



"My view is that this campus has been successful primarily because we don't have all those silos and departmental boundaries to overcome," said Subramani. "Today's campus centers, programs and Organized Research Units (ORUs) transcend departmental and divisional structures and allow people to work together seamlessly."

The next step is to persuade freestanding scientific institutions and world-class scientists to bring their research programs to San Diego. "This is a relatively new concept for us – and one that

we should welcome,” says Brenner. “It’s a way of improving UC San Diego’s educational opportunities and research portfolio, and bringing more economic power to San Diego County.”

NEXT INSTALLMENT: THE IMPACT OF OUR RESEARCH ON SOCIETY, INCLUDING HOW WE ENSURE A DIVERSE FACULTY

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