

# New Admits Tour CTE Lab

by Brad Hansen; ed. Johnny Du

On April 12th, 2008, UCSD hosted its annual Admit Day, an open house event to help admitted students decide whether to join the university's incoming freshman or transfer class. One feature of the event allows students and parents to tour the campus facilities and learn about each department, various degree programs, and possible research opportunities. The Cartilage Tissue Engineering Lab was happy to take part in Admit Day, showing approximately 60 students and parents a variety of exciting research projects completed by undergraduate students working in the lab.

Undergraduate research in the CTE Lab plays a significant role in achieving the lab's goals. Graduate researchers Nancy Hsieh-Bonassera, Hoa Nguyen, Bill McCarty, and Bradley Hansen, along with undergraduate Utsav Gupta, explained the research and equipment in the lab to the prospective students and their parents, all of which is used and occasionally designed by undergraduates.

The tour began with Nancy and Utsav providing an overview of goals, main research areas, and past projects. They highlighted the interdisciplinary requirements of using bioreactors and mechanical stimuli to create mechanically and biochemically viable tissue engineered cartilage constructs for the treatment of osteoarthritis.

Inside the lab, Brad demonstrated a novel robotic mechanical testing device used to test joint laxity in cadaveric knees. For the demonstration, only plastic bones and rubber bands were used. This device was created by a team of senior undergraduates assigned to the CTE Lab as part of a senior design project.

Bill proceeded to display another one of this year's senior design projects, a whole-joint bioreactor. He described the motivation for the project as well as the demands on the senior undergraduates in the team to create a novel device as part of the senior design curriculum.

Hoa then gave an overview of the mechanics room. She described the functions and purpose of the machines. She also explained how an understanding of the mechanics of cartilage can help answer questions regarding joint pathologies and serve as design targets for cartilage constructs.

In addition to their presentations, volunteers answered questions about the science and engineering aspects, along with logistical queries about how to become involved. Most prospective students in the tour were admitted to the Department of Bioengineering and had many questions about the degree tracks offered. Being an undergraduate, Utsav was an invaluable resource.

The participation of CTE researchers in Admit Day lab tours was beneficial for prospective UCSD students by providing information on the research and education opportunities at UCSD and in the CTE Lab.

For more information on the CTE Lab and UCSD, please visit <http://cte.ucsd.edu> and <http://www.ucsd.edu>.