

# Dental Student Research: Helping to Shape the Future

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We are living in an extraordinary time in human history. The convergence of the digital and biological revolutions of the last 50 years is yielding significant benefits for the human condition. Arguably, California is one of the most scientifically productive “places” on Earth.

The nature of science in California is shaped and reflected by research from our great universities. California’s university research scientists produce more than 20 percent of America’s science and technology. The five California dental schools — University of the Pacific; University of California, San Francisco; University of California, Los Angeles; Loma Linda University; and University of Southern California — collectively receive more than 20 percent of federally sponsored and peer-reviewed research support from the National Institutes of Health. These federal research dollars are leveraged with additional research support from nonprofit foundations, state research agencies, and private indus-

try. The consequence is that California dental schools within great universities continue to shape what is thought, what is taught, and what is practiced in the oral health professions.

The energy that perpetuates this extraordinary human intellectual progress can be found within our dental students, residents in the various dental specialty programs, graduate students pursuing their education and training in various PhD programs, postdoctoral fellows learning and training in our laboratories/clinics/hospitals, and, of course, the remarkable faculty which constitute California’s five dental schools.

I have the special pleasure of serving as guest editor for this issue of the *Journal of the California Dental Association*, an issue that provides you with a glimpse into dental student research within each of the five dental schools of California. As you read each of these scientific papers, you will discover remarkably innovative approaches to the management of oral infections such as molecular controls of *Streptococcus mutans* from UCLA; discoveries that are resulting in

new ways to control root resorption related to orthodontic movement from USC; improving our understanding of the highly aggressive odontogenic keratocyst as intraosseous lesions from LLU; highly innovative approaches to use gene therapy to manage intraoral squamous cell carcinoma from UOP; and scientific studies that compare aciduricity, acidogenicity, and intracellular production of polysaccharides of *S. mutans* strains isolated from caries-active versus caries-free adults from UCSF. All of these scientific papers are a delight to read. Each reflects the superb faculty mentoring of the dental students from our five dental schools. These published papers remind us all that science is the fuel that drives the technology that continues to improve oral health care in California and beyond.

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