

# College of Dentistry

## Dean

- Clark M. Stanford

## Executive Associate Dean

- Galen B. Schneider

## Associate Dean, Education

- Michelle M. Krupp

## Associate Dean, Finance and Facilities

- Scott K. Arneson

## Associate Dean, Patient Care

- Michael J. Kanellis

## Associate Dean, Research

- Xian Jin Xie

## Associate Dean, Student Affairs

- Sherry R. Timmons

**Professional degree:** D.D.S.

**Graduate degrees:** M.S.; Ph.D.

**Website:** <https://dentistry.uiowa.edu/>

## Facilities

The College of Dentistry is located in the Dental Science Building on the University of Iowa health sciences campus, in proximity to the Roy J. and Lucille A. Carver College of Medicine, College of Nursing, College of Pharmacy, College of Public Health, and University of Iowa Hospitals & Clinics. The Bowen Science Building and the Hardin Library for the Health Sciences also are nearby.

The south wing of the Dental Science Building is devoted to clinical teaching. There are 248 operatories in departmental clinics, student laboratories, clinical research space, and a cafeteria.

The west wing contains two floors of patient treatment areas and one floor of space for students. The clinical spaces include 44 dental operatories in the Geriatric and Special Needs Clinic, the Endodontic Clinic, Faculty General Practice, and the Craniofacial Clinical Research Center. Student areas include a classroom that accommodates 80 people, small-group study rooms, a seminar room, a student lounge, lockers, and showers.

The north wing houses the simulation clinic and technique bench teaching laboratory, the electronic classroom, college administrative offices, technology and media services, the academic Department of Preventive and Community Dentistry, and the research laboratories and faculty offices of the Iowa Institute for Oral Health Research.

## Dental Education and Patient Care

Patient care is integral to dental education. Students and faculty members deliver oral health care in clinics on the health sciences campus and at several off-campus sites, including nursing homes. More than 45,600 people receive oral health care yearly in the college's clinics. Patients from throughout Iowa as well as from western Illinois and northern

Missouri account for most of the 167,300 patient visits each year.

## Interdisciplinary Centers and Research

### Iowa Institute for Oral Health Research

The Iowa Institute for Oral Health Research occupies the first and fourth floors of the Dental Science Building's north wing. Laboratories are equipped to support a wide variety of research projects reflecting the complex nature of modern health care needs. Research at the institute is coordinated by the College of Dentistry.

There are four focus areas of research. The first area includes bioengineering, tissue engineering, stem cells, and biomaterials and materials research. The second area encompasses craniofacial, oral biology, genetics, and dental development. The third area includes public health, epidemiology, and behavioral sciences. The fourth area encompasses immunology, inflammation, microbiology, and caries and microbiome research. All focus areas are supported by the Division of Biostatistics and Computational Biology. Clinical and translational research involving new innovative methods and products designed in the research laboratories is carried out in the Craniofacial Clinical Research Center.

Although research is concentrated in these program areas, one of the unit's strengths has been the consistent level of interaction and collaboration among individuals and programs across the college and the University.

### Craniofacial Anomalies Research Center

The role of the Craniofacial Anomalies Research Center is to understand the molecular mechanisms of genes and gene interactions that contribute to craniofacial/dental anomalies and birth defects. These genetic defects arise from inherited and somatic gene mutations due to environmental effects. The center researchers use mouse, ferret and zebrafish models, human genetic material, cell lines, and molecular/biochemistry approaches to understand gene function. With the advent of human genome sequencing and the decreasing costs of genomic analyses, it has become somewhat more efficient to identify genetic defects associated with human genetic defects and diseases. The use of these genetic screening approaches provides invaluable data and resources in the search for new genes involved in human craniofacial development and associated anomalies. The center collaborators reside in the Carver College of Medicine, and the Colleges of Dentistry, Pharmacy, and Public Health.

### Craniofacial Clinical Research

For more than two decades, the College of Dentistry has offered outpatient research support for National Institutes of Health (NIH), U.S. Food and Drug Administration (FDA), and related federally supported research grants. Protocol-based studies are performed by faculty scientists and supported by oral health care industries. Scientists also engage in translational research that involves laboratory-to-clinical-research outcomes. College of Dentistry faculty use new technology to improve dental procedures and provide state-of-the-art methods to obtain the best outcomes for patients. A biorepository program helps researchers understand the causes of dental and oral diseases and genetic anomalies. It

benefits lowans by the potential diagnoses of diseases and their effects and provides new, improved patient treatment.

Through integrated research, education, and clinical programs, craniofacial clinical research facilitates the development of implants and their use as a therapeutic modality in dentistry. The program also integrates basic and clinical research with technology transfer to the clinical setting, enhancing predoctoral, postgraduate, and continuing education and expanding treatment options available to patients served by the college. Craniofacial clinical research also provides vital coordination of dental specialties that participate in this treatment modality.