

RESEARCH INTERESTS

The HCBB focuses specifically on laboratory and clinical research, patient care and education in the following areas:

1. Biomaterials, especially the mechanical and physical properties of oral biomaterials • Head: **Joe C. Ontiveros, DDS, MS**
2. Clinical technology (includes CAD/CAM, lasers, point-of-care patient technologies, and transfer of biomedical technologies to clinical practice) • Head: **Maria D. Gonzalez, DDS, MS & Marilia M. Sly, DDS, MSD**
3. Advanced applications in orthodontics (includes digital and 3D-printed models, orthodontic appliances, material-based approaches for craniofacial bone regeneration, and guides for surgical procedures) • Head: **F. Kurtis Kasper**
4. Tissue Engineering (using modern tissue-compatible biomaterials and bioprinting to create implantable living cell constructs, both for oral soft tissues and hard tissues technology)
• Head: **Daniel A. Harrington, PhD**
5. Maxillofacial prosthodontics, including clinical and laboratory research related to treatment outcome and patient satisfaction, longevity and appearance (mechanical and physical properties)
• Head: **Sudarat Kiat-amnuay, DDS, MS**
6. Color and appearance research (includes evaluation of fundamental optical properties of oral and maxillofacial tissues, testing of existing products and invention of new materials, clinical and didactic tools) • Head: **Rade D. Paravina, DDS, MS, PhD**
7. Oral health prevention and risk assessment (includes caries management by risk assessment - CAMBRA, dental caries susceptibility, dental disease prevention and control, minimal invasive operative care, fluoride releasing materials, and remineralizing agents) • Head: **Ana Neumann, DDS, MPH, PhD**