

UMKC Center of Excellence in the Study of Dental and Musculoskeletal Tissues (CEMT)

Authors: Dr. Lynda Bonewald, Center Director

Organization: University of Missouri-Kansas City

Diseases of mineralized tissues such as bone and teeth or of the muscles that control bone movement result in significant health costs in terms of suffering, loss of work and productivity, and even death. There is a tremendous need for new approaches to treating musculoskeletal diseases. The UMKC Center of Excellence in the Study of Dental and Musculoskeletal Tissues has formed a multidisciplinary and interdisciplinary center that includes investigators from the UMKC Schools of Dentistry, Medicine, Nursing, Biological Sciences, and Computing and Engineering that focus on dental and musculoskeletal health. The Center of Excellence integrates basic and clinical investigators into a powerful translational team to prevent and treat diseases of mineralized tissue, which includes teeth, cartilage, bone, and muscle. Findings are being applied to biomaterials and composite research, medical devices, diagnostics, and clinical imaging, as related to diagnostics and treatment of human and animal dental and bone disease. The major objective is to expand the ability to make new discoveries in the basic sciences, translate these findings into treatments, diagnoses, and therapies for mineralized

tissue disease into the clinics, the community, and into the commercial sector. This Center provides the infrastructure and personnel to move basic science discoveries into patient care. The development of the Center of Excellence provides an infrastructure for taking the outstanding basic research now occurring in this area and converting those findings into useful clinical treatments and applications leading to improved health outcomes. Several patents are being applied for based on finding from investigators in the center including diagnostics for bone loss leading to osteoporosis, devices for healing both bone and muscle, and basic research tools. Visit website <http://cemt.umkc.edu>.