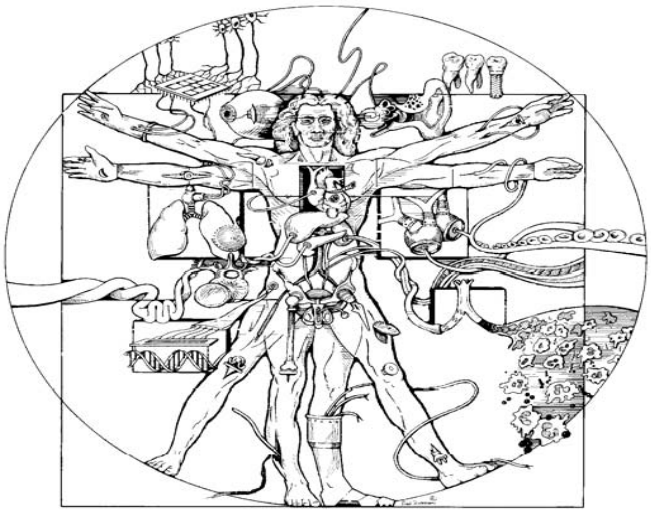
Biomedical Engineering Seminar



Master's Defense of

William Brands

Biomedical Engineering, University of Arizona

"Optical Studies of Collagen Crosslinking, Angiogenesis and Matrix Metalloproteinases"

Abstract: A blood circulatory system (vasculature) is an essential structure in multicellular organisms for distribution of oxygen and nutrients. Angiogenesis, the formation and growth of new blood vessel sprouts from existing vessels, is the process by which additional vascular elements are formed from an initial vascular structure. During angiogenesis, endothelial cells are stimulated to exhibit migratory and proliferative phenotypes, leading to the formation of new vessel sprouts. Sprouting endothelial cells degrade their basement membrane by production of matrix metalloproteinases (MMPs). In an effort to understand the role of certain MMPs during the sprouting process, the rat fat microvessel fragment 3D model of angiogenesis was used to immunostain for the presence of MMP-2, MMP-9 and MT1-MMP at several stages of the sprouting process.

Friday, October 26, 2007
9:00 a.m.
MRB 102
Host: Urs Utzinger, Ph.D. (626-9281)

Persons with a disability may request a reasonable accommodation by contacting the Disability Resource Center at 621-3268 (V/TTY). Requests should be made as early as possible to allow time to arrange the accommodation.