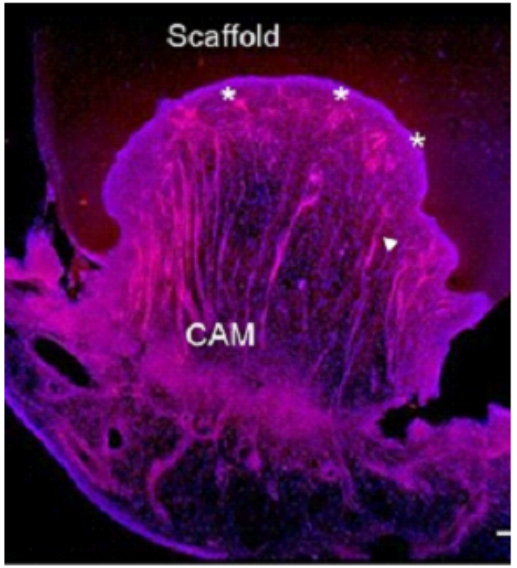
Phil G. Campbell, Research Professor

Institute of Complex Engineering Systems and Department of Biomedical Engineering, Carnegie Mellon University
Ph.D., 1985, Pennsylvania State University

Professor Campbell has over 25 years' experience in multidisciplinary research with both engineers and clinicians to develop unique solutions to a wide variety of complex biomedical problems, including the development of natural-based biomaterials, implant biocompatibility, and tissue engineering. One of his overarching research themes involves understanding and engineering the cellular microenvironment from an endocrine point of view, both *in vitro* and *in vivo*. The study encompasses growth factor interstitial transport, interactions with receptors and non-receptor binding proteins, immobilization and proteolytic processing of extracellular matrix bound growth factors and other signaling molecules, and live cell and animal imaging. His research has taken advantage of biopatterned microenvironments to spatially deliver signaling molecules to spatially control cell behavior *in vitro* and tissue formation *in vivo* toward musculoskeletal, cardiac, immunological and cancer applications.



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http://www.ices.cmu.edu/phil-campbell.asp