



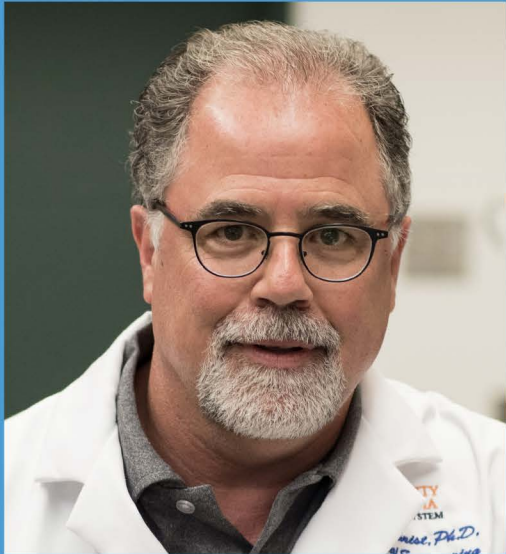
UNC
ORTHOPAEDICS

OrthoRaMS SEMINAR SERIES

Orthopaedic Research and Musculoskeletal Science

Thursday, April 2, 2026 12:00-1:00

*Location: Dickson Conference Room, 3200 Thurston Bldg.
Zoom Meeting ID: 972 4253 1148, PW: 286522*



George Christ, PhD
Commonwealth Professor of Engineering
Professor of Biomedical Engineering
Professor of Orthopaedic Surgery

Department of
Biomedical Engineering

Department of Orthopaedic
Surgery

University of Virginia

Biomaterials and Biofabrication for Repair of Extremity Trauma with Volumetric Muscle Loss

Dr. Christ is a Professor in the Depts. of Biomedical Engineering and Orthopaedic Surgery and is the Commonwealth Professor of Engineering at the University of Virginia, as well as Co-Director of the Center for Advanced Biomanufacturing, and Director of Basic and Translational Research in the Dept. of Orthopaedics. He is the Past Chairman of the Division of Systems and Integrative Pharmacology of the American Society of Pharmacology and Experimental Therapeutics (ASPET), and Past President of the North Carolina Tissue Engineering and Regenerative Medicine (NCTERM) group. He was inducted into the American Institute for Medical and Biological Engineering (AIMBE; top 2% of the medical and biological engineering community) in 2017. He is a member of the Regenerative Rehabilitation Consortium Leadership Council and has served on the Leadership Advisory Council for ARMI/BioFabUSA. He received the Ray Fuller Award and Lecture (ASPET, 2018). He serves on the Editorial Board of several journals and is an ad-hoc reviewer for 2 dozen others. Dr. Christ has authored more than 240 scientific publications and is co-editor of a book on integrative smooth muscle physiology and another on regenerative pharmacology. Dr. Christ has served on both national and international committees related to his expertise in muscle physiology, and on study sections for the NSF (EBMS Panel), as well as NIH study sections in the NIDDK, NICHD, NCR, NAIAD, NIAMS and NHLBI. He has chaired working groups for both the NIH and the WHO, and is inventor on 16 issued US Patents, with many more pending (national and international). Dr. Christ has broad experience in vascular, urogenital and musculoskeletal physiology, pharmacology and tissue engineering. Dr. Christ has also been a driving scientific force behind the preclinical studies and IND approvals supporting three Phase I clinical trials for gene therapy for benign human smooth muscle disorders. This technology has been evaluated in 55 patients in the US and overseas for ED and OAB, with a Phase 2a trial for 80 patients on OAB recently completed.

He is also spearheading several translational research programs to develop novel regenerative medicine treatments (biologics and biomaterials) with applications for wounded warriors and civilians, in particular, volumetric muscle loss injuries. He leads a DOD-funded (AFRIM 1 and 2) multi-institutional program for development of a tissue engineered muscle repair (TEMR) technology platform for treatment of VML injuries and is PI for a prestigious AFIRM 3 award to continue this work. An IND was submitted for a 5 patient first-in-man pilot study to further develop this biologic technology platform for treatment of cleft lip. He collaborates in another NIH funded multi-institutional effort as part of the C-DOCTOR (Center for Dental, Oral and Craniofacial Tissue and Organ Regeneration) consortium, to develop a bioinspired hydrogel for VML repair with colleagues at UC-Berkeley—this work is also supported by the DoD, and has spurred the formation of a new company, MuscleMatrix, of which he is a Co-Founder. Dr. Christ has been working with Keranetics for the past 9 years on preclinical development of Keragenics Muscle™ for VML repair, including submission of an RFD to FDA, to support a 10-patient clinical trial at UVA for lower extremity traumatic injuries to the tibialis anterior muscle. He has also engaged with Embody, Inc. in evaluation of a novel biofabrication platform and tissue engineering technology for the treatment of muscle injuries and rotator cuff repair.