Engineering Neuroscience & Health

Department of Biomedical Engineering Division of Biokinesiology and Physical Therapy

USC UNIVERSITY OF SOUTHERN CALIFORNIA

SEMINAR SERIES

Presents:

Dr. Stuart Binder-Macleod

University of Delaware
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Monday

February 2, 2009

4:00 p.m.

Refreshments will be served 3—4

Force Optimization During Electrical Activation of Skeletal Muscle: From the Bench to the Bedside

Stuart A. Binder-Macleod, PT, PhD, FAPTA
Edward L. Ratledge Professor and Chair
Department of Physical Therapy
University of Delaware

Electrical stimulation of human skeletal muscles in used to accomplish a variety of objectives by physical therapist and other rehabilitation specialists. The focus of my laboratory for the past two decades has been to attempt to identify stimulation patterns that optimize force outputs from human skeletal muscles for a variety of these applications. This presentation will outline and highlight the findings from my laboratory regarding the stimulation patterns and strategies that optimize muscle performance and discuss recently funded projects that apply these finding to exciting clinical intervention studies involving individuals who have sustained a stroke.

BIOSKETCH

EDUCATION
Ph.D. in Physiology and Neuroscience - Medical College of Virginia, Richmond, VA 1987
M.MSc. in PT - Emory University, Atlanta, GA 1979
B.S. in PT - State University of New York at Buffalo, Buffalo, NY 1974

Chair - Department of Physical Therapy, University of Delaware, 9/98-present

RESEARCH INTERESTS
Dr. Binder-Macleod's research interests center around increasing our understanding of the relationship between the activation pattern of skeletal muscle and the forces produced. Animal, human and mathematical models are used. This work has clinical implication for improving the use of electrical stimulation to activate skeletal muscles and problems of fatigue and weakness in the elderly and disabled populations.

Locations:

Seminar is simultaneously presented

HSC: CHP 147 - LIVE
Center for the Health Professional
HSC Campus Map/Directions:
http://www.usc.edu/about/visit/hsc/

UPC: HNB 100 – Video Conference
Hedco Neurosciences Building
UPC Campus Map/Directions:
http://www.usc.edu/about/visit/upc/

Web Cast
http://capture.usc.edu/college/Catalog/?cid=af180d48-ceff-42b9-a35c-eb199daed320

Information about all seminars can be found at
http://www-clmc.usc.edu/~heiko/ENH