

## **David M. Gundermann, M.Sc.**

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### **CURRENT POSITION**

**Doctor of Philosophy (Ph.D.) student in Rehabilitation Science** (Expected 2012)  
*Skeletal Muscle Metabolism Laboratory, University of Texas Medical Branch  
Galveston, TX 77555*

### **EDUCATION**

**Master of Science (M.Sc.) in Human Performance** (April 2009)  
*University of Florida, Department of Applied Physiology and Kinesiology  
Gainesville, FL 32611*

#### ***Selected Courses:***

APK7117	Exercise Metabolism
BCH 6206	Advanced Metabolism
HLP 6535	Research Methods
STA 6166	Statistics for research methods
PET 5936	Professional Skills/Grant Writing
APK 2108	Environmental Stress Physiology
APK 6900	Advanced Lab Techniques
PET 5936	Advanced Technique Analysis
PET 5936	Advanced Exercise Physiology
APK 6900	Muscle Physiology

#### ***Selected Writings:***

- Antioxidants may Attenuate Muscle Atrophy seen in PAD Patients (Grant, May 2008)
- Oxidative stress – A potential cause of Atrophy from Ischemia Reperfusion. (Literature review, November 2007)

#### ***Poster***

- Peripheral Arterial Disease Causes Skeletal Muscle Atrophy through FOXO-3 and p65 (December 2008)

**Bachelor of Science (B.Sc.) in Bio-Medical Science** (April 2006)  
*University of Guelph, Department of Human Health and Nutritional Sciences  
Guelph, ON, Canada.*

#### ***Selected Courses:***

HK*4460	Regulation of Human Metabolism
HK*4550	Cardio-Respiratory Physiology
BIOM*4030	Endocrine Physiology
HK*3940	Human Physiology
BIOM*3120	Lab Exercises: Mammalian Physiology

HK*3402	Human Anatomy
NUTR*3210	Fundamentals of Nutrition
BIOM*3030	Biomedical Histology
CHEM*3560	Structure and Function in Biochemistry
PATH*3610	Principles of Disease
BIOM*3090	Principles of Pharmacology and Toxicology
POPM*3240	Epidemiology
MICR*3230	Immunology
BIOM*3040	Medical Embryology
MBG*2020	Introductory Molecular Biology
BIOL*2210	Introductory Cell Biology
PHIL*2180	Philosophy of Science
MBG*2000	Introductory Genetics
CHEM*2580	Introductory Biochemistry
STAT*2040	Statistics I

***Independent studies***

BIOM*4500	Research in Biomedical Science – “A Healthy Dose of Anabolic Steroids in Eugonadal Males”
HK*4230	Advanced Study in Human Biology & Nutritional Science – “Limits and Benefits of Protein Supplementation in Weightlifters”

**RESEARCH EXPERIENCE**

**Muscle Metabolism Laboratory** (August 2009 – Present)

*University of Texas Medical Branch, Department of Preventive Medicine and Community Health, Center for Rehabilitation Science*

**Aging and Rehabilitation Research Center** (January 2009 – April 2009)

*University of Florida, Department of Medicine*

Supervisor: Dr. Todd Manini

- Ran a pilot study on the blood chemistry responses to different degrees of blood flow restriction using Near Infrared Spectroscopy.
- Experimented with blood flow restriction in elderly participants
- Completed a validity study using panoramic ultrasonography to estimate whole muscle cross section area *in vivo*

**Muscle Physiology Laboratory** (August 2007 – May 2008)

*University of Florida, Department of Applied Physiology and Kinesiology*

Advisor: Dr. Stephen Dodd

Studied the mechanistic signaling pathways of skeletal muscle atrophy derived from Peripheral Arterial Disease.

Lab experience with:

- Sub cloning plasmids
- Growing plasmids
- Rodent Surgeries

- Femoral Artery Ligation
- Plasmid Injection/Electroporation
- Muscle Harvesting
- Muscle Homogenizing
- Western Blotting
- DNA gels
- RT PCR

## **TEACHING EXPERIENCE**

**Graduate Teaching Assistant** (August 2007 – May 2009)

*University of Florida, Department of Applied Physiology and Kinesiology*

APK 2105 Applied Human Physiology Lab

- Taught 360 undergraduate students
- Developed my own teaching style to keep students interested

## **GUEST LECTURE**

**“Muscle Physiology – How it applies to training”** (September 2008)

*Living Well – College of Health and Human Performance, University of Florida.*

## **AWARDS**

Awarded the Linton E. Grinter Fellowship, University of Florida (August 2007)

## **RESEARCH INTERESTS**

- Resistance exercise effects of muscle protein synthesis
- Cell signaling of muscle protein synthesis
- Nutritional effect of muscle protein synthesis
- Cellular adaptation to exercise and nutrition
- Benefits of blood flow restriction and exercise