

Lori Lynn Ploutz-Snyder, Ph.D.
Department of Exercise Science
820 Comstock Avenue, Room 201
Syracuse University
Syracuse, NY 13244
PHONE (315) 443-9800
FAX (315) 443-9375
EMAIL llploutz@syr.edu

EDUCATIONAL BACKGROUND

Post-doctoral Research - Department of Physiology - advisor Dr. Ronald Meyer
Michigan State University 1994-1996

Ph.D. - Department of Biological Sciences – advisor Dr. Gary Dudley
Ohio University, June 1994

M.S. – Department of Zoological & Biomedical Sciences – advisor Dr. Fredrick
Hagerman
Ohio University, August 1989

B.S. in zoology – Honors Tutorial College
Ohio University, August 1989

FIELDS OF STUDY

Undergraduate: Biology
Graduate: Physiology, skeletal muscle, exercise

THESES

Bachelors/Masters *Cardiovascular and Metabolic Adaptations to Hyperoxic Training*

Ph.D. *Muscle Mass Involvement in Exercise Following Prolonged Periods of Use and Disuse*

TEACHING & ADMINISTRATIVE EXPERIENCE

5/04 to present *Chair, Department of Exercise Science, Syracuse University*

7/01 to present *Associate Professor, Department of Exercise Science, Syracuse University*

- 4/96 to present** *Adjunct Assistant Professor, Department of Neuroscience and Physiology, State University of New York Upstate Medical University, Syracuse, NY*
- 1/96 to 7/01 *Assistant Professor, Department of Exercise Science, Syracuse University*
- 9/95 to 12/95 *Assistant Professor, Department of Biological Sciences, Ohio University*
- 9/94 to 6/95 *Instructor, Department of Biological Sciences, Ohio University*
- 1/90 to 8/90 *Project and Curriculum Assistant, National Aeronautics and Space Administration Space Life Science Training Program, The Bionetics Corporation, Kennedy Space Center, Florida*
- 9/89 to 1/90 *Teaching Assistant, School of Kinesiology, Simon Fraser University, Burnaby, British Columbia, Canada*
- 9/86 to 6/88 and 9/90 to 6/91 *Teaching Assistant, College of Osteopathic Medicine, Department of Zoological and Biomedical Sciences, Ohio University*
- 9/88 to 6/89 *Physiology Tutor, College of Osteopathic Medicine, Ohio University*

SUBJECTS TAUGHT

- Undergraduate** Human Physiology (lecture and laboratory), Exercise Physiology (laboratory), Gravitational Physiology (lecture and laboratory), Contemporary Canadian Health Issues (lecture), Exercise Testing and Interpretation (lecture and laboratory), Exercise Prescription in Health and Disease, Motor Learning, Pathophysiology
- Graduate and Professional** Didactic course for residents in Physical Medicine and Rehabilitation, Exercise Physiology (laboratory), Medical Physiology (tutor), Exercise Testing and Interpretation (lecture and laboratory), Exercise Prescription in Health and Disease, Skeletal Muscle Physiology, Pathophysiology, Current Literature In Exercise and Sport Science
- Courses developed** Didactic course for residents in Physical Medicine and Rehabilitation
Gravitational Physiology (lecture and laboratory)

Pathophysiology
Skeletal Muscle Physiology
Exercise Testing and Interpretation (lecture and laboratory)
Motor Control and Learning
Exercise Prescription in Health and Disease

GRADUATE STUDENT RESEARCH ADVISING

M.S. Thesis Chair Katherine Murray
 Andrew Kelleher
 Eric Coellen
 Jesse Lloyd
 Nina Bermudez
 Summer Baldwin
 Brian Clark
 Todd Manini
 Elizabeth Yackel-Giamis
 Lynn Fennechia
 Craig Holt
 Jill Nappi

M.S. Thesis Committee

Seung Ho Jung
Brian Weil
Jessica Mistretta
Erin Kelly
Joe Pierce
Brian Pearson
Scott Collier
Ciji Miller
Lynn Sauro
Kristi Palmaccio
 Li Yi-Hua
 John Mayer
 Ciji Miller
 Cheri Alverado
 George Mochizuki

Ph.D. Dissertation Chair

John Mayer – awarded 2001 doctoral prize at Syracuse University
Todd Manini – awarded 2005 doctoral prize at Syracuse University
Brian Clark – awarded 2006 doctoral prize at Syracuse University
Moshe Marko
Nathaniel Ordway

Summer Cook
Patrick Cowley
Lynne Logan
Kyle Hackney

Ph.D. Dissertation Committee

Fenia Giannopoulou
Tracy Baynard
Ruth Franklin

Ph.D. Chair of Dissertation Defense

Laurie Witzel
Joanne Scandale
Brian Marguilles
Andrew Campbell

RESEARCH POSITIONS

- 8/01 to present** Research Associate Professor, Department of Physical Medicine and Rehabilitation, Upstate Medical University, Syracuse, NY
- 1/98 to present** Senior Research Associate, Maxwell Center for Policy Research, Syracuse University, Syracuse, NY
- 8/97 to present** Director, Musculoskeletal Research Laboratory, Syracuse University, Syracuse, New York
- 7/95 to 7/96 Visiting Scholar, Department of Physiology, Michigan State University, East Lansing, Michigan
- 4/94 to 7/95 Research Associate, Department of Physiology, Michigan State University, East Lansing, Michigan
- 9/91 to 4/94 National Aeronautics and Space Administration Graduate Student Researchers Program, Ohio University and Kennedy Space Center, Florida
- 1/90 to 8/90 National Aeronautics and Space Administration Space Life Sciences Training Program, Kennedy Space Center, Florida

PUBLICATIONS IN REFERRED JOURNALS

Baynard, T, RL Carhart, LL PLOUTZ-SNYDER, RS Weinstock, JA Kanaley. Short-term Training Effects on Diastolic Function in Obese Persons with the Metabolic Syndrome, *Obesity*, submitted July 2007.

Cowley, PM, BC Clark and LL PLOUTZ-SNYDER. Kinesthetic motor imagery and spinal excitability: the effect of contraction intensity and spatial localization. *Experimental Brain Research*, submitted June 2007.

Clark , B.C., P.M. Cowley, R.R. Conatser and LL PLOUTZ-SNYDER. Role of biarticular muscles in regulating task failure and muscle synergies in humans. *Applied Physiology, Nutrition and Metabolism*, submitted 2007.

Cook, SB, BC Clark, and LL PLOUTZ-SNYDER. Effects of exercise load and blood flow restriction on skeletal muscle function. *Medicine and Science in Sports and Exercise*, 39(10):1708-13, 2007 .

Manini, T, M Marko, T Vanarnam, S Cook, B Fernhall, J Burke, and LL PLOUTZ-SNYDER. Efficacy of resistance and task-specific exercise in older adults. *Journals of Gerontology: Biological Science and Medical Science*. 62(6):616-23, 2007.

Clark, BC, TM Manini, and LL PLOUTZ-SNYDER. Fatigue-induced changes in phasic muscle activation patterns during dynamic trunk extension exercise. *American Journal of Physical Medicine and Rehabilitation*. 86(5):373-9, 2007.

Clark, BC., Summer B. Cook and LL PLOUTZ-SNYDER. Reliability of techniques to assess human neuromuscular function *in vivo*. *Journal of Electromyography and Kinesiology*, 17:90-101, 2007.

JA Kanaley, I Giannopoulou, LL PLOUTZ-SNYDER. Regional differences in abdominal fat distribution. *International Journal of Obesity*, 31(1): 145-52, 2007.

LL PLOUTZ-SNYDER, BC Clark, L Logan, M Turk. Evaluation of spastic muscle in stroke survivors using MRI and resistance to passive motion. *Archives of Physical Medicine and Rehabilitation*, 87(12): 1636-42 2006.

Pierce, JR, BC Clark, LL PLOUTZ-SNYDER, JA Kanaley. Growth hormone and muscle function responses to skeletal muscle ischemia. *Journal of Applied Physiology*, 101(6):1588-95, 2006.

Clark, BC, JR Pierce, TM Manini, and LL Ploutz-Snyder. Effect of prolonged unweighting of human skeletal muscle on neuromotor control. *European Journal of Applied Physiology*, 100(1):53-62, 2007.

TM Manini, BC Clark, MA Nalls, BH Goodpaster, LL Ploutz-Snyder, TB Harris. Reduced physical activity increases inter-muscular adipose tissue. *American Journal of Clinical Nutrition*, 85(2):377-84, 2007.

TM Manini, SB Cook, T VanArnam, M Marko, and LL PLOUTZ-SNYDER. Evaluating task modification as a standardized measure of functional limitation: repeatability and comparability. *Journals of Gerontology: Biological and Medical Sciences*, 61(7):718-25, 2006.

SB Cook, BC Clark, and LL PLOUTZ-SNYDER. Accelerometry as a measure of subject compliance in unilateral lower limb suspension. *Aviation Space and Environmental Medicine*, 77(9):953-6, 2006.

BC Clark, B Fernhall and LL PLOUTZ-SNYDER. Adaptations in human neuromuscular function to prolonged unweighting. Part I: Contractile Properties. *Journal of Applied Physiology*. 101(1): 256-63, 2006.

BC Clark, TM. Manini, SJ Bolanowski, and LL PLOUTZ-SNYDER. Adaptations in human neuromuscular function to prolonged unweighting. Part II: Neural Properties. *Journal of Applied Physiology*. 101(1): 264-72, 2006.

NR Ordway, N Hand, G Briggs, LL PLOUTZ-SNYDER. Reliability of Knee and Ankle Strength Measures in an Older Adult Population. *Journal of Strength and Conditioning Research*, 20(1) 82-7, 2006.

TM Manini, BC Clark, B Tracy, J Burke, and LL PLOUTZ-SNYDER. Resistance and functional training reduces knee extensor fluctuations in functionally limited older adults. *European Journal of Applied Physiology*, 95(5-6):436-46, 2005.

TM Manini, JM Mayer, KS Sagendorf and LL PLOUTZ-SNYDER. Trunk extensor muscle function in young and old women: a pilot study. *Journal of Back and Musculoskeletal Rehabilitation*, 18:5-13, 2005.

JM Mayer, JE Graves, BC Clark, M Formikell, and LL PLOUTZ-SNYDER. The Use of Magnetic Resonance Imaging to Evaluate Lumbar Muscle Activity During Trunk Extension Exercise at Varying Intensities. *Spine*, 39(22): 2556-63, 2005.

T Manini, M Druger, and LL PLOUTZ-SNYDER. Misconceptions of strength exercise in the elderly. *Journal of Physical Activity & Aging*, 13:422-33, 2005.

BC. Clark, SR. Collier, TM. Manini, and LL. PLOUTZ-SNYDER Sex Differences in Muscle Fatigability and Activation Patterns of the Human Quadriceps Femoris. *European Journal of Applied Physiology*, 94:196-206, 2005.

TM Manini, SB Cook, NR Ordway, RJ Ploutz-Snyder, and LL PLOUTZ-SNYDER. Knee extensor unsteadiness does not predict functional limitation in older adults. *American Journal of Physical Medicine & Rehabilitation*, Feb;84(2):112-121, 2005.

Giannopoulou, I, LL PLOUTZ-SNYDER, R Carhart, RS Weinstock, B Fernhall, S Gouloupoulou, and JA Kanaley. Exercise is required for visceral fat loss in postmenopausal women with type 2 diabetes. *Journal of Clinical Endocrinology and Metabolism*. 90(3):1511-8, 2005.

Clark, BC, TM Manini, NR Ordway and LL PLOUTZ-SNYDER. Leg muscle activity during walking with assistive devices at varying levels of weight bearing. *Archives of Physical Medicine and Rehabilitation*. 85 (9): 1555-1560, 2004.

LM Fenicchia, JA Kanaley, JL Azevedo, CS Miller, RS Weinstock, RL Carhart, and LL PLOUTZ-SNYDER. Acute changes in glucose tolerance after resistance exercise training in women with type 2 diabetes. *Metabolism*, 53:284-9, 2004.

JM Mayer, LL PLOUTZ-SNYDER, JE. Graves, BE. Udermann, Ph.D, and M Druger. Exercise Therapy for Low Back Pain: Chiropractors' Patterns of Use and Perceptions of Educational Quality. *Journal of Chiropractic Education*. 17(2):1-8, 2003.

The, DJ and LL PLOUTZ-SNYDER. Influence of age, body mass, and gender on masters olympic-style weightlifting. *Medicine and Science in Sports and Exercise*. 35(7):1214-24, 2003.

JM Mayer, BE Udermann, JE Graves, LL PLOUTZ-SNYDER. Effect of roman chair exercise training on the development of lumbar extension strength. *Journal of Strength and Conditioning Research*, 17(2):356-61, 2003.

BC Clark, TM Manini, DJ The, N Doldo, LL PLOUTZ-SNYDER. Gender differences in skeletal muscle fatigability are related to contraction type and EMG spectral compression. *Journal of Applied Physiology*, 94(6):2263-2272, 2003.

BC Clark, TM Manini, LL PLOUTZ-SNYDER. Derecruitment of the lumbar musculature with fatiguing trunk extension exercise. *Spine*, 28(3):282-7, 2003.

JA Kanaley, I Giannopoulou, G Tillapaugh-Fay, JS Nappi, and LL PLOUTZ-SNYDER. Racial differences in subcutaneous and visceral fat distribution in postmenopausal black and white women. *Metabolism*, 52(2): 186-91, 2003.

JM Mayer, JE Graves, BE Udermann, LL PLOUTZ-SNYDER. Development of lumbar extension strength: effect of pelvic stabilization during resistance training. *Journal of Back and Musculoskeletal Rehabilitation*, 16:25-31, 2002.

JM Mayer, JE Graves, BE Udermann, LL PLOUTZ-SNYDER. Quantification of the loading characteristics of the upper body and back extension strength on a variable angle Roman chair. *Journal of Back and Musculoskeletal Rehabilitation*, 16:95-104, 2002.

BC. Clark, TM. Manini, JM. Mayer, LL Ploutz-Snyder, JE Graves. Electromyographic activity of the lumbar and hip extensors during dynamic trunk extension exercise. *Archives of Physical Medicine and Rehabilitation*, 83:1547-52, 2002.

LL PLOUTZ-SNYDER, T Manini, RJ Ploutz-Snyder, and DA Wolf. Functionally relevant thresholds of quadriceps femoris strength. *Journals of Gerontology: Series A, Biological and Medical Sciences*, 57:B144-B152, 2002.

PLOUTZ-SNYDER, LL and E Yackel. Orientation and familiarization to 1 RM strength testing in old and young women. *Journal of Strength and Conditioning Research*, 15(4):519-23, 2001.

J.A. Kanaley, L.M. Fenicchia, C.S. Miller, LL PLOUTZ-SNYDER, R.S. Weinsotck, R. Carhart, J.L. Azevedo, Jr. Resting leptin responses to acute and chronic resistance training in type 2 diabetic men and women. *International Journal of Obesity*, 25:1474-80, 2001.

Udermann, B., Mayer, J., Graves, J., and Ploutz-Snyder, L. Inter investigator variability during isometric lumbar extension dynamometer. *International Sports Journal*, 5(2), 118-22, Summer 2001.

LL PLOUTZ-SNYDER, EL Giamis, M Formikell, and AE Rosenbaum. Resistance training reduces susceptibility to eccentric exercise-induced muscle dysfunction in older women. *Journals of Gerontology: Series A, Biological and Medical Sciences*, 56A:9, B384-B390, 2001.

J.A.Kanaley, C. Sames, L. Swisher, A.G. Swick, LL PLOUTZ-SNYDER, C.M. Steppan, K.S. Sagendorf, D. Feiglin, E.B. Jaynes, R.S. Weinstock. Abdominal fat distribution, blood lipids and leptin concentration in pre and postmenopausal women. *Metabolism*, 50:8, 976-982, 2001.

BM Prior, LL PLOUTZ-SNYDER, TG Cooper, and RA Meyer. Fiber type and metabolic dependence of T2 increases in stimulated rat muscles. *Journal of Applied Physiology*, 90:615-623, 2001.

LL PLOUTZ-SNYDER, E Yackel, AE Rosenbaum, and M Formikell. Use of muscle functional MRI with older individuals. *Journals of Gerontology: Series A, Biological and Medical Sciences*, 55A(10):B504-B511, 2000.

Vandenborne, K., G. Walter, L PLOUTZ-SNYDER, G. Dudley, M. Elliott, K. DeMeirleir. Relationship between muscle T_2^* relaxation properties and metabolic state: a combined localized ^{31}P -spectroscopy and ^1H -imaging study. *European Journal of Applied Physiology*. 82:76-82, 2000.

Mayer, JM, JE Graves, VL Robertson, EA Pierra, JL Verna, and LL PLOUTZ-SNYDER. Electromyographic activity of the lumbar extensor muscles: effect of angle and hand position during roman chair exercise. *Archives of Physical Medicine and Rehabilitation* 80: 751-5, 1999.

Udermann BE, Graves JE, Donelson RG, PLOUTZ-SNYDER, LL, Boucher JP, Iriso JH. Pelvic restraint effect on lumbar gluteal and hamstring muscle electromyographic activation. *Archives of Physical Medicine and Rehabilitation*. 80(4):428-31, 1999.

PLOUTZ-SNYDER, L.L., J. Foley, R. Ploutz-Snyder, J. Kanaley, K. Sagendorf, and R. Meyer. Gastric gas and fluid emptying assessed by magnetic resonance imaging in humans. *European Journal of Applied Physiology*, 79:212-220, 1999.

PLOUTZ-SNYDER, L.L., P.A. Tesch, and G.A. Dudley. Increased vulnerability to eccentric exercise induced dysfunction and muscle injury after concentric training. *Archives of Physical Medicine and Rehabilitation*, 79(1):58-61, 1998.

Tesch, P.A., PLOUTZ-SNYDER, L.L., Yström, L, Castro, M.J. and G.A. Dudley. Skeletal muscle glycogen loss evoked by resistance exercise. *Journal of Strength and Conditioning Reserach* 12(2):67-73, 1998.

PLOUTZ-SNYDER, L.L., S. Nyren, T.G. Cooper, E.J. Potchen, and R.A. Meyer. Different effects of exercise and edema on T2 relaxation in skeletal muscle. *Magnetic Resonance in Medicine*, 37:676-682, 1997.

Ludman, C.N., T.G. Cooper, L.L. PLOUTZ-SYNDER, E.J. Potchen, and R.A. Meyer. Force of voluntary exercise does not affect sensorimotor cortex activation as detected by functional MRI at 1.5 T. *NMR Biomed*. 9(5):228-32, 1996.

Conley, M. S., J.M. Foley, L.L. PLOUTZ-SNYDER, R. A. Meyer and G. A. Dudley. Effect of acute head-down tilt on skeletal muscle cross-sectional area and proton transverse relaxation time. *Journal of Applied Physiology*, 81:1572-1577, 1996.

PLOUTZ-SNYDER, L.L., P.A. Tesch, B.M. Hather and G.A. Dudley. Vulnerability to dysfunction and muscle injury after unloading. *Archives of Physical Medicine and Rehabilitation*, 77:773-7, 1996.

PLOUTZ-SNYDER, L.L., J.A. Simoneau, R.M. Gilders, R.S. Staron, and F.C. Hagerman. Cardiorespiratory and metabolic adaptations to hyperoxic training. *European Journal of Applied Physiology*, 73:38-48, 1996.

PLOUTZ-SNYDER, L.L., V.A. Convertino, and G.A. Dudley. Resistance exercise induced fluid shifts: Change in active muscle size and plasma volume. *American Journal of Physiology: Regulatory, Integrative, and Comparative Physiology* 38:R536-R543, 1995.

PLOUTZ-SNYDER, L.L., P.A. Tesch, D. Crittenden, and G.A. Dudley. Effect of unweighting on muscle mass involvement in exercise. *Journal of Applied Physiology*, 79(1): 168-75, 1995.

Vandenborne, K., G. Walter, L. PLOUTZ-SNYDER, R. Staron, A. Fry, K. DeMeirleir, G. Dudley, and J.S. Leigh. Energy rich phosphates in slow and fast twitch human skeletal muscle. *American Journal of Physiology: Cell Physiology*, 268 (37): C869-C876, 1995.

PLOUTZ, L.L., P.A. Tesch, R.L. Biro, and G.A. Dudley. Effect of resistance training on muscle mass involvement in exercise. *Journal of Applied Physiology* 76:1675-1681, 1994.

P.A. Tesch, L.L. PLOUTZ, and GA Dudley. Effects of 5 weeks of lower limb suspension on muscle size and strength. *Journal of Gravitational Physiology* 1:P59-60, 1994.

PLOUTZ, L.L., D.L. Tatro, G.A. Dudley, and V.A. Convertino. Plasma volume and baroreflex responsiveness during 24 hours following resistance exercise. *Clinical Physiology* 13:429-438, 1993.

INVITED PRESENTATIONS

National Aeronautics and Space Administration. Johnson Space Center, Houston, TX. Relationship between muscle strength and functional activities. November 7, 2007.

National Strength and Conditioning Association. Atlanta, Georgia. Pioneering work in muscle atrophy, its evaluation and prevention in a symposium in memory of Gary Dudley. July 2007.

United States Army Research Institute of Environmental Medicine. Magnetic Resonance Imaging and the Evaluation of Skeletal Muscle. Natick, MA, March 2007.

Mid-Atlantic Region of the American College of Sports Medicine, Harrisburg, PA.
Reduced Blood Flow and Exercise. Nov 2006.

Syracuse University Gerontology Center, Maxwell School, Syracuse University -
Evaluation of everyday activities in older adults, May 2005

Mid-Atlantic Region of the American College of Sports Medicine. Scope and
Limitations of Muscle Functional MRI, Nov 2004.

Department of Radiology, Michigan State University. Muscle Functional MRI. August 6,
2003.

Muscle Activity Localization Using MRI - Mini-symposium at national American
College of Sports Medicine conference, May 29-June 1, 2001, St. Louis, Missouri.

Issues in the measurement of disability - Symposium at national meeting of the
Gerontological Society of America, November 15-18, 2001, Chicago, Illinois.

Department of Exercise Science, University of Massachusetts - How can MRI be used to
assess muscle recruitment in exercise?, April 2001.

Syracuse University Gerontology Center, Maxwell School, Syracuse University - Muscle
function and age, May 2000

Center for Demography and Economics of Aging, Maxwell School, Syracuse University
- Muscle strength thresholds required for everyday function, February 1998

Colloquia - Use of T2 for identifying muscle activation. American College of Sports
Medicine, Denver, CO, June 1997

Gatorade Exercise Physiology Laboratory, The Quaker Oats Corporation - MRI
evaluation of gastric emptying, July 1996

3rd Annual Central New York Exercise Science Symposium, SUNY Cortland - Use of
MRI to evaluate muscle activation patterns, April 1996

Department of Physiology, SUNY Upstate Medical University - Evaluation of human
skeletal muscle function and involvement in exercise following periods of prolonged
use and disuse, April 1996

INVITED BOOK CHAPTERS

JE Graves, LL PLOUTZ-SNYDER, and ML Pollock. Physiological Consequences of Deconditioning in Physically Active Populations, *Deconditioning-Reconditioning*, Gordon & Breach, CRC Press, Ed. J Greenleaf, 2004.

G.A. Dudley and L.L. PLOUTZ-SNYDER. Deconditioning and Bedrest: Musculoskeletal Response, *ACSM Resource Manual for Guidelines for Exercise Testing and Exercise Prescription - 4th edition*. 2001.

LL PLOUTZ-SNYDER. Resistance Training In Women. *Resistance Training for Health and Rehabilitation*, Human Kinetics, Eds. JE Graves, B Franklin., 2004.

G.A. Dudley and L.L. PLOUTZ-SNYDER. Bedrest and deconditioning *ACSM Resource Manual for Exercise Testing and Exercise Prescription - 3rd edition*. 1998.

REFERREED ABSTRACTS

Baynard, T., R. Carhart, R.S. Weinstock, L.L. Ploutz-Snyder, J.A. Kanaley. Short-term training affects glucose responses to a meal differently in obese persons with and without the Metabolic Syndrome. *Med. Sci. Sports Exerc.* 39(5):S174, 2007.

Clark, B.C., P.M. Cowley, R. Conaster, L.L. Ploutz-Snyder. Role of biarticular muscles in regulating task failure and muscle synergies. *Med. Sci. Sports Exerc.* 39(5):268, 2007.

Cook, S.B., B.C. Clark, L.L. Ploutz-Snyder. Effects of exercise intensity and vascular occlusion pressure and duration on skeletal muscle function. *Med. Sci. Sports Exerc.* 39(5):407, 2007.

Cowley, P.M., T. Baynard, B. Fernhall, L.L. Ploutz-Snyder. The effect of resistance training in individuals with Down Syndrome. *Med. Sci. Sports Exerc.* 39(5):S98, 2007.

Fernhall, B., S.Y. Jae, K. Heffernan, S.Hsu, L.L. Ploutz-Snyder, P.M. Cowley, T. Baynard, m. Reiman, S. Chapman, K. Pitetti. Aerobic capacity is related to muscle strength in individuals with down syndrome. *Med. Sci. Sports Exerc.* 39(5):245, 2007.

Jung, S.H., S.B. Cook, N.R. Ordway, L.L. Ploutzx-Snyder. Reliability and validity of handheld dynamometer to assess knee and ankle strength in an older adult population. *Med. Sci. Sports Exerc.* 39(5):S249. 2007.

Kanaley, J.A., J.R. Pierce, P.J. Arciero, L.L. Ploutz-Snyder. Minimal effects of vascular occlusion on systemic cytokine levels in healthy young adults. *Med. Sci. Sports Exerc.* 39(5):407, 2007.

Clark, BC, TM Manini and LL Ploutz-Snyder. Relative contribution of neural and muscular factors in unweighting-induced strength loss. *Medicine and Science in Sports and Exercise*. 38(5):S1090, 2006.

Ploutz-Snyder, LL and BC Clark. Differential affect of applied ischemia on atrophy attenuation and muscle function following ULLS. *Medicine and Science in Sports and Exercise*. 38(5):S2716, 2006.

Cook, SB, LL Ploutz-Snyder and BC Clark. Influence of motor imagery on disuse-induced strength loss and central activation function. *Medicine and Science in Sports and Exercise*. 38(5):S2193, 2006.

Cowley, PM, BC Clark and Lori L. Ploutz-Snyder. Kinesthetic motor imagery acutely increases spinal excitability. *Medicine and Science in Sports and Exercise*. 38(5):S2414, 2006.

Pierce, JR, BC Clark, LL Ploutz-Snyder and JA Kanaley. Muscle function responses to vascular occlusion of the leg. *Medicine and Science in Sports and Exercise*. 38(5):S848, 2006.

Kanaley, JA, E Giannopoulou, and LL Ploutz-Snyder. Regional differences in abdominal fat loss. *Medicine and Science in Sports and Exercise*. 38(5):S1894, 2006.

TM Manini, M Marko, T VanArnam, SB Cook, B Fernhall, and LL Ploutz-Snyder. Traditional versus functional training and contributors to functional improvement in pre-clinically disabled older adults. *Medicine and Science in Sports and Exercise*. 37(5): S337, 2005.

DJ The and LL Ploutz-Snyder. Using the generalized lambda distribution (GLD) to improve physical fitness testing assessment. *Medicine and Science in Sports and Exercise*. 37(5): S424, 2005.

BC Clark, Summer B. Cook and Lori L. Ploutz-Snyder. Reliability of techniques to assess human neuromuscular function *in vivo*. Conference proceedings from the *Workshop on Investigation of Human Muscle Function In Vivo*, 49, 2005.

Ploutz-Snyder, Lori L. and BC Clark. Resiliency to change of skeletal muscle fatigability following prolonged unweighting. *Conference proceedings from the Workshop on Investigation of Human Muscle Function In Vivo*, 24, 2005.

BC Clark, Stanley J. Bolanowski, Bo Fernhall and Lori L. Ploutz-Snyder. Neural plasticity to prolonged unweighting of human skeletal muscle. *Medicine and Science in Sports and Exercise*. 37(5): S36, 2005.

Cook, Summer B., BC Clark and Lori L. Ploutz-Snyder. Planar accelerometry as a measure of subject compliance with unilateral lower limb suspension. *Medicine and Science in Sports and Exercise*. 37(5): S35, 2005.

Unnithan, Vishwanth B., Summer B. Cook, BC Clark and Lori L. Ploutz-Snyder. Role of coactivation during an isometric leg-extensor fatigue test in children with cerebral palsy. *Medicine and Science in Sports and Exercise*. 37(5): S231, 2005.

Pierce, Joseph R., BC Clark and Lori L. Ploutz-Snyder. Disuse-induced decrements in neuromotor performance are contraction type and muscle group dependent. *Medicine and Science in Sports and Exercise*. 37(5): S36, 2005.

Clark, B.C. and L.L. Ploutz-Snyder. Disuse-induced alterations in contractile properties of the human triceps surae: a pilot study. *The Physiologist*. 318: 21.8, 2004.

Bermudez, N, PJ Evans, L Ploutz-Snyder, B Fernhall. Physiological contributors to the slow component of oxygen uptake kinetics during high intensity cycling exercise. *Medicine and Science in Sports and Exercise*, 36(5): S10, 2004.

SL Baldwin, TW VanArnam, LL Ploutz-Snyder. Reliability of dynamic bilateral postural stability on the Biodex Stability System in older adults. *Medicine and Science in Sports and Exercise*, 36(5): S30, 2004.

T Manini, SL Baldwin, T VanArnam, L Ploutz-Snyder. Isotonic force steadiness of the leg extensors is dependent on intensity and contraction type in pre-clinically disabled older adults. *Medicine and Science in Sports and Exercise*, 36(5): S123, 2004.

B Clark, SR Collier, TM Manini, LL Ploutz-Snyder. Sex differences in muscle fatigability and neuromuscular activation patterns of the human quadriceps femoris. *Medicine and Science in Sports and Exercise*, 36(5): S277, 2004.

LL Ploutz-Snyder, B Clark, L Logan, M Turk. Quantification of muscle spasticity using MRI and resistance to passive movement. *Medicine and Science in Sports and Exercise*, 36(5): S334, 2004.

NR Ordway, N Hand, G Briggs, L Ploutz-Snyder. Reliability of knee and ankle strength testing in an elderly population. *Medicine and Science in Sports and Exercise*, 36(5): S354, 2004.

DJ The, L Ploutz-Snyder. Classifying data of unknown distribution origin with an evidential support continuum (ESC). *Medicine and Science in Sports and Exercise*, 36(5): S355, 2004.

B.C. Clark, T.M. Manini, D.J. The, N.A. Doldo and L.L. PLOUTZ-SNYDER. Role of contraction type and activation strategies in fatigability differences between males and females. *Medicine and Science in Sports and Exercise*, 35(5): S146, 2003.

S.L Baldwin, D.A. Wolf, L.L. Ploutz-Snyder. Relationship of self-reported and observed performance in daily tasks among older adults. *Medicine and Science in Sports and Exercise*, 35(5): S130, 2003.

T.M. Manini, S.L. Baldwin, N.R. Ordway, B.C. Clark, R.J. Ploutz-Snyder, L.L. PLOUTZ-SNYDER. Isometric force steadiness and the relationship to functional ability in older adults. *Medicine and Science in Sports and Exercise*, , 35(5): S282, 2003.

N.R. Ordway, T.M. Manini, S. Baldwin, R. Ploutz-Snyder, , L.L. PLOUTZ-SNYDER. Relationship between muscular endurance and everyday activities in the elderly. *Medicine and Science in Sports and Exercise*, 35(5), S171 2003.

LL PLOUTZ-SNYDER, TM Manini, SL Baldwin, NR Ordway, RJ Ploutz-Snyder. Predictors of strength loss in older adults: a longitudinal study. *Medicine and Science in Sports and Exercise*, 35(5): S172, 2003.

TM Manini, BC Clark, NR Ordway, and LL PLOUTZ-SNYDER. An EMG and force comparison for walking with crutches and an ergonomically designed walker. *Medicine and Science in Sports and Exercise*, 34(5):S247, 2002.

L.L.PLOUTZ-SNYDER, B.C. Clark, and T.M. Manini. Muscle activation patterns during trunk extension exercise. *Medicine and Science in Sports and Exercise*, 34(5):S262, 2002.

B.C. Clark, T.M. Manini and L.L. Ploutz-Snyder. Effect of muscle fatigue on the electromyogram characteristics of the lumbar paraspinal and hip extensor muscles. *Medicine and Science in Sports and Exercise*, 34(5):S260, 2002.

N. Ordway, M. Lamb, and L.L. PLOUTZ-SNYDER. Jump analysis of a university women's volleyball team. *Medicine and Science in Sports and Exercise*, 34(5):S33, 2002.

D. The and LL PLOUTZ-SNYDER. Influence of age, body weight, and gender on masters weightlifting performance. *Medicine and Science in Sports and Exercise*, 34(5):S198, 2002.

J.M. Mayer, J.E. Graves, R. Caruso, M. Formikell, L.L PLOUTZ-SNYDER. The use of magnetic resonance imaging to evaluate lumbar muscle function during occupational lifts. *Medicine and Science in Sports and Exercise* 33(5):S296, 2001.

L.L. PLOUTZ-SNYDER, J.M. Mayer, R. Caruso, M. Formikell, J.E. Graves. The use of magnetic resonance imaging to evaluate lumbar muscle function during roman chair trunk extension exercise *Medicine and Science in Sports and Exercise* 33(5):S296, 2001.

TM Manini, DJ The, D Bishop, M Kyle, LL PLOUTZ-SNYDER. Influence of resistance training on functional capacity of older individuals *Medicine and Science in Sports and Exercise* 33(5):S117, 2001.

B Clark, T Manini, J Mayer, JE Graves, and LL PLOUTZ-SNYDER. Lumbar extensor muscle recruitment as assessed by sEMG during variable angle roman chair exercise at varying intensities. *Medicine and Science in Sports and Exercise* 33(5):S82, 2001.

B Pearson, T Manini, B Clark, and LL PLOUTZ-SNYDER. Reliability of rating chair rise and stair climb performance in older subjects *Medicine and Science in Sports and Exercise* 33(5):S124, 2001.

JA Kanaley, CA Sames, JS Nappi, and LL PLOUTZ-SNYDER. Abdominal fat distribution and blood lipids in pre and post menopausal women *Medicine and Science in Sports and Exercise* 33(5):S187, 2001.

LL PLOUTZ-SNYDER, JA Kanaley, D Feiglin, G Tillapaugh-Fay, and RA Meyer. Automated determination of abdominal fat compartments from magnetic resonance images (MRI). *The Physiologist* 43(4):324, 2000.

DA Wolf, V Freedman, J Marcotte, and LL PLOUTZ-SNYDER. Issues in Modeling the Dynamics of Old-Age Disability. Presented at Demography of Health and Aging Seminar, March 1, 2000, University of Wisconsin, Madison.

KS Sagendorf, TM Manini, JM Mayer, DJ The, JE Graves, LL PLOUTZ-SNYDER. Relationship of strength and endurance of the low back between younger and older subjects. *Medicine and Science in Sports and Exercise* 32(5):S243, 2000.

JM Mayer, LL PLOUTZ-SNYDER, BE Udermann, and JE Graves. Quantification of upper body mass and lumbar extension strength using a variable angle roman chair. *Medicine and Science in Sports and Exercise*, 32(5):S237, 2000.

TM Manini, JM Mayer, KS Sagendorf, DJ The, JE Graves, and LL PLOUTZ-SNYDER. Ratio of leg to back peak isometric torque changes with age. *Medicine and Science in Sports and Exercise*, 32(5):S112, 2000.

JA Kanaley, LM Fenicchia, CS Miller, KS Sagendorf, R Carhart, RS Weinstock, JL Azevedo, and LL PLOUTZ-SNYDER. Resistance training is effective in improving glucose concentrations in diabetic women. *Medicine and Science in Sports and Exercise*, 32(5):S291, 2000.

CS Miller, LM Fenicchia, KS Sagendorf, R Carhart, RS Weinstock, JL Azevedo, LL PLOUTZ-SNYDER, and JA Kanaley. 6 weeks of resistance training does not improve glucose tolerance in middle-aged men. *Medicine and Science in Sports and Exercise*, , 32(5):S226 2000.

L.L. PLOUTZ-SNYDER, T. Manini, and R.J. Ploutz-Snyder. When does age related strength loss begin to impair muscle function. *Medicine and Science In Sports and Exercise.*, 31(5): S386, 1999.

C. Sames, L. Swisher, A.G. Swick, L.L. PLOUTZ-SNYDER, D. Feiglin, R.Weinstock, J.A. Kanaley. Shifts in abdominal fat distribution with menopause. *Medicine and Science In Sports and Exercise.*, 31(5): S44, 1999.

B.M. Prior, L.L. Ploutz-Snyder, R.A. Meyer. ¹H-NMR T2 relaxation time in rat hindlimb muscles stimulated at different frequencies. *Medicine and Science In Sports and Exercise*, 31(5): S241, 1999.

Prior, B.M., Ploutz-Snyder, L.L., Cooper, T.G. and Meyer, R.A. T2 changes in rat hindlimb muscle depends on osmolite production. *Proceedings of the International Society for Magnetic Resonance in Medicine*, 7: 1060, 1999.

JA Kanaley, LM Fenicchia, CS Miller, LL PLOUTZ-SNYDER, RS Weinstock, R Carhart, JL Azevedo. Acute and Chronic Resistive Exercise Training on Resting Serum Leptin Levels in Type 2 Diabetics. North American Association for the Study of Obesity, 1999.

LL Ploutz-Snyder. 13th Annual Charles R. Ross Research Poster Session, SUNY Upstate Medical University – Use of muscle functional MRI with older individuals, December 1999.

E.L. Yackel, A. Rosenbaum, and L.L. PLOUTZ-SNYDER. Resistance training reduces susceptibility to eccentrically-induced muscular weakness and injury in older women, *Medicine and Science In Sports and Exercise*. 30(5):S103, 1998.

R. Bulbulian, C. Holt, and L.L. PLOUTZ-SNYDER. Linear potentiation of the H-reflex during graded isotonic knee extension in young adults, *Medicine and Science In Sports and Exercise*. 30(5):S251, 1998.

- B.E. Udermann, J.M. Mayer, L.L. PLOUTZ-SNYDER, and J.E. Graves. Quantitative assessment of lumbar para-spinal muscular endurance, *Medicine and Science In Sports and Exercise*. 30(5):S215, 1998.
- J.M. Mayer, J.E. Graves, Y.H. Li, L.L. PLOUTZ-SNYDER, and B.E. Udermann. Specificity of training and isolated lumbar extension strength, *Medicine and Science In Sports and Exercise*. 30(5):S206, 1998.
- Y, Li, L.L. PLOUTZ-SNYDER, J. Graves, and J. Mayer. Neuromuscular adaptations to lumbar extension strength gain, *Medicine and Science In Sports and Exercise*. 30(5):S207, 1998.
- J.A. Kanaley, C. Sames, L. Swisher, D. Feiglin, R. Weinstock, L.L. PLOUTZ-SNYDER, E.M. Jaynes. No differences in resting or exercise fatty acid oxidation between pre and post-menopausal women. North American Association for the Study of Obesity, 1998.
- L.L. PLOUTZ-SNYDER, K. Sagendorf, R.A. Meyer, J. Foley, and J. Kanaley. Inaccuracies in body composition estimation: effects of ingestion of a carbonated beverage. *Medicine and Science In Sports and Exercise*. 29(5):S55, 1997.
- L.L. PLOUTZ-SNYDER, J. Foley, and R.A. Meyer. Proton spectroscopic evaluation of intramuscular fat in trained and untrained individuals. *The Physiologist* 39:A14, 1996.
- L.L. PLOUTZ-SNYDER, J.M. Foley, and R.A. Meyer. Measurement of total gastric volume and emptying using magnetic resonance imaging. *Medicine and Science In Sports and Exercise*. 28(5):S38, 1996.
- Jayaraman, R.C., J.M. Foley, L. PLOUTZ-SNYDER, G.A. Dudley, and R.A. Meyer. Functional MRI of muscle use and muscle trauma with resistance exercise. *Medicine and Science In Sports and Exercise*. 28(5):S113, 1996.
- Foley, J.M., D.C. Hartman, M.A. Lauderdale, A. Baldwin, L. PLOUTZ-SNYDER, J.M. Pivarnik, G.A. Dudley, and R.A. Meyer. MRI vs. conventional measures of body fat loss with endurance training in sedentary females. *Medicine and Science In Sports and Exercise*. 28(5):S193, 1996.
- L.L. PLOUTZ-SNYDER, J.M. Foley, T.G. Cooper, C.N. Ludman, and R.A. Meyer. Echo planar MRI measurement of gastric emptying of fluids without contrast enhancement. *Proceedings of the Society of Magnetic Resonance* 3:1588, 1996.
- L. PLOUTZ-SNYDER, S. Nyren, T. Cooper, R.A. Meyer, and E. Potchen. Exercise and edema have different effects on T2 relaxation in human skeletal muscle. *Proceedings of the Society of Magnetic Resonance* 1:515, 1995.

Ludman, C.N., T.G. Cooper, L. PLOUTZ-SNYDER, E.J. Potchen, and R.A. Meyer. Influence of changing force on fMRI activation in the primary motor cortex. *Proceedings of the Society of Magnetic Resonance* 2:789, 1995.

L. PLOUTZ-SNYDER, S. Nyren, T. Cooper, and R.A. Meyer. MRI evaluation of human skeletal muscle at rest and following maximal exercise. *Medicine and Science In Sports and Exercise*. 27(5):S80, 1995.

L. PLOUTZ-SNYDER, P. Tesch, and G. Dudley. Unweighting increases eccentric exercise-induced muscle dysfunction and damage. *Medicine and Science In Sports and Exercise*. 26(5):S55, 1994.

Walter, G., K. Vandeborne, L. PLOUTZ-SNYDER, K. DeMeirleir, G. Dudley, and J.S. Leigh. Relationship between muscle T2 relaxation properties and metabolic state. *Medicine and Science In Sports and Exercise*. 26(5):S98, 1994.

Scarpone, M., L. PLOUTZ-SNYDER, J. Czerkawski, and G. Dudley. Efficacy of ketorolac therapy for muscle strain injury. *Medicine and Science In Sports and Exercise*. 26(5):S110, 1994.

Verdun, M., G. Dudley, A. Fry, R. Gilders, F. Hagerman, T. Murray, L. PLOUTZ-SNYDER, and R. Staron. Specific and non-specific adaptations to rowing and cycle ergometer training. *Medicine and Science In Sports and Exercise*. 26(5):S5, 1994.

Walter, G., K. Vandeborne, G. Goelman, L. PLOUTZ-SNYDER, G. Dudley and J.S. Leigh. Imaging of skeletal muscle activation with T2 weighted images and ³¹P-localized spectra. *Society of Magnetic Resonance in Medicine*. New York, NY, 1993.

Vandeborne, K., G. Walter, G. Goelman, L. PLOUTZ-SNYDER, G. Dudley, and J.S. Leigh. Phosphate content in fast and slow twitch muscles. *Society of Magnetic Resonance in Medicine*. New York, NY, 1993.

PLOUTZ, L.L., P.A. Tesch, and G.A. Dudley. Effect of unweighting on muscle mass involvement during exercise. Presented at American College of Sports Medicine, Seattle, WA, 1993. *Medicine and Science In Sports and Exercise*. 25(5):S156, 1993.

PLOUTZ, L.L., P.A. Tesch, and G.A. Dudley. Effect of limb suspension on muscle use in exercise. Presented at Marshall University School of Medicine. Huntington, WV, 1993.

PLOUTZ, L.L., and G.A. Dudley. Use of thigh musculature in the squat exercise. Presented at Integrative Biology of Exercise, American Physiological Society, Colorado Springs, CO, 1992. *The Physiologist*, 35(4):185, 1992.

PLOUTZ, L.L., D.L. Tatro, G.A. Dudley, and V.A. Convertino. Changes in plasma volume during 24 hours after heavy resistance exercise. Presented at American College of Sports Medicine, Orlando, Florida, 1991. *Medicine and Science In Sports and Exercise*. 23(4):S20, 1991.

Tatro, D.L., L.L. PLOUTZ, G.A. Dudley, and V.A. Convertino. Carotid-cardiac baroreflex response during 24 hours after resistance exercise. Presented at American College of Sports Medicine, Orlando, Florida, 1991. *Medicine and Science In Sports and Exercise*.. 23(4):S161, 1991.

Convertino, V.A., L.L. PLOUTZ, and D.F. Doerr. Resetting of the carotid-cardiac baroreflex response relationship during exercise in man. Presented at American College of Sports Medicine, Orlando, Florida, 1991. *Medicine and Science In Sports and Exercise*.. 23(4):S162, 1991.

PLOUTZ, L.L., R.M. Gilders, and F.C. Hagerman. Hyperoxic training. Presented at American College of Sports Medicine, Salt Lake City, Utah. 1990. *Medicine and Science In Sports and Exercise*.. 22(2):S36, 1990.

PLOUTZ, L.L., Workshop entitled Tutorial: An Honors Diversity. National Collegiate Honors Council Conference, Miami, Florida, 1986. Discussed the Honors Tutorial College at Ohio University, attended by deans, directors, faculty and students in honors programs.

GRANTS FUNDED

National Aeronautics and Space Administration. *Efficacy of resistance exercise coupled with blood flow restriction as a countermeasure to unilateral lower limb suspension*. \$82,000, 2006-2009, P.I. LL PLOUTZ-SNYDER. Training grant for Ph.D. student SB Cook.

Department of Defense - SBIR subcontract with Intelligent Automation, Inc. *UWB Muscle Water Sensor Phase 2*. Contract #W81XWH-04-C-0011 \$750,000, 3/06-3/08, Subcontract to LL Ploutz-Snyder \$150,000.

Department of Defense - SBIR subcontract with Intelligent Automation, Inc. *Muscle Water Sensor*. 2/04-06/04, \$23,000. PI - LL Ploutz-Snyder

US Department of Education - National Institute on Disability and Rehabilitation Research - Field Initiated Research Program. *Muscle strength and functional performance in individuals with Down Syndrome*. \$448,621, 7/1/03-6/30/06. Co-investigator.

National Aeronautics and Space Administration. *Neuromuscular function and countermeasures to prolonged unweighting*. \$72,000, 2003, P.I. LL PLOUTZ-SNYDER.
Training grant for Ph.D. student BC Clark

SUNY Upstate Medical University, *Research Support for Faculty*, \$43,512. P.I. PLOUTZ-SNYDER.

Life Fitness Academy. Equipment grant in support of exercise training for older adults. \$22,000, 2003, P.I. LL PLOUTZ-SNYDER.

Michael Pollock Memorial Grant, Life Fitness Academy, *Traditional vs. functional strength training in older individuals with pre-clinical disability*, \$5,000, 2001, P.I. L.L. PLOUTZ-SNYDER.

Hartford Walking Systems, *Comparison of assisted and non-assisted walking*, \$10,000, 2001, P.I. L.L. PLOUTZ-SNYDER

National Institute on Aging. *Pilot study for the relationship of muscle strength to function*. 1/98 to 12/98. \$17896.78. P.I. L.L. PLOUTZ-SNYDER.

Quaker Oats Corporation (Gatorade). *Animation of MRI Images of Gastric Emptying*, 1/12/97. \$5500. P.I. L.L. PLOUTZ-SNYDER.

Quaker Oats Corporation (Gatorade). *Measurement of Gastric Emptying Using Magnetic Resonance Imaging*. 7/95-6-96. \$20,000. P.I. L.L. PLOUTZ-SNYDER.

National Aeronautics and Space Administration Graduate Student Researchers Program. *Skeletal Muscle Activation Patterns Following Periods of Prolonged Use and Disuse*. 10/92 to 10/94. \$62,000. P.I. L.L. PLOUTZ-SNYDER.

National Aeronautics and Space Administration. *Comparison of Exercise Training Regimens For Long-Term Spaceflights*. 1/93 to 12/93. \$45,000. Co-investigator. L.L. PLOUTZ-SNYDER

Ohio University Research Committee. *Hyperoxic Training*. 1989. \$5150. CoP.I. L.L. PLOUTZ.

John Houk Research Award, *Metabolic and Cardiovascular Adaptations to Hyperoxic Training*,. 1989. \$500. P.I. L.L. PLOUTZ.

GRANTS SUBMITTED BUT NOT CURRENTLY FUNDED

National Aeronautics and Space Administration. *KineSys: Novel exercise device for use in space-based applications*. \$350,000. Co-investigator with Mayhew and Bachrach, submitted September 2007.

Office of Naval Medical Research. *Non-invasive monitoring of dissolved nitrogen and hydration for prevention of decompression sickness*. \$675,000 total, \$232,000 to Syracuse University as subcontract to LL Ploutz-Snyder, submitted July 2007.

National Space Biomedical Research Institute. *Low load resistance training coupled with blood flow occlusion as a countermeasure to prolonged disuse*. Principal Investigator, \$659,432, 2007.

National Institute of Health R01. *Exercise effects on ectopic fat accumulation in young and older obese subjects*. Co-investigator, \$1,321,870, 2007.

National Institute of Health, R21. *An intelligent passive active motor recovery strategy for stroke rehabilitation*. Co-investigator. \$380,921, 2006.

National Institute of Health R03. Co-investigator.
Effects of task constraints on postural stability in aging. \$150,000, 2006

National Institute of Health. *Tracking Muscle Fluid Constituents Using Spectrographic Electromagnetic Probing*. Submitted by TransTech Inc. PI – R Gamache. , \$500,000, 9/31/05-8/31/07, Consultant.

General Mills Corporation Youth Nutrition and Fitness Grants. *Liberty Kids: Healthy Bodies, Healthy Minds*. \$10,000. 05/05-09/06, Co-Investigator – in review

National Aeronautics and Space Administration. *Neuromuscular adaptation to disuse*. \$459,851, 6/04-5/07, submitted 7/03, Principal Investigator

US Department of Education – National Institute on Disability and Rehabilitation Research – RERC Program. *Center on Functional Performance and Physical Rehabilitation*. \$4,492,996. 12/1/2002 – 11/30/2007, submitted 8/02. Co-Investigator

National Institute of Health. *An Interdisciplinary Program for Caregiver Well-being*. \$2,453,667. 1/1/03-12/31/07, submitted 2/02. Co-Investigator

Doris Duke Charitable Foundation. *Stroke rehabilitation – muscle spasticity*. \$200,000, submitted 11/27/01. Principal Investigator

National Institute of Health. *Abdominal Fat Loss With Diet and Exercise in Type 2 Diabetic Women*. \$1,000,000. Submitted 6/1/01. Co-investigator.

National Institute on Aging. *Influence of Skeletal Muscle on Physical Function*. \$391,564, 1999. Principal Investigator

National Institute on Aging. *Muscle Strength and Functioning at Older Ages* - \$75,500, 1999, Principal Investigator

National Institute on Aging. *Center for Demography and Economics of Aging (Maxwell)*, P.I. Doug Wolf - I am listed as a Senior Faculty Associate. \$2,000,000. ~\$70,000 specifically for the Musculoskeletal Research Laboratory/ salaries/ equipment/ etc., 1998

North American Spine Society. *Using muscle functional magnetic resonance imaging to evaluate the effects of spinal manipulative therapy and resistance training on the activation patterns of the lumbar extensor muscles during exercise in chronic low back pain patients*. \$23,285, 1997, Principal Investigator

National Aeronautics and Space Administration. *Resistance exercise countermeasure to unweighting induced muscle atrophy and dysfunction*. \$525,659, first submission and requested revision both in 1996, Principal Investigator

National Institute of Aging. *Decreased skeletal muscle function in aging humans*. \$67,651, 1996, Principal Investigator

American Federation of Aging Research - *Skeletal muscle function in aging humans*. \$40,000, 1996, Principal Investigator

Women's Sports Foundation. *Fluid rehydration and swimming*. \$5,000, 1996, Principal Investigator

Student Grants Funded

Syracuse University: Graduate School Travel Grant . *Effects of exercise intensity and vascular occlusion pressure and duration on skeletal muscle function* . \$400. Student: Summer Cook. 2007.

Syracuse University: Graduate School Travel Grant . *The effect of resistance training in individuals with Down syndrome*. \$400. Student: Patrick Cowley. 2007.

Syracuse University: Graduate School Travel Grant. *Influence of motor imagery on disuse-induced strength loss and central activation function*. \$400. Student: Summer Cook. 2006

Syracuse University: Graduate School Travel Grant. *Reliability and validity of handheld dynamometer to assess knee and ankle strength in an older adult population* \$400. Student: Seung Jung. 2007.

Syracuse University: Graduate School Travel Grant. *Kinesthetic motor imagery acutely increases spinal excitability* \$400. Student: Patrick Cowley. 2006

Syracuse University: SOE Creative Research Grant. Student. *Efficacy of resistance exercise coupled with blood flow restriction as a countermeasure to prolonged unweighting*. Summer Cook \$1000. 2006.

Syracuse University: SOE Creative Research Grant. *Neuromuscular characteristics of individuals with Down syndrome*. Student: Patrick Cowley \$610. 2006.

American College of Sports Medicine. Summer Cook. *Resistance exercise and ischemia in simulated spaceflight*. \$5000. 2006.

National Aeronautics and Space Administration Space Physiology Research Grant through the American College of Sports Medicine Foundation. *Countermeasures to disuse-induced neuromuscular dysfunction*. \$5,000. 2005-2006.

National Aeronautics and Space Administration Space Physiology Research Grant through the American College of Sports Medicine Foundation. *Neuromuscular adaptations to simulated-microgravity*. \$2,500. 2004-2005.

SUNY Upstate Medical University. *Sensory threshold electrical stimulation: effects on muscle MRI and mf-MRI*. Student: Lynne Logan, \$12,500. 2/05

TASCNetwork. *Sensory threshold electrical stimulation: effects on muscle MRI and mf-MRI*. equipment grant of \$15,000, 2005

American Physical Therapy Association. *Sensory threshold electrical stimulation: effects on muscle MRI and mf-MRI*. Student: Lynne Logan, \$1,000. 2/05

American College of Sports Medicine & Robert Wood Johnson Foundation. *Traditional vs. functional strength training in older subjects*. Student: Todd Manini, \$10,000.

Syracuse University: SOE Creative Research Grant. *Functional versus resistance training: Improvement of physical function in functionally limited older adults*. Student: Todd Manini, \$1000.

Syracuse University: Graduate School Travel Grant. An EMG and force comparison for walking with crutches and an ergonomically designed walker. \$400. January, 2002. Student: Todd Manini

Sidney Young Research Award. *Relationship of Self-Reported and Observed Performance in Daily Tasks Among Older Adults* Student: Summer Baldwin, \$215.00.

Syracuse University: SOE Creative Research Grant. *Relationship of Self-Reported and Observed Performance in Daily Tasks Among Older Adults* Student: Summer Baldwin, \$201.21.

Mid-Atlantic Region Chapter of the American College of Sports Medicine Student Research Grant Award. *Gender differences in skeletal muscle fatigability* \$500. November, 2002. Student: Brian Clark

Syracuse University: SOE Creative Research Grant Gender differences in human skeletal muscle fatigability. \$1,000. July, 2002. Student: Brian Clark

Syracuse University: Sidney W. Young Graduate Student Research Award. Gender differences in skeletal muscle fatigability. \$375. February, 2002. Student: Brian Clark

Syracuse University: Graduate School Travel Grant. Effect of muscle fatigue on the electromyogram characteristics of the lumbar paraspinal and hip extensor muscles. \$400. January, 2002. Student: Brian Clark

ORGANIZATIONS AND SERVICE

Associate Editor -

Medicine and Science in Sports and Exercise
Journal of Strength and Conditioning Research

Manuscript Reviewer -

American Journal of Physiology: Heart and Circulatory Physiology
Archives of Physical Medicine and Rehabilitation
Aviation Space and Environmental Medicine
Canadian Journal of Applied Physiology
Experimental Brain Research
International Journal of Sports Medicine
Journal of Applied Physiology
Medicine and Science in Sports and Exercise
Mental Retardation
Muscle and Nerve

American College of Sports Medicine-

Fellow - 1998 to present
Professional Member - 1994 to present

	<i>Student Member - 1991-1994</i>
American Physiological Society-	<i>Regular Member - 1997 to present</i>
New York Chiropractic College	Institutional Review Board – 1998-2000
Syracuse University Service	Elected to SU Faculty Senate – 2007 to present SU Gerontology Center Advisory Board 2005 to present Middle States Study Group – 1998
School of Education Service	Search Committee Chair – Assistant Professor in Exercise Science 2007 Search Committee Chair – Assistant Professor in Exercise Science 2006 Dean’s Council 2004- present Teaching Committee (Koszalka) - 2002 Research Methods Committee – 2000 -2002 Curriculum Committee – 1998 -2003 Community Building Task Force – 1998 Teaching Committee (Hinchman) - 1997 Judicial Committee – 1996-97 Scholarship Committee – 1996