Curriculum Vitae

Christopher Paul Ingalls, Ph.D.

Personal Background

Present Title and Position

Associate Professor
Director of Muscle Biology Laboratory
Coordinator, Doctoral Kinesiology Program
Coordinator, Master's of Science Exercise Science Program
Department of Kinesiology and Health
Georgia State University

Work Address

Department of Kinesiology and Health
Georgia State University
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Education

Doctor of Philosophy, Kinesiology: 1994
Texas A&M University, College Station, TX
Dissertation: "The effects of clenbuterol and interval training on exercise performance and myosin light chain isoform expression in mouse skeletal muscle"
Committee: William S. Barnes, Ph.D. (Advisor)
Stephen B. Smith, Ph.D.
John M. Lawler, Ph.D.
Homer Tolson, Ph.D.

Master of Science, Kinesiology: 1990
Texas A&M University, College Station, TX
Thesis: "The role of sarcoplasmic free calcium availability in staircase twitch potentiation"
Committee: William S. Barnes, Ph.D. (Advisor)
James G. Anderson, Ph.D.
Charles Shea, Ph.D.

Bachelor of Science, Health and Sport Science, 1988
Wake Forest University, Winston-Salem, NC

Work Experience

Associate Professor	Department of Kinesiology and Health Georgia State University Atlanta, GA	2005-Present
Assistant Professor	Departments of Kinesiology and Health, and Physical Therapy Georgia State University Atlanta, GA	2001-2005
Assistant Professor	Department of Kinesiology and Health Georgia State University Atlanta, GA	1999-2001
Associate Research Scientist	Department of Molecular Physiology & Biophysics Baylor College of Medicine Houston, TX	1999

Associate Research Scientist	Muscle Biology Laboratory Department of Health and Kinesiology Texas A&M University College Station, TX	1998-1999
Assistant Research Scientist	Muscle Biology Laboratory Department of Health and Kinesiology Texas A&M University College Station, TX	1997-1998
Post-Doctoral Research Associate	Muscle Biology Laboratory Department of Health and Kinesiology Texas A&M University College Station, TX	1994-1997
Graduate Assistant	Department of Health and Kinesiology Texas A&M University College Station, TX	1989-1994

Research

Refereed Journal Articles

Green, M.S., J.A. Doyle, **C.P. Ingalls**, D. Benardot, J.C. Rupp, and B.T. Corona. Insulin Resistance Adapts to a Repeated Bout of Eccentrically-Biased Exercise in Human Skeletal Muscle *International Journal of Sport Nutrition & Exercise Metabolis*, In press

Corona BT, C. Rouviere, S.L. Hamilton, and **C.P. Ingalls**. Eccentric Contractions Do Not Induce Rhabdomyolysis in Malignant Hyperthermia Susceptible Mice. *J. Appl. Physiol.* 105: 1542-1553, 2008.

Corona, B, C. Rouviere, S.L. Hamilton, and **C.P. Ingalls.** FKBP12 deficiency reduces strength deficits after eccentric contraction-induced injury. *J. Appl. Physiol.* 105: 527-537, 2008.

Green, M.S., B.T. Corona, J.A. Doyle, and **C.P. Ingalls**. A carbohydrate-protein drink does not enhance recovery from exercise-induced muscle injury. *International Journal of Sport Nutrition & Exercise Metabolism*. 18: 1-18, 2008.

Hubal, M.J., **C.P. Ingalls**, M.R. Allen, J.C. Wenke, H.A. Hogan, and S.A. Bloomfield. Effects of eccentric exercise training on cortical bone and muscle strength in estrogen-deficient mouse. *J. Appl. Physiol.*. 98: 1674-1681, 2005.

Tang, W., **C.P. Ingalls**, W.J. Durham, J. Snider, M.B. Reid, G. Wu, M.M. Matzuk, and S.L. Hamilton. Altered excitation-contraction coupling with skeletal muscle specific FKBP12 deficiency**.** *FASEB J.* 18:1597-9, 2004.

Ingalls, C.P., J.C. Wenke, T. Nofal, and R.B. Armstrong. Adaptation to lengthening contraction-induced injury in mouse muscle. *Journal of Applied Physiology*. 97: 1067-1076, 2004.

Ingalls, C.P., G.L. Warren, J. Zhang, S.L. Hamilton, and R.B. Armstrong. Dihydropyridine and ryanodine receptor binding after eccentric contractions in mouse skeletal muscle. *J. Appl. Physiol*. 96: 1619-1625, 2004.

Warren, G.L., **C.P. Ingalls**, and R.B. Armstrong. Temperature dependency of force loss and Ca^{2+} homeostasis in mouse EDL muscle after eccentric contractions. *Am. J. Physiol. (Reg. Int. Comp. Physiol.)* 282: R1122-R1132, 2002.

Warren, G.L., **C.P. Ingalls**, D.A. Lowe, and R.B. Armstrong. What mechanisms contribute to the functional changes during and in the recovery from skeletal muscle injury? *J. Orthop. Sports Phys. Ther*. 32: 58-64, 2002.

Ingalls, C.P., J. Wenke, and R.B Armstrong. Time course changes in $[Ca^{2+}]_i$, force, and protein content in hindlimb-suspended mouse soleus muscles. *Aviat. Space Environ. Med.* 72: 471-476, 2001.

Warren, G.L., **C.P. Ingalls**, D.A. Lowe, and R.B. Armstrong. Excitation-contraction uncoupling: Major role in contraction-induced muscle injury. *Exercise and Sport Sciences Reviews* 29: 82-87, 2001.

Warren, G.L., K.M. Hermann, **C.P. Ingalls**, M.R. Masselli, and R.B. Armstrong. Shift to slower motor units with repetition of eccentric contractions. *Med. Sci. Sport Exerc*. 32(4): 820-829, 2000.

Ingalls, C.P., G.L. Warren, and R.B. Armstrong. Intracellular Ca^{2+} transients in mouse soleus muscle after hindlimb unloading and reloading. *J. Appl. Physiol*. 87(1): 386-390, 1999.

Warren, G.L., **C.P. Ingalls**, S. Shaw, and R.B. Armstrong. Uncoupling of in vivo torque production from EMG in muscles injured by eccentric contractions. *J. Physiol. (Lond.)* 515(2): 609-619, 1999.

Ingalls, C.P., G.L. Warren, J.H. Williams, and R.B. Armstrong. E-C coupling failure in mouse EDL muscle after in vivo eccentric contractions. *J. Appl. Physiol*. 85(1): 58-67, 1998.

Warren, G.L., **C.P. Ingalls**, and R.B. Armstrong. A stimulating nerve cuff for chronic in vivo measurements of torque produced about the ankle in the mouse. *J. Appl. Physiol*. 84(6): 2171-2176, 1998.

Ingalls, C.P., G.L. Warren, and R.B. Armstrong. Dissociation of force production from MHC and actin contents in muscles injured by eccentric contractions. *J. Mus. Res. Cell Motil*. 19(3): 215-224, 1998.

Warren, G.L., J.H. Williams, C.W. Ward, H. Matoba, **C.P. Ingalls**, K.M. Hermann, and R.B. Armstrong. Decreased contraction economy in mouse EDL muscle injured by eccentric contractions. *J. Appl. Physiol*.81(6): 2555-2564, 1996.

Ingalls, C.P., W.S. Barnes, and S.B. Smith. Interaction between clenbuterol and run training: effects on exercise performance and MLC isoform content. *J. Appl. Physiol*. 80(3):795-801, 1996.

Ingalls, C.P., G.L. Warren, D.A. Lowe, D.B. Boorstein, and R.B. Armstrong. Differential effects of anesthetics on contractile function of mouse ankle dorsiflexor muscles in vivo. *J. Appl. Physiol*. 80(1):332-340, 1996.

Willoughby, D.S., W.S. Barnes, **C.P. Ingalls**, and S.B. Smith. The effects of the β_2-agonist clenbuterol, and exercise training on muscle protein and performance in frogs. *J. Strength Cond. Res*. 10(4): 228-233, 1996.

Lowe, D.A., G.L. Warren, **C.P. Ingalls**, D.B. Boorstein, and R.B. Armstrong. Protein metabolism in mouse EDL muscle 0-336 hours after eccentric contraction-induced injury. *J. Appl. Physiol*. 79(4): 1260-1270, 1995.

Signorile, J.F., **C. Ingalls**, and L.M. Tremblay. The effects of active and passive recovery on short-term, high-intensity power output. *Can. J. Appl. Physiol*. 18(1):31-42, 1993.

Barnes, W.S. and **C.P. Ingalls**. Differential effects of temperature on contractile behavior in isolated frog skeletal muscle. *Comp. Biochem. Physiol*. 100A:575-580, 1991.

Berry, M.J., A.S. Weyrich, R.A. Robergs, K.M. Krause, and **C.P. Ingalls**. Ratings of perceived exertion in individuals with varying fitness levels during walking and running. *Eur. J. Appl. Physiol*. 58:494-499, 1989.

Invited Journal Article

Ingalls, C.P. Nature vs. nurture: can exercise really alter fiber type composition in human skeletal muscle. *J. Appl. Physiol.* 97: 1591-1592, 2004.

Journal Articles in Preparation

Corona, B.T., E.M. Balog, J.A. Doyle, J.C. Rupp, R.C. Luke, and **C.P. Ingalls**. Junctophilin damage contributes to early strength deficits and EC coupling failure after eccentric contractions. *Amer. J . Physiol. Cell* (in review).

Corona B.C., P. Aracena, S.L. Hamilton, and **C.P. Ingalls**. The effect of prior exercise on thermal sensitivity of malignant hyperthermia susceptible muscle. (Submitted to *Muscle & Nerve*)

Rouviere, C., B. Corona, and **C.P. Ingalls.** Aerobic endurance exercise does not exacerbate muscle injury in a mouse model of Malignant Hyperthermia. (In preparation for *J. Appl. Physiol.*)

Corona, B., M. Green, A. Doyle, J Rupp, and **C.P. Ingalls**. Exercise-induced muscle injury elevates glycolytic and aerobic metabolism during submaximal treadmill running.

Abstracts

Corona, B.T., C. Rouviere, and **C.P. Ingalls**. Malignant Hyperthermia Susceptible Mice Can Safely Perform Voluntary Endurance Training and Exhibit an Intrinsic Fatigue Resistance. Med Sci Sport Exerc. 41:S593, 2009.

Corona, B.T. and **C.P. Ingalls**. Nitric Oxide Synthase Inhibition Exacerbates Isolated EDL Muscle Force Deficits During and Immediately After Performing Eccentric Contractions. *The Physiologist*, 51(6): 76, Program #36.6. 2008.

Ingalls, C.P., B.T. Corona, and C. Rouviere. Eccentric contractions protect skeletal muscle from temperature-induced contracture in Y522S RyR1 knock-in mice. *FASEB J.* 22: 962.33, 2008.

Corona, B.T., A.K. Wilson, C. Rouviere, S.L. Hamilton **C.P. Ingalls**. Changes in junctophilin 1 contribute to strength deficits after eccentric contraction-induced muscle injury. *FASEB J.* 22: 962.35, 2008.

C.P. Ingalls, B. Corona, C. Rouviere, and S.L. Hamilton. Effects of Eccentric Contractions on Skeletal Muscle Function in a Malignant Hyperthermia Mouse Model. *Med. Sci. Sports Exerc*. 39(5): S432, 2007.

B. Corona, C. Rouviere, S.L. Hamilton, and **C.P. Ingalls**. Basic phenotype of a knock-in mouse model of malignant hyperthermia. *Med. Sci. Sports Exerc*. 39(5): S431, 2007.

M.S. Green, B.T. Corona, J.A. Doyle, and **C.P. Ingalls**. A carbohydrate-protein drink does not enhance recovery from exercise-induced muscle injury. *Med. Sci. Sports Exerc*. 39(5): S363, 2007.

Schroeder J., M. Luger-Hamer, B. Kellman, **C.P. Ingalls**, and R. Balaban. Quantitative analysis of function and structure of mouse skeletal muscle in vivo using multi-photon excitation microscopy. *Biophysics Journal, Supplement* 20a: 373a, 2007

Ingalls, C.P., B. Corona, C. Rouviere, and S.L. Hamilton. Effects of skeletal muscle specific FKBP12 deficiency on eccentric contraction training in mouse muscle. *Med. Sci. Sports Exerc*. 38(5): S35, 2006

Corona, B.T., M.S. Greene, J.A. Doyle, J.C. Rupp, and **C.P. Ingalls**. Exercise-induced muscle injury results in elevations in aerobic and anaerobic metabolism during submaximal treadmill running. *Med. Sci. Sports Exerc*. 38(5): S221, 2006

Rouviere C., T. Nofal., S.L. Hamilton, and **C.P. Ingalls.** FKBP12 deficiency does not exacerbate muscle damage after eccentric exercise. Amercian College of Sports Medicine Southeast Regional Chapter Abstracts. 2006

Corona, B.T., M.S. Greene, J.A. Doyle, J.C. Rupp, and **C.P. Ingalls**. Exercise-induced muscle injury results in elevations in aerobic and anaerobic metabolism during submaximal treadmill running. Amercian College of Sports Medicine Southeast Regional Chapter Abstracts. 2006

Ingalls, C.P., T. Nofal, J. Chapman, W. Tang, and S.L. Hamilton. Effects of skeletal muscle specific FKBP12 deficiency on eccentric contraction-induced injury in mouse muscle. *Med. Sci. Sports Exerc*. 37(5): S317, 2005

Ingalls, C.P., T. Nofal, J. Chapman, W. Tang, and S.L. Hamilton. Skeletal muscle specific FKBP12 deficiency reduces force production in mouse EDL muscle. *Med. Sci. Sports Exerc.* 35(5): S269, 2004.

Nofal, T.S., and **C.P. Ingalls**. The effects of eccentric contraction preconditioning on ischemia-reperfusion injury in mouse skeletal muscle. *Med. Sci. Sports Exerc.* 35(5): S289, 2004.

LaBudde, B.D., C. Papadopoulos, J.A. Doyle, **C.P. Ingalls**, and D.E. Martin. The effect of heat stress on metabolic alterations during a 10-km performance run. *Med. Sci. Sports Exerc.* 35(5): S83, 2004.

Nofal, T.S., and **C.P. Ingalls**. Effects of prophylactic heating on eccentric contraction-induced injury in mouse skeletal muscle. *Med. Sci. Sports Exerc*. 35(5): S240, 2003.

Ingalls, C.P., T. Nofal, and C. Papadopoulos. Adaptation of mouse skeletal muscle to two bouts of exercise-induced injury. *Med. Sci. Sports Exerc*. 34(5): S183, 2002.

Ingalls, C.P., J.C. Wenke, T. Nofal, S. Hinz, E. Arnold, and R.B. Armstrong. Mechanisms of strength adaptation after repeated bouts of exercise-induced muscle injury. *Med. Sci. Sports Exerc*. 33(5): S41, 2001.

Warren, G.L., G.K. Pavlath, and **C.P. Ingalls.** Less MyoD and myogenin expression following contraction-induced muscle injury compared to traumatic injury. *J. Aging Phys. Activity* 8: 277, 2000.

Ingalls, C.P., J.C. Wenke, and R.B. Armstrong. Temporal changes in calcium, protein, and strength in mouse soleus muscle after hindlimb suspension. *Med. Sci. Sports Exerc*. 32(5): S80, 2000.

Papineni R.V.L., **Ingalls C.P**., Wenke J., and Hamilton S.L. Hindlimb suspension increases resting Ca2+ but decreases calcineurin levels. *Biophys. J.* 78 (1): 433A-433A 2553Pos Part 2, 2000

Wenke, J.C., **C.P. Ingalls**, and R.B Armstrong. Effects of repeated bouts of eccentric contractions on torque production and recovery of skeletal muscle. *Med. Sci. Sports Exerc*. 32(5): S323, 2000.

Hubal, M.J., **C.P. Ingalls**, M. Allen, J.C. Wenke, and S.A. Bloomfield. Effects of eccentric exercise training on mouse skeletal muscle and bone. *Med. Sci. Sports Exerc*. 32(5): S270, 2000.

Ingalls, C.P., G.L. Warren, S.L. Hamilton, and R.B. Armstrong. Dihydropyridine and ryanodine receptor binding after eccentric contractions in mouse skeletal muscle. *Med. Sci. Sports Exerc*. 31(5): S72, 1999.

Wenke, J.C., G.L. Warren, **C.P. Ingalls**, and R.B. Armstrong. Does treadmill training slow the recovery of eccentric contraction-induced injury? *Med. Sci. Sports Exerc*. 31(5): S73, 1999.

Warren, G.L., D.A. Lowe, **C.P. Ingalls**, and R.B. Armstrong. Altered calcium homeostasis in mouse soleus muscle after hindlimb suspension and reloading. *Med. Sci. Sports Exerc*. 31(5): S221, 1999.

Allen M.R., **Ingalls C.P**., Warren G.L., and Bloomfield S.A. Time course of bone and muscle alterations after hindlimb suspension and 24-hour reambulation in mice. *J. Bone Min. Res.* 14: F018 Suppl. 1, 1999.

Ingalls, C.P., G.L. Warren, and R.B. Armstrong. Torque-EMG relationship in mouse muscle after *in vivo* eccentric or concentric contractions. *Med. Sci. Sports Exerc.* 30(5): S102, 1998.

Warren, G.L., **Ingalls, C.P.**, and R.B. Armstrong. Marked effect of temperature on the eccentric contraction-induced force deficit. *Med. Sci. Sports Exerc*. 30(5): S102, 1998.

Warren, G.L., D.A. Lowe, **C.P. Ingalls**, and R.B. Armstrong. Eicosanoid release by mouse EDL muscle after 150 in vivo eccentric contractions. *Med. Sci. Sports Exerc.* 29(5): S53, 1997.

Ingalls, C.P., G.L. Warren, J.H. Williams, and R.B. Armstrong. Excitation contraction coupling failure in mouse EDL muscle after eccentric contractions in vivo. *Med. Sci. Sports Exerc*. 29(5): S272, 1997.

Ingalls, C.P., G.L. Warren, and R.B. Armstrong. Dissociation of MHC and actin contents from force production in muscles injured by eccentric contractions. *The Physiologist*. 39(5): A-12, 1996.

Warren, G.L., J.H. Williams, C.W. Ward, H. Matoba, **C.P. Ingalls**, K.M. Hermann, and R.B. Armstrong. Decreased contraction economy in mouse EDL muscle injured by eccentric contractions. *The Physiologist*. 39(5):A-55, 1996.

Hermann, K.M., G.L. Warren, M.R. Masselli, **C.P. Ingalls**, and R.B. Armstrong. Muscle recruitment between two bouts of eccentric exercise. *The Physiologist*. 39(5): A-57, 1996.

Ingalls, C.P., G.L. Warren, D.A. Lowe, D.B. Boorstein, and R.B. Armstrong. Anesthetic effects on the contractile function of mouse ankle dorsiflexor muscles *in vivo*. *Med. Sci. Sports Exerc.* 27(5): S217, 1995.

Boorstein, D.B., **C.P. Ingalls**, G.L. Warren, D.A. Lowe, and R.B. Armstrong. Mitochondrial coupling state of mouse EDL muscle after eccentric exercise. *Med. Sci. Sports Exerc.* 27(5): S37, 1995.

Lowe, D.A., G.L. Warren, **C.P. Ingalls**, D.B. Boorstein, and R.B. Armstrong. Protein metabolism in mouse EDL muscle 0-336 hours after eccentric contraction-induced injury. *Med. Sci. Sports Exerc.* 27(5): S37, 1995.

Ingalls, C.P., W.S. Barnes, and S.B. Smith. The effects of clenbuterol and training on myosin isoform expression and run performance in mice. *Med. Sci. Sports. Exerc*. 26(5): S92, 1994.

Cooke, W.H., **C.P. Ingalls**, and W.S. Barnes. Effect of extracellular calcium on cooling-induced contractures in caffeinated skeletal muscle. *Med. Sci. Sports. Exerc*. 26(5): S193, 1994.

Willoughby, D.S, W.S. Barnes, **C.P. Ingalls**, and S.B. Smith. Interaction between clenbuterol and exercise: Effects of a β_2-adrenergic agonist on muscular size and performance. *Med. Sci. Sports Exerc*. 25(5): S157, 1993.

Ingalls, C.P., W.S. Barnes, D. Willoughby, C. Cline, and D. Chilek. Epinephrine and glycogenolysis in isolated skeletal muscle. *Med. Sci. Sports Exerc*. 24(5): S109, 1992.

Barnes, W.S. and **C. Ingalls**. Thermal dependence of skeletal muscle in vitro: Effects of a benzothiazepine calcium channel antagonist (diltiazem). *Med. Sci. Sports Exerc*. 24(5): S56, 1992.

Ingalls, C.P. and W.S. Barnes. The effects of altered intracellular calcium concentration on staircase potentiation. *Med. Sci. Sports Exerc*. 23(4): S58, 1991.

Tremblay, L., J. Signorile and **C. Ingalls**. The effects of active and passive rest on a short term, high-intensity power output. *Med. Sci. Sports Exerc*. 23(4): S9, 1991.

Barnes, W. and **C. Ingalls**. Temperature effects on partially-fused isometric contractions in frog skeletal muscle *in vitro*. *FASEB J.* 5(5): A1034, 1991.

Ingalls, C.P. and W.S. Barnes. Staircase recoverability in isolated frog skeletal muscle. *Med. Sci. Sports Exerc*. 22: S73, 1990.

Signorile, J., W. Barnes, A. Sams, and **C. Ingalls**. Effects of the β_2 agonist fenoterol on contractile and biochemical properties of skeletal muscle. *Med. Sci. Sports Exerc*. 22: S2, 1990.

Signorile, J., W. Barnes, and **C. Ingalls**. Effects of the β_2 agonist fenoterol on contractile properties of skeletal muscle. *FASEB J.* 1: A815, 1990.

Berry, M.J., R.A. Robergs, A.S. Weyrich, K. Krause, and **C. Ingalls**. Ventilatory responses of trained and untrained subjects during running and walking at similar workloads. *Med. Sci. Sports Exerc.*19: S2, 1987.

Grants

Funded

Hamilton, S.H., **C.P. Ingalls**, J.L. Vergara (MPI). Modulation of sarcoplasmic reticulum calcium release. National Institutes of Health ($2,738,251 total costs; C.P. Ingalls: $320,240 total costs). Oct 2009 to Sept 2014.

Ingalls, C.P. GSU College of Education Doctoral Student Stipend Award. ($12,000). August 2008 to July 2009.

Hamilton, S.H., **C.P. Ingalls**, M.M. Matzuk, M.B. Reid, G.Y. Wu, and P. Zhang. Modulation of sarcoplasmic reticulum calcium release. National Institutes of Health ($1,732,804 direct costs; subcontract to C.P. Ingalls for $232,715 total costs). Aug 2003 to Jan 2009.

Ingalls, C.P. Prophylactic effects of eccentric contractions on ischemia-reperfusion injury in mouse skeletal muscle. GSU College of Education Proposal Development Grant. ($3,000). October 3, 2002 to June 30, 2003.

Ingalls, C.P. and G.L. Warren. How does mouse skeletal muscle protect itself from exercise-induced muscle injury? Mechanisms of strength adaptation. GSU Office of Research and Sponsored Programs: Team Grant. ($11,683). July 1, 2001 to June 30, 2002.

Ingalls, C.P. Repair mechanisms of exercise-induced muscle injury. GSU College of Education Proposal Development Grant. ($5,630). September 29, 2000 to June 30, 2001.

Ingalls, C.P. The role of high-resistance exercise training in preventing musculoskeletal decompensation and injury after simulated weightlessness. GSU Office of Research and Sponsored Programs: Research Initiation Grant. ($4,901). July 1, 2000 to June 30, 2001.

Ingalls, C.P. and G.L. Warren. Repair mechanisms of work and exercise-induced skeletal muscle injury. GSU Office of Research and Sponsored Programs: Quality Improvement Grant. ($9,230). May 24, 2000 to June 30, 2000.

Ingalls, C.P. Mechanisms of adaptation to exercise-induced muscle fiber injury: Is E-C uncoupling a protective mechanism? Texas A&M University, College of Education. ($2,500). December 21, 1998 to June 1, 1999.

Ingalls, C.P. and W.S. Barnes. Myosin light chain expression after clenbuterol and sprinting. Cybex Immunology Grant from the American College of Sports Medicine Foundation. ($2,500). 1992 to 1993.

Ingalls, C.P. The effects of clenbuterol and sprint training on myosin isoform expression in mouse skeletal muscle. Texas A&M University, Office of Graduate Studies. ($500). 1992 to 1993.

Ingalls, C.P. The effects of clenbuterol and sprint training on myosin isoform expression in mouse skeletal muscle. Texas A&M University, College of Education. ($100). 1992 to 1993.

Unfunded Proposals

Hamilton, S.H. and **C.P. Ingalls**. Modulation of sarcoplasmic reticulum calcium release. National Institutes of Health (subcontract to C.P. Ingalls for $320,240 total costs), Submitted August 2008.

Hamilton, S.H. and **C.P. Ingalls**. Modulation of sarcoplasmic reticulum calcium release. National Institutes of Health (subcontract to C.P. Ingalls for $320,240 total costs), Submitted May 2008.

Hamilton, S.H. and **C.P. Ingalls**. Modulation of sarcoplasmic reticulum calcium release. National Institutes of Health (subcontract to C.P. Ingalls for $317,047 total costs), Submitted November 2007.

Burkholder, T.J. and **C.P. Ingalls**. Arachidonic acid metabolism contributes to cellular mechanical damage. National Institutes of Health ($1,448,689 direct costs; subcontract to C.P. Ingalls for $300,000 direct costs). Submitted June 2007

C.P. Ingalls and S.H. Hamilton. Muscle structure and function after exercise in mouse models of Central Core Disease. Muscular Dystrophy Association. ($245,853 direct costs), 2004.

Ingalls, C.P., G.L. Warren, and J.A. Carson. Countermeasure against muscle injury after unloading. National Space Biomedical Research Institute ($525,000 direct costs), 2000.

Ingalls, C.P. and G.L. Warren. Adaptation mechanisms in eccentric contraction-induced muscle injury. GSU Office of Research and Sponsored Programs: Mentor Grant, ($12,800), 2000.

Warren, G.L., **C.P. Ingalls**, and G.K. Pavlath. Satellite cell role in contraction-induced muscle injury. National Institutes of Health ($525,000 direct costs), 1999.

Ingalls, C.P. Mechanisms of myofibrillar protein protection and recovery from high-force contraction-induced muscle injury. The Camille and Henry Dreyfus Foundation, Inc. ($25,000 direct costs), 1999.

Ingalls, C.P. and G.L. Warren. Gender differences in exercise-induced muscle injury. National Institutes of Health ($50,000 direct costs), 1998.

Gaddy-Kurten, D., S.A. Bloomfield, and **C.P. Ingalls**. Activin, inhibin, and follistatin regulation of bone cell differentiation following hindlimb suspension in adult mice. National Aeronautics and Space Administration ($213,769 direct costs), 1998.

Warren, G.L., J.H. Williams, R.B. Armstrong, and **C.P. Ingalls**. Mechanisms of exercise-induced muscle fiber injury. National Institutes of Health ($880,456 direct costs), 1997.

Presentations

Invited Presentations

Ingalls, C.P. and Benjamin T. Corona. The role of Ca^{2+} dysregulation in eccentric contraction-induced skeletal muscle injury. The Atlanta Calcium Club, Department of Chemistry, Georgia State University. Atlanta, GA. June 17, 2008.

Ingalls, C.P. Muscle Physiology, Performance, and Injury. African Academy on Disability Sport. Georgia State University. Atlanta, GA. May 7, 2003.

Ingalls, C.P. Exercise-induced muscle injury: Strength loss, recovery, and adaptation. Department of Exercise Science, University of Georgia, (seminar), Athens, GA. March 16, 2001.

Ingalls, C.P. Temporal changes in calcium, protein, and strength in mouse soleus muscle after hindlimb suspension. Department of Kinesiology and Health Spring Research Symposium, Georgia State University. April 12, 2000.

Schwartz, R.J. (coordinator), S.L. Hamilton (coordinator), R.B. Armstrong, K.M. Baldwin, S. Baylor, F. Booth, P.M. Clarkson, H.F. Epstein, D. Feeback, D. Goll, **C.P. Ingalls**, R.S. Krauss, M.J. Kushmerick, D.R. Mosier, B.W. O'Malley, Jr., D. Paulsen, C.A. Peterson, R.N. Pierson, D.A. Riley, J. Tidball, J.H. Wilmore, B. Wold. National Space Biomedical Research Institute Muscle Alterations and Atrophy Team Workshop. Houston, TX. November 29-30, 1999.

Ingalls, C.P., G.L. Warren, and R.B. Armstrong. Intracellular Ca^{2+} transients in mouse soleus muscle after hindlimb unloading and reloading. First Biennial Space Biomedical Investigators' Workshop. League City, TX. January 11-13, 1999.

Ingalls, C.P., G.L. Warren, and R.B. Armstrong. Altered intracellular Ca^{2+} homeostasis and strength in mouse soleus muscle after hindlimb unloading and reloading. Department of Physical Therapy, Georgia State University, (seminar) Atlanta, GA. November 8, 1999.

Ingalls, C.P., G.L. Warren, and R.B. Armstrong. Intracellular Ca^{2+} transients in mouse soleus muscle after hindlimb unloading and reloading. First Annual National Space Biomedical Research Institute Retreat. Conroe, TX. Feb. 1998.

Professional Conferences

Ingalls, C.P., B. Corona, C. Rouviere, and S.L. Hamilton. Effects of Skeletal Muscle Specific FKBP12 Deficiency on Eccentric Contraction Training in Mouse Muscle. American College of Sports Medicine Annual Meeting. Denver, CO. May 31, 2006.

Nofal, T.S., and **C.P. Ingalls**. The effects of eccentric contraction preconditioning on ischemia-reperfusion injury in mouse skeletal muscle. American College of Sports Medicine Annual Meeting. Indianapolis, IN. June 5, 2004.

Ingalls, C.P., J.C. Wenke, T. Nofal, S. Hinz, E. Arnold, and R.B. Armstrong. Mechanisms of strength adaptation after repeated bouts of exercise-induced muscle injury. American College of Sports Medicine Annual Meeting. Baltimore, MD. May 30, 2001.

Carson, J.A., L. Lowe, and **C. Ingalls**. The effect of altered loading on skeletal muscle gene expression and function. American College of Sports Medicine Southeast Regional Meeting. Columbia, SC. January 27, 2001.

Ingalls, C.P., J.C. Wenke, and R.B. Armstrong. Temporal changes in calcium, protein, and strength in mouse soleus muscle after hindlimb suspension. American College of Sports Medicine Annual Meeting. Indianapolis, IN. May 31, 2000.

Warren, G. and **C. Ingalls**. What exactly is exercise-induced muscle injury and how do we measure it. American College of Sports Medicine Southeast Regional Meeting. Charlotte, NC. January 27-29, 2000.

Warren, G.L., **C.P. Ingalls**, and R.B. Armstrong. Eccentric contraction-induced strength loss: contributing factors and their relative importance. American College of Sports Medicine Southeast Regional Meeting. Norfolk, VA. February 4-6, 1999.

Ingalls, C.P., G.L. Warren, J.H. Williams, and R.B. Armstrong. E-C coupling failure in mouse EDL muscle after in vivo eccentric contractions. American College of Sports Medicine Annual Meeting. Denver, CO. June 2, 1997.

Teaching

Graduate Courses

Practicum in Exercise Science (KH 7710)	Georgia State University Atlanta, GA
Directed Readings and Research (KH 7810)	Georgia State University Atlanta, GA
Research Design (KH 7820)	Georgia State University Atlanta, GA
Advanced Topics in Exercise Physiology (KH 8270)	Georgia State University Atlanta, GA
Cardiopulmonary Physiology (KH 8290)	Georgia State University Atlanta, GA
Seminar in Exercise Physiology (KH 8970)	Georgia State University Atlanta, GA
Myocellular Physiology (KH 9550)	Georgia State University Atlanta, GA
Research in Sports Science (KH 9820)	Georgia State University Atlanta, GA

Undergraduate Courses

Neuromuscular Physiology and Plasticity (KH 4300)	Georgia State University Atlanta, GA
Cardiopulmonary Physiology (KH 4290)	Georgia State University Atlanta, GA
Cardiac Fitness Assessment and Rehabilitation Exercise Prescription (KH 4360)	Georgia State University Atlanta, GA
Practicum in Exercise Science I (KH 4750)	Georgia State University Atlanta, GA

Guest Lecturer

Introduction to the Allied Fields of Health, Physical Education, and Fitness (KH 2130)	Georgia State University Atlanta, GA
Physiology of Exercise (KH 3650)	Georgia State University Atlanta, GA
Cardiac Fitness Assessment and Rehabilitation Exercise Prescription (KH 4360)	Georgia State University Atlanta, GA
Physiology of Exercise (KH 7500)	Georgia State University Atlanta, GA
Neuromuscular Adaptations Laboratory (PT 8871)	Georgia State University Atlanta, GA
Exercise Physiology (KINE 437)	Texas A&M University College Station, TX
Exercise Physiology Laboratory (KINE 637)	Texas A&M University College Station, TX

Curriculum Development

Research Fellowship in Exercise Science (KH 4800): Georgia State University. Development of an undergraduate honors research course. Proposal submitted in September 2008.

Modification of Sports Science Ph.D. program: Georgia State University. Modified curriculum in the Sports Science Ph.D. program. Proposal developed, submitted, and approved as a curricular change in the Sports Science Ph.D. program in 2006.

Neuromuscular Physiology and Plasticity (KH 4300): Georgia State University. Development of an undergraduate course in musculoskeletal physiology. Proposal approved in May 2004.

Modification of Exercise Science B.S. program: Georgia State University. Assisted in the modification of the curriculum in the Exercise Science program. Proposal developed, submitted, and approved as a curricular change in the Exercise Science B.S. program May 2004.

Myocellular Physiology (KH 9550): Georgia State University. Development of a graduate course to replace Cell Physiology in the Major Area of doctoral program. Proposal developed, submitted, and approved as a course offering in the Sports Science Ph.D. program in 2001.

Modification of Sports Science Ph.D. program: Georgia State University. Assisted in the modification of the curriculum in the Sports Science Ph.D. program. Proposal developed, submitted, and approved as a curricular change in the Sports Science Ph.D. program in 2001.

Academic Advising

Doctoral Committee Chair

Benjamin Corona 2005-2009
Department of Kinesiology and Health
Georgia State University
Atlanta, GA
"Junctophilin damage contributes to early strength deficits and EC coupling failure after eccentric contractions."

Doctoral Committee Member

Katherine Heimburger Ingram 2006-2009
Department of Kinesiology and Health
Georgia State University
Atlanta, GA
"Skeletal muscle lipid peroxidation and its relationships with intramyocellular lipids and peripheral insulin sensitivity in mildly- to morbidly-obese subjects"

Eric Arnold 2000-2008
Department of Kinesiology and Health
Georgia State University
Atlanta, GA
"Mechanical overload induced skeletal muscle plasticity in the obsese Zucker rat ($Lepr^{fa}$)"

Michael Green
Department of Kinesiology and Health 2005-2008
Georgia State University
Atlanta, GA
"Effect of a repeated bout of eccentrically biased contractions on insulin resistance"

Master's Thesis Committee Chair

Clement Rouviere 2004-2008
Department of Kinesiology and Health
Georgia State University
Atlanta, GA
"Aerobic endurance exercise does not exacerbate muscle injury in a mouse model of Malignant Hyperthermia"

Benjamin T. Corona 2004-2006
Department of Kinesiology and Health
Georgia State University
Atlanta, GA
"Exercise-induced muscle injury results in elevations in aerobic and anaerobic metabolism during submaxinmal treatmill running"

Master's Non-Thesis Committee Chair

Shelley Taylor 2008-2009
Department of Biology
Georgia State University
"Reactive oxygen and nitrogen modifications to ryanodine receptor and Malignant Hyperthermia episodes"

Master's Thesis Committee Member

Jessica Lee 2007-2008
Department of Kinesiology and Health
Georgia State University
Atlanta, GA
"The effects of three different rest periods between sets to fatigue in recreationally trained females"

Donavan Almond 2007-2008
Department of Kinesiology and Health
Georgia State University
Atlanta, GA
"The effects of three different rest periods between sets to fatigue in recreationally trained females"

Joshua Hopper 2003-2004
Department of Kinesiology and Health
Georgia State University
Atlanta, GA
"The effect of impulse training on shoulder torques and throwing velocities."

Rijuta Dhere 2002-2003
Department of Physical Therapy
Georgia State University
Atlanta, GA
"The relative contributions of neural and muscular mechanisms to the repeated bout effect associated with eccentric contraction-induced muscle injury."

Brian LaBudde 2001- 2003
Department of Kinesiology and Health
Georgia State University
Atlanta, GA
"The Effect of Heat Stress on Metabolic Alterations During 10km Running."

Michael Rodgers 2000-2002
Department of Kinesiology and Health
Georgia State University
Atlanta, GA
"The Effect of Inspired Air Humidity on the Airway Response of Asthmatics to Submaximal Exercise."

Monica Hubal 1998-1999
Department of Health & Kinesiology
Texas A&M University
College Station, TX
"Effects of eccentric exercise training on bone in the estrogen-deficient mouse."

Service

Professional Memberships

American College of Sports Medicine, Fellow

Southeast Chapter of American College of Sports Medicine, Member

American Physiological Society, Member

Phi Kappa Phi Honor Society

Professional Service

Invited Journal Reviewer

American Journal of Physiology: Regulatory, Integrative and Comparative Physiology

Journal of Applied Physiology

Advances in Physiology Education

Medicine and Science in Sports and Exercise

Aviation, Space, and Environmental Medicine

Muscle and Nerve

International Journal of Sports Medicine

Journal Editor Reviewer, Journal of Applied Physiology (1999-2001)

Invited Grant Reviewer

United States Civilian Research and Development Foundation
Sponsored by the National Science Foundation and U.S. Department of State, August 2001

Invited External Reviewer for Promotion and Tenure

The College of William & Mary, Department of Kinesiology, September 2008

National/Regional Meetings

Symposium Chair, Inflammation after acute musculoskeletal injury: Basic science and clinical perspectives. Southeast Chapter of the American College of Sports Medicine Regional Meeting, February 9, 2007

Session Chair, Skeletal Muscle Damage
American College of Sports Medicine Annual Meeting, June 3, 2006

Session Chair, Skeletal Muscle Genomics/Gene Expression II
American College of Sports Medicine Annual Meeting, June 3, 2004

Session Chair, SEACSM Basic Science Lecture
Southeast Chapter of the American College of Sports Medicine Regional Meeting, January 31, 2003
Session Chair, Skeletal Muscle Injury
American College of Sports Medicine Annual Meeting, May 31, 2002

Session Chair, Cellular Regulatory Mechanisms and Skeletal Muscle
Southeast Chapter of the American College of Sports Medicine Regional Meeting, February 1, 2002

Academic Service

University

Interim Chair	Institutional Animal Care and Use Committee Georgia State University Atlanta, GA	2009
Vice-Chair	Institutional Animal Care and Use Committee Georgia State University Atlanta, GA	2008-present
Member	University Research Internal Grant Review Committee Georgia State University Atlanta, GA	2006-present
Member	Institutional Animal Care and Use Committee-Occupational Health and Safety Subcommittee Georgia State University Atlanta, GA	2005-2007
Member	Institutional Animal Care and Use Committee Georgia State University Atlanta, GA	2002-present
Member	Georgia State University Search Committee for Attending Veterinarian	2005-2006
Alternate Member	Institutional Animal Care and Use Committee Georgia State University Atlanta, GA	2001-2002

College/School

Member	Ad hoc Doctoral Core Committee College of Education Georgia State University Atlanta, GA	2009-present
Member	Faculty Appeals Committee College of Education Georgia State University Atlanta, GA	2006-present

Member	Dissertation Quality Review Committee College of Education Georgia State University Atlanta, GA	2006-2007
Member	Informational Systems and Instructional Technology Committee College of Education Georgia State University Atlanta, GA	2004-2006
Member	Ad Hoc Committee to reorganize the Center for Sports Medicine, Science and Technology Georgia State University Atlanta, GA	2002
Associate Faculty Member	Graduate Faculty Committee Graduate School Texas A&M University College Station, TX	1998-1999

Department

Coordinator	Doctoral Kinesiology Program Department of Kinesiology and Health Georgia State University Atlanta, GA	2008-present
Coordinator	Master's of Science Exercise Science Program Department of Kinesiology and Health Georgia State University Atlanta, GA	2008-present
Chair	Academic Program Review Committee Department of Kinesiology and Health Georgia State University Atlanta, GA	2006-2008
Chair	Graduate Faculty Committee Department of Kinesiology and Health Georgia State University Atlanta, GA	2000-present

Member	Promotion and Tenure Department of Kinesiology and Health Georgia State University Atlanta, GA	2006-present
Member	Faculty search committee for Sports Administration Department of Kinesiology and Health Georgia State University Atlanta, GA	2006-2007
Joint Appointment	Department of Physical Therapy Georgia State University Atlanta, GA	2001-2005
Member	Faculty search committee for Biomechanics program Department of Kinesiology and Health Georgia State University Atlanta, GA	2003
Member	Graduate Faculty Committee Department of Kinesiology and Health Georgia State University Atlanta, GA	2000
Provisional Member	Graduate Faculty Committee Department of Kinesiology and Health Georgia State University Atlanta, GA	1999-2000

Community Service

Assistant soccer coach, Georgia Futball Club, 2005-2006
Snellville, GA

Committee member, Dominion Walk community neighborhood common grounds management, 2004, Snellville, GA

Volunteer, Dominion Walk community spring festival, 2004
Snellville, GA

Volunteer, Dominion Walk community fall festival, 2002, 2003
Snellville, GA

Volunteer, Dominion Walk community summer festival, 2000, 2001, 2002
Snellville, GA

Volunteer, Dominion Walk community fund raising festival honoring the New York Firefighters Fund commemorating the September 11 attack in New York City, 2001
Snellville, GA

Volunteer, Wake Forest University Cardiac Rehabilitation Program, 1986-1987, Winston-Salem, NC

Certifications

Biomethodology of Mice Workshop, Georgia State University, 2008

Cardiopulmonary resuscitation, Emory University, 2007

Mice breeding strategy, Emory University, 2006

The Humane Care and Use of Laboratory Animals. Online computer course sponsored by the Laboratory Animal Training Association, 2004

Essentials for IACUC Members course on ResearchTraining.Org. Online computer course sponsored by VA Office of Research and Development, 2004

Working with the IACUC course on ResearchTraining.Org. Online computer course sponsored by VA Office of Research and Development, 2004

Post-Procedure Care of Mice and Rats in Research: Reducing Pain and Distress course on ResearchTraining.Org. Online course sponsored by VA Office of Research and Development, 2004

Applied Research Ethics National Association Institutional Animal Care and Use Committee 101, Co-Sponsors National Institutes of Health Office of Laboratory Animal Welfare and Emory University School of Medicine, 2002
Atlanta, GA

Confocal Microscopy and Imaging Training Course, 1995
NORAN Instruments, Inc.
Madison, WI

Basic Transmission Electron Microscopy Operation Workshop, Electron Microscopy Center, 1994
Texas A&M University
College Station, TX

Radiological Safety Short Course, Office of Radiological Safety, 1993
Texas A&M University
College Station, TX

Asepsis and Aseptic Techniques, Animal Care and Use Training Program, 1993
Texas A&M University
College Station, TX

Rats: Basic Handling and Techniques, Animal Care and Use Training Program, 1993
Texas A&M University
College Station, TX

Mice: Basic Handling and Techniques, Animal Care and Use Training Program, 1991
Texas A&M University
College Station, TX

Honors and Awards

Fellow, American College of Sports Medicine, 2002
Georgia State University
Atlanta, GA

Distinguished Dissertation Award, 1994
Department of Health and Kinesiology
Texas A&M University
College Station, TX

Dissertation Research Proposal Award, 1992
American College of Sports Medicine Foundation
Texas A&M University
College Station, TX

Graduate Student Research Awards, 1992, 1994
Texas Region, American College of Sports Medicine
Texas A&M University

Phi Kappa Phi Honor Society, 1991
Texas A&M University Chapter
College Station, TX

Athletic Scholarship, Cross Country and Track and Field, 1983-1988
Wake Forest University
Winston-Salem, NC