Curriculum vitae

John J. McCarthy

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Education

Ph.D. University of Oregon, Eugene, Exercise Physiology, 1995
Dissertation: *Phosphorylation kinetics of the sarcoplasmic reticulum Ca^{2+}-ATPase following exercise*

M.S. California State University, Fullerton, Physical Education, 1991
Concentration: Exercise physiology
Thesis: *Effects of a wrestling periodization strength program on muscular strength, absolute strength, and relative endurance*

B.S. University of California, Irvine, Biology, 1987

Professional Experience

Current Research Assistant Professor, University of Kentucky, Department of Physiology

2002-04 Research Specialist I, Stowers Institute for Medical Research, Kansas City

2000-02 Research Associate, Stowers Institute for Medical Research, Kansas City

1998-00 Post-doctoral Fellow, University of Missouri, Columbia, Department of Veterinary Biomedical Sciences

1995-98 Post-doctoral Fellow, University of Illinois, Urbana-Champaign, Department of Molecular and Integrative Physiology

1992-95 Research Assistant, University of Oregon, Department of Exercise and Movement Sciences

Honors and Awards

1996-99 NIH National Research Service Award
In vivo regulation of myosin during muscle hypertrophy (5F32AR008412)

1995 Graduate Research Award

1994 Evonuk Memorial Fellowship

1991-95 Graduate Teaching Fellowship

Teaching Experience

Graduate Courses
1995 Systems Physiology II
1994 Biochemical Principles of Exercise

Undergraduate Courses
1994-95 Exercise Physiology & Laboratory
1991-95 Weight Training I & II

Web Site

Myogenin (http://personalpages.tds.net/~jmccarth/myogenin.html)

Publications

McCarthy, J.J., Henry, S.O., Luckin, K.A., Cholzwinski, N.D., & Klug, G.A. (**1994**). An instrument for the measurement of rapid reaction kinetics. *Anal. Biochem.*, 221, 250-256.

Wiedenman, J.L, Tsika, G.L., Gao, L., **McCarthy, J.J.**, Rivera-Rivera, I.D., Vyas, D., Sheriff-Carter, K., & Tsika, R.W. (**1996**). Muscle- specific and inducible expression of 293-base pair β-myosin heavy chain promoter in transgenic mice. *Am. J. Physiol.*, 271, R688-R695.

Tsika, G.L., Wiedenman, J.L., Gao, L., **McCarthy, J.J.**, Sheriff-Carter, K., Rivera-Rivera, I., & Tsika, R.W. (**1996**). Induction of β-MHC transgene in overloaded skeletal muscle is not eliminated by mutation of conserved elements. *Am. J. Physiol*., 271, C690-C699.

McCarthy, J.J., Fox, A.M., Tsika, G.L., Gao, L., & Tsika, R.W. (**1997**). β-MHC transgene expression in suspended and mechanically overloaded/suspended soleus muscle of transgenic mice. *Am. J. Physiol*., 272, R1552-R1561.

McCarthy, J.J., Vyas, D.R., Tsika, G.L., & Tsika, R.W. (**1999**). Segregated regulatory elements direct β-myosin heavy chain expression in response to altered muscle activity. *J. Biol. Chem*., 274,14270-14279.

Vyas, D.R., **McCarthy, J.J.,** & Tsika, R.W. (**1999**). Nuclear protein binding at the β-myosin heavy chain A/T-rich element is enriched following increased skeletal muscle activity. *J. Biol. Chem*., 274, 30832-30842.

Vyas, D.R., **McCarthy, J.J.**, Tsika, G.L., & Tsika, R.W. (**2000**). Dissimilar nuclear protein binding at human β-myosin heavy chain proximal and distal MCAT elements in response to increased skeletal muscle activity. *Basic Appl. Myol*., 10, 5-16.

Vyas, D.R., **McCarthy, J.J**., Tsika, G.L., & Tsika, R.W. (**2001**). Multiprotein complex formation at the β myosin heavy chain distal muscle CAT element correlates with slow muscle expression but not mechanical overload responsiveness. *J. Biol. Chem*., 276, 1173-1184.

Tsika, R.W., **McCarthy, J.**, Karasseva, N., Ou, Y., & Tsika, G.L. (**2002**). Divergence in species and regulatory role of β-myosin heavy chain proximal promoter muscle-CAT elements. *Am. J. Physiol.* 283, C1761-1775.

Robertson, A.J, Dickey, C.E., **McCarthy, J.J.**, & Coffman, J.A. (**2002**). The expression of SpRunt during sea urchin embryogenesis. *Mech. Dev*., 117, 327-330.

Song, X., Wong, M.D., Kawase, E., Xi, R., Ding, B.C., **McCarthy, J.J**., Xie, T. (**2004**). BMP signals from niche cells directly repress transcription of a differentiation-promoting gene, bag of marbles, in germline stem cells in the Drosophila ovary. *Development*, 131, 1353-1364.

Robertson, A.J., Howard, J.T., Dominski, Z., Schnackenberg, B.J., Sumeral, J.L., **McCarthy, J.J**., Coffman, J.A., & Marzluff, W.F. (**2004**). The sea urchin stemloop binding protein: a maternally expressed protein that likely functions in expression of multiple classes of histone mRNA. *Nucleic Acids Res.*, 32, 811-818.

Coffman, J.A., Dickey-Sims, C.E., Haug, J.S., **McCarthy, J.J**., & Robertson, A.J. (**2004**). Evaluation of developmental phenotypes produced by morpholino antisense targeting of a sea urchin Runx gene. *BMC Biology,* 2:6.

Coffman, J.A., **McCarthy, J.J**., Dickey-Sims, C.E., & Robertson A.J. (**2004**). Oral-aboral axis specification in the sea urchin embryo: II. Mitochondrial distribution and redox state contribute to establishing polarity in *Strongylocentrotus purpuratus*. *Dev. Biol.*, 273, 160-171.