

Curriculum Vitae of Kevin Kane McCully

Personal Data

Born: January 30, 1953 in Roger City, Michigan, USA.
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Education

Western Michigan University, 1975, B.S. Major in Biology, Minor in Math.
University of Michigan, 1985, Ph.D. in Physiology.

Positions

Post-doctoral fellow, Dept. of Biochem/Biophysics, Univer. of Penn., 1985-89.
Research Associate, Dept of Biochem/Biophysics, 1990-91.
Research Assistant Professor of Medicine, Division of Geriatric Medicine, Medical College of Pennsylvania and Hahnemann University (MCPHU), Philadelphia, PA, 6/1990 to 6/30/99.
Associate Professor, Dept of Exercise Science, University of Georgia, Athens, GA. 8/99 to 5/04.
Professor, Dept of Kinesiology, University of Georgia, Athens, GA. 6/04 to present.
Faculty of Gerontology Center, University of Georgia, Athens, GA. 9/99 to present.
Faculty of the Biomedical Health Sciences Institute, 2002 to present.

Honors and Awards

W.M.U. Gary Scholar 1972-1975.
W.M.U. Scholar Athlete of the Year (Swimming), 1975.
Waldo Sangren Scholar, 1975.
U.M. Graduate Student Representative, Physiol. Dept., 1980.
Ninth Annual Peter A. Rechnitzer Lecturer, University of Western Ontario, 2003

Professional Associations

American Academy of Kinesiology and Physical Education, Fellow
American Association of University Professors, Member
American College of Sports Medicine, Fellow
American Physiological Society, Member
Biochemical Society, Member

Committees

Biosafety Committee, MCPHU, 1992-1998
Committee for the Protection of Human Subjects, MCPHU, 1997-1998
Chair, ACSM Special Interest Group on Aging (1999-2001)
Co-Chair, ACSM Special Interest Group on Noninvasive Technologies (2004-2007)
Office of Research, Development and Outreach Advisory Committee, College of Education(2001-)
University Promotion and Tenure Committee (2005-7)
Bio-Imaging Research Center (BIRC) Research Advisory Committee (2006-)

Peer Review

Assist. Editor of J. Gerontology, Biological Sciences (1996-2000), Assistant Editor for Clinical Science, Deputy Editor, Dynamic Medicine, Regular paper reviewer for J. of Appl. Physiol., Am. J. Physiol: Cell, Can J. Physiol. Pharm., Muscle Nerve, Med Sci Sports Ex., British J. Sports Medicine, Eur J. Appl. Physiol., J. Biomed Optics

Served on NIH special emphasis panel on Chronic Fatigue Syndrome (1992-present).
Served on NIH Geriatric and Rehabilitation Medicine study section (2002-2003)
Served on NIH Clinical Integrative Cardiovascular Sciences study section (2006-7)
Served on Military Clinical & Integrative Cardiovascular Science (CICS) Study Section (2006)
Ad Hoc Grant reviewer for Canadian Research Council (2005-7)

Ad Hoc Grant reviewer for American Federation for Aging Research (including 2006)
Singapore national research council (2006)
Ad Hoc Grant reviewer for Australian Heart Association (2004)
Ad Hoc Grant reviewer for VA Merit Review program
Ad Hoc Grant reviewer for Louisiana Board of Regents Pilot grant program
Ad Hoc Grant reviewer for Phillip Morris Research grant program (2001, 2004, 2007)
Ad Hoc Grant reviewer for South African Sport, Physical Activity and Health Programme (2004)

Grant Support

Previous

Muscular Dystrophy Association of America, 1987-88, Post-doctoral fellowship.

U.S. Olympic Committee, 1989, MRS of elite Rowers.

MCPHU Intramural funds:

Correlation of MRS and muscle biopsies, 1991

Measurement of muscle endurance in the elderly, 1992

Non-invasive measurements of muscle blood flow in the elderly, 1995

Measurement of Gait abnormalities in people with PVD, 1997

University of Pennsylvania Intramural funds:

Development of NMR computer tutorial, J. Leigh, (Co-PI), 1992-93

University of Georgia Intramural funds

Gerontology Seed Grant, Assessment of vascular disease in the elderly, 2000-2001

MCG-UGA Biomedical initiative, Assessment of health in underserved elders, M.E. Cress
(Co-P.I.) 2001-2003

UGA-Shepherd Center, Vascular health in spinal cord injured patients, (UGA-P.I.), 2003

UGA-MCG pilot grant, Vascular health, is it fit or fat? (UGA-P.I.) 2004

NIH:

Metabolic Regional Resource and Computing Center. J. Leigh (Outside collaborator)
1990-2001

Muscle metabolism of patients with chronic fatigue syndrome, subproject, B.H. Natelson PI,
1992-1998

Treatment of hypertension with two exercise intensities, J.D. Posner (Co-P.I.), 1997-1998

Muscle blood flow in chronic fatigue syndrome, P.I., 1999-2003

Muscle plasticity and health in SCI. G.A. Dudley (Co-P.I.), 2001-2005

Noninvasive evaluation of skeletal muscle. Funding for Nashville meeting R13 AR053057 B.
Damon (Co-P.I.) 2005

Ralston House:

Feasibility of establishing exercise centers in the Germantown area of Philadelphia, (P.I.)
1995-96

Current

NIH:

Cytokine modulation by follicle-stimulating hormone J.G. Cannon (Co-P.I.) 2005-2007

Muscle plasticity and health in SCI (P.I.), 2008-2013

NSF:

DHB testing a dynamic theory of social emotions using infrared imaging. D. Robinson (Co-
P.I.), 2008-2011

Nestle Purina:

Mechanisms of insulin resistance in cats. M. Honig (Co-P.I.) 2007-8

Teaching Experience

1977-1980 Conference leader and lab instructor, Physiology 102 U.M.
1979-1984 Lab instructor, cardiovascular labs for Physiol. 500 and 502 (Dental & Medical students). U.M.
1980-1983 Lab instructor, blood pressure labs for Physiol. 502 (Dental). U.M.
1982-1983 Lecturer, exercise physiology section for the Program in Physical Therapy. U.M.
1984-1985 Lecturer for seminar course on skeletal muscle injury, Physiol. 807. U.M.
1986 Lecturer for Veterinary Student Exercise Physiology Course. UPenn.
1987 Lecturer NMR section of Biochemistry class for first year medical students. UPenn.
1988 Lecturer Nutrition Research Methods at the Wistar Institute (Philadelphia). Topic: Phosphorus magnetic resonance spectroscopy. UPenn.
1988-89 Laboratory session 31-P MRS equipment to study muscle metabolism. Summer Science Academy (High school students). UPenn.
1988 Lecture NMR and sports medicine. Haverford High School.
1988-90 NMR laboratory sessions for medical students. UPenn.
1991-1994 Lecture 'The Muscular System' Gerontology Course, Freshman medical students, MCPHU.
1992 Lecture to graduate students. 'Noninvasive measurements of metabolism and blood flow'. Univ. Bologna, Bologna Italy.
1998 Problem Based Learning Workshop. Two day workshop to learn fundamentals of PBL
1998 Lectures to MCPHU Physical Therapy students on muscle function and metabolism
1998 Taught 1/2 of neuro unit to first year MCPHU medical students in PBL program
1999 EXRS4630/6630 Exercise Physiology I
1999 EXRS8420 Oxygen Transport
2000 FRSH1020 Research Using Human Subjects in Exercise Physiology
2000 EXRS4630/6630 Exercise Physiology I
2001 EXRS4630/6630 Exercise Physiology I
2001 EXRS7140 Exercise Biochemistry
2001 EXRS8410 Neuromuscular Physiology
2002 EXRS4630 Exercise Physiology I
2002 EXRS4690/6690 Exercise Physiology II
2002 EXRS8420 Oxygen Transport
2003 EXRS4690/6690 Exercise Physiology II
2003 EXRS4630/6630 Exercise Physiology I
2004 Freshman Honors Seminar: Drugs in Sports
2004 EXRS8310 Laboratory Experiences in Exercise Physiology
2004 EXRS4630/6630 Exercise Physiology I
2005 EXRS3700 Exercise Physiology
2005 EXRS4690/6690 Exercise Physiology II
2006 EXRS4690/6690 Exercise Physiology II
2006 EXRS8310 Laboratory Experiences in Exercise Physiology
2006 EXRS4630/6630 Exercise Physiology I
2006 EXRS8420 Oxygen transport
2006 Freshman Honors Seminar: Drugs in Sports
2007 KINS3700 Exercise Physiology
2007 KINS4630/6630 Exercise Physiology I
2007 KINS4690/6690 Exercise Physiology II

Kevin Kane McCully, Ph.D.

List of Publications

Papers

1. Faulkner, J.A., D.R. Claflin, **K.K. McCully**, D.A. Jones. Contractile properties of intact and cut skeletal muscle fibers. *Am. J. Physiol.* 243: C66-C73, 1982.
2. Faulkner, J.A., **K.K. McCully**, D.S. Carlson, J.A. McNamara Jr. Contractile properties of the muscles of mastication of rhesus monkeys (*Macaca Mulatta*) following increase in muscle length. *Archs. Oral Biol.* 27: 841-845, 1982.
3. Faulkner, J.A., J.M. Markely, Jr., **K.K. McCully**, C.R. Watters, T.P. White. Characteristics of cat skeletal muscles grafted with intact nerves or with anastomosed nerves. *Exper. Neurol.* 80: 682-696, 1983.
4. **McCully, K.K.** J.A. Faulkner. Length-tension relationship of mammalian diaphragm muscles. *J. Appl. Physiol.* 54:1681-1686, 1983.
5. **McCully, K.K.** J.A. Faulkner. Injury to skeletal muscle fibers of mice following lengthening contractions. *J. Appl. Physiol.* 59: 119-126, 1985.
6. Chance, B., J.S. Leigh, Jr., J. Kent, **K. McCully**, S. Nioka, B. J. Clark, J. M. Maris, T. Graham. Multiple controls of oxidative metabolism of living tissues as studied by 31-P MRS. *Proc. Nat'l. Acad. Sci. USA* 83:9458-9462, 1986.
7. **McCully, K.K.** J.A. Faulkner. Characteristics of lengthening contractions that result in injury to skeletal muscle. *J. Appl. Physiol.* 61: 293-299, 1986.
8. Park, J.H., R.L. Brown, C. R. Park, **K. McCully**, M. Cohn, B. Chance. Functional pools of oxidative and glycolytic fibers in human muscle during exercise. *Proc. Nat'l. Acad. Sci.* 84: 8976-8980, 1987.
9. Chance, B., S. Nioka, J. Kent, **K. McCully**, M. Fountain, R. Greenfeld, G. Holtom. Time resolved spectroscopy of hemoglobin and myoglobin in resting and ischemic muscle. *Anal. Biochem.* 174: 698-707, 1988.
10. Clark, B.J., M.A. Acker, **K.K. McCully**, H.V. Subramanian, B. Hammond, S. Salmons, B. Chance, L. Stephenson. In vivo 31-P NMR spectroscopy of chronically stimulated canine skeletal muscle. *Am. J. Physiol.* 254: C258-C266, 1988.
11. **McCully, K.K.**, Z. Argov, B.P. Boden, R.L. Brown, W.J. Bank, B. Chance. Detection of muscle injury in humans with 31-P magnetic resonance spectroscopy. *Muscle and Nerve.* 11: 212-216, 1988.
12. Wilson, J.R., **K.K. McCully**, D. M. Mancini, B.P. Boden, B. Chance. Relationship of muscle fatigue to pH in man: a 31-phosphorus nuclear magnetic resonance study. *J. Appl. Physiol.* 64: 2333-2339, 1988.
13. **McCully, K.K.**, B.P. Boden, M. Tuchler, M. Fountain, B. Chance. The wrist flexor muscles of elite rowers measured with magnetic resonance spectroscopy. *J. Appl. Physiol.* 67: 926-932, 1989.
14. Roth, Z., Z. Argov, J. Maris, **K. McCully**, B. Chance. The effect of female sex hormones on steady state phosphate compound levels in exercising rat skeletal muscle as studied with 31-P NMR. *J. Appl. Physiol.* 67: 2060-2065. 1989.
15. Wilson, J.R., D.M. Mancini, **K K. McCully**, N. Ferrato, V. Lanoce, B. Chance. Noninvasive detection of skeletal muscle underperfusion with near-infrared spectroscopy in patients with heart failure. *Circulation.* 80: 1668-1703, 1989.
16. Kent, J., **K. McCully**, B. Chance. Metabolic effects of training in man: a 31-P MRS study. *J. Appl. Physiol.* 69: 1165-1170, 1990.
17. **McCully, K.**, Z. Argov, U. Giger, B. Valentine, B. Cooper, B. Chance, W. Bank. Canine muscular dystrophy studied with phosphorus magnetic resonance spectroscopy. *Muscle Nerve* 14: 1091-1098, 1991.
18. **McCully, K.**, M. Forcia, L. Hack, E. Donlon, R. Wheatly, C. Otis, T. Goldberg, B. Chance. Muscle metabolism during exercise in elderly subjects using 31-P magnetic resonance spectroscopy (MRS). *Can. J. Physiol. Pharm.* 69: 576-580, 1991.

19. Vandenborne, K., **K. McCully**, H. Kakihira, M. Prammer, L. Bolinger, J. Detre, K. DeMeirleir, G. Walter, B. Chance, J. Leigh. Metabolic heterogeneity in human calf muscle during maximal exercise. *Proc. Nat'l. Acad. Sci. USA* 88: 5714-5718, 1991.
20. Lai, K., M. Jaweed, R. Seestead, G. Herbison, J. Ditunno, **K. McCully**, B. Chance. Changes in nerve conduction and Pi/PCr ratio during denervation-reinnervation of the gastroc/soleus muscles of rats. *Arch. Phys. Med. Rehab.* 73: 1155-1159, 1992.
21. Mancini, D.M., G. Walter, N. Reichel, R. Lenkinski, **K.K. McCully**, J.L. Mullen, J. Wilson. Contribution of skeletal muscle atrophy to exercise intolerance and altered muscle metabolism in heart failure. *Cir.* 85:1364-1373, 1992.
22. **McCully, K.**, K. Vandenborne, K. De Meirleir, J. Posner, J. S. Leigh Jr. Muscle metabolism in track athletes using 31-P magnetic resonance spectroscopy. *Can. J. Physiol. Pharm.* 70: 1353-1359, 1992.
23. Barbiroli, B., **K.K. McCully**, S. Iotti, R. Lodi, P. Zaniol, B. Chance. Further impairments of muscle phosphate kinetics by lengthening exercise in BMD/DMD carriers. *J. Neurol. Sci.* 119:65-73, 1993.
24. **McCully, K.**, R. Fielding, W. Evans, J. Leigh, J. Posner. Correlations between in vivo and in vitro metabolism in young and old human skeletal muscles. *J. Appl. Physiol.* 75:813-819, 1993.
25. Shaw, C., K. Gorman, **K. McCully**, J. Posner. Comparison of different bicycle ergometer protocols in elderly males. *J. Cardiopul. Rehab.* 13: 126-133, 1993.
26. **McCully, K.**, C. Halber, J.D. Posner. Exercise-induced changes in oxygen saturation in the calf muscles of elderly subjects with peripheral vascular disease. *J. Geron., Biol.Sci.* 49: B128-B134, 1994.
27. **McCully, K.K.**, S. Iotti, K. Kendrick, Z. Wang, J.D. Posner, J.S. Leigh, Jr., B. Chance. Simultaneous in vivo measurements of HbO₂ saturation and PCr kinetics after exercise in normal humans. *J. Appl. Physiol.* 77: 5-10, 1994.
28. Posner, J. D., **K.K. McCully**, L. Landsberg, L.P. Sands, P. Tycenski, M. Hoffman, and K. Wetterholt. Physical determinants of independence in mature women. *Arch. Phys. Med. Rehab.* 76: 373-380, 1995.
29. Schott, J., **K. McCully**, O. M. Rutherford. Role of metabolites in strength training: II short versus long isometric contractions. *Eur. J. Appl. Physiol.* 71:332-336, 1995.
30. Shaw, C., **K.K. McCully**, J. D. Posner. Injuries during the one repetition maximum assessment in the elderly. *J. Cardiopul. Rehabil.* 15:283-287, 1995.
31. **McCully, K.K.**, B.H. Natelson, S. Iotti, S. Sisto, J.S. Leigh, Jr. Reduced oxidative muscle metabolism in chronic fatigue syndrome. *Muscle Nerve* 19:621-625, 1996.
32. Shaw, C., **K. K. McCully**, L. Landsberg, J. D. Posner. The effect of a submaximal orientation on cardiopulmonary cycle ergometer stress test results in older adults. *J. Cardiopul. Rehabil.* 16:93-99, 1996.
33. Hofmann, M.T., D.N. Nahass, M.N. Felipe, C. Glew, M.G. Suarez, L.A. Landsberg, **K.K. McCully**, J.D. Posner. The effect of multi-disciplinary geriatric assessment team on length of hospital stay and utilization of hospital resources. *Annals Long-Term Care* 5:444-449, 1997.
34. **McCully, K.K.**, L. Landsberg, M. Suarez, J.D. Posner. Identification of peripheral vascular disease in elderly subjects using optical spectroscopy. *J. Gerontology Biol. Sci.* 52A:B159-B165, 1997.
35. Walter, G, K. Vandenborne, **K. McCully**, J. Leigh. Noninvasive measurement of oxidative capacity in a single muscle. *Am. J. Physiol. Cell.* 272:C525-C534, 1997.
36. Mangione, K.K., **K. McCully**, A. Gloviak, I. Lefebvre, M. Hofmann, R. Craik. The effects of high intensity and low intensity cycle ergometry in older adults with knee osteoarthritis. *J. Gerontology Med. Sci.* 54A: M184-M190, 1999.
37. **McCully, K.K.**, C. Leiper, T. Sanders, E. Griffin. Gait and peripheral vascular disease. *J. Gerontology Biol. Sci.* 54:B291-B294, 1999.
38. **McCully, K.**, U. Giger, B. Chance. In vivo determination of altered hemoglobin saturation in dogs with M-type phosphofructokinase deficiency. *Muscle Nerve* 22:621-627, 1999.

39. **McCully, K.**, B. Natelson. Impaired oxygen delivery in chronic fatigue syndrome. *Clinical Science* 97: 603-608, 1999.
40. Miura H, **K., McCully**, S. Nioka, B Chance. Validity for measuring skeletal muscle oxygen status using functional near infrared imaging machine. *Jpn J Phys Fitness Sports Med.* 49:211-216, 2000.
41. Miura, H., B. Chance, **K. McCully**. Relationship between heterogeneity for oxygen status and individual differences in physical fitness. *Ono Sports Science.* 8:67-76, 2000.
42. Miura H, **K., McCully**, L. Hong, S. Nioka, B Chance. Regional differences of muscle oxygen saturation and blood volume determine by near infrared imaging device. *Japanese J. Physiology.* 51:599-606, 2001.
43. **McCully, K.**, B. Authier, J. Olive, B. J. Clark III. Muscle fatigue: the role of metabolism. *Canadian J. Exercise Physiology.* 27:70-82, 2002
44. Olive, J.L., A.E. DeVan, **K.K. McCully**. The effects of aging and activity on muscle blood flow. *Dynamic Med.* 1:2, 2002.
45. Olive, J., **K. McCully**, G. Dudley. Abnormal blood flow in incomplete spinal cord injury patients. *Spinal Cord Spinal Cord.* 40:640-646, 2002.
46. **McCully, K.**, B. Authier, J. Olive, B.J. Clark. Muscle fatigue: the role of metabolism. *Can. J. Exer. Physiol.* 27:70-82, 2002.
47. Black, C.D., B. Vickerson, **K.K. McCully**. Noninvasive Assessment of Vascular Function in the Posterior Tibial Artery of Healthy Humans. *Dynamic Med.* 2:1, 2003.
48. **McCully, K.**, S. Smith, S. Rajaei, J. Leigh, Jr., B. Natelson. Blood flow and muscle metabolism in chronic fatigue syndrome. *Clinical Sci.* 104:64-647, 2003.
49. Nioka S, **K. McCully**, G. McClellan, J. Park, B. Chance. Oxygen transport and intracellular bioenergetics on stimulated cat skeletal muscle. *Adv Exp Med Biol.* 510:267-272, 2003.
50. Olive, J.L., G. Dudley, **K. McCully**. Vascular remodeling after spinal cord injury. *Med. Sci. Sports Exer.* 35: 901-907, 2003.
51. Olive, J.L., J. Slade, G. Dudley, **K. McCully**. Is muscle fatigue related to blood flow: A comparison between able-bodied and spinal cord injured individuals. *J. Appl. Physiol.* 94:701-708, 2003.
52. Castellano, V., J. Olive, L. Stoner, C. Black, **K. McCully**. Blood flow response to a postural challenge in older men and women. *Dynamic Med.* Jan 16, 3(1):1, 2004.
53. **McCully, K.**, S. Smith, S. Rajaei, J. Leigh, Jr., B. Natelson. Muscle metabolism and blood flow restriction in chronic fatigue syndrome. *J. Appl. Physiol.* 96:871-878, 2004.
54. Meyer, R.A., T.F. Towse, R.W. Reid, R.C. Jayaraman, R.W. Wiseman, **K. K. McCully**. BOLD MRI mapping of transient hyperemia in skeletal muscle after single contractions. *NMR in Biomedicine.* 17:392-398, 2004.
55. Miura, H., **K. McCully**, S. Nioka, B. Chance. Relationship between muscle architectural features and oxygenation status determined by near infrared device. *Eur. J. Appl. Physiol.* 91: 273-278, 2004.
56. Olive, J.L., J. Slade, C. S. Bickel, G. Dudley, **K. McCully**. Increasing blood flow prior to exercise in spinal cord injured individuals does not alter skeletal muscle fatigue. *J. Appl. Physiol.* 96:477-482, 2004
57. Stoner, L., M. Sabetier, K. Edge, **K. McCully**. The relationship between blood velocity and conduit artery diameter, and the effects of smoking on vascular responsiveness. *J. Appl. Physiol.* 96: 2139-2145, 2004.
58. Black, C.D., P. J. O'Connor, **K.K. McCully**. Increased daily physical activity and fatigue symptoms in chronic fatigue syndrome. *Dynamic Med.* Jan 11;5:1, 2006.
59. Sabatier, M.J., L. Stoner, E.T. Mahoney, C. Black, C. Elder, G.A. Dudley, **K. McCully**. Electrically-stimulated resistance training in SCI individuals increases muscle fatigue resistance but not femoral artery size or blood flow. *Spinal Cord.* 44:227-233, 2006.
60. Sabatier MJ, L Stoner, MA Reifenberger, **K McCully**. Doppler Ultrasound Assessment of Posterior Tibial Artery Size in Humans. *Journal of Clinical Ultrasound* 34:223-230, 2006.

61. Stoner L, MJ Sabatier, L Vanhiel, D Groves, D. Ripley, **K. McCully**. Upper versus lower extremity arterial function after spinal cord injury. *Journal of Spinal Cord Medicine*. **29**:138-146, 2006.
62. Stoner, L., M. Sabatier, E. Mahoney, G.A. Dudley, and **K. McCully**. Electrical stimulation evoked resistance exercise therapy improves arterial health after chronic SCI. *Spinal Cord*. **45**(1):49-56, 2007.
63. Maridakis, V., P.J. O'Connor, G.A. Dudley, and **K. McCully**. Caffeine attenuates delayed onset muscle pain and force loss following eccentric exercise. *Pain*. **8**: 237-43, 2007.
64. Duren, C. M., M. E. Cress, **K. K. McCully**. The Influence of Physical Activity and Yoga on Central Arterial Stiffness [Accepted]
65. Mahoney, E. T., T. W. Puetz, G. A. Dudley, and **K. K. McCully**. Low frequency fatigue in individuals with spinal cord injury. *Spinal Cord* [In Press]
66. Sabatier, M.J., **K. K. McCully**, E. L. Marinik, E. H. Schwark, S. Haddow, M. Cortez-Cooper, M. F. Bergeron, G. J. Sloan, R. D. Lewis, and J. G.. Cannon. Leptin, blood pressure, and aerobic fitness in middle-aged women. [Submitted]
67. **McCully K.K.**, A. McPherson, M. King. The influence of passive stretch on gastrocnemius muscle oxygen saturation. [Submitted]

Symposium Proceedings, Book Chapters, and other articles

1. Chance, B., J.S. Leigh, Jr., J. Kent, **K. McCully**. Metabolic control principles and 31-P NMR. *Fed. Proc.* **45**: 2915-2920, 1986.
2. Chance, B., J.S. Leigh, Jr., **K. McCully**, Z. Argov, B. Boden. Evaluation of human exercise performance capability in human limbs. In: *Biochemical Aspects of Physical Exercise*. Benzi, G., L. Packer, and N. Siliprandi, Eds. Elsevier Science Pub., B.V., Amsterdam. 491-502, 1986.
3. Chance, B., D.P. Younkin, R. Kelly, W.J. Bank, H.D. Berkowitz, Z. Argov, E. Donlon, B. Boden, **K. McCully**, N. M. R. Buist, N. Kennaway. Magnetic resonance spectroscopy of normal and diseased muscles. *Am. J. Med. Genetics*. **25**: 659-679, 1986.
4. Faulkner, J.A., D.R. Claflin, **K.K. McCully**. Power outputs of fast and slow fibers from human skeletal muscles. In: *Human Power Output*. N. L. Jones and N. McCartney. Eds., Human Kinetics Publishers, Inc., Champaign, Illinois, pp. 81-91, 1986.
5. Faulkner, J.A., P.J. Guelinckx, **K.K. McCully**, T.P. White. Functional deficits in free and vascularized grafts. In: *Proceedings of the 2nd Vienna Muscle Symposium*, M. Frey and G. Freilinger, Eds., Facultas Universitatsverlag, Vienna, pp. 68-74, 1986.
6. **McCully, K.K.** Exercise-induced injury to skeletal muscle. *Fed. Proc.* **45**: 2933-2936, 1986.
7. Faulkner, J.A., D.R. Claflin, **K.K. McCully**. Muscle function in the cold. In: *Hypoxia and Cold*. Eds: J. R. Sutton, C. S. Houston, and G. Coates. Preager Publishers, New York, 429-436, 1987.
8. **McCully, K.K.** B. Chance. Skeletal muscle injury during exercise. In: *Respiratory Muscles and their Neuromotor Control*. Sieck, G.S., S. Gandevia, W.E. Cameron, Eds., Alan R. Liss, Inc. New York, N. Y. 317-326, 1987.
9. **McCully, K.K.** B. Chance. Theory and application of magnetic resonance spectroscopy. *J. Hrt. Failure*. **3**: 144-148, 1987.
10. **McCully, K.K.**, J. A. Kent, B. Chance. Application of 31-P magnetic resonance spectroscopy to the study of athletic performance. *Sports Med*. **5**:312-321, 1988.
11. **McCully, K.**, J. Kent, and B. Chance. Evaluation of athletic performance using 31-P magnetic resonance spectroscopy. *Revista de Investigacion y Documentacion sobre las Ciencias de la Educacion Fisica y del Deporte Instituto de Ciencias de la Educacion Fisica y del Deporte*. Madrid, Spain. **4**(8): 71-92, 1988.
12. Quistorff, B., E. J. Pedersen, **K. McCully**, B. Chance. Metabolic effects of alcohol studied by 31-P NMR in rat and in man. *Alfred Benzon Symposium*. Eds: J. W. Jaroszewski, K. Schaumberg, and H. Kofod. Munksgaard, Copenhagen, Denmark. **26**:449-571, 1988.

13. Osbakken, M., **K. McCully**, M. Young, J. Pigott, L. Ligeti, M. Shinnar, J. Huddel, J. Closter, B. Chance. Uses of NMR techniques to study the effects of loading of skeletal muscle and heart: Potential for evaluation of the athlete. II Int'l. Conference on Sports Cardiology. Sorrento, Italy. pp. 335-348, 1988.
14. Chance, B., E. Borer, A. Evans, G. Holtom, J. Kent, M. Maris, **K. McCully**, J. Northrop, M. Shinkwin. Optical and nuclear magnetic resonance studies of hypoxia in human tissue and tumors. *N. Y. Acad. Sci.* 551: 1-16, 1989.
15. **McCully, K.K.**, J.A. Kent, B. Chance. Muscle injury and stress measured with 31-P magnetic resonance spectroscopy. *Muscle Energetics. Progress in Clinical and Biological Research*; Vol. 315 R. J. Paul, K. Yamada, and G. Elzinga, Eds. A. R. Liss. NY 197-207, 1989.
16. **McCully, K.**, J. Kent, H. Berkowitz, B. Chance. Muscle fatigue and carnitine determination. *International Union of Angiology: 15th World Congress.* Rome, Italy. Sept. 17th-22nd, 1989.
17. **McCully, K.** Magnetic Resonance Spectroscopy in Sports Medicine. Presented at the 9th Annual meeting of the Society of Magnetic Resonance in Medicine. August, 1990. *Book of Abs., Soc. Mag. Res. Med.* 1: 327, 1990.
18. **McCully, K.K.**, B.J. Clark, J.A. Kent, J. Wilson, and B. Chance. Biochemical adaptations to training: implications for resisting muscle fatigue. *Symposium: Cellular aspects of skeletal muscle fatigue. Can J. Physiol. Pharm.* 69:274-278, 1991.
19. **McCully, K.K.**, B. J. Clark, D. Klurfeld, J. Wilson, J. Posner, B. Chance. Biochemical adaptations to training and muscle fatigue. *La fatigue musculaire: Aspects biochimiques et physiologiques.* G. Atlan, L. Beliveau, and P. Boussou, Eds. Masson. Paris France. 19-27, 1991.
20. **McCully, K.K.**, H. Kakihira, K. Vandenborne, J. A. Kent-Braun. Noninvasive measurements of activity-induced changes in muscle metabolism. *J. Biomech.* 24: (Suppl.) 153-162, 1991.
21. **McCully, K.K.**, F. G. Shellock, W. J. Bank, J. D. Posner. The use of nuclear magnetic resonance to evaluate muscle injury. *Med. Sci. Sports Ex.* 24:537-542, 1992.
22. **McCully, K.K.** J. D. Posner. Measuring exercise-induced adaptations and injury with magnetic resonance spectroscopy. *Int'l J. Sports Med.* 13(Suppl. 1): S147-S149, 1992.
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