

**CURRICULUM VITAE**  
**JOHN C. YOUNG, Ph.D.**

Department of Kinesiology  
 College of Health and Human Sciences  
 University of Nevada, Las Vegas  
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<i>Academic:</i>	B.S. Ed.	University of Michigan	1970
	M.S.	University of Michigan	1976
	Ph.D.	University of Wisconsin - Madison	1980
<i>Employment:</i>	Professor, Department of Kinesiology		1998
	Chair, Department of Kinesiology		1998-2000
	Interim Chair, Department of Kinesiology		1995-97
	Associate Professor, Department of Kinesiology, University of Nevada Las Vegas, Las Vegas, NV		1991-97
	Assistant Research Professor, Department of Physiology, School of Medicine, Boston University		1989-91
	Assistant Professor, Department of Health Sciences, Sargent College of Allied Health Professions, Boston University, Boston, MA		1983-91
	National Institutes of Health Postdoctoral Research Fellow (NRSA), Department of Preventive Medicine, Washington University School of Medicine, St. Louis, MO (John O. Holloszy, M.D., Sponsor)		1980-83
	Teaching Assistant, University of Wisconsin - Madison (Physical Education)		1978-80
	Project Assistant, University of Wisconsin - Madison (Biodynamics Laboratory)		1976-77
	Teaching Assistant, University of Michigan (Physical Education)		1975-76
	Medical Assistance Eligibility Examiner, Wayne County Department of Social Services, State of Michigan		1972-76
	Substitute Teacher, Detroit Public Schools, Detroit, MI		1971-72
<i>Professional Societies:</i>	American College of Sports Medicine, Fellow American Physiological Society		

*Professional Activities:*

Manuscript Reviewer

Journal of Applied Physiology; Medicine and Science in Sports and Exercise; American Journal of Physiology; Diabetologia; Diabetes Care; Journal of Clinical Endocrinology and Metabolism; Journal of Clinical Investigation; Diabetes, Sports Medicine, Life Sciences, Obesity Research

Committees

Member-at-Large, Southwest Regional Chapter Administrative Council, American College of Sports Medicine, 1996-99

Advisory Board, ACSM's Health & Fitness Journal, 1997-98; Editorial Board, 1999

Member, Multi-Speciality Physician Advisory Board, Diabetes Treatment Center, Desert Springs Hospital, Las Vegas, NV, 1995-

Abstract review committee, American College of Sports Medicine annual meeting: Carbohydrate Metabolism Section, 1986; Carbohydrate Metabolism Section, 1987; Nutrition and Sports Section, 1988

Invited Speaker

Symposium - Sports Nutrition Update, New England Chapter American College of Sports Medicine annual meeting, 1986; "Exercise and the Thermogenic Effect of Food"

Symposium on Exercise Physiology, University of Wisconsin-Madison, 1989; "Epinephrine-induced Glycogen Depletion: Effect on Glucose Uptake"

Symposium - Cholesterol: Detection and Intervention, New England Chapter American College of Sports Medicine annual meeting, 1989; "Cholesterol and Exercise Intervention"

Clinical Exercise Physiology Symposium and Workshop, Northeastern University, 1990; "Exercise Physiology I: Metabolism", and "Tutorial: Metabolic Calculations"

Acarbose Preclinical Workshop, Miles Institute for Preclinical Pharmacology, 1991; "Effect of Acarbose on Glucose Uptake in Skeletal Muscle"

Symposium - Physiology of Sport, Southwest Chapter American College of Sports Medicine annual meeting, 1993; "Physiological Considerations in Soccer"

Diabetes Nurse Educators Association, Las Vegas, NV, 1997; "Exercise and Diabetes Management"

ACSM Health & Fitness Summit, New Orleans, LA, 1999; "Exercise - The Missing Link in Diabetes Management"

2002 Las Vegas Diabetes Symposium, American Diabetes Association; "Exercise Physiology - The Role Exercise Plays in the Successful Management of Diabetes"

Teacher's Health Trust, Las Vegas, NV, 2002; "Steppin Up to a Healthy Lifestyle"

Which Weigh to Go: Strategies for Weight Management. Nevada Educational Associates for Diabetes, Las Vegas, NV, 2003; "Exercise and the Management of Obesity"

#### Other

Chair, Free Communications Session, New England Chapter, American College of Sports Medicine annual meeting, 1984

Moderator, Symposium - Physiology of Sport, Southwest Chapter American College of Sports Medicine annual meeting, 1993

Chair, Free Communications Session, Southwest Chapter, American College of Sports Medicine annual meeting, 1997, 1998, 1999

#### Presentations

Federation of American Societies for Experimental Biology, 1981 annual meeting, Atlanta, GA; "Glycogen synthesis from lactate in rat skeletal muscle"

American College of Sports Medicine, 1984 annual meeting, San Diego, CA; "Role of intramuscular triglycerides in exercise"

American College of Sports Medicine, 1985 annual meeting, Nashville, TN; "Effect of prior exercise on dietary-induced thermogenesis"

Federation of American Societies for Experimental Biology, 1988 annual meeting, Las Vegas, NV; "Effect of lowered muscle glycogen content on glucose uptake"

Federation of American Societies for Experimental Biology, 1991 annual meeting, Atlanta, GA; "Skeletal muscle glucose uptake following overload-induced hypertrophy"

14th International Diabetes Federation Congress, Washington, D.C., 1991; "Effect of oral  $\alpha$ -glucosidase inhibitor BAY g5421 on glucose uptake in skeletal muscle"

Federation of American Societies for Experimental Biology, 1992 annual meeting, Anaheim, CA; "Meal size and frequency: effect on potentiation of TEF by prior exercise"

Experimental Biology 1994 annual meeting, Anaheim, CA; "Blood flow as a determinant of glucose uptake in skeletal muscle"

American College of Sports Medicine, 1994 annual meeting, Indianapolis, IN; "Effect of a fat meal on potentiation of TEF by prior exercise"

American College of Sports Medicine, 1995 annual meeting, Minneapolis, MN; "Role of dihydropyridine sensitive calcium channels in glucose uptake in skeletal muscle"

American College of Sports Medicine, 1996 annual meeting, Cincinnati, OH; "Effect of static stretching on lactate removal after high intensity exercise"

Experimental Biology 2000 annual meeting, San Diego, CA; "The effect of creatine supplementation on glucose transport in rat skeletal muscle"

## *Publications*

1. Fell, R.D., S.E. Terblanche, J.L. Ivy, J.C. Young, and J.O. Holloszy. Effect of muscle glycogen content on glucose uptake following exercise. **Journal of Applied Physiology** 52: 434-437, 1982.
2. Juhlin-Dannfelt, A.C., S.E. Terblanche, R.D. Fell, J.C. Young, and J.O. Holloszy. Effect of beta-adrenergic receptor blockade on glycogenolysis during exercise. **Journal of Applied Physiology** 53: 549-554, 1982.
3. Young, J.C., M. Chen, and J.O. Holloszy. Maintenance of the adaptation of skeletal muscle mitochondria to exercise in old rats. **Medicine and Science in Sports and Exercise** 15: 243-246, 1983.
4. Young, J.C., S.M. Garthwaite, J.E. Bryan, L.-J. Cartier, and J.O. Holloszy. Carbohydrate feeding speeds reversal of enhanced glucose uptake in muscle after exercise. **American Journal of Physiology** 245: R684-R688, 1983.
5. Ivy, J.L., J.C. Young, J.A. McLane, R.D. Fell, and J.O. Holloszy. Exercise-training and glucose uptake by skeletal muscle in rats. **Journal of Applied Physiology** 55: 1395-1396, 1983.
6. Ruderman, N.B., J.C. Young, and S.H. Schneider. Exercise as a therapeutic tool in the type I diabetic. **Practical Cardiology** 10: 143-153, 1984.
7. Hurley, B.F., J.M. Hagberg, W.K. Allen, D.R. Seals, J.C. Young, R.W. Cuddihee, and J.O. Holloszy. Effect of training on blood lactate levels during submaximal exercise. **Journal of Applied Physiology** 56: 1260-1264, 1984.
8. Young, J.C., J.E. Bryan, S.H. Constable, G.F. Tutwiler, and J.O. Holloszy. Effects of oral hypoglycemic agent methyl palmoxirate on exercise capacity of rats. **Canadian Journal of Physiology and Pharmacology** 62: 815-818, 1984.
9. Constable, S.H., J.C. Young, M. Higuchi, and J.O. Holloszy. Glycogen resynthesis in leg muscles of rats during exercise. **American Journal of Physiology** 247: R880-R883, 1984.
10. Zorzano, A., T.W. Balon, L.J. Brady, P. Rivera, L.P. Garetto, J.C. Young, M.N. Goodman, and N.B. Ruderman. Effects of starvation and exercise on concentrations of citrate, hexose phosphates, and glycogen in skeletal muscle and heart. Evidence for selective operation of the glucose-fatty acid cycle. **Biochemical Journal** 232: 585-591, 1985.
11. Schneider, S.H., J.C. Young, and N.B. Ruderman. Exercise studies in the diabetic. In, **Methods in Diabetes Research, Vol. II: Clinical Methods**. W.L. Clarke, J. Larner, and S.L. Pohl, eds. New York: John Wiley & Sons, 1986. p. 407-424.
12. Young, J.C., J.L. Treadway, E.I. Fader, and R.F. Caslin. Effects of oral hypoglycemic agent methyl palmoxirate on exercise capacity of streptozocin diabetic rats. **Diabetes** 37: 744-748, 1986.
13. Adams, R.P., P.A. Cashman, and J.C. Young. The effect of hyperoxia on substrate utilization during intense submaximal exercise. **Journal of Applied Physiology** 61: 523-529, 1986.
14. Ruderman, N.B., T.W. Balon, A. Zorzano, M.N. Goodman, and J.C. Young. Acute and chronic metabolism changes following exercise: Mechanisms and physiological relevance. In, **Nutrition and Exercise**. M. Winick, ed. New York: John Wiley & Sons, 1986. p. 1-8.

15. Young, J.C., J.L. Treadway, T.W. Balon, H.P. Gavras, and N.B. Ruderman. Prior exercise potentiates the thermic effect of a carbohydrate load. **Metabolism** 35: 1048-1053, 1986.
16. Young, J.C. and N.B. Ruderman. Exercise and Metabolic Disorders. In, **Principles of Exercise Biochemistry**. J. Poortmans, ed. Medicine and Sport Science, Vol. 27. Basel: Karger, 1988. p. 230-253.
17. Treadway, J.L. and J.C. Young. Decreased glucose uptake in the fetus after maternal exercise. **Medicine and Science in Sports and Exercise** 21: 140-145, 1989.
18. Young, J.C., J. Enslin, and B. Kuca. Exercise intensity and glucose tolerance in trained and non-trained subjects. **Journal of Applied Physiology** 67: 39-43, 1989.
19. Treadway, J.L. and J.C. Young. Failure of prior low intensity exercise to potentiate the thermic effect of glucose. **European Journal of Applied Physiology** 60: 377-381, 1990.
20. Young, J.C., T.G. Kurowski, A.M. Maurice, R. Neshet, and N.B. Ruderman. Polymyxin B inhibits contraction stimulated glucose uptake in rat skeletal muscle. **Journal of Applied Physiology** 70: 1650-1654, 1991.
21. Snyder-Mackler, L., Z. Ladin, A.A. Schepsis, and J.C. Young. Electrical stimulation of the thigh muscles after reconstruction of the anterior cruciate ligament. **Journal of Bone and Joint Surgery** 73-A: 1025-1036, 1991.
22. Holloszy, J.O., M. Chen, G.D. Cartee, and J.C. Young. Atrophy of skeletal muscle in old rats: differential changes in the three fiber types. **Mechanisms of Ageing and Development** 60: 199-213, 1991.
23. Ivy, J.L., J.C. Young, B.W. Craig, W.M. Kohrt, and J.O. Holloszy. Aging, exercise, and food restriction: effects on skeletal muscle glucose uptake. **Mechanisms of Ageing and Development** 61: 123-133, 1991.
24. Young, J.C., S.C. Kandarian, and T.G. Kurowski. Skeletal muscle glucose uptake following overload-induced hypertrophy. **Life Sciences** 50: 1319-1325, 1992.
25. Young, J.C. and J.L. Treadway. The effect of prior exercise on oral glucose tolerance in late gestational women. **European Journal of Applied Physiology** 64: 430-433, 1992.
26. Balon, T., J. Treadway, J. Hughes, J. Young, and N. Ruderman. The effect of prior exercise and insulin on potential thermogenic systems in rat skeletal muscle. **Journal of Applied Physiology** 72: 2203-2209, 1992.
27. Kandarian, S.C., J.C. Young, and E.E. Gomez. Adaptation in synergistic muscles to soleus and plantaris muscle removal in the rat hindlimb. **Life Sciences** 51: 1691-1698, 1992.
28. Young, J.C., J.L. Treadway, and N.B. Ruderman. Effect of acarbose on glucose uptake in skeletal muscle. In, **Drugs in Development, Vol. I ∇- Glucosidase Inhibition: Potential Use in Diabetes**. J.R. Vasselli, C.A. Maggio, and A. Scriabine, eds. Branford, CT: Neva Press, 1993. p. 75-84.
29. Young, J.C. and N.B. Ruderman. Exercise and Metabolic Disorders. In, **Principles of Exercise Biochemistry, 2nd. rev. ed.**, J.R. Poortmans, ed. Medicine and Sport Science, Vol. 38. Basel: Karger, 1993. p. 269-298.
30. Morrison-Gibson, M.A. and J.C. Young. Effect of exercise mode on recovery

- oxygen consumption. **The Journal, NAHPERD** 10: 31-32, 1994.
31. Young, J.C. Exercise prescription for individuals with metabolic disorders: practical considerations. **Sports Medicine** 19: 43-54, 1995.
  32. Liggett, C.L., R.D. Tandy, and J.C. Young. The effect of prophylactic knee bracing on running gait. **Journal of Athletic Training** 30: 159-161, 1995.
  33. Young, J.C. Meal size and frequency: effect on potentiation of the thermal effect of food by prior exercise. **European Journal of Applied Physiology** 70: 437-441, 1995.
  34. Williams, N.I., J.C. Young, J.W. McArthur, B. Bullen. G.S. Skrinar, and B. Turnbull. Strenuous exercise with caloric restriction: effect on luteinizing hormone secretion. **Medicine and Science in Sports and Exercise** 27: 1390-1398, 1995.
  35. Young, J.C. and T. W. Balon. Role of dihydropyridine sensitive calcium channels in glucose transport in skeletal muscle. **Life Sciences** 61: 335-342, 1997.
  36. Young, J.C. Exercise for clients with type 2 diabetes. Facts and guidelines. **ACSM's Health & Fitness Journal** 2(3): 24-29, 1998.
  37. Balon, T.W., A.P. Jasman, and J.C. Young. Effects of chronic N(omega)-nitro-l-arginine methyl ester administration on glucose tolerance and skeletal muscle glucose transport in the rat. **Nitric Oxide** 3: 312-320, 1999.
  38. Young, J.C. Exercise Prescription for Individuals with Metabolic Disorders. In, **Exercise for Health**. J.N. Shanahan, ed. Auckland, NZ: Adis Books, 2000. p. 43-55.
  39. Young, J.C. Exercise: Missing link in diabetes management? **The American Journal of Medicine & Sports** 3:28-35, 2001.
  40. Young, J.C. and R.E. Young. The effect of creatine supplementation on glucose uptake in rat skeletal muscle. **Life Sciences** 71:1731-1737, 2002.
  41. Denzer, C.M. and J.C. Young. The effect of resistance exercise on the thermic effect of food. **International Journal of Sport Nutrition and Exercise Metabolism** 13:402-409, 2003.

## Abstracts

1. Foss, M.L., J.C. Young, and P. Bjorntorp. Training and fatness: lack of specificity effects with equal quantity - variable modality. **Medicine and Science in Sports** 9: 63, 1977.
2. Young, J.C., C.L. Gribskov, and R.W. Swick. Glycogen synthesis from lactate in rat skeletal muscle. **Federation Proceedings** 40(3): 1614, 1981.
3. Cartier, L.-J., R.W. Cuddihee, M. Chen, J.C. Young, S.M. Garthwaite, and J.O. Holloszy. Effects of iron deficiency on composition of skeletal muscle mitochondria. **Federation Proceedings** 41(5): 8585, 1982.
4. Young, J.C., J.E. Bryan, and J.O. Holloszy. Role of intramuscular triglycerides in exercise. **Medicine and Science in Sports and Exercise** 16: 174, 1984.
5. Young, J.C., J.L. Treadway, and N.B. Ruderman. Effect of prior exercise on dietary-induced thermogenesis. **Medicine and Science in Sports and Exercise** 17: 205, 1985.
6. Treadway, J.L., J.C. Young, E.I. Fader, and R.F. Caslin. Effects of an oral hypoglycemic agent on exercise performance of diabetic rats. **Medicine and Science in Sports and Exercise** 17: 280, 1985.
7. Treadway, J.L. and J.C. Young. The effect of prior exercise upon the thermic effect of glucose: dependence on exercise intensity. **Diabetes** 35 (Supplement 1): 742, 1986.
8. Treadway, J.L. and J.C. Young. Decreased glucose uptake in the fetus after exercise. **Medicine and Science in Sports and Exercise** 19 (Supplement): 30, 1987.
9. Young, J.C., T.G. Kurowski, A.M. Maurice, and N.B. Ruderman. Effect of lowered muscle glycogen content on glucose uptake. **FASEB Journal** 2(6): 7711, 1988.
10. Heydrick, S., K. Chen, J. Young, and N. Ruderman. Insulin induces an increase in skeletal muscle diacylglycerol that may result from denovo synthesis. **Diabetes** 39 (Supplement 1): 1173, 1990.
11. Young, J.C. and S.C. Kandarian. Skeletal muscle glucose uptake following overload-induced hypertrophy. **FASEB Journal** 5(5): 3730, 1991.
12. Young, J.C., T.G. Kurowski, T. O'Hare, J.R. Vasselli, and N.B. Ruderman. Effect of oral  $\alpha$ -glucosidase inhibitor BAY g5421 on glucose uptake in skeletal muscle. **Diabetes** 40 (Supplement 1): 98, 1991.
13. Heydrick, S., K. Chen, J. Young, and N. Ruderman. Insulin induces increases in skeletal muscle diacylglycerol that are dependent on glucose. **Diabetes** 40 (Supplement 1): 953, 1991.
14. Young, J.C. and B. Kuca. Meal size and frequency: effect on potentiation of TEF by prior exercise. **FASEB Journal** 6(5): 6294, 1992.
15. Williams, N., J. McArthur, B. Bullen, G. Skrinar, B. Turnbull, and J. Young. Slowed LH pulse frequency in trained eumenorrheic women due to caloric restriction combined with heavy training. **Medicine and Science in Sports and Exercise** 24 (Supplement): 219, 1992.
16. Liggett, C.L. and J.C. Young. Energy cost of traveling a fixed distance (one mile) at different speeds. **Medicine and Science in Sports and Exercise** 25 (Supplement):

- 68, 1993.
17. Wulff, S., L.A. Golding, and J. Young. Comparison of actual to predicted maximal heart rate in trained older individuals. **Sports Medicine, Training and Rehabilitation** 4: 153, 1993.
  18. Morrison-Gibson, M.A. and J.C. Young. Effect of exercise mode on excess postexercise oxygen consumption. **Sports Medicine, Training and Rehabilitation** 4: 314, 1993.
  19. Young, J.C. Blood flow as a determinant of glucose uptake in skeletal muscle. **FASEB Journal** 8(4): 1778, 1994.
  20. Young, J.C. and C.B. Palmer-Lynch. Effect of a fat meal on potentiation of TEF by prior exercise. **Medicine and Science in Sports and Exercise** 26 (Supplement): 888, 1994.
  21. Young, J.C. Role of dihydropyridine sensitive calcium channels in glucose uptake in skeletal muscle. **Medicine and Science in Sports and Exercise** 27 (Supplement): 683, 1995.
  22. Liggett, C., J. Young, and R. Tandy. Effect of prophylactic knee braces on running gait. **Sports Medicine, Training and Rehabilitation** 6: 239, 1995.
  23. Morrison-Gibson, M.A. and J.C. Young. Effect of prior muscle fatigue on lactate production during submaximal exercise. **Sports Medicine, Training and Rehabilitation** 6: 245, 1995.
  24. Young, J.C. and K.T. Pitt. Effect of static stretching on lactate removal after high intensity exercise. **Medicine and Science in Sports and Exercise** 28 (Supplement): 406, 1996.
  25. DiNenna, J.A. and J.C. Young. The relationship between plasma  $K^+$  and the ventilatory drift during steady state exercise. **Medicine and Science in Sports and Exercise** 30 (Supplement): 238, 1998.
  26. Herman, J.A. and J.C. Young. The effect of caffeine on high-intensity, intermittent exercise to exhaustion. **Medicine and Science in Sports and Exercise** 30 (Supplement): 1383, 1998.
  27. Navalta, J.W., J.C. Young, and R.D. Tandy.  $VO_2$  transitional response to a crossover from priming exercise. **Medicine and Science in Sports and Exercise** 31 (Supplement): 407, 1999.
  28. Young, J.C., R.E. Young, and C.J. Young. The effect of creatine supplementation on glucose transport in rat skeletal muscle. **FASEB Journal** 14(4): 99.10, 2000.
  29. Young, R.E. and J.C. Young. The effect of creatine supplementation on size and performance of rat skeletal muscle. **Medicine and Science in Sports and Exercise** 32 (Supplement): 566, 2000.
  30. Denzer, C.M. and J.C. Young. The effect of resistance exercise on the thermic effect of food. **FASEB Journal** 16(5): 859.33, 2002.
  30. Boersma, H., J. Mercer, M. Varon, and J.C. Young. Prediction of performance time on a treadmill stress test following a Bruce protocol. **Medicine and Science in Sports and Exercise** 34 (Supplement): 23, 2002.
  30. Kruskall, L.J., B. Nielsen, S.L. Meacham, and J.C. Young. Skeletal muscle as the site of dietary-induced insulin resistance. **FASEB Journal** 17(5): 570.6, 2003.

## *Grant Activities*

### Principal Investigator

1. McNeil Pharmaceutical: Effect of Methyl Palmoxirate on Exercise Capacity of Diabetic Rats. Period of Award 12-1-83 to 12-31-84 (\$6,600).
2. Boston University BRSG: Effect of Exercise Intensity on Glucose Tolerance. Period of Award 1-1-84 to 4-30-85 (\$1,889).
3. Boston University BRSG (summer salary support grant): Effect of a Single Bout of Exercise on Glucose Tolerance and Insulin Sensitivity. Period of Award Summer, 1984 (\$1,500).
4. American Diabetes Association: Effect of Prior Exercise on Dietary Induced Thermogenesis. Period of Award 8-1-85 to 7-31-88 (\$37,830 for two years).
5. Boston University BRSG: Effects of Exercise on Glucose Transport by Skeletal Muscle of Aged Rats. Period of Award 6-1-86 to 6-30-88 (\$1,700).
6. Wyeth-Ayerst Research: Effect of Wy-27, 918 on Insulin Stimulated Glucose Uptake in Rat Skeletal Muscle. Period of Award 6-1-88 to 5-31-89 (\$18,700).
7. Miles, Inc. Pharmaceutical Division: Effects of Acarbose on Glucose Uptake and Insulin Binding in Skeletal Muscle. Period of Award 1-1-89 to 12-31-90 (\$26,178).
8. UNLV Research Support Award: Blood Flow as a Determinant of Glucose Uptake in Muscle. Period of Award 1-1-92 to 12-31-92 (\$3,750).
9. UNLV Research Support Award: Activation of Glucose Uptake in Muscle by Blood Flow. Period of Award 7-1-93 to 6-30-94 (\$2,000).
10. Imagenetix, Inc: Effect of a Nutritional Supplement on Treatment and Prevention of Insulin Resistance in Rats. Period of Award 11-19-02 to 6-30-03 (\$20,625).

#### Co-Investigator

1. Diabetes Research and Education Foundation: Exercise, Thermogenesis, and Control of Body Weight (N.B. Ruderman, PI). Period of Award 5-1-85 to 4-30-86 (\$12,800).
2. National Institutes of Health: Insulin and Muscle Metabolism in the Post-Exercise State (AM 19514) (N.B. Ruderman, PI). Period of Award 5-1-86 to 4-30-90 (\$104,000 for first year).
3. Miles, Inc. Pharmaceutical Division: Effects of Acarbose on Body Weight, Insulin, and Oral Glucose Tolerance in Cafeteria-Fed Rats. (N.B. Ruderman, P.I.). Period of Award 4-1-87 to 10-31-87 (\$32,500).
4. National Institutes of Health: Insulin Resistance and DAG/PKC Signaling in Muscle (AM 19514) (N.B. Ruderman, PI). Period of Award 5-1-91 to 4-30-96 (\$143,403 for first year).

#### Other

1. UNLV Summer Faculty Fellowship (1992). Project title: Blood Flow as a Determinant of Glucose Uptake in Skeletal Muscle. (\$5,000).