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Curriculum vitae

Education

- 1997 Ph.D. Université de Montréal, Département d'éducation physique
Title : Rôle du métabolisme hépatique dans la modulation de réponses endocriniennes.
- 1993 M.Sc. Université de Montréal, Département d'éducation physique
Title : Implication des pompes à sodium hépatiques dans la réponse hormonale de l'axe hépato-médullo-surrénalien.
- 1991 B.Ed. McGill University, Montréal, Department of Physical Education

Academic appointment

07/2006 - Professeur agrégé
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Research Experience

2001-2006 Senior Research Biochemist

Merck Research Laboratories
Department of Metabolic Disorders (Diabetes)
Rahway, NJ, USA

- 1997-2001 Post-doctoral fellowship
Yale University School of Medicine, Department of Internal Medicine
Supervisor: Dr. Gerald I. Shulman
- 1996 Doctoral training - University of Copenhagen, Bispebjerg Hospital
Supervisor: Dr. Michaël Kjær

Scholarships

- 1999-2001 Post-doctoral mentor-based scholarship – American Diabetes Association;
Yale University, Department of Internal Medicine/Endocrinology
- 1997-1999 Post-doctoral Scholarship - Juvenile Diabetes Foundation International
(JDRF); Yale University, Department of Internal Medicine/Endocrinology
- 1996-1997 Excellence scholarship; Université de Montréal
- 1996 Scholarship to study abroad - Fonds pour la Formation de Chercheurs et
de l'Aide à la Recherche (FCAR) ; University of Copenhagen, Denmark
- 1996 Travelling Funds - American Association of Anatomists, "Experimental
Biology 1996"
- 1994-1996 Doctoral scholarship – Natural Science and Engineering Research Council
(NSERC); Université de Montréal
- 1994-1996 Doctoral scholarship - Fonds pour la Formation de Chercheurs et de l'Aide
à la Recherche (FCAR); Université de Montréal
- 1993-1994 Bourse d'excellence; Université de Montréal

Honors and Awards

- 2000 American Physiological Society, Carl Gisolfi Post-Doctoral Award,
Portland, ME
- 1989 A.S. Lamb Scholarship, McGill University

Professional memberships

American Diabetes Association
American Physiological Society
Diabète Québec

Editorial Boards

Ad Hoc reviewer: American Journal of Physiology, Diabetes, Journal of
Applied Physiology.

Grant Support

- 2007-2012 NSERC – Discovery Grant – Individual: *Role of AMP-activated protein*

kinase on energy metabolism and skeletal muscle adaptations in response to acute and chronic exercise. (168 750\$; 100%)

2006-2007 Merck Research Laboratories : Consultant.

Bibliography

Original peer reviewed publications

Bergeron, R., Russell, R.R. III, Young, L.H., Ren, J.-M., Marcucci, M., Lee, A. and Shulman, G.I. Effect of AMPK activation on muscle glucose metabolism in conscious rats. Am. J. Physiol. (Endocrinol. Metab.) 276:E938-E944, 1999 (27^{ième} article le plus cité d'AJP – Endo en date du 11 octobre 2007).

Bergeron, R., Kjaer, M., Bülow, J., Simonsen, L., and Galbo, H. Glucose production during exercise in humans: (a-hv) balance and isotopic measurements compared. J. Appl. Physiol. 87:111-115, 1999.

Young, L.H., Russell, R.R. III, Yin, R., Caplan, M.J., Ren, J.M., Bergeron, R., Shulman, G.I. and Sinusas, A.J. Regulation of myocardial glucose uptake and glucose transport during ischemia and energetic stresses. Am. J. Cardiology 83:H25H-H30, 1999.

Russell, R.R. III, Bergeron, R., Shulman, G.I. and Young, L.H. Translocation of myocardial GLUT-4 through activation of AMP-activated protein kinase by AICAR. Implications for ischemia and contraction activated glucose transport. Am. J. Physiol. (Heart and Circulatory Physiol.) 277:H643-H649, 1999.

Latour, M.G., Bergeron, R. and Lavoie, J.M. Effect of hepatic portal infusion of hypertonic saline on the glucagon response during exercise. Physiol. Behav. 67(3):377-383, 1999.

Howlett, K., Galbo, H., Lorensen, J., Bergeron, R., Zimmerman-Belsing, T., Bülow, J., Feldt-Rasmussen and Kjaer, M. Effect of adrenaline on glucose kinetics during exercise in adrenalectomised humans. J. Physiol. (London) 519(3):911-921, 1999.

Ghanbari-Niaki A., Bergeron R., Latour MG. And Lavoie, J.M. Effects of physical exercise on liver ATP levels in fasted and phosphate-injected rats. Arch. Physiol. Biochem. 107(5):393-402, 1999.

Krssak, M., Petersen, K.F., Bergeron, R., Price, T., Laurent, D., Rothman, D.L., Roden, M. and Shulman, G.I. Intramuscular glycogen and intramyocellular lipid utilization during prolonged exercise and recovery in man: A ¹³C and ¹H NMR spectroscopy study. J. Clin. Endo. Metab. 85(2):748-754, 2000.

Bergeron, R., Previs, S.F., Cline, G.W., Perret, P., Russell, R.R. III, Young, L.H. and Shulman, G.I. Effect of AICAR infusion on *in vivo* glucose metabolism: Lean and obese Zucker rats. Diabetes 50:1076-1082, 2001.

Bergeron, R., Ren, J.M., Cadman, K.S., Moore, I.K., Perret, P., Pypaert, M., Young, L.H., Semenkovich, C.F. and Shulman, G.I. Chronic activation of AMP-activated protein kinase results in nuclear respiratory factor-1 activation and increased muscle mitochondrial biogenesis. Am. J. Physiol. (Endo. Metab.) 281:E1340-1346, 2001.

Bergeron, R., Galbo, H., Bülow, J., Simonsen, L., Skovgaard, D., Howlett, K., Lavoie, J.M. and Kjaer, M. Regulation of splanchnic blood flow and hepatic glucose production in exercising humans: the renin-angiotensin system. Am. J. Physiol. (Regulatory) 281:R1854-R1861, 2001.

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Yu, C., Chen, Y., Zong, H., Wang, Y., Bergeron, R., Kim, J.K., Cushman, S., Croft, L., Atcheson, B., White, M.F., Kraegen, E. and Shulman, G.I. Mechanism by which fatty acids inhibit insulin activation of IRS-1 associated phosphatidylinositol 3-kinase activity in muscle. J. Biol. Chem. 277:50230-50-236, 2002.

Coven, D.L. Hu, X., Cong, L., Bergeron, R., Shulman, G.I. Hardie, D.G. and Young, L.H. Physiological role of AMP-activated protein kinase in the heart: Graded activation during exercise. Am. J. Physiol. 285:E629-E636, 2003.

Ogawa, A.K., Willoughby, C.A., Bergeron, R., Ellsworth, K.P., Geissler, W.M., Myers, R.W., Yao, J., Harris, G., and Chapman, K.T. Glucose-Lowering in a *db/db* Mouse Model by Dihydropyridine Diacid Glycogen Phosphorylase Inhibitors. Bioorganical & Medicinal Chemistry Letters 13:3405-3408, 2003.

Lu, Z, Bohn, J., Bergeron, R., Deng, Q., Ellsworth, K.P., Geissler, W.M., Harris, G., McCann, P.E., McKeever, B., Myers, R.W., Saperstein, R., Willoughby, C.A. Yao, J. and Chapman, K. A new class of Glycogen Phosphorylase Inhibitors. Bioorganical & Medicinal Chemistry Letters 13:4125-4128, 2003.

Petersen, K.F., Price, T.B., and Bergeron, R. Regulation of net hepatic glycogenolysis and gluconeogenesis during exercise: Impact of type I diabetes. J. Clin. Endo Metab. 89: 4656-4664, 2004.

Jiang, G. Li, Z., Liu, F., Ellsworth, K., Dallas-Yang, Q., Wu, M. Ronan, J., Essau, C., Murphy, C., Szalkowski, D., Bergeron, R., Doebber, T. and Zhang, B. Prevention of obesity in mice by antisense oligonucleotide inhibitors of stearoyl-CoA desaturase-1. J.Clin.Invest. 115:1030-1038, 2005.

Lavoie, J.M., Bergeron, R. and Latour, M.G. Regulatory impact of intra-hepatic carbohydrate and lipid metabolism. Can. J. Appl. Physiol. 30:282-291, 2005.

R. Bergeron, J. Yao, J.W. Woods, E.I. Zycband, C. Liu, Z. Li, A. Adams, J.P. Berger, B.B. Zhang, D.E. Moller, and T.W. Doebber. PPAR α agonism prevents the onset of type 2 diabetes in ZDF rats: A comparison to PPAR γ agonism. Endocrinology 147 :4252-4262, 2006

Invited lectures

“AMPK and the regulation of muscle glucose metabolism during muscle contraction.”
Merck Research Laboratories, March 2008

“Acute and chronic effects of AMPK activation on glucose metabolism.” Case Western Reserve University

Media appearances

TQS - Mongrain

Entrevue sur les effets de l'administration de l'hormone de croissance suite à l'affaire Éric Gagné. 14 décembre 2007

Le Devoir

Raynald Bergeron

Une protection contre le diabète (Pauline Gravel)
Samedi le 2 février, 2008
<http://www.ledevoir.com/2008/02/02/174422.html>

FORUM

Article dans FORUM 26 mai 2008 : « Exercice et diabète ».

