

## **Curriculum Vitae**

**Brian B. Roman, Ph.D.**  
**Department of Radiology, MC 2026**  
**University of Chicago Medical Center**  
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### **Education**

- B.A. Biology, Illinois Wesleyan University  
Bloomington, Illinois, 1985
- M.S. Physiology, University of Illinois at Urbana-Champaign  
Champaign, Illinois, 1988
- Ph.D. Physiology, University of Illinois at Urbana-Champaign  
Champaign, Illinois, 1992

### **Employment**

- 1988-1989 Visiting Research Specialists in the Life Sciences,  
Department of Physiology and Biophysics, College of  
Medicine, and the Biomedical Magnetic Resonance  
Laboratory, University of Illinois at Urbana-Champaign
- 1992-1997 Postdoctoral Research Associate, Department of Biological  
Sciences, Carnegie Mellon University, Pittsburgh, PA
- 1997-2005 Postdoctoral Research Associate, Department of Medicine,  
Section of Cardiology, University of Illinois at Chicago
- 2005-Present Assistant Professor, Department of Radiology, University  
of Chicago

### **Teaching Experience**

- 1990-1992 Anatomy and Physiology Instructor, Parkland Community  
College, Champaign, IL
- 1993-1997 Anatomy and physiology Instructor, Community College of  
Allegheny County
- 1999-2003 Research Assistant Professor of Bioengineering, University  
of Illinois at Chicago

## **Grant Support**

### Current

2003-2008	Imaging Pancreatic B-Cell Function by Magnetic Resonance NIH 1 R01 EB0011828-01: Role: PI	\$1,250, 000
2003-2008	NMR Detection of Gene Expressions NIH 1 R01 HL0609961-01: Role: PI	\$1,328,334
2005-2006	Quantitative and Fast MRI Imaging of Pancreas Cancer Cancer Research Center Pilot Grant (PI: Pan) University of Chicago Role: Co-Investigator	\$30,000

### Completed

1994-1997	National Institutes of Health Postdoctoral Fellowship (NRSA)	
1999-2001	Protein Kinase C Effects on Senescent Heart Function NIH 1R03AG016443-01 Role: Co-Investigator	\$100,000
2002-2004	Magnetic Resonance Imaging of Beta-Cell Activation ADA Innovation Award Role: PI	\$100,000

## **Locally Appointed University Committees**

2000-2005	Thesis Committee Member, University of Illinois at Chicago, Departments of Bioengineering and Electrical Engineering, Four Phd and six Masters degrees.
2002-2005	University Animal Care Committee: Small Animal Subcommittee, University of Illinois at Chicago
2005-Present	Institutional Animal Care and Use Committee (IACUC)-University of Chicago
2005-Present	Graduate Program in Medical Physics, University of Chicago, Department of Radiology
2005-Present	Cancer Research Center, University of Chicago
2006-Present	Co-Director of MRIS Laboratory Core, University of Chicago
2006-Present	Faculty Advisory Committee for Optical Imaging Core, University of Chicago

2006-Present Co-Director, Lynn S. Florsheim Magnetic Resonance Imaging and Spectroscopy Laboratory

### **National Appointed Committee Positions**

- 2002 NIH ZRG1 Special Study Section X(30) Bioengineering Committee Member, CSR Diagnostic Medical Imaging
- 2003 NIH ZRG1 Special Study Section Bioengineering Committee Member, CSR Diagnostic Medical Imaging
- 2004 NIH Special Emphasis Panel/Initial Review Group 2004/05 ZRG1 SRB-J (50) (R), Committee Member
- 2004 NIH Bench to Bedside Diabetes Review Group 2004 ZDK1 GRB-6 O1, Committee Member
- 2005 NIH/NICHD Special Emphasis Panel 2005 ZHD1 DRG-D, Committee Member
- 2006 NIH/Musculoskeletal Tissue Engineering Study Section

### **Awards and Honors**

- 1993-1992 Keck Scholar, W.M. Keck Center for Advanced Training and Research in computational Biology. University of Pittsburgh, Carnegie Mellon University/Pittsburgh Supercomputing Center
- 1995 W.M. Keck Center for Advanced Training and Research in Computational Biology Travel Fellowship. Funds for travel to the Annual Meeting of the Society of Magnetic Resonance in Medicine in Nice, France.

### **Professional Memberships**

- 1987-Present International Society of Magnetic Resonance in Medicine
- 2004-Present American Physiological Society
- 2004-Present American Heart Association
- 2004-Present The Society for Molecular Imaging
- 2005-Present Society of Cardiovascular Magnetic Resonance
- 2006-Present Radiological Society of North America

## Refereed Publications

1. Dawson, M.J., Fletcher, E.S., Ingkanisorn, S.S., Kmiecik, J.A., and **Roman, B.B.**, 31P and 1H Nuclear Magnetic Resonance Spectroscopic studies of contracture-inducing agents in frog skeletal muscle. *Journal of Physiology*, 1989; 415:133.
2. **Roman, B.B.**, Foley, J.M., Meyer, R.A., and A.P. Koretsky, contractile and Metabolic Effects of Increased Creatine Kinase Activity in Mouse Skeletal Muscle. *American Journal of Physiology*, 1996; 270: C1236-1245.
3. **Roman, B.B.**, and Koretsky, A.P.. The brain isoform of Creatine Kinase Rescues the Contractile Defect in Mice Lacking the Muscle Isoform Despite Lack of Localization to Myofibrils. *J Biol Chem*. 1997; 272(28):17790-4.
4. LaBella, J.J., Daood, M.J., Koretsky, A.P., **Roman, B.B.**, Sieck, G.C., Wieringa, B., and Watchko, J.F. Absence of Myofibrillar Creatine Kinase and Diaphragm Isometric Function During Repetitive Activation. *Journal of Applied Physiology*, 1998; 84(4), 116-1173.
5. Slawson, S.S., **Roman, B.B.**, Williams, D.S., and Koretsky, A.P. Cardiac MRI of the Normal and Hypertrophied Mouse Heart. *Magnetic Resonance in Medicine*, 1998; 39; 980-987.
6. **Roman, B.B.**, Geenen, D.L., Leitges, M., and Buttrick, P.M. PKC-B is not necessary for Cardiac Hypertrophy. *American Journal of Physiology – Heart and Circ*, 2001; 280: H2264-H2270.
7. Montgomery, D.E., Wolska, B.M., Pyle, W.G., **Roman, B.B.**, Dowell, J.C., Buttrick, P.M., Koretsky, A.P., Del Nido, P., and Solaro, R.J. Alpha-Adrenergic Response and Myofilament Activity in Mouse Hearts Lacking PKC Phosphorylation Sites on Cardiac TnI. *Am J Physiol Heart Circ Physiol*, 2002; 282: H2397-405.
8. **Roman, B.B.**, Meyer, R.A., and Wiseman, R. Phosphocreatine Kinetics at the Onset of Contraction in Skeletal Muscle of MM Creatine Kinase Knockout Mice. *Am J Physiol Cell Physiol*, 2002; 283(6); C1776-83.
9. Eroglu, S., Gimi, B., **Roman, B.B.**, Friedman, G., and Magin, R. NMR Spiral Microcoils: Design, Fabrication, and Imaging. *Concepts in Magnetic Resonance*, 2003; 17B:1-10.
10. Gimi, B., Eroglu, S., Leoni, L., Desai, T.A., Magin, R.L., and **Roman, B.B.** NMR Spiral Surface Microcoils: Applications. *Concepts in Magnetic Resonance*, 2003; 18B: 1-18.
11. Itani S.I., Tapscott E.B., Leitges M., McKinney R., **Roman B.B.**, Buttrick, P.M., and Dohm G.L. Effect of Protein Kinase C Beta Knockout on Insulin Signal Transduction in Transgenic Mice. *Amer J Physiol*, 2003; In revision.
12. **Roman B.B.**, Goldspink, P.H., Spaite, E., Urboniene, D., McKinney, R., Geenen, D.L., Solaro R.J., and Buttrick P.M. Inhibition of PKC Phosphorylation of cTnI

- Improves Cardiac Performance In Vivo. American Journal of Physiology: Heart, 2004 286: H2089-H2095.
13. Barjor G., Leoni L., Oberholzer J., Braun M., Avila J., Wang Y., Desai T., Philipson L.H., Magin R.L., and **Roman B.B.** Functional MR Microimaging of Pancreatic B-Cell Activation. Cell Transplantation the Regenerative Medicine Journal, 2006; 15: 195-203.
  14. Fan, X., Markiewicz, E., Haque, M., Zamora, M., Karczmar, G.S., **Roman, B.B.** Open Birdcage Coil and Physiological Chamber for Mouse Cardiac Imaging. Journal of Cardiovascular Magnetic Resonance, 2006; 8(1); 298-299.
  15. Fan X., Markiewicz E.J., Zamora M., Karczmar G., **Roman B.B.** Comparison and Evaluation of Mouse Cardiac MRI Acquired With Open Birdcage, Single Loop Surface And Volume Birdcage Coils, 2006; 51; N451-N459.
  16. LaFlamme K., Leoni L., Popat K., Markiewicz E.J., **Roman B.B.**, Desai T.A. Biocompatibility of Porous Alumina Biocapsules, 2006 (In Press).

### Related Abstracts

1. **Roman, B.B.**, Geenen, D.L., Leitges, M., and Buttrick, P.M. Targeted Disruption of PKC-B in the Murine Heart Does Not Prevent the Hypertrophic Response. Oral Presentation for the American Heart Association, 1999, Atlanta, GA.
2. **Roman, B.B.**, Montgomery D.G., Del Nido P., Koretsky A.P., Solaro R.J., Buttrick P.M. Targeted Mutation of Protein Kinase C Phosphorylation Sites on Cardiac Troponin I (TnI) Alters Cardiac Function in Vivo. Oral Presentation for the American Heart Association, 2000, New Orleans, LA.
3. Moresi G., Friedman G., Magin R., **Roman B.B.** MicroCatheter Coils for in Vivo <sup>31</sup>P NMRS: Applications to Genetic Models, ISMRM Limits of Detection in Nuclear Magnetic Resonance, 2001, Berkeley, CA.
4. Moresi G., Friedman G., **Roman B.B.**, Magin R. A <sup>31</sup>P NMR Micro-Catheter Coil for In Viv Cardiovascular Metabolic Studies, Biomedical Engineering Society's Conference, Duke University, 2001, Durham, North Carolina.
5. Moresi G., Magin R., **Roman B.B.** Micro-Catheter Coils for in Vivo <sup>31</sup>P NMRS: Applications to Genetic Models, ISMRM Annual Meeting, 2002, Honolulu Hawaii.
6. Gimi B., Leoni L, Desai T., Magin R., **Roman B.B.** Imaging of Pancreatic Beta Cell Function by Mn<sup>2+</sup>-Enhanced MRI, ISMRM Annual Meeting, 2002 Honolulu Hawaii.
7. **Roman B.B.**, Wiseman R.W., Jayaraman R.C., Meyer R.A. Gated <sup>31</sup>P-NMR demonstrate profound energy deficit at the onset of contractions in MM Creatine Kinase Knockout Mice, ISMRM Annual Meeting, 2002, Honolulu Hawaii.
8. Gimi B., Braun M., Magin R., **Roman B.B.** Functional Imaging of Pancreatic Islets, ISMRM Annual Meeting, 2003, Toronto, CA.

9. Leoni L., **Roman B.B.**, Desai T. Microfabricated Nanoporous Biocapsule for Encapsulation of Insulinoma Cells, ACS Meeting, 2003, New Orleans, Louisiana.
10. Gimi B., Leoni L., Braun M., Eroglu S., Magin R., **Roman B.B.** Noninvasive Functional Imaging of Pancreatic Islets Using Mn Enhanced MRI, Second Annual Meeting of Society of Molecular Imaging, August 2003, San Francisco, CA.
11. Fan X., Karczmar G., Zamora M., Markiewicz E., Haque M., and **Roman B.B.** Mouse Cardiac MRI Using Open Birdcage Coil – Comparison with Single Loop and Body coils, Oral Presentation, 14<sup>th</sup> Annual Scientific Meeting of the International Society of Magnetic Resonance in Medicine 2006, Seattle, Washington.
12. Leoni L., Serai S.D., Haque M.E., Oberholzer J., Magin R., **Roman B.B.** MEMRI of Glucose Activated Human Pancreatic Islets. E-Poster Presentation. 14<sup>th</sup> Annual Scientific Meeting of the International Society of Magnetic Resonance in Medicine 2006, Seattle, Washington.
13. Serai S.D., Leoni L. Haque M., Oberholzer J., Magin R. **Roman B.B.** MR Characterization of Isolated Human Pancreatic Islets. Poster Presentation. 14<sup>th</sup> Annual Scientific Meeting of the International Society of Magnetic Resonance in Medicine 2006, Seattle, Washington.
14. Leoni L., Serai S., Haque M., Oberholzer J., Magin R., **Roman B.B.** Non-invasive MR Imaging of Human Pancreatic Islets Activation. Oral Presentation. Annual American Diabetes Association Scientific Sessions, 2006, Washington DC.
15. Haque M., Serai S., Leoni L., Honeychuck R., Oberholzer J., **Roman B.B.** Diffusion Weighted MRI of Isolated Human Pancreatic Islet. Poster Presentation. 14<sup>th</sup> Annual Scientific Meeting of the International Society of Magnetic Resonance in Medicine, 2006, Seattle, Washington.

#### **Invited Lectures/Workshops/Presentations**

1. International Society of Magnetic Resonance in biological Systems XX Meeting, Keystone Colorado, 1997
2. American Physiological Society Conference on the Integrative Biology of Exercise, Portland Maine, 2000.
3. NIH CSR Diagnostic Medical Imaging Workshop on Developments In Molecular Imaging. NIH, Bethesda MD, 2002
4. Department of Physiology, Michigan State University, East Lansing, MI, 2003
5. NIH NIBIB Workshop on Imaging The Beta Cell, NIH, Bethesda MD, 2003
6. Department of Radiology, Evanston Hospital, Evanston, IL, 2004

7. Department of Radiology, Section of Medial Physics, University of Chicago, Chicago, IL, 2004
8. Center for Biotechnology & Bioengineering & Department of Physiology, Medical College of Wisconsin, Milwaukee, WI, 2004
9. Department of Molecular Physiology and Biophysics, Baylor College of Medicine, Houston, Texas, 2006
10. NIH Symposium on Anatomical, Functional and Molecular Imaging, Functional MRI of Pancreatic Islets, 2006.
11. Annual NIBIB Grantee Meeting, Funtional MRI of Activated Human Pancreatic Islets and The Invivo Rodent Pancreas, Washington, DC 2006.

### **Current Trainees**

Lara Leoni, Ph.D.	Postdoctoral Scholar	University of Chicago
Patrick Dillon	Medical Student	University of Chicago
Muhammad Haque	Graduate Student	George Mason University
Suraj Serai	Graduate Student	University of Illinois at Chicago-BioE
Markus Yap	Graduate Student	University of Illinois of Chicago-BioE

### **Past Students**

Barjor Gimi, Graduate Student, University of Illinois of Chicago Dept. of Bioengineering. Currently, Assistant Professor in Radiology University of Texas

Bryan Bertoglio, Medical Student, University of Illinois at Chicago, Currently Neurology Fellow at University of Iowa.