

CURRICULUM VITAE

Name: Michael Stanley Rosol, Ph.D.

Office Address: 169 Ashley Avenue
P.O. Box 250332
Charleston, SC 29425

Phone: (843) 792-6837

Citizenship and/or Visa Information: U.S.A.

EDUCATION:

1992-1993	Suffolk University, Boston, MA	BS / 1993	Biology
1995-2000	Boston University School of Medicine	Ph.D. / 2000	Physiology /Biophysics

RESIDENCIES OR POST DOCTORAL:

2000-20001	Post-doctoral Fellowship, Massachusetts General Hospital and Harvard Medical School, Department of Radiology
2001-2002	Post-doctoral Fellowship, Mayo Clinic and Foundation, Rochester, MN, Division of Cardiovascular Diseases

FACULTY APPOINTMENTS:

2002-2003	Instructor, Mayo Graduate School of Medicine, Department of Medicine
2002-2007	Assistant Professor, Children's Hospital Los Angeles and Keck School of Medicine, Research Radiology
2008-Present	Assistant Professor, Medical University of South Carolina, Radiology

ADMINISTRATIVE APPOINTMENTS:

2005-2006	Associate Director of Small Animal Imaging, Childrens Hospital Los Angeles
2006-2007	Director of Small Animal Imaging, Childrens Hospital Los Angeles
2008-Present	Director of Small Animal Imaging Facility of the Hollings Cancer Center, Medical University of South Carolina

OTHER EXPERIENCE:

1993-1995	Senior Research Analyst, Massachusetts General Hospital, Department of Radiology
1989-1999	Consultant, Massachusetts General Hospital, Department of Radiology

MEMBERSHIP IN PROFESSIONAL/SCIENTIFIC SOCIETIES (INCLUDE OFFICES HELD):

National Societies

1997-2000	Biophysical Society
2005-Present	Society for Molecular Imaging

EDITORIAL POSITIONS:

2005-Present	NIH Biomedical Imaging and Bioengineering Study Section Reviewer
2001-2006	Reviewed articles for the journals BioTechniques, Medical Physics, and Radiology

GRANTS/AMOUNT OF AWARD:

Current Support

PI: **Rosol**, M

Source and Number: HCC Translational Research Award

Title: In vivo imaging and targeting of AML stem cells

Period: Sep 1, 2008-Aug 31, 2009

Annual Direct Costs: \$40,000

PI: Forman, S.J. (**Rosol**, M: Consultant, no effort specified)

Source and Number: NCI 5P50CA107399-02

Title: City of Hope Lymphoma SPORE

Institution: City of Hope/Beckman Research Institute

Period: Sep 2, 2004-June 30, 2009

Completed Support

PI: **Rosol**, M (Sub-award)

Source and number: University of Southern California (via NIH 5P20CA086352-03 award to Peter Conti)

Title: Bioluminescent and PET imaging of targeted, engineered T cell therapy in a murine model of glioblastoma

Period: Sept 1, 2004-Aug 31, 2005 (no cost extension)

Annual Direct Costs: \$50,000

Goals: To use bioluminescence imaging and micro-PET imaging to track labeled T cells targeted to glioblastoma and to assess T cell effects on tumor size.

PI: **Rosol**, M (35% effort)

Source and number: Radiological Society of North America (FBR0403)

Title: Dynamic tracking of engraftment and enhancement of human common lymphoid progenitor cells in vivo using bioluminescent imaging

Period: July 1, 2004-June 30, 2006 (no cost extension to Nov. 15, 2006)

Annual Direct Costs: \$55,000

Goals: Using bioluminescent imaging, we will track human bone marrow cells and subpopulations in vivo in immunodeficient mice. We will seek to enhance their engraftment and assess with imaging.

PI: **Rosol**, M (No effort specified)

Source and number: Robert E. and May R. Wright Foundation (no number given)

Title: Bioluminescent imaging of targeted, engineered T cell therapy in a murine model of glioblastoma

Period: July 1, 2004-June 30, 2005 (no cost extension to June 30, 2006)

Annual Direct Costs: \$50,000

Goals: To use bioluminescent imaging to track targeted T cells to brain tumor, and to assess changes on tumor size as a result of T cell induced cytotoxicity.

PI: Seeger, R (**Rosol**, M: Imaging Core PI, 10% effort)

Source: Pediatric Brain Tumor Foundation

Title: Biology and Therapy of Pediatric Brain Tumors: Saving Lives, Saving Neurons

Period: Jan. 1, 2006- Dec. 31, 2008

AWARDS, HONORS, MEMBERSHIP IN HONORARY SOCIETIES:

1992	Delta Alpha Phi Academic Honor Society
1992-1993	Dean's High Honors and Honors Lists
2000	Travel Grant Award Winner – Biophysical Society
2000	Certificate of Merit Award Winner – Educational Exhibit, RSNA Annual Meeting
2002	Young Investigator Award Winner, Cardiovascular Section, Experimental Biology Annual Meeting

MAJOR TEACHING RESPONSIBILITIES (CURRENT):

Graduate Medical Education

1997-1999	Tutorials in physiology for dental students
1999	Teaching fellow for graduate course in cell biology
2006-2007	Undergrad and graduate course adviser (Neuroscience and BME)
2007	USC/CHLA/CalTech Lecturer for Stem Cell Course
2008	MUSC lecture on Small Animal Imaging for Master's program

LECTURES AND PRESENTATIONS:

Invited lectures and presentations

1996	Arthur West Alumni Seminar Series, Suffolk University
2000	Arthur West Alumni Seminar Series, Suffolk University
2002	UCLA Department of Radiology
2004	Annual Symposium of Gene Therapy, UC-Davis
2006	USC Biomedical Imaging Sciences Initiative Retreat Speaker
2007	Medical University of South Carolina Hollings Cancer Center
2007	Los Angeles Area Animal Lab Technologist Annual Meeting
2008	Clemson/MUSC/USC Bioengineering Alliance BME Seminar Series

Submitted presentations (Listings up to 2004 only)

1. Burn P, Moore R, **Rosol M**, Olsson A, Barrett S.
Diagnosing Liver Tumors in Boston Harbor Winter Flounder Using Tc-99m-Disofenin. The New England Estuarine Research Society Meeting, 1992.
2. Spillane R, Dupuy D, **Rosol M**, Rosenthal D, Rosenberg A, Palmer W.
Three-Dimensional Images of Articular Cartilage of the Knee. The Association of University Radiologists Annual Meeting, 1994.
3. **Rosol M**, Moore R, Chew F, Dupuy D, Palmer W, Rosenthal D.
A Digital Method of Vertebral Morphometry. American Society of Bone and Mineral Research Annual Meeting, 1994.
4. Dupuy D, **Rosol M**, Spillane R, Burke D.
Morphologic and Quantitative Assessment of Knee Hyaline Cartilage using Three Dimensional Reconstruction from MRI Data. The Royal College of Radiologists Annual Meeting, 1994.
5. Burn P, Moore R, **Rosol M**, Davey E, Perez K.

- Hot Shots Part Deux: as Clear as Mud. The New England Estuarine Research Society Meeting, 1994.
6. Seltzer S, Chew F, **Rosol M**.
Axially-Loaded MRI of the Lumbar Spine: a Physiologic Approach to Spinal Stenosis and Lumbosacral Radiculopathy. The RSNA Annual Meeting, 1994.
 7. Niklason LT, **Rosol M**, Moore R, Kopans D.
Magnification in Mammography Imaging. The AAPM Annual Meeting, 1995.
 8. Niklason LT, **Rosol M**, Kopans, D.
Scattered Radiation in Mammography: Implications for the Use of Grids in Digital Mammography Systems. The AAPM Annual Meeting, 1995.
 9. Nishimura H, Rosenthal D, **Rosol M**, Uchida M, Hayabuchi N.
Musculoskeletal Malignant Fibrous Hystiocytomas: Analysis of MR Imaging Features. The RSNA Annual Meeting, 1995.
 10. Palmer WE, Ramsdell MG, **Rosol M**, Dupuy DE, Rosenthal DI, Caudry DJ, Panicek DM.
Preoperative Contrast-Enhanced MR Imaging of Bone and Soft-Tissue Tumors: Comparison with Non-Contrast-Enhanced MR and Contrast-Enhanced CT in 80 cases. ARRS Annual Meeting, 1997.
 11. **Rosol M**, Landis C, Lehman W, Craig R, Tobacman L.
3-D Reconstruction of Inhibited Thin Filaments Containing Mutant Tropomyosin. Biophysical Society Annual Meeting, 1998.
 12. Lehman W, **Rosol M**, Xu C, Craig R.
Tropomyosin Equilibrium States Revealed by Electron Microscopy and 3-D Reconstruction. Seidel Symposium, 1999.
 13. Lehman W, **Rosol M**, Hatch V, Korman V, Horowitz R, Van Eyk J, Tobacman L, Craig R.
Tropomyosin Control of Thin Filament Activity Revealed by Electron Microscopy and 3-D Reconstruction. ASCB Annual Meeting, 1999.
 14. **Rosol M**, Niklason LT, Venkatakrisnan V, Silvenoinnen H, Kopans D, Hamberg L. Contrast-Detail Comparison of a Full-field Digital Mammography System and a Screen-Film System. The RSNA Annual Meeting, 1999.
 15. Suri R, **Rosol M**, Kattapuram S.
MR Imaging of Pseudotumoral Masses Complicating Bone Allografts. The RSNA Annual Meeting, 1999.
 16. Lehman W, **Rosol M**, Hatch V, Korman V, Van Eyk J, Tobacman L, Craig R. Tropomyosin Control of Thin Filament Activity Revealed by Electron Microscopy and 3-D Reconstruction. Biophysical Society Annual Meeting, 2000.

17. **Rosol M**, Lehman W, Hatch V, Tobacman L, Van Eyk J, Horowitz R, Craig R. Troponin Density Detected on Thin Filaments by Electron Microscopy and 3-D Reconstruction. Biophysical Society Annual Meeting, 2000.
18. Lehman W, Hatch V, **Rosol M**, Korman V, Horowitz R, Van Eyk J, Tobacman LS, Craig R. Troponin-Tropomyosin Control of Thin Filament Activity Revealed by Electron Microscopy and 3-D Reconstruction. Microscopy and Microanalysis Annual Meeting, 2000.
19. Suri R, **Rosol M**, Kattapuram S. Frozen Bone Allografts: MR Imaging Features of Vascularization of the Allograft and Its Complications. The RSNA Annual Meeting, 2000.
20. Lehman W, **Rosol M**, Tobacman L, Craig R. 3D Organization of Troponin on relaxed and Activated Thin Filaments Revealed by EM and 3D Reconstruction. Biophysical Society Annual Meeting, 2001.
21. Lehman W, **Rosol M**, Hatch V, Tobacman L, Craig R. The Structural Organization of Troponin-Tropomyosin on Thin Filaments. Biophysical Society Annual Meeting, 2001.
22. **Rosol M**, Hoffmann U, Wicky S, Gupta R, Pfoh AH, Basu SK, Ross, WR, Iatrou M, Cesmeli E, Brady T, Edic PM. Volumetric CT of Animal Hearts and Human Carotids. 2nd International Conference on Cardiac Spiral CT, 2001.
23. Hoffmann U, **Rosol M**, Tsai H, Philp M, Hinton D, Enzweiler C, Nichols S, Lamuraglia G, Brady T. In Vitro Calcium Quantitation by Multidetector Computed Tomography (MDCT). 2nd International Conference on Cardiac Spiral CT, 2001.
24. Wicky S, **Rosol M**, Hamberg L, Hoffmann U, Enzweiler C, Graziano M, Brady T. To Optimize Retrospective Multisector and Half Scan ECG-gated Multislice CT Protocols with Gated Moving Phantoms. 2nd International Conference on Cardiac Spiral CT, 2001.
25. **Rosol M**, Pfoh AH, Basu SK, Hinton D, Ross WR, Iatrou M, Cesmeli E, Gupta R, Brady TJ, Edic PM. Volume CT in Carotid Atherosclerosis. Second International Workshop on Coronary MR and CT Angiography, in conjunction with The 29th Annual Meeting & Scientific Sessions of the North American Society for Cardiac Imaging (NASCI), 2001.

26. Hoffmann U, **Rosol M**, Millea R, Enzweiler C, Titus J, Handwerker J, Wicky S, Holmvang G, Graziano M, Kwait DC, Tsai H, Brady TJ. An Animal Model for Validation of Calcium Measurements using Multidetector CT Second International Workshop on Coronary MR and CT Angiography, in conjunction with The 29th Annual Meeting & Scientific Sessions of the North American Society for Cardiac Imaging (NASCI), 2001.
27. **Rosol M**, Goessl M, Malyar N, Reyes DA, Allen JL, Lund PE, Ritman, EL, Kantor B. Increased number and density of coronary vasa vasorum precedes neointima proliferation following stenting: evaluation by 3D micro-CT. Experimental Biology Annual Meeting, 2002.
28. Goessl M, **Rosol M**, Kantor B, Malyar NM, Chuah SC, Lund PE, Reyes DA, Ritman EL. The spatial location of the origin of vasa vasorum of porcine coronary arteries: a study with 3D micro-CT. Experimental Biology Annual Meeting, 2002.
29. Zobitz ME, **Rosol M**, Goessl M, Malyar N, An KN, Kantor B. Stress Transfer to Coronary Vasa Vasorum after Stenting: A Finite Element Model. American Society of Biomechanics, 2002.
30. Hoffmann U, Kwait D, Tsai H, **Rosol M**, Lamuraglia G, Brady T. Precision and Variability of Multiple Scoring Methods for ex Vivo Quantitation of Vascular Calcification by Multidetector Computed Tomography. The RSNA Annual Meeting, 2002.
31. **Rosol M**, Sohara Y, DeClerck Y, Pollack H, Nelson MD, Moats R. In vivo multi-modality imaging of a mouse bone metastases model. Society for Molecular Imaging Annual Meeting, 2003.
32. **Rosol M**, Jensen M, Khankaldyyan V, Laug W, Moats R. In vivo imaging of targeted engineered T-cell therapy in a murine model. Society for Molecular Imaging Annual Meeting, 2003.
33. **Rosol M**, Wang X, Ge S, Peterson D, McNamara G, Pollack H, Kohn D, Nelson MD, Crooks G. Dynamic tracking of human hematopoietic stem cell engraftment using in vivo bioluminescence imaging. Academy of Molecular Imaging Annual Meeting, 2003.
34. Kobayashi H, Petersen D, Carbonaro D, Skelton D, Ge S, Lutzko C, Cannon P, Otto Duessel M, **Rosol M**, Moats R, Shimada H, Kohn DB. Comparative study of lentiviral vector-mediated gene therapy in neonatal and young-adult MPS I mice by a single intravenous injection. American Society of Gene Therapy Annual Meeting, 2004

PUBLICATIONS:

Peer Reviewed Journal Articles: Published or accepted for publication in final form

1. Dupuy DE, Spillane RM, **Rosol M**, Rosenthal DI, Palmer WE, Burke DW, Rosenberg AE. Quantification of Articular Cartilage in the Knee with Three-Dimensional MR Imaging. *Acad Radiol* Nov 1;3(11):919-924, 1996.
2. **Rosol M**, Cohen GL, Halpern EF, Chew FS, Kattapuram SV, Palmer WE, Dupuy, DE, Rosenthal DI. Vertebral Morphometry Derived from Digital Images. *AJR Am J Roentgenol* Dec;167(6):1545-1549, 1996.
3. Katznelson L, Rosenthal DI, **Rosol M**, Anderson EJ, Hayden DL, Schoenfeld DA, Klibanski A. Using Quantitative CT to Assess Adipose Distribution in Adult Men with Acquired Hypogonadism. *AJR Am J Roentgenol* Feb 1;170(2):423-427, 1998.
4. Kattapuram SV, **Rosol MS**, Rosenthal DI, Palmer WE, Mankin HJ. Magnetic Resonance Imaging Features of Allografts. *Skeletal Radiol* Jul 28(7):383-389, 1999.
5. Perez KT, Davey EW, Moore RH, Purn PR, **Rosol MS**, Cardin JA, Johnson RL, Kopans DN. Application of Computer Aided Tomography (CT) to The Study of Estuarine Benthic Communities. *Ecological Applications* 9(3):1050-1058, 1999
6. **Rosol M**, Lehman W, Craig R, Landis C, Butters C, Tobacman LS. Three-Dimensional Reconstruction of Thin Filaments Containing Mutant Tropomyosin. *Biophys J* Feb 78(2):908-917, 2000.
7. Lehman W, Hatch V, Korman V, **Rosol M**, Thomas L, Maytum R, Geeves M, Van Eyk JE, Tobacman LS, Craig R. Tropomyosin and Actin Isoforms Modulate the Localization of Tropomyosin Strands on Actin Filaments. *J Mol Biol* Sep 22;302(3):593-606, 2000.
8. Lehman W, **Rosol M**, Tobacman L, Craig R. Troponin organization on relaxed and activated thin filaments revealed by electron microscopy and three-dimensional reconstruction. *J Mol Biol* Mar 30;307(3):739-44, 2001.
9. Burhop J, **Rosol M**, Craig R, Tobacman LS, Lehman W. Effects of a cardiomyopathy-causing troponin T mutation on thin filament function and structure. *J Biol Chem* Jun 8;276(23):20788-94, 2001.
10. Wicky S, **Rosol M**, Hamberg LM, Hoffmann H, Enzweiler C, Graziano M, Brady T. Evaluation of retrospective multisector and half scan ECG-gated multi-detector cardiac CT protocols with moving phantoms. *J Comput Assist Tomogr* Sep-Oct;26(5):768-76, 2002.
11. Gossel M, **Rosol M**, Malyar N, Fitzpatrick LA, Beighley PE, Zamir M, Ritman EL. Functional anatomy and hemodynamic characteristics of vasa vasorum in the walls of porcine coronary arteries. *Anat Rec* Jun; 272A(2):526-37, 2003.
12. Wicky S, **Rosol M**, Hoffmann U, Graziano M, Yucel KE, Brady TJ. Comparative study with a moving heart phantom of the impact of temporal resolution on image quality with two multidetector ECG-gated CT units. *J Comput Assist Tomogr* May-Jun; 27(3):392-8, 2003.

13. Burgos JS, **Rosol M**, Moats R, Khankaldyyan V, Kohn D, Nelson MD, Laug W. Time course of bioluminescent signal in ortho- and heterotopic brain tumors in nude mice. *BioTechniques*. Jun; 34(6):1184-8, 2003.
14. Gossel M, Malyar NM, **Rosol M**, Beighley PE, Ritman EL. Impact of coronary vasa vasorum functional structure on coronary vessel wall perfusion distribution. *Am J Physiol Heart Circ Physiol* Nov; 285(5):H2019-26, 2003.
15. Wang X, **Rosol M**, Ge S, Peterson D, Mcnamara G, Pollack H, Kohn DB, Nelson MD, Crooks GM. Dynamic tracking of human hematopoietic stem cell tracking using in vivo bioluminescence imaging. *Blood* Nov 15;102(10):3478-82, 2003.
16. Kattapuram TM, Suri R, **Rosol M**, Rosenberg AE, Kattapuram SV. Idiopathic and diabetic skeletal muscle necrosis: evaluation by magnetic resonance imaging. *Skeletal Radiol*. Apr;34(4):203-9, 2005.
17. **Rosol M**, Sachdev K, Enzweiler C, Kwait DC, Millea R, Titus J, Handwerker J, Wicky S, Achenbach S, Brady TJ. A novel model to test accuracy and reproducibility of MDCT scan protocols for coronary calcium in vivo. *Int Journal of Cardiovasc Imaging* Feb;22(1):111-8, 2006. Epub 2005 Dec 20.
18. Otto-Duessel M, Khankaldyyan V, Jensen MC, Gonzalez-Gomez I, Laug W, **Rosol M**. In Vivo Testing of Renilla Luciferase Substrate Analogs in a Murine Model of Glioblastoma. *Mol Imaging* Apr-Jun;5(2):57-64, 2006.
19. Abdel-Azim H, Zhu Y, Hollis R, Wang X, Ge S, Hao Q-L, Smbatyan G, Kohn DB, **Rosol M**, Crooks GM. Expansion of multipotent and lymphoid-committed human progenitors through intracellular dimerization of mpl. *Blood*. 2008 Jan 3; [Epub ahead of print].
20. Di Iorgi N, **Rosol M**, Mittelman SD, Gilsanz V. Reciprocal relation between marrow adiposity and the amount of bone in the axial and appendicular skeleton of young adults. *J Clin Endocrinol Metab*. 2008 Apr 1. [Epub ahead of print].

Chapters in Scholarly Books and Monographs

1. Rosenthal D, Cohen G, **Rosol M**. Digital morphometry in a large scale clinical trial. In: *Vertebral Fracture in Osteoporosis* (Genant HK, van Kuijk C, Jergas M, Ed) 1996.