

## CURRICULUM VITAE

Name: Dr. Ronald N. Germain

Date and Place of Birth: October 29, 1948, New York, New York

Citizenship: United States

Education:

1970 Sc.B., Brown University, Providence, RI  
1970 Sc.M., Brown University, Providence, RI  
1976 Ph.D., Harvard University, Boston, MA  
1976 M.D., Harvard University, Boston, MA

Brief Chronology of Employment:

1976-1977 Instructor, Pathology, Harvard Medical School and Intern in Pathology, Peter Bent Brigham Hospital  
1977-1980 Assistant Professor, Pathology, Harvard Medical School  
1980-1982 Associate Professor, Pathology, Harvard Medical School  
1981-1982 Guest Investigator, Laboratory of Molecular Genetics, National Institute of Child Health and Human Development, NIH  
1982-1987 Senior Investigator, Laboratory of Immunology, National Institute of Allergy and Infectious Diseases, NIH  
1987-Date Chief, Lymphocyte Biology Section, Laboratory of Immunology, National Institute of Allergy and Infectious Diseases, NIH  
1989-2002 Senior Executive Service, DHHS  
1994-Date Deputy Chief, Laboratory of Immunology, National Institute of Allergy and Infectious Diseases, NIH  
2006-Date Director, Program in Systems Immunology and Infectious Disease Modeling, National Institute of Allergy and Infectious Diseases, NIH  
2008-Date Associate Director - Systems Biology and Technology, Trans-NIH Center for Human Immunology, Inflammation, and Autoimmunity [CHI]

Honors:

Summa cum laude, Honors in Biology, Brown University, Sc.B.  
Magna cum laude, Harvard Medical School, M.D.  
Sigma Xi  
Recipient of Milton Fund Award, 1977-1978  
Recipient of American Cancer Society Scholar Grant, 1981-1982  
Recipient of the NIH Directors Award, 1986  
Recipient of the PHS Superior Service Award, 1989  
Recipient of the DHHS Distinguished Service Award, 1994  
Distinguished Lecturer of the German-American Academic Council, 1997  
Recipient of the NIAID EEO Special Recognition Award, 1998  
Recipient of the Meritorious Presidential Rank Award, Senior Executive Service, U.S. Government, 2000

## **Ronald N. Germain, M.D., Ph.D.**

Benacerraf Lecturer, Dana-Farber Cancer Center, Harvard Medical School, 2002  
Ernst Schering Foundation Lecturer, 2004  
Distinguished Lecturer in Immunology, Children's Hospital Research Foundation, Cincinnati, 2004  
Distinguished Lecturer, American Association of Immunologists, 2006  
R.G.E. Murray Lecturer, Univ. of Western Ontario, 2006  
Australasian Society for Immunology (ASI) Visiting Lecturer, 2007  
Landsteiner Medal, Austrian Soc. Allergy and Immunology, 2008  
Leukemia Fund Research Lecturer, Cambridge University, Cambridge, UK, 2008  
Elected Foreign Associate, EMBO, 2008  
Blumenthal Lecturer, Univ. of Minnesota, 2009  
Willison Lecturer, Univ. of Michigan, 2009  
Merck Serono Lecturer, European Society of Dermatological Research, Budapest, 2009  
Ita Askonas Lecturer, Imperial College, London UK, 2010  
NIAID Merit Award, 2010  
NIH Director's Merit Award, 2010

### Editorial Boards; Study Sections; Committees:

1980-1984	Associate Editor, The Journal of Immunology
1980-1984	Associate Editor, The Journal of the Reticuloendothelial Society
1981-1983	Associate Editor, The Journal of Molecular and Cellular Immunology
1984-1989	Advisory Editor, Annales de L'Institut Pasteur
1985-1987	Member, Advisory Committee on Clinical Investigations I - Immunology and Immunotherapy, American Cancer Society
1987-1988	Member, Clinical Review Subpanel, NIAID, NIH
1987-1992	Deputy Editor - Journal of Immunology
1988	Organizer, 6th International H-2/HLA Cloning Workshop
1990-1993	Organizer and Chairperson, NIAID Research Grand Rounds
1991-1992	American Association of Immunologists Membership Committee
1991-Date	Member, Scientific Advisory Board, Ruggero Ceppellini Advanced School of Immunology, Naples, Italy
1992-1994	Chairman, American Association of Immunologists Membership Committee
1992-Date	Advisory Editor, Journal of Experimental Medicine
1994-2003	Associate Editor, Immunity
1994-1998	Promotion and Tenure Committee, NIAID, NIH
1994	Member, NIAID STD Human Challenge Study Advisory Group
1994	Participant, OAR Planning Meeting, Vaccine Subcommittee
1995	Member, Search Committee, NIA Scientific Director
1995-1996	Member, NIH AIDS Targeted Antiviral Review Panel
1995-1999	Scientific Review Board, Howard Hughes Medical Institute
1995-Date	Editorial Board, Scandinavian Journal of Immunology
1995-1997	Founding member, NIH Immunology Interest Group Organizing Committee
1996-1999	Member, American Association of Immunologists Education Committee
1996	Member, NIAID Tuberculosis Program Review Panel
1996	Ad hoc member, IOM Malaria Vaccine Evaluation Group
1996-2000	Member, Etiology and Pathogenesis Planning Subcommittee, OAR

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1996-1997	Chair, NIAID Committee on Transgenic and Gene Targeting Technology
1997-Date	Editorial board, Current Biology
1997	Member, NIAID Central Microscopy Facility Planning Committee
1997	Member, NEI Retinal Disease Panel, 5 year Planning Committee
1997-1999	Member, Steering Committee, Vaccine Research Center, NIH
1997-1999	Member, Association of Immunologists Nominations Committee
1999	Chair, NIAMS Promotion and Tenure Committee
1999-2000	Member, VRC Immunology Search Committee
2000-2003	HHMI-NIH Research Scholars Program Advisory Committee
2000-2004	Member, Scientific Evaluation Panel, Immune Tolerance Network
2000-Date	Member, Advisory Committee, NIAID Research Technology Branch
2000-Date	Member, NIAID Confocal Microscopy Users Committee
2001-Date	Immunology advisor, BioMedCentral Immunology
2001	Co-organizer, R. Cappelletti Advanced School of Immunology course "Remembering Environmental Experiences: The Physiological Basis of Memory in the Immune and Nervous Systems," Capo Miseno, Italy
2003-2006	Editor, Immunity
2003	Co-organizer, NIH Systems Biology Interest Group Symposium on "Systems Biology," Airlie House, Warrenton, VA
2005	Co-organizer, HHMI conference on Intravital Imaging of the Immune System
2005	Co-organizer, 2 <sup>nd</sup> international meeting on "Dendritic Cells at the Host-Pathogen Interface," Airlie House, Warrenton, VA
2005-2007	Member, NIH Immunology Interest Group Steering Committee
2006-Date	Editorial Board, Immunity
2006	Co-chair, Trans-NIH Working Group Research Initiatives
2007-2008	Member, Trans-NIH implementation Committee on Systems Biology Initiative, Committee on Inflammation and Autoimmunity Translational Initiative, Committee on Imaging Initiative
2006-2007	Co-Chair, NIH Immunology Interest Group Steering Committee
2007-2009	Editorial Board member, Journal of Clinical Investigation
2007-Date	Editorial Board, Interdisciplinary Reviews Systems Biology and Medicine
2007	Co-organizer of first Keystone Symposium on "Imaging Immune Responses"
2007	Chair and Plenary Speaker, NIH Research Festival Symposium on "Immune Cell Dynamics: From Monkeys to Models to Movies"
2008	Intramural scientist representative, Science of Science management meeting, OPASI, NIH
2008-date	Editorial Board, Journal of Biology (now BMC Biology)
2008	Member of the International Program Committee, 14 <sup>th</sup> International Congress of Immunology, ICI 2010
2008	Invited participant, Science of Science Workshop, Office of Science and Technology Policy [Office of the President], GW University, Washington, DC
2008-Date	Collaborative Professor, World Premiere Initiative (WPI) Immunology Frontier Research Center of Osaka University
2009	Search Committee, LMIV, NIAID
2009-Date	Editorial board member, International Immunology
2009	NIH Computing Power Committee member
2009	Invited participant, Novartis analysis of adjuvant safety
2009	Invited participant, NIH presentation to Sage on large scale datasets and modeling
2009	Member, Trans-NIH Systems Biology faculty search committee

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2009-Date	Member, Global AIDS Vaccine Enterprise Strategic Planning Committee, Working Group 3 (Novel Approaches including Systems Biology)
2009	Member, Search Committee, Senior Scientist, LMIV
2009	Member, Search Committee, Laboratory of Immunology PI recruit
2009	Dean's Committee on Quadrangle Basic Science Reorganization at Harvard Medical School
2009-date	Advisory editorial board member, Molecular Systems Biology
2009-date	Member, RCAI RIKEN (Yokohama, Japan) systems biology advisory review board
2009-date	Member, NIAID Bioinformatics Working Group
2009-date	Member, Trans-NIH systems biology principal investigator search committee
2010-date	Member, Editorial Advisory Panel, Scientific Reports
2010-date	Ex officio member and CHI representative, NIAID HIPC Steering Committee
2011	Co-organizer, CHI Symposium "Advanced Technologies in Human Immunology Research"
2011	CHI representative, FITMaN FOCIS working group on flow cytometry in human immunology studies

### Consulting Activities

1988-2002	Scientific Advisory Board member, MedImmune, Inc.
1990-1997	Consultant, Cell Genesys, Inc.
1997-2004	Scientific Advisory Board member, Cell Genesys, Inc.
1992-2002	Consultant, Genetics Institute (Wyeth)
2004	Consultant, Wyeth
1993-2000	Scientific Advisory Board member, Roche Milano Ricerche, Hoffmann-LaRoche
1993-1998	Consultant, Anergen, Inc.
1998-2003	Scientific Advisory Board member, Mojave Therapeutics, Inc.
2000-2003	Scientific Advisory Board member, Alexion Pharmaceuticals, Inc.
2001-2004	Consultant, Hybridon, Inc.
2002-2004	Member, Strategic Planning Board, Genencor International, Inc.

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Lectures by Invitation (2005 – date; abbreviated)

1. Jan. 10, 2005 – “Dynamic In Situ Visualization of Immune Cell Interactions.” Children’s Medical Center, Cincinnati, OH
2. Feb. 1-7, 2005 – “Visualizing Dendritic Cell – Lymphocyte Interactions In Vivo.” Keystone Symposium, Dendritic Cells at the Center of Innate and Adaptive Immunity, Vancouver, Canada
3. Feb. 11, 2005 – “Dynamic Visualization of Lymphocyte – Dendritic Cell Interactions.” NIAID Grand Rounds, NIH, Bethesda, MD
4. March 1-6, 2005 – “CD4 T Cell Interaction with Dendritic Cells in Lymph Nodes.” Keystone Symposium on Leukocyte Trafficking, Taos, NM
5. March 16, 2005 – “Dynamic Visualization of Lymphocyte – Dendritic Cell Interactions.” Wistar Institute, Philadelphia, PA
6. March 22, 2005 – “Visualizing and Modeling Immune Cell Interactions.” Cell Biology and Metabolism Branch, NICHD, NIH, Bethesda, MD
7. April 5-10, 2005 – “Visualizing and Modeling Immune Cell Interactions.” Advances in Targeted Therapeutics, Juan le Pins, France
8. April 18, 2005 – “Cell Interactions in Adaptive Immunity – From Molecules to Models to Movies.” Case Western Reserve University School of Medicine, Cleveland, OH
9. April 29, 2005 – “Dynamic In Situ Imaging of Immune Cell Behavior.” Scripps Research Institute, La Jolla, CA
10. May 15, 2005 - "High Resolution Dynamic Visualization of Immune Cell Function in vivo in Health and Disease." 5th Annual FOCIS meeting, Boston, MA
11. June 17-21, 2005 – “Visualizing immune cell interactions in vivo.” Basic Science Symposium, Transplant Society, La Baule, France
12. June 22, 2005 – “Dynamic Intravital Imaging of Adaptive and Innate Immune Cell Function” Institut Cochin, Paris, France
13. August 7-12, 2005 - “In situ 4D imaging of immune cell behavior and function in lymphoid and peripheral tissues.” Immunochimistry and Immunobiology Gordon Research Conference, Oxford, England
14. Sept. 7-9, 2005 – “Chemokine mediated guidance of T-DC interactions.” Howard Hughes Medical Institute, Chevy Chase, MD
15. Sept. 12, 2005 - "Unraveling and Reconstructing Adaptive Immunity: From Molecules to Models to Movies." Memorial Sloan-Kettering Cancer Center, New York, NY
16. Sept. 26-29, 2005 – “Imaging Mucosal Immune Responses” 2<sup>nd</sup> International Meeting on

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Dendritic Cells at the Host-Pathogen Interface. Airlie House, Warrenton, VA

17. Oct. 4-7, 2005 - "Dynamic in vivo High Resolution Imaging of Immune Cell Behavior." Cancer Research Institute Symposium on Cancer Vaccines, New York, NY
18. Oct. 9-14, 2005 - "Dynamic in vivo High Resolution Imaging of Immune Cell Behavior." Aegean Conference 'Crossroads of Innate and Adaptive Immunity', Rhodes, Greece
19. Nov. 12-14, 2005 – "Real Time Inside the Lymph Node." Basic Science Symposium, Association of Clinical Rheumatology annual meeting, San Diego, CA
20. Dec. 1, 2005 - "Unraveling and Reconstructing Adaptive Immunity: From Molecules to Models to Movies." Brown University, Providence, RI
21. Dec. 14, 2005 - "Unraveling and Reconstructing Adaptive Immunity: From Molecules to Models to Movies." Harvard Medical School
22. Jan. 6-11, 2006 – "Modeling T Cell Antigen Discrimination: The Key Role of Feedback Control Circuits." Keystone Symposium on Lymphocyte Activation, Steamboat Springs, CO
23. Jan. 24 – 28, 2006 – "Dynamic in vivo High Resolution Imaging of Immune Cell Behavior." Erasmus Molecular Medicine Symposium, Rotterdam, Germany
24. Mar. 16, 2006 – "Unraveling and Reconstructing Adaptive Immunity: From Molecules to Models to Movies." Fox Chase Cancer Center, Philadelphia, PA
25. Mar. 28 – April 1, 2006 – "Dynamic High Resolution Imaging of Immune Cells in Intact Tissues." Annual Congress of the Swiss Society for Allergology and Immunology, Zurich, Switzerland
26. Apr. 4-9, 2006 – "How do Cells Interact?" Advances in Targeted Therapies, Sorrento, Italy
27. April 20, 2006 - "Unraveling and Reconstructing Adaptive Immunity: From Molecules to Models to Movies." MIT Dept. of Bioengineering, Boston, MA
28. April 21, 2006 – "New Tools for Multiscale, Spatially-resolved Modeling and Simulation: A Focus on the Biology, Not the Math." Dept. of Systems Biology, Harvard Medical School, Boston, MA
29. May 12-16, 2006 – "A Reconstructionist's View of Antigen-specific T Cell Activation: From Molecules to Models to Movies." Distinguished Lecture, American Association of Immunologists Annual Meeting, Boston, MA
30. May 25, 2006 - "Unraveling and Reconstructing Adaptive Immunity: From Molecules to Models to Movies." R. G. E. Murray Lecture, University of Western Ontario, London, ON, Canada
31. June 3-5, 2006 – "Using Intravital Imaging to Unravel and Reconstruct the Cell Interactions and Signals Underlying Adaptive Immune Responses." FOCiS, San Francisco, CA

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32. July 24, 2006 – “Dynamic Visualization of T-Cell Immune Responses.” World Transplant Congress, Boston, MA
33. July 25-29, 2006 - “Unraveling and Reconstructing Adaptive Immunity: From Molecules to Models to Movies.” RIKEN, Tokyo, Japan
34. Sept. 2-11, 2006- “Intravital Dynamic Multiphoton Imaging of Immune Cells in Lymphoid Tissues and Peripheral Sites.” The University Hospital of the City of Vienna, Vienna, Austria
35. Sept. 17-22, 2006 – “How Chemoattractants Work: From In Silico Models to In Vivo Movies.” Keynote Lecture, Gordon Research Conference, Aussois, France
36. Oct. 7-13, 2006 – “A New Biologist-friendly Software Approach to Complex Multiscale Spatially-resolved Modeling and Simulation.” Aegean Conference on Networks and Pathways, Mykonos, Greece
37. Nov. 3-5, 2006 – “Understanding Adaptive Immune Responses Using Movies and Models.” Baylor Institute for Immunology – U19 Annual Symposium, Dallas, TX
38. Nov. 27-29 – “An Integrated Multiscale Approach to Understanding the Immune System: From Molecules to Models to Movies.” 3<sup>rd</sup> Annual Meeting on Immune Activation and the Pathogenesis of HIV Infection: Lessons from Studies in Humans, Monkeys and Mice. Bethesda, MD
39. Dec. 6, 2006 – “Building a Systems Level Understanding of Adaptive Immunity: From Molecules to Models to Movies.” Netherlands Cancer Institute, Amsterdam, The Netherlands
40. Dec. 7, 2006 – “A Multiscale View of the Immune System: From Molecules to Models to Movies.” Dutch Society for Immunology Conference, Noordwijk, The Netherlands
41. Jan. 19, 2007 – “Understanding Adaptive Immunity: From Molecules to Models to Movies.” Syracuse University, Syracuse, NY
42. Jan. 29/30, 2007 - "2 Photon Intravital Imaging of the Immune System" and "A Multiscale View of the Immune Systems: From Molecules to Models to Movies." UT Southwestern Medical School, Dallas, TX
43. Feb. 13, 2007 - "Understanding Adaptive Immunity: From Molecules to Models to Movies." Immunology Dept., Stanford University, Stanford. CA
44. Feb. 14, 2007 – “Multiscale Spatially-resolved Modeling and Simulation: A Focus on the Biology Not the Math.” Simbios NCBC, Stanford University, Stanford, CA
45. Feb. 26, 2007 - "Directed Cell-Cell Interactions in the Development of Adaptive Immunity.” Keystone Symposium on Imaging Immune Responses (R. N. Germain and E. Robey. Co-chairs), Keystone, CO
46. March 25-28, 2007 - "Dynamic Imaging of Immune Cell Behavior and Function in Vivo." Immunochemistry and Immunobiology Gordon Research Conference, Ventura Beach, CA

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47. April 10-20, 2007 – Australasian Society for Immunology (ASI) Visiting Lecturer, with seminars at the Peter Mac (Melbourne), WEHI (Melbourne), John Curtin School (Canberra), Centenary Institute (Sydney), QIMR and PA Hospital (Brisbane), Australia and the Univ. of Auckland Bioengineering Dept., Auckland, NZ, and Malaghan Institute, Wellington, NZ: talks included “Dynamic Intravital Imaging of Immune Cell Behavior in Lymphoid and Peripheral Tissues,” “A Multiscale Approach to Understanding Adaptive Immunity: From Molecules to Models to Movies,” and “Multiscale Spatially-resolved Modeling and Simulation: A Focus on the Biology Not the Math.”
48. May 2, 2007 - "Understanding Immune Cell Migration and Interaction." Inaugural Symposium of the Center for Cell Dynamics, Johns Hopkins University, Baltimore, MD
49. May 22-28, 2007 – “Dissecting TCR-dependent T Cell Activation: Combining Classical Biochemistry with In Silico Modeling.” EMBO Conference on Lymphocyte Antigen Receptor and Coreceptor Signaling, Siena, Italy
50. June 2-7, 2007 – “Dynamic High-resolution Intravital Imaging of the Immune System in Mice.” Gates Grand Challenges Meeting, Lugano, Switzerland
51. June 17, 2007 - Keynote Lecture, "The Old and the New: Enhanced Multiscale Modeling of Biological Systems", Biodefense Immune Modeling Summer School, University of Pittsburgh, Pittsburgh, PA
52. June 19-22, 2007 – “Intravital Imaging Reveals How Chemical Signals and Physical Cues Optimize Cell-Cell Interactions During Immune Responses.” Aegean Conference on Crossroads of Innate and Adaptive Immunity, Crete, Greece
53. June 24-29, 2007 – “Improved Software Tools for Complex Spatially-resolved Modeling and Simulation.” Aegean Conference on Pathways, Networks, and Systems, Porto Heli, Greece
54. July 14-19, 2007 – “Dynamic Intravital Visualization of Immune Cell Activity Using 2-photon Microscopy.” FASEB Summer Research Conference on Autoimmunity, Saxon’s River, VT
55. Sept. 8-11, 2007 – “Multiscale Analysis of the Immune System: Molecules, Models, and Movies.” From the Laboratory to the Clinic Meeting on T Cells and Cytokines, Trinity College, Oxford, UK
56. Sept. 19, 2007 – “Exploring the Immune System – From Molecules to Models to Movies and Back.” Johns Hopkins University Immunology Retreat Keynote Lecture, Baltimore, MD.
57. Sept. 26, 2007 – “Imaging of lymphocyte migration and mobility in lymphoid tissues and the periphery.” NIH Research Festival Symposium on Immune Cell Dynamics: From Monkeys to Models to Movies, Bethesda, MD.
58. Oct. 12, 2007 – “Developing a Systems View of Immune Function by Integrating Molecular Studies, Models, and Movies.” New York University Symposium in honor of Dr. S. Burakoff, New York City, NY.
59. Oct. 24, 2007 – “A Journey Through Time and Space: From Mice in the Basement to Live Imaging and Computer Modeling of the Immune System.” University of Pennsylvania Biomedical Research Postdoctoral Symposium Keynote Lecture, Philadelphia, PA.



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60. Nov. 2-4, 2007 – “Real-time Visualization of Innate and Adaptive Immune Responses Using Intravital 2-Photon Microscopy.” Baylor Institute for Immunology U19 Symposium, Dallas, TX.
61. Nov. 8, 2007 – “Making Sense of All the Data: New Biologist-friendly Methods for Complex Multiscale Modeling, Simulation, and Prediction.” Pharmacogenetics Research Network Scientific Meeting, Indianapolis, IN.
62. Dec. 5, 2007 - “Understanding How the Immune System Really Works: From Molecular Studies to Computational Models to Intravital Movies and Back,” University of California, San Francisco Graduate Program, San Francisco, CA.
63. Jan. 13-16, 2008 - “Multi-Cellular Communication in Lymph Nodes,” Chemokines and Chemokine Receptors/Leukocyte Trafficking Keystone Symposia, Keystone, CO.
64. Jan. 22-23, 2008 - Keynote Lecture, “A New Approach to Multiscale Modeling of the Immune System,” A Systems Biology Approach to Immune Modulation and Inflammation, Montreal, Canada.
65. Feb. 3-6, 2008 - “Visual Evaluation of Interactions Between T Cells and DCs,” Lymphocyte Activation and Signaling Meeting, Keystone Symposium. Snowbird, UT.
66. Feb. 9-12, 2008 - “Quantitative Multiscale Modeling and Simulation of Cellular Differentiation: How to Do It and Why Experimental Biologists Should Care,” Nature Immunology – Max Planck Ringberg Symposium on Determinism and Plasticity of T Lymphocytes, Munich, Germany
67. Feb. 13, 2008 – “Building a Systems Level Understanding of Adaptive Immunity: From Molecular Networks to Intravital Movies to Computational Models,” Max-Planck Institute for Biochemistry, Martinsried, Munich, Germany.
68. March 15-19, 2008 - “Lymphocyte entry, migration, and territoriality in lymph nodes,” World Immune Regulation Meeting, Davos, Switzerland.
69. March 25-31, 2008 - “Dynamic Intravital Imaging and Computer Modeling of Immune Responses,” WPI Immunology Frontier Research Center, Osaka, Japan.
70. April 29, 2008 – “Developing a Systems View of Immune Function by Integrating Molecular Studies, Models, and Movies,” University of Pennsylvania Immunology Interest Group, Philadelphia, PA
71. May 9, 2008 – “Building a Systems Level Understanding of Adaptive Immunity: From Molecules to Models to Movies,” Mt. Sinai School of Medicine, New York, NY
72. May 28, 2008 – “Building a Systems Level Understanding of Adaptive Immunity: From Molecules to Models to Movies,” University of Rochester, Rochester, NY
73. June 9 – 11, 2008 – “Systems Biology White Paper,” Symposia Organizzazione Congressi Srl, Portofino, Italy

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74. June 15 – 17, 2008 – “New Tools for Multiscale, Spatially-resolved Modeling and Simulation: A Focus on Biology, Not the Math,” Center for Infectious Disease Dynamics, State College, PA
75. June 18 – 21, 2008 – “Modeling and Simulation of Immunological Systems: Replacing the Old Ways with the New,” Summer Symposium in Molecular Biology, State College, PA
76. July 16, 2008 – “Developing a Multiscale View of Immune Function by Integrating Molecular Studies, Movies, and Mathematical Models,” Harvard Medical School, Boston, MA
77. August 18 – 22, 2008 – “Meeting and Greeting: Dynamic Intravital Imaging of Immune Cell Behavior,” Immunobiology and Immunochemistry Conference, Gordon Research Conference, Oxford, United Kingdom
78. Sept. 4, 2008 – “Deciphering TCR Ligand Discrimination by Combining Experiments, Computer Modeling, and Predictive Simulation” and “The In Situ Dynamics of Innate and Adaptive Immune Cell behavior Revealed by Intravital Multiphoton Microscopy,” Joint Annual Meeting of the Austrian and German Immunological Societies, Vienna, Austria
79. Sept. 25, 2008 – “Dynamic 2 Photon Intravital Imaging of Immune Cell Migration, Interaction, and Function,” Cambridge Immunology Forum “Visions of Immunology,” Cambridge University, Cambridge, UK
80. Sept. 29, 2008 – “Developing an Integrated Vision of Immune Function by Combining Molecular Studies, Modeling, and Movies,” Univ. of Tokushima, Tokushima, Japan
81. Oct. 1, 2008 – “Immune Cell Migration, Territoriality, Interaction, and Function Assessed by Intravital 2-Photon Microscopy,” 10<sup>th</sup> International Symposium on Dendritic Cells, Kobe, Japan
82. Oct. 6, 2008 – “Omic-scale Analyses and Multiscale Computational Modeling as New Discovery Tools in Disease Research,” Lupus Research Institute, New York, NY
83. Oct. 8 – 10, 2008 – “Combining Molecular Studies, Models, and Movies to Develop an Integrated View of Immune Function,” 3<sup>rd</sup> B. Halpern Symposium, Paris, France
84. Nov. 18-19, 2008 – “Lymphocyte Migration, Territoriality, Interaction, and Function Assessed by Intravital 2-photon Microscopy,” British Society for Immunology, Glasgow, Scotland
85. Nov. 20, 2008 – “Developing an Integrated Systems Understanding of Immune Function by Combining Molecular Studies, Modeling, and In Situ Movies,” Institute of Immunology and Infection Research, University of Edinburgh, Edinburgh, Scotland
86. Jan. 5, 2009 – “Dynamic Intravital Imaging of Immune Cell Function,” Baylor Institute for Immunological Research, Dallas, TX
87. Jan. 17, 2009 – “Towards an Integrated View of Immune Function Combining Molecular Studies, Models, and Movies,” EMBO meeting on ‘Visualizing Immune System Complexity,’ Marseilles, France

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88. Jan. 27, 2009 – “Dynamic Intravital Imaging of Immune Cell Migration, Interaction, and Effector Function,” Midwinter Conference of Immunologists, Asilomar, CA
89. Jan. 28, 2009 – “A Systems Biology Approach to Immune Analysis,” AVRS meeting on Systems Biology and HIV Vaccines, Bethesda, MD
90. Feb. 27, 2009 – “Visualizing the Cell-Cell Interactions Underlying Humoral Immune Responses,” Keystone Symposium ‘B Cells in Context,’ Taos, NM
91. March 13, 2009 – “Immune Cells on the Move,” AAAAI Annual Meeting, Washington, DC
92. March 19, 2009 – “Dynamic High Resolution Intravital Imaging: New Insights into Immune Cell Behavior and Host-Pathogen Relationships Through Direct Observation In Situ,” Opening Lecture, Joint Meeting of the Swiss Society for Allergy and Immunology/Swiss Society for Infectious Diseases, Geneva, Switzerland
93. April 3, 2009 – “Enhancing Our Understanding of Immune System Function Through Dynamic In Vivo Imaging and In Silico Modeling.” Blumenthal Lecture, University of Minnesota, Minneapolis, Minnesota.
94. April 9, 2009 – “Integrating Molecular Studies, Models, and Movies into a Dynamic Multiscale View of the Immune System.” Willison Lecture, University of Michigan, Ann Arbor, Michigan.
95. April 13 – 16, 2009 – “Lymphocyte Migration, Territoriality, Interaction, and Function Assessed by Intravital 2-photon Microscopy.” Imaging the Immune System from Cancer to Pathogens, British Society for Immunology, York, United Kingdom.
96. May 3 – 5, 2009 – “Dynamic In Situ Imaging of Immune Cell Behavior: New Insights into the Origin of XLP and the Role of SAP in Controlling Productive T Cell – B Cell Interactions.” Children's Hospital Primary Immunodeficiency Diseases Center 2nd symposium, Children's Hospital, Boston, Massachusetts.
97. May 23 - 28, 2009 – “Structures, Signals and Cell interactions Involved in Adaptive Immune Responses as Revealed by Dynamic Intravital Imaging.” First Kishimoto Symposium on Paradigms of Immune Regulation, Osaka, Japan.
98. July 4 - 8, 2009 – “Structures, Signals and Cell interactions Involved in Adaptive Immune Responses as Revealed by Dynamic Intravital Imaging.” 16 Germinal Center Conference, Frankfurt, Germany.
99. July 9, 2009 – “A Predictive Understanding of Immune Function Derived from Molecular, Studies, Models, and Movies.” Max Planck Institute for Immunobiology, Freiburg, Germany
100. Sept. 11, 2009 – “The Role of Cell Dynamics in Immune System Function: Insights from High-resolution Intravital Imaging of Lymphoid and Peripheral Tissue Sites.” Merck Serono Lecture, European Society for Dermatological Research, Budapest, Hungary
101. Sept. 14, 2009 - “In Situ Dynamics of T Cell Co-operation and Effector Activation Analyzed By 2 Photon Microscopy.” EMBO meeting on signaling in the Immune System, Siena, Italy

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102. Sept. 17, 2009 – “Combining Molecular Studies, Dynamic Intravital Imaging, and Multiscale Computational Modeling to Achieve a Predictive Understanding of In Vivo Immune Responses.” Novartis Vaccines and Diagnostics, Siena, Italy
103. Oct. 1, 2009 – “Dynamic intravital imaging of the immune system.” *Frontiers in Basic Immunology*, NCI, NIH, Bethesda, MD
104. Oct. 7, 2009 – “Enhancing Our Understanding of Human Immunity by Integrating Emerging High-density Analytic Technologies and Computational Systems Methods.” NIH Research Festival Symposium on Human Immunology, Bethesda, MD
105. Oct. 9, 2009 – “Immune Cell Migration, Territoriality, Interaction, and Function Assessed by Intravital 2-Photon Microscopy.” NCI Immunology and Inflammation Seminar Series, Frederick, MD
106. Oct. 21, 2009 – “In Vivo Dynamics of the Immune Response as Revealed by Multiphoton Imaging.” AIDS Vaccine 2009, Paris, France
107. Oct. 24, 2009 – “Understanding the Inner Workings of the Immune System: From Images to Immunological Models.” Harvard Medical School Immunology Retreat, Lincoln, NH
108. November 16, 2009 - "Overview of the Trans-NIH Center for Human Immunology," American Association of Immunologists, Bethesda, MD
109. November 18, 2009 - "Systems Biology of Host-Pathogen Interactions," Systems Biology Workshop, Chemical and Biological Defense Science and Technology Conference, Dallas, TX
110. December 9, 2009 - "An Integrated Computational Systems Biology Program: Developing the Tools Biologists Need for Modeling and Simulation in Health and Disease," Systems Biology of Human Aging, National Institute on Aging, Baltimore, MD
111. December 17, 2009 - "Dynamic In Vivo High Resolution Imaging of Adaptive and Innate Immune Cell Behavior in Lymphoid and Peripheral Tissues," Thaler Lecture, Aeras Global TB Vaccine Foundation, Rockville, MD
112. January 28, 2010 - "Developing an Integrate, Multiscale Picture of the Immune System Using Molecular Analysis, Dynamic Imaging, and Computational Biology," Immunobiology Seminar Series, Yale University, New Haven, CT
113. February 27 - March 4, 2010 - "Cell Dynamics during the Initiation and Effector Phases of Adaptive Immune Responses," Lymphocyte Activation and Gene Expression Keystone Meeting, Keystone, CO
114. March 21 - 26, 2010 - "Intravital Imaging of Adaptive Immune Effector Activity," HIV Vaccine Keystone Meeting, Banff, Canada
115. April 5 - 9, 2010 - "Dynamic Intravital Imaging of the Immune System" and "A New Biologist-centric Approach to Computational Modeling and Simulation of Immunity," Lautenberg Center

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retreat, Tiberias, Israel

116. April 10 - 12, 2010 - "Exploring the immune System Using Movie-making and Computational Modeling," Weizmann Institute, Rehovot, Israel
117. April 14 - 17, 2010 - "Dynamic Visualization of Immune System Function Using Intravital 2-Photon Microscopy: A First-Hand View of Immunity In Situ," Ben-Guiron University, Beer-Sheva, Israel
118. May 8, 2010 – “In Vivo Cell Dynamics,” IMMUNOLOGY 2010, Baltimore, MD
119. May 16 - 21, 2010 - "Dynamic Intravital Imaging of Immune Cell Behavior in Lymphoid and Peripheral Tissues," Immunchemistry and Immunobiology Gordon Research Conference, Les Diablerets, Switzerland
120. June 1 - 4, 2010 - "Dynamic In Situ Visualization of Immune System Interactions with Pathogens Using Intravital 2-photon Microscopy," EMBO, Nice, France
121. June 20 - 24, 2010 - "Imaging and Modeling the Immune System at Work," Systems Biology and Immune Responses, Fondation Merieux, Annecy, France
122. June 28, 2010 - "Dynamic Intravital Imaging of the Immune System - Replacing Cartoons with Movies of the Real Thing," AAI Introductory Course, Philadelphia, PA
123. July 26-27, 2010 - "An Integrated Multiscale Systems Approach to Analysis of Immune Function: From Molecules to Movies to Human Biology, University of Washington Systems Biology Speaker Series, Seattle, WA
124. August 5, 2010 – “Dynamic Intravital Imaging of the Immune System,” Rocky Mountain Labs, NIAID, Hamilton, MT
125. August 22 - 28, 2010 - "In Situ Dynamics of T Cell Co-operation and Effector Activation Analyzed By 2-Photon Microscopy," 14th International Congress of Immunology, Osaka-Kobe, Japan
126. Sept. 16, 2010 – "Visualizing and Modeling the Immune System: An Integrated Approach to Understanding Host Defense,” Imperial College, London, UK
127. Sept. 17, 2010 – "Dynamic Intravital Imaging of Immune Cell Activation and Effector Function in Lymphoid Tissues and Peripheral Sites," Cancer Research UK, London, UK
128. Oct. 7, 2010 – “Probing the Initiation and Effector Phases of T-Cell Responses Using Dynamic Intravital Microscopy,” Cancer Research Institute Symposium, New York, NY
129. Oct. 16, 2010 - "Probing Central and Peripheral Immune Function Using Dynamic Intravital 2-Photon Imaging," 3<sup>rd</sup> International Symposium “Adaptive Immunity”, Erlangen, Germany

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130. Oct. 28, 2010 – “A Systems Approach to Immunology,” Keystone / Gates Symposium on Immune Mechanisms of Vaccination, Seattle, WA
131. Nov. 9, 2010 – “Immune System Function: Molecules, Models, Mice, Movies, and (Hu)man,” IMP Seminar Series, Emory University, Atlanta, GA
132. Dec. 1, 2010 – “Dynamic Intravital Imaging of the Immune System,” 16th Takeda Science Foundation Symposium on Bioscience, Tokyo, Japan
133. Dec. 4, 2010 – “A Systems Biology Approach to the Study of Human Immunity: Defining the Normal Immunome and Its Perturbation by Influenza Vaccination,” Cell Symposia on Influenza: Translating Basic Insights, Washington, D.C.
134. Jan. 18, 2011 – “Dynamic In Situ Visualization of Immune System Interactions with Pathogens Using Intravital 2-photon Microscopy,” Tuberculosis: Immunology, Cell Biology and Novel Vaccination Strategies, Vancouver, Canada
135. Jan. 31, 2011 – “Combining Cell Biology, Computation, and Cinematography in an Integrated Approach to Understanding the Immune System,” Immunology Program Seminar Series, Washington University, St. Louis, MO
136. Feb. 16 and 17, 2011 – “Multiscale Systems Analysis and Modeling of Immune Recognition and the Host Response to Infection,” and “Dynamic Intravital Imaging of the Initiation and Effector Limbs of the Immune System,” Genentech, South San Francisco, CA

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