

CURRICULUM VITAE
The Johns Hopkins University School of Medicine

[signature] Abraham Kupfer
Abraham Kupfer

2013

DEMOGRAPHIC INFORMATION

Current Appointments

Professor , Department of Cell Biology and Director , Program in Immunology at ICE
Johns Hopkins University School of Medicine

Previous Appointment

Professor, National Jewish Medical and Research Center, Denver, CO
Member, Cancer center, Univ. Colorado Health Sciences Center, Denver, CO

Personal Data

Abraham (Avi) Kupfer, Ph.D
Johns Hopkins University School of Medicine
733 N. Broadway, MRB Room 623
Baltimore, MD 21205
Tel: 443-287-3102 (office)
443-287-3106 (lab)
Fax: 443-287-3109
Email: akupfer@jhmi.edu

Education and Training (in chronological order)

INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
The Hebrew University of Jerusalem, Israel	B.Sc.	1969	Chem./Biochem.
Tel-Aviv University, Israel	M.Sc.	1973	Biochemistry
The Weizmann Inst. Science, Rehovet, Israel	Ph.D.	1981	Chem. Immunol.
Univ. of California, San Diego, Dept. Biology	Postdoc	1984	Cell Biol./Immunol.

Professional Experience (in chronological order)

1984-1988 Research Assistant Professor, Dept. of Biology, University of California, San Diego, La Jolla, CA
1988- Associate Member, Department of Pediatrics, National Jewish Center for Immunology, Denver, CO
1990 Associate Professor, Department of Cell and Structural Biology, University of Colorado Health Science Center, Denver, Colorado
1990 Member, Cancer Center, University of Colorado Health Sciences Center, Denver, Colorado
1994 Associate Professor, Department of Immunology, University of Colorado Health Sciences Center, Denver, Colorado
1998 Member, Steering Committee of the Biomedical Sciences Program, University of Colorado Health Sciences Center, Denver, Colorado
1999 Professor, National Jewish Medical and Research Center, Denver, Colorado

RESEARCH ACTIVITIES

Publications

- Peer-reviewed original research articles
1. Feinstein G, **Kupfer A**, Sokolovsky M. N-Acetyl-(L:ALA)₃-p-Nitroanilide as a new chromogenic substrate for elastase. *Biochem. Biophys Res Commun.* 1973;50:1020-1026.
 2. **Kupfer A**, Gani V, Shaltiel S. Micelles of pyridoxal-5'-phosphate Schiff bases--an improved model for the b₆ site of glycogen phosphorylase. *Biochem Biophys Res Commun.* 1977;79:1004-1010.
 3. Gani V, **Kupfer A**, Shaltiel S. A micellar model for the pyridoxal 5'-phosphate site of glycogen phosphorylase. *Biochemistry* 1978;17:1294-1300.
 4. **Kupfer A**, Gani V, Jimenez JS, Shaltiel S. Affinity labeling of the catalytic subunit of cAMP-dependent protein kinase by N(□)-tosyl-L-lysine chloromethyl ketone. *Proc Natl Acad Sci. USA* 1979;76:3073-3077.
 5. **Kupfer A**, Jimenez JS, Shaltiel S. Distinct conformational changes in the catalytic subunit of cAMP-dependent protein kinase around physiological conditions. Do these changes reflect an ability to assume different specificities? *Biochem Biophys Res Commun.* 1980;96:77-84.
 6. Jimenez JS, **Kupfer A**, Gottlieb P, Shaltiel S. Substrate-mediated channeling of a chemical reagent to the active site of cAMP-dependent protein kinase. *FEBS Lett.* 1981;130:127-132.
 7. Jimenez JS, **Kupfer A**, Gani V, Shaltiel S. Salt-induced conformational changes in the catalytic subunit of adenosine cyclic 3',5'-phosphate-dependent protein kinase. Use for establishing a connection between one sulfhydryl group and the □-P subsite in the ATP site of this subunit. *Biochemistry* 1982;21:1623-1630.
 8. **Kupfer A**, Jimenez JS, Gottlieb P, Shaltiel S. On the protein accommodating site of the catalytic subunit of adenosine cyclic 3', 5'-phosphate-dependent protein kinase. *Biochemistry* 1982;21:1631-1637.
 9. **Kupfer A**, Louvard D, Singer SJ. The polarization of the Golgi apparatus and the microtubule-organizing center in cultured fibroblasts at the edge of an experimental wound. *Proc Natl Acad Sci USA* 1982;79:2603-2607.
 10. Bergmann JE, **Kupfer A**, Singer SJ. Membrane insertion at the leading edge of motile fibroblasts. *Proc Natl Acad Sci USA* 1983;80:1367-1371.
 11. **Kupfer A**, Dennert G, Singer SJ. Polarization of the Golgi apparatus and the microtubule-organizing center within cloned natural killer cells bound to their targets. *Proc Natl Acad Sci USA* 1983;80:7224-7228.
 12. **Kupfer A**, Dennert G. Reorientation of the microtubule organizing center and the Golgi apparatus in cloned cytotoxic lymphocytes triggered by binding to lysable target cells. *J Immunol.* 1984;133:2762-2766.
 13. Nemere I, **Kupfer A**, Singer SJ. The reorientation of the Golgi apparatus and the microtubule organizing center inside macrophages subjected to chemotactic gradient. *Cell Motility* 1985;5:17-29.
 14. **Kupfer A**, Dennert G, Singer SJ. The reorientation of the Golgi apparatus and the microtubule-organizing center in the cytotoxic effector cell is a prerequisite in the lysis of bound target cells. *J Mol Cell Immunol.* 1985;2:37-49.
 15. **Kupfer A**, Singer SJ, Dennert G. On the mechanisms of unidirectional killing in mixtures of two cytotoxic T lymphocytes. Unidirectional polarization of cytoplasmic organelles and the membrane-associated cytoskeleton in the effector cell. *J Exp Med.* 1986;163:489-498.
 16. **Kupfer A**, Swain SL, Janeway CA Jr, Singer SJ. The specific direct interaction of T helper cells and antigen-presenting B cells. *Proc Natl Acad Sci USA.* 1986;83:6080-6083.

17. **Kupfer A**, Swain SL, Singer SJ. The specific interaction of Helper T cells and antigen-presenting B cells. II. Reorientation of the microtubule organizing center and reorganization of the membrane-associated cytoskeleton inside the bound Helper T. cells. *J Exp Med.* 1987;165:1565-1580.
18. **Kupfer A**, Singer SJ, Janeway CA Jr, Swain SL. Coclustering of CD4 (L3T4) molecule with the T-cell receptor is induced by specific direct interaction of helper T cells and antigen-presenting cells. *Proc Natl Acad Sci USA.* 1987;84:5888-5892.
19. **Kupfer A**, Kronebusch PJ, Rose JK, Singer SJ. A critical role for the polarization of membrane recycling in cell motility. *Cell Motil Cytoskeleton.* 1987;8:182-189.
20. Burn P, **Kupfer A**, Singer SJ. Dynamic membrane cytoskeletal interactions: A specific association of integrin and talin arises in vivo after phorbol ester treatment of peripheral blood lymphocytes. *Proc Natl Acad Sci USA.* 1988;85:497-501.
21. **Kupfer A**, Singer SJ. Molecular dynamics in the membranes of helper T cells. *Proc Natl Acad Sci USA.* 1988;85:8216-8220.
22. **Kupfer A**, Singer SJ. The specific interaction of helper T cells and antigen-presenting B cells. IV. Membrane and cytoskeletal reorganizations in the bound T cell as a function of antigen dose. *J Exp Med.* 1989;170:1697-1713.
23. **Kupfer A**, Burn P, Singer SJ. The PMA-induced specific association of LFA-1 and talin in intact cloned T helper cells. *J Mol Cell Immunol.* 1990;4:317-325.
24. **Kupfer A**, Mosmann TR, Kupfer H. Polarized expression of cytokines in cell conjugates of helper T cells and splenic B cells. *Proc Natl Acad Sci USA* 1991;88:775-779.
25. Renz H, Lack G, Saloga J, Schwitzer R, Bradley K, Loader J, **Kupfer A**, Larsen GL, Gelfand EW. Inhibition of IgE production and normalization of airways responsiveness by sensitized CD8 T cells in a mouse model of allergen-induced sensitization. *J Immunol.* 1994;152:351-360.
26. Sinensky M, Fantle K, Trujillo M, McLaon T, **Kupfer A**, Dalton, M. The processing pathway of prelamin A. *J Cell Sci.* 1994;107:61-67.
27. Kupfer H, Monks CRF, **Kupfer A**. Small splenic B cells that bind to antigen-specific T helper (Th) cells and face the site of cytokine production in the Th cells selectively proliferate: Immunofluorescence microscopic studies of Th-B antigen-presenting cell interactions. *J Exp Med.* 1994;179:1507-1515.
28. Finkel TH, Tudor-Williams G, Banda NK, Cotton MF, Curiel T, Monks C, Baba TW, Ruprecht RM, **Kupfer A**. Apoptosis occurs predominantly in bystander cells and not in productively infected cells of HIV- and SIV-infected lymph nodes. *Nature Medicine* 1995;1:129-134.
29. Finkel TH, Monks C, Casella C, Cotton MF, Banda NK, **Kupfer A**, Iklé Baba TW, Ruprecht RM. Apoptosis and HIV disease. *Nature Medicine* 1995;1:386-387.
30. Monks C, Crossno P, Davidson G, Pavlakos C, **Kupfer A**, Silva C, Wylie B. Three dimensional visualization of proteins in cellular interactions. *Proceedings IEEE Visualization*, 1996;503: 363-366.
31. Monks CRF, Kupfer H, Tamir I, Barlow A, **Kupfer A**. Selective modulation of protein kinase C- θ during T cell activation. *Nature* 1997;385:83-86.
32. Nagasawa M, Melamed I, **Kupfer A**, Gelfand EW, Lucas JJ. Rapid nuclear translocation and increased activity of cyclin-dependent kinase 6 after T-cell activation. *J Immunol.* 1997;158:5146-5154.
33. Monks CRF, Freiberg BA, Kupfer H, Sciaky N, **Kupfer A**. Three-dimensional segregation of supramolecular activation clusters in T cells. *Nature* 1998;395 82-86.

34. Janeway CA Jr, **Kupfer A**, Viret C, Boursalian T, Goverman J, Bottomly K, Sant'Angelo D. T-cell development, survival, and signaling. *Immunologist* 1998;6:5-12.
 35. Sperling AI, Sedy JR, Manjunath N, **Kupfer A**, Ardman B, Burkhardt JK. Cutting Edge: TCR signaling induces selective exclusion of CD43 from the T cell-antigen-presenting cell contact site. *J Immunol.* 1998;161:6459-6462.
 36. Marschner S, Freiberg BA, **Kupfer A**, Hunig T, Finkel TH. Ligation of the CD4 receptor induces activation-independent downregulation of L-selectin. *Proc Natl Acad Sci USA.* 1999;96:9763-9768.
 37. Sun Z, Arendt CW, Ellmeier W, Schaeffer EM, Sunshine MJ, Annes J, Petrzilka D, **Kupfer A**, Schwartzberg PM, Littman DR. PKC- θ is required for TCR-induced NF- κ B activation in mature but not immature T lymphocytes. *Nature* 2000;404:402-407.
 38. **Kupfer A**. Breaking up receptor alliances: the parting of CD3 and CD4. *Nature Med* 2000;6:1097-1098.
 39. Lang P, Stolpa JC, Freiberg BA, Crawford F, Kappler J, **Kupfer A**, Cambier JC. TCR induces trans-membrane signaling by peptide/MHC Class II via associated Ig- α /Ig- β dimers. *Science* 2001;291:1537-1540.
 40. Potter TA, Grebe K, Freiberg B, **Kupfer A**. Formation of supramolecular activation clusters on fresh ex vivo CD8+ T cells after engagement of the T cell antigen receptor and CD8 by antigen-presenting cells. *Proc Natl Acad Sci USA* 2001;98:12624-12629.
 41. Miranda LR, Schaefer BC, **Kupfer A**, Hu Z, Franzusoff A. Cell surface expression of the HIV-1 envelope glycoproteins is directed from intracellular CTLA-4-containing regulated secretory granules. *Proc Natl Acad Sci USA* 2002;99:8031-8036.
 42. Freiberg BA, Kupfer H, Maslanik W, Delli J, Kappler J, Zaller DM, **Kupfer A**. Staging and resetting T cell activation in SMACs. *Nature Immunol.* 2002;3:911-917.
 43. Mukasa A, Lahn M, Fleming S, Freiberg B, Pflum E, Vollmer M, **Kupfer A**, O'Brien R, Born W. Extensive and preferential Fas/Fas ligand-dependent death of gammadelta T cells following infection with *Listeria monocytogenes*. *Scand J Immunol.* 2002;56:233-247.
 44. Schaefer BC, Kappler JW, **Kupfer A**, Marrack P. Complex and dynamic redistribution of NF- κ B signaling intermediates in response to T cell receptor stimulation. *Proc Natl Acad Sci USA.* 2004;101:1004-1009.
 45. **Kupfer A**. Signaling in the immunological synapse: defining the optimal size. *Immunity* 2006;25:11-13.
 46. Lamason RL, **Kupfer A**, Pomerantz JL. The dynamic distribution of CARD11 at the immunological synapse is regulated by the inhibitory kinesin GAKIN. *Mol Cell.* 2010; **40**, 798-809.
 47. Collins, S., Waickman, A., Basson, A., **Kupfer, A.**, Licht, J.D., Horton, M.R., and Powell, J.D.. Regulation of CD4(+) and CD8(+) Effector Responses by Sprouty-1. 2012: *PLoS One* 7, e49801.
- **Review articles**
 1. Dennert G, **Kupfer A**, Anderson CG, Singer SJ. Reorientation of the Golgi apparatus and the microtubule organizing center: is it a means to polarize cell mediated cytotoxicity? *Adv. Exp. Med. Biol.* 1985;184:83-97.
 2. Singer SJ, **Kupfer A**. The directed migration of eukaryotic cells. *Annual Rev Cell Biol.* 1986;2:337-365.

3. **Kupfer A**, Singer SJ. Cell biology of cytotoxic and helper T cell functions. Immunofluorescence microscopic studies of single cells and cell couples. Annual Rev Immunol.1989;7:309-337.
4. Podack ER, **Kupfer A**. T cell effector functions: mechanisms for delivery of cytotoxicity and help. Annual Rev Cell Biol. 1991;7:49-59.
5. **Kupfer, A**, Kupfer H. Imaging immune cell interactions and functions: SMACs and the immunological synapse. Seminars in Immunology, 2003;15:295-300.
6. **Kupfer A**. Visualizing the immune synapse. Biol of Blood Marrow Transplant. 2007;13:115-119.
7. **Kupfer A.**, (2010) Immunological Synapses, Preface. Current Topics Microbiology and Immunology. 340: 5-8. PMID: 20333809

Inventions, Patents, Copyrights

- 1994- 3D Deconvolution Software Plug-in licensed to IP Lab Spectrum
1997- US patent US6040152 “Antigen-specific Translocation of PKC θ : A Rapid and Specific Assay/Marker for T Cell Activation,”

Extramural Sponsorship

- **Grants**

Active:

- 9/1/08-8/31/13 Antigen receptor inputs: linking structural, molecular and cellular responses
P01 AI072677, Program Project
NIAID
\$ 10,304,570
PI: Jonathan Schneck, MD PHD
PI: Abraham Kupfer, PHD, Project 2, 31.5% effort
PI: Abraham Kupfer, PHD, Imaging Core, 5% effort

Notes: This program will combine genetic, molecular, nanoparticles and imaging approaches to study the mechanisms that couple the sensing of foreign pathogens to the mounting of the appropriate immune responses. These studies will investigate new targets to enhance desired immune responses and to suppress pathologic responses that cause autoimmunity.

Completed:

- 4/1/05-3/31/10 Cell Biology of Immune Interactions
R37 AI23764, Merit Award,
NIAID
\$ 2,222,093
PI: Abraham Kupfer, PhD, 36.7% effort

Notes: These studies aim to obtain detailed multi-dimensional (space and time) information of the activation induced molecular associations that occur at the immune synapse during productive and pathologic immune responses.

- 9/1/07-8/31/09 Receptor Organization, SMAC Dynamics and Membrane Lipids in Aging T-Cells
R21 AG030952
NIA
\$ 267,521
PI: Abraham Kupfer, PhD, 10% effort

Notes: These studies aim to find whether changed membrane organization of receptors and altered immune synapses formed by aged lymphocytes may cause reduced immunity and weak vaccine responses seen in aging people/mice. These studies will then attempt to restore structural and functional responsiveness by using controlled lipid diets to modify membrane organization. These preliminary data will serve as the basis for a more comprehensive RO1 application.

- 1985-2000 Cell Biology of Immune Interactions
RO1 AI23764 (This grant was converted to a Merit Award in 2000)
NIAID
PI: Abraham Kupfer, PhD, 50% effort

Notes: These studies aim to obtain detailed multi-dimensional (space and time) information of the activation induced molecular associations that occur at the T-APC contact area during productive and abnormal immune responses.

- 9/1/96- 8/31/01 Immune Activation in Neonatal SIV
RO1 AI40003
NIAID
PI: Abraham Kupfer, Ph.D. (since 2000) 10% effort

Notes: The major goals of this project were to: 1) Determine the effect of immune activation on viral loads and apoptosis in SIV-infected macaques, 2) Determine viral load, apoptosis, and disease progression after in utero infection, before and after the

development of immune responsiveness, 3) Determine viral load, and apoptosis in neonatal and adult animals infected with SIV or SIVΔ3 by oral or intravenous infection.

3/1/97-11/30/99 The role of Antigen Structure in Determining Consequences of mIg Mediated Signaling

PO1 AI22295

PI: John Cambier, PHD

PI: Abraham Kupfer, Ph.D. 20% effort

Notes: The goal of this project was to define the role of the structure and valency of antigens in stimulating primary and secondary B cell responses, class switching, anergy and deletion.

1/1/01-12/31/05 Antigen Recognition by Lymphocytes

PO1 AI 22295

NIAID

\$4,263,444

PI: Philippa Marrack, PhD

PI: Abraham Kupfer, PhD, Project 2, 30% effort

PI: Abraham Kupfer, PHD, Imaging Core 5% effort

Note: These studies investigated the formation of SMACs in thymocytes during their interaction with Antigen Presenting Cells and studied the role of SMACs in thymocytes undergoing positive and negative selection events.

4/24/02-4/30/03 Microscopic Translocation of PKCθ in T-Cells

Trellis biotechnology, Research Contract

\$148,264.

PI: Abraham Kupfer, Ph.D. 20% effort

Notes: These studies aim to find stable T cell lines and APCs and the optimal conditions for the rapid visualization of the antigen induced translocation of PKCθ in T cells.

EDUCATIONAL ACTIVITIES

Teaching

Denver:

- 1) 1989-1990 **Immunology**
Course Directors: J. Freed and R. Kubo at the Dept. of Microbiology/Immunology
Four classes of 1 hour each.
- 2) 1991-1994 **Cell Biology (CSB 7604)**
Course Director: K. Howell
Four classes of 1 hour each.
- 3) 1994-1995 **Basic Science Course: Introduction to Cell Biology**
Course Director: Joe Lucas, Dept of Pediatrics
This was a summer course to new Clinical Fellows, 2 classes of 2 hours.
- 4) 1990-2004 **Cell Biology of the Immune System (IDPT 7663)**
Course Directors: J. Cambier and J. Freed at the Dept. of Microbiology/Immunology
Four classes of 1 hour each.
- 5) 1996- 2004 **Advanced Topics in Immunology**, Dept of Immunology; 2-4 hours each year.

Hopkins:

- 1) 2006- present **Molecule and Cells: Cell Physiology**, Leader Discussion small Group ~10Hrs/yr,
- 2) 2005-present, **Graduate Immunology (ME:250.703)**, , 2 hours lecture/yr.
- 3) 2005-present, **Immunology Core course (ME:250.709)**, ,2 hours Journal club/yr.
- 4) 2006-present, **Immunology Elective**: "From recognition to response: the physical and biochemical basis of immune activation, 2005-2006, Class: 3/24/06, 2.5 hours discussion.
- 5) 2006-present, **Introduction to Immunology Research (ME.250.804)**, 2hr
- 6) 2008, **Graduate Immunology: The Immune Response (PH. 260.717)**, 2hr

Mentoring (pre- and post-doctoral)

1993-1996	Colin Monks, Ph.D
1997-2000	Benjamin Freiberg, Ph.D
2001-2006	Josef Delli, Ph.D
2003-	Yibing Wang, stayed in Denver in another lab when we moved to JHU
1996-1997	Noah Sciaky, Ph.D, Post Doc
1999-2001	Vach Angkachatchai, Ph.D, Post Doc
2002-2004	Takeshi Suzuki, Ph.D, Post Doc
2004- 2011	Hiroshi Ike, Ph.D, Post Doc
2011-present	Rashmi Choudhary, Ph.D, Post Doc

Had many rotation students and served on multiple Thesis committees.

Training grant participation

Denver:

7/1/78-6/30/03	Basic Immune Mechanisms and Immunologic Diseases NIH 5 T32 AI00048 PI: John Kappler, PHD
9/1/91-7/31/06	Training Program in Immunology NIH T32 AI07405 PI: Terry Potter, PHD
9/1/02-8/31/06	Predocutorial Emphasis Pathway in Tumor Immunology Cancer Research Institute PI: Philippa Marrack, PHD

Hopkins:

7/1/77 - 6/30/17	Biochemistry, Cellular and Molecular Biology Program NIH/NIGMS T32 GM007445 PI: Carolyn Machamer, PHD
9/1/82-8/31/2017	Cellular and Molecular Mechanisms of Immune Inflammatory Reactions NIH/NIAID T32 AI07247 PI: Mark J. Soloski, PHD
9/28/07- 8/31/17	Pathobiology of Cancer NIH T32 CA67751 PI: Edward Gabrielson, MD
05/01/08-04/30/13	Multidisciplinary Rheumatology training Grant NIH T32 PA-06-468 PI: Antony Rosen, MD

Editorial Activities

Reviewer for:

Nature

Immunity

Nature Cell Biology

J Immunology

J His Cyt

Science

Nature Immunology

J Cell Biology

PNAS

Cell

Nature Medicine

J Exp Medicine

J Cell Science

Eductional Publications

- **Book Chapters, Monographs**

1. Shaltiel S, Zick Y, **Kupfer A**, Jimenez J, Elhanaty E. cAMP-dependent protein kinase as an intracellular sensor for extracellular hormonal stimuli. Special FEBS Meeting on Cell Function and Differentiation, 1982;111.
2. Shaltiel S, Cesla R, Jimenez JS, **Kupfer A**, Zick Y. cAMP-dependent protein kinase: biorecognition and bioregulation. In Protein phosphorylation, O. Rosen and E.G. Krebs, eds. Cold Spr. Harb. Conf. on Cell Proliferation. 1980; 8:83.
3. Shaltiel S, Jimenez JS, **Kupfer A**, Alhanaty E, Tauber-Finkelstein M, Zick Y, Cesla R. cAMP-dependent protein kinase. Active site structure, restricted degradation, and use in assessing the regulation of the hormonal response. In Metabolic Interconversion of Enzymes, H. Holzer, ed., Springer-Verlag, Berlin, Germany, 1981:10.
4. **Kupfer A**, Bergmann JE, Louvard D, Singer SJ. Intracellular polarization, membrane recycling and cell motility. In Biological Structures and Coupled Flows. Oplatka A, Balaban M, eds, Academic Press, New York and Balaban ISS, Philadelphia, 1982:317.
5. Dennert G, **Kupfer A**, Singer SJ. NK mediated cell lysis: a directed secretory event of cytolytic tubular structures. In Mechanisms of Cytotoxicity by NK Cells, Academic Press. 1985:173.
6. Singer SJ, Maher PA, Rogalski,AA, **Kupfer A**, Cox GF. Progress in the study of membrane cytoskeletal associations. In Membrane Skeletons and Cytoskeletal-Membrane Associations, Bennet CV, Cohen CM, Lux SE, Palek J, eds, Alan Liss, New York. 1986;38:261.
7. Janeway CA Jr, Tite JP, Conrad L, Poo WJ, Conrad P, **Kupfer A**, Bottomly K, Jones B. The effector T cell as a lymphomine targeting vehicle. In: Regulation Immune by Defined Polypeptides. Goldstein and Back, eds, A.R. Liss Press, New York. 1987;373.
8. Singer SJ, **Kupfer A**. On Membrane Dynamics in Cell-Cell Interactions, with Application to Immunology. In: The T-Cell Receptor (eds. Davis MM, Kappler J.). Alan Liss, New York. 1988;361.
9. **Kupfer A**. Editor. Special Issue: The Immunological Synapse. Seminars in Immunology. 2003;15 (6).

ORGANIZATIONAL ACTIVITIES

Institutional Service and Committees (at NJMRC)

Basic Science Division, Dept Pediatrics, Search Committee
Division of Cell Biology, Search Committee
Department of Immunology, Search Committee
Basic Science representative for the Clinical Allergy and Immunology Fellowship Program
MSTP Program, admission committee
Director, Imaging Core Facility
Academic Computing Committee
Library Committee, NJMRC
Institutional Tenure and Promotions Committee.

Institutional Service and Committees (at Hopkins)

2004-present, Co-Director, Program of Immunobiology, Institute for Cell Engineering, JHMI.
2004-2006, Immunology Council, Operating Committee officer
2005-2006, Immunology Council, Annual Seminar Series, Chair
2005-present, BCMB graduate program, faculty
2005-present, Graduate Program in Immunology- Admissions Committee.
2006-2007, Graduate Program in Immunology-First year student advisor.
2006-present- Graduate Program in Immunology- Immunology Operating Committee (IOC)

2006-present, Pathobiology graduate program, faculty
2006-present, Center for NanoBiotechnology, Member
2007- present, Center for Cell Dynamics, Member
2012-present, Awards committee, Dept Cell Biology, member

Professional Societies

1985 American Society for Cell Biology
1987 American Association of Immunologists
2008 Biophysical Society

Conference Organizer

1994, Co-Chair, "Rocky Mountain Imaging and Cytometry Meeting" at Angel Fire, NM.
2004, Co-Chair, Immunological Synapse symposium, International Congress of Immunology, Montreal, Canada

Advisory Committees, Review Groups

Member, Special Review Committee 90-03, NIAID, Allergy and Clinical Immunology Program Projects
1996 External Review Panel, Program Project (P.I. Don Gilden), Department of Neurology, UCHSC
1996-97 External Review and Advisory Panel, Restructuring Immunology Program, University of Rochester School of Medicine
1997 NIH/NIDA Special Panel, HIV and Apoptosis
1997 NIH/NIAID Special Advisory Panel, Biotechnology Advancing Immunology
1997 NIH/NCI PO1 Site Visit, Program Project (P.I. M. Farquar), UCSD School of Medicine, Scripps
1998 NIH Discussion Panel, NIH and Future Biothechnology
1998 NIH/NCI PO1 Site Visit, Program Project (P.I. R. Noelle), Dartmouth College, Sch of Medicine
1999 NIH/NCRR National Advisory Panel "Imaging at the Molecular and Cellular Levels"
2002 NIH/NCI Oct 3-4, PO1 Review Panel Site Visit
2003 NIH/NCI NCI IRG C-Basic and Preclinical Sciences, June 11-12, PO1 Site visit, (P.I. R. Schreiber), Wash U School Med
2004 NIH/NIAID ZAI1 GB-I, Immune System SEP for 3PO1s, June 10, Gaithersburg, MD
2006 NIH/NIAID ZAI1-PA-I-M2, PO1 Special Emphasis Panel, Feb 22
2006 NIH ZRG1 IMM-J(02)M and ZRG1 IMM-J(03)M, SEP cluster for several PO1s, March 9
2008 NIH/NIAID ZAI1 PRJ-A (M1), PO1 SEP 2008/05, April 14
2009 NASA NNH08ZTT002N, Immunology cluster Review Panel, Jan 13
2010 NIH/NCRR ZRR R1-B COBRE III (P50) cluster Review Panel, Oct 19-20
2011 NIH/NIAID ZAL1 EC-1 M1, Special Emphasis Panel PO1 Immune Response Consortium, Jan 27

Consultantships

1995-Present Co-Founder, consultant, Intelligent-Imaging Innovations, Inc, Denver, CO
1995-96 Scientific Advisory Board Consultant, Terrapin Technologies, CA
1997-99 Roche Discoveries, Consultant, UK
2002-Present SAB member, Trellis Biotechnology, Palo Alto, CA

RECOGNITION: Awards, Honors

1973 - "H. Shenkar" Memorial Prize, Tel-Aviv Univ, Israel
1979 - A short-term EMBO Fellowship
1980 - Prize of Distinction awarded by Feinberg Graduate School of the Weizmann Institute of Science
1980 -1983 A Chaim Weizmann Overseas 3 Years Full Postdoctoral Fellowship
2003- National Jewish Medical and Research Center: recipient of the 2003 Outstanding Scientific Achievement Award-Annual National Jewish Faculty Award.

Invited Speaker, Panels

1995 (since Summer 1995)

- Jul 28 9th International Congress of Immunology - T cell Activation Symposia; San Francisco, CA
- Aug 11 Univ Calif. San Diego, S.J. Singer Symposium; CA
- Sep 28 Terrapin Technologies, S. San Francisco, CA
- Nov 2 San Diego State University; CA
- Nov 11 Terrapin Tech, Scientific Advisory Board Meeting; CA
- Nov 28 Scripps Research Clinic, Immunology Interest group; La Jolla CA
- Nov 29 La Jolla Institute Allergy and Immunity; CA

1996

- Jan 11 Stanford Univ MSTP Speaker; CA
- Feb 13 Weizmann Institute Science, Dept Immunology; Rehovot, Israel
- Feb 16 Basel Institute Immunology, Switzerland
- Feb 19 Karolinska Institute, Sweden
- Feb 26 Univ Chicago, Ben Mey Institute, Chicago, IL
- Mar 14 Amgen, Boulder, CO
- Mar 20 Keystone Symposia, Lymphocyte Activation; Hilton Head Island SC
- Apr 17 Nexstar Seminar; Boulder, CO
- May 1 Immunex Seminar Series; Seattle, WA
- May 10 Univ Rochester SOM; Rochester, NY
- May 15 Univ New Mexico; Albuquerque, NM
- Jun 6 ASBMB/ASIP/AAI Joint Annual Meeting, Adhesion/Signaling Symposium; New Orleans, LA
- Jun 20 Univ Rochester, Immunology Program; Rochester, NY
- Sep 10 RPR GenCell Seminar; Santa Clara, CA
- Oct 7 Univ Toronto, Dept Immunology; Toronto, Canada
- Oct 9 NIH/NCI, Opening Immunology Seminar; Bethesda, MD
- Oct 16 Univ Calif San Diego, Dept Biology; La Jolla, CA
- Nov 10 Stanford Univ Immunology Annual Retreat, Guest Keynote Speaker; Asilomar, CA
- Nov 21 ICOS Corp Seminar; Seattle, WA
- Dec 2 Sloan-Kettering Institute, NY, NY
- Dec 9 Univ Calif San Francisco, Immunology Seminar Series; San Francisco, CA
- Dec 10 Univ Calif Berkeley, Immunology Seminar Series; Berkeley, CA

1997

- Jan 14 Children Hosp; Denver, CO
- Jan 25 Asilomar- mid winter Immunology conf; CA
- Feb 15 Basel Institute Immunology, T Cell Activation Meeting; Basel Switzerland
- Mar 6 Skirball Institute, NYU SOM; NY, NY
- Apr 8 Royal Postgraduate SOM, Hammersmith Hospital, Dept Immunology; London, UK
- Apr 11 Scandinavian Society of Immunology, 28th Annual Meeting; Geilo, Norway
- May 1 NIH/National Institute Drug Abuse/HIV and apoptosis; Bethesda, MD
- May 5 Univ Virginia, Dept Immunology; Charlottesville, VA
- May 22 Univ Pittsburgh SOM; Pittsburgh, PA
- Jun 2 National Institute for Medical Research/ Mill Hill; London, UK
- Jun 4 Roche Discovery; Welwyn Garden City, UK
- Sep 24 NIH/NIAID Biotechnology workshop; Bethesda, MD
- Sep 26 26th German Society for Immunology.; Wurzburg, Germany
- Nov 25 Case Western Reserve University, SOM; Cleveland, OH
- Dec 4 UCHSC, Dept. Biochem and Molecular Biol; Denver, CO

1998

- Feb 27 NIH and Future Biotechnology Conference, Bethesda, MD
- Mar 17 Duke Univ, Dept Immunology., NC

Mar 30 Univ Washington SOM, Dept Immunology, Seattle, WA
Apr 17 Stanford Univ, Cellular Asymmetry Symposium, student-invited, Stanford, CA
Apr 27 Univ British Columbia, Vancouver, Canada
Apr 28 Univ Edmonton, Immunology Program, Edmonton, Canada
May 7 Northwestern Univ Dept Biochemistry, Molecular Biology and Cell Biology, IL
Aug 24 5th International Symposium of Dendritic Cells, Pittsburgh, PA
Dec 8 NIH, NICHD Seminar, Bethesda, MD

1999

Feb 18 Yale Univ, Section Immunobiology, New Haven, CT
Mar 5 Merck Drug Discovery, NJ
Mar 24 American Red Cross, Rockville, MD
Apr 21 AAI Annual Meeting, Visualizing Immunity Symposium, Washington, DC
May 13 UC Irvine, S. CA Imaging Society, Irvine, CA
Jun 1 Children's Hospital, Denver, CO
Oct 5 Univ Massachusetts SOM, Worcester, MA
Oct 12 Univ Pennsylvania, Immunology. Colloquium Seminar, Philadelphia, PA
Nov 2 Johns Hopkins Univ SOM, Baltimore, MD
Nov 9 Univ Georgia, Dept Cellular Biology, Athens, GA
Nov 20 Univ Chicago, Midwest Autumn Immunology. Conf., Chicago, IL
Nov 29 Univ Glasgow, WSIG Seminar, Glasgow, UK
Nov 30 7th Annual Congress British Society Immunology, Harrogate, UK

2000

Jan 21 Univ Colorado Health Sciences Center, Dept Microbiology, Denver, CO.
Mar 2 Weizmann Institute. Science, Signaling Meeting, Rehovot, Israel.
Mar 24 Univ Gunma, Foreign Invited Speaker, Maebashi, Japan
Apr 6 Beth Israel/ Harvard SOM, Signal Transduction Seminar, Boston, MA
Apr 11 Univ California Berkeley, the Marian Koshland Lecture, Student invited, Berkeley, CA
Jul 11 FASEB Summer Conf, Signaling in the Immune System, VT
Jul 31 Boehringer Ingelheim, Seminar speaker, Ridgefield, CT
Sep 4 XIth International Cong Histoch Cytochem Symposium, Speaker, York, UK
Oct 18 Aegean conf, Lymphocytes Signal Transduction, Santorini, Greece
Nov 17 10th Annual Center for Inflammatory Bowel Disease, Boston, MA

2001

Feb 18 Gordon Res Conf, Immunochem. Immunobiology, Ventura, CA
Feb 28 Univ Iowa, Interdisciplinary Grad Program in Immunology, IA City, IA
Mar 19 NCI/NIH, Div Cancer Biology, Extramural Dir, Rockville, MD
Mar 27 McGill Univ, Meakins Christie Laboratories, Montreal, Canada
Apr 4 FASEB/AAI Annual Meeting, Orlando, FL
Apr 7 Canadian Society of Immunology, Lake Louise, Alberta, Canada
May 31 Japanese Society of Cell Biology, Annual Meeting, Gifu, Japan
Jun 6 Nagoya Univ, 5th Membrane Research Forum, Nagoya, Japan
Jul 12 Trinity College, The Biochemical Society, Dublin, Ireland
Jul 24 11th International Congress of Immunology, Stockholm, Sweden
Oct 4 Kimmel Cancer Center, Philadelphia, PA

2002

Feb 5 Johns Hopkins SOM, Baltimore, MD
Feb 25 Washington Univ, St Louis, MO
Mar 3 Keynote Speaker, Annual Meeting Israel Soc Immunology, Tel Aviv, Israel.
Mar 12 NIH/2001-2002 Twinbrook Tuesday Seminar Series. Bethesda, MD.
Apr 8 Weizmann Institute of Science, Life Sciences Seminar, Rehovot, Israel

Apr 19 Univ New Mexico, Albuquerque, NM.
May 3 Univ Toronto, Toronto, Canada
May 20 Univ Illinois at Chicago, Chicago, IL
Jun 4 Juan Mar Foundation, Workshop on Cell Polarity, Madrid, Spain
Aug 5 FASEB Summer Conf-Immunoreceptors, Tuscon, AZ
Sep 12 Immunology Retreat, Dept Immunology, NJMRC, Copper Mtn, CO
Oct 15 Lymphocyte Signal Transduction Workshop, Santorini, Greece.
Nov 5 Vanderbilt Univ, Nashville, TN

2003

Mar 8 60th AAAAI Anniversary Meeting, T Lymphocyte Activation, Denver, CO
May 5 Weizmann Institute of Science, Rehovot, Israel
May 10 AAI 90th Annual Meeting, Denver, CO
May 30 2003 American Transplant Congress (ATC), Washington DC
Jun 29 FASEB Summer Conference, Tuscon, AZ
Oct 16 Johns Hopkins Immunology Retreat, Baltimore, MD
Oct 22 Excellence in Immunology Lecture Series, Univ Texas SW Med Center, Dallas TX.

2004

Jan 8 Keystone Symposium, Steamboat Springs, CO
Feb 19 Dept Cell Biology, Johns Hopkins Univ, Baltimore MD
May 21 Imperial College, London, UK
May 25 Univ Warwick, Time and Space in Cells Workshop, Coventry, UK
May 28 Sir William Dunn School of Pathology, Oxford, UK
Jun 20 FASEB Summer Research Conference, Snowmass, CO
Jul 20 Co-Chair, Immunological Synapse, International Congress of Immunology, Montreal, Canada
Jul 22 BioScience 2004, Glasgow, Scotland

2005

Jan 18 Student invited, Immunol & Microb, Stanford Univ SOM, CA
Apr 21 Vanderbilt Univ SOM, TN
Jul 26 FASEB Summer Research Conference Immunoreceptors, Tucson, AZ
Sep 8 13th Symposium on Signals and Signal Processing in the Immune System Balatonöszöd, Hungary.

2006

Apr 7 Centennial Meeting InterUrban Clinical Club, JHMI, Baltimore
Jun 9 Annual Autoimmunity Day, JH Center for Autoimmune Disease Research, Baltimore
Jun 15 NYU Immunology Club, NYU SOM, Skirball Inst, NY

2007

Jan 24 Allergy and Clinical Immunology Center, JHMI,
Feb 8 ASBMT meeting, Keystone, CO
Mar 26 Gordon Research Conf, Ventura, CA
Jun 29 Symposium CAESAR, Bonn, Germany
Jul 9 FASEB summer conf, Tucson, AZ
Sep 15 14th EFIS Signal Conference, Balatonöszöd, Hungary
Nov 1 STS Conference, Weimar, Germany

2008

Feb 2 Biophysical Society 52nd Annual Meeting and 16th International Biophysics Congress (IUPAB), Long Beach, CA

2010

July5 FASEB summer research conf. "Immunoreceptors", Snowmass village, CO

2011

April 29 Program in Cell Biology Seminar Series, Hospital for Sick Children, Toronto, Canada

OTHER PROFESSIONAL ACCOMPLISHMENTS - none