

17th Chicago Signal Transduction Symposium



May 20, 2004, NORTHWESTERN UNIVERSITY
Chicago campus, Thorne Hall, Lake Shore Drive & Chicago Ave

David B. Donner

Indiana University Sch. of Medicine
MEDIATION OF TNF SIGNALING BY AKT

FRED H. GAGE

The Salk Institute
REGULATION OF ADULT NEURAL STEM CELL FATE

JENNIFER LIPONCOTT-SCHWARTZ

NICHD, NIH
*INSIGHTS INTO MOLECULAR COMPARTMENTALIZATION & TRANSPORT
USING GFP TECHNOLOGY*

IAN MACARA

UNIVERSITY OF VIRGINIA SCH. OF MEDICINE
PARSING THE CELL POLARITY CODE

MARC TESSIER-LAVIGNE

STANFORD UNIVERSITY SCH. OF MEDICINE
*THE LOGIC AND MOLECULAR BIOLOGY
OF AXON GUIDANCE AND REGENERATION*

RANDALL REED

Johns Hopkins SCH. OF MEDICINE
*CHEMOSENSORY SIGNALING: REGULATING FUNCTION
and Organization in Mammalian Olfaction*

For information, registration, and poster submission visit

<http://www.pharm.northwestern.edu/SignalTransduction/registration.html>

Preregistration deadline: May 3, 2004; No fee for preregistered predoctoral students.
Lunch included for all; Sponsors will be announced on the program; Tel, 312-503-0800

Chicago Signal Transduction Symposium 2004



May 20, 2004, Northwestern University
Chicago Campus, Thorne Hall, Lake Shore Drive & Chicago Ave

SYMPOSIUM ORGANIZING COMMITTEE

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Nava Segev, University of Illinois at Chicago, Co-Chairperson
Richard Longnecker, Northwestern University, Fund Raising Coordinator

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Tatyana Voyno-Yasenetskaya, University of Illinois at Chicago
Richard Ye, University of Illinois at Chicago
Yimin Zou, University of Chicago

ORGANIZATIONAL SUPPORT: The organizing committee gratefully thanks Andrena Logan and Laurie Daniels of the Dept of Molecular Pharmacology & Biological Chemistry, Northwestern University, and Susan Hall-Perdomo, Northwestern University Center for Reproductive Sciences, for superb managerial assistance. Finally, we thank members of our laboratories for their assistance with organizational matters.

T-SHIRTS are for sale in the lobby; proceeds benefit the symposium fund!

LUNCH AND POSTERS: PLEASE NOTE!! Lunches will be distributed in the Law School Atrium (adjacent to the auditorium). Six tables have been reserved in Loudon Hall (Law School) for the Student and Postdoc "Lunch with the Speakers".

THIS SYMPOSIUM WAS MADE POSSIBLE IN PART BY SUPPORT FROM:

Loyola University Stritch School of Medicine, Department of Pharmacology

The University of Chicago, Committee on Cell Physiology

The University of Chicago, Committee on Cancer Biology

The University of Chicago, Molecular and Cellular Biology Training Program

Northwestern University, Training in Cellular and Molecular Basis of Disease

Northwestern University, Feinberg Cardiovascular Research Institute

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Northwestern University, Center for Genetic Medicine, Microarray Core Facility

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Northwestern University, Medical Scientist Training Program

Northwestern University, Training Program in Signal Transduction and Cancer

Northwestern University, Division of Endocrinology, Metabolism, and Molecular
Medicine

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Northwestern University, Department of Pathology

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Chemistry

University of Illinois at Chicago, Department of Pharmacology

University of Illinois at Chicago, Department of Biochemistry and Molecular Genetics

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Cellular Endocrinology

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PROGRAM

8:00 AM **REGISTRATION & COFFEE (Thorne Hall)**
POSTER SET-UP (Rubloff Atrium, Law School--adjacent to Thorne Hall)

9:00 AM **Introductory Remarks (Mary Hunzicker-Dunn)**

Session Chair: *Wei-jen Tang*

9:05 AM **RANDALL REED, CHEMOSENSORY SIGNALING: REGULATING FUNCTION AND ORGANIZATION IN MAMMALIAN OLFACTION**

9:50 AM **DAVID B. DONNER, MEDIATION OF TNF SIGNALING BY AKT SERINE-THREONINE KINASE**

10:35 AM **Coffee Break**

Session Chair: *Nava Segev*

11:00 AM **IAN MACARA, PARSING THE CELL POLARITY CODE**

11:45 AM **JENNIFER LIPPINCOTT-SCHWARTZ, INSIGHTS INTO MOLECULAR COMPARTMENTALIZATION & TRANSPORT USING GFP TECHNOLOGY**

12:30 PM **LUNCH (Rubloff Atrium, Law School—adjacent to Thorne Hall)**

1:30 PM **Poster Session (Rubloff Atrium, Law School)**

Session Chair: *Mark Rasenick*

3:00 PM **FRED H. GAGE, REGULATION OF ADULT NEURAL STEM CELL FATE**

3:45 PM **MARC TESSIER-LAVIGNE, THE LOGIC AND MOLECULAR BIOLOGY OF AXON GUIDANCE AND REGENERATION**

4:30 PM **CLOSING REMARKS and POEM**

The 18th annual **Chicago Signal Transduction Symposium** will be held on Thursday, May 19, 2005! Watch for information on our web site: <http://www.pharm.nwu.edu/signal/info.html>

Poster Session 2004

	Number	Authors	Title of Abstract	Institution
	1	S. Amin, S. Bulun	Microarray Analysis of breast adipose fibroblast in paracrine interaction with malignant epithelial cells	Northwestern University, MED-Obstetrics & Gynecology
	2	S. Deb, S. Amin, S. Bunun	Estrogen regulates TNF action on breast adipocyte differentiation	Northwestern University, Med-Obstetrics & Gynecology
	3	J. Clack, S. Liu, F. Bai, N. Pedrick, F. Witzmann	Biochemical and Proteomic Analysis of Transducin Beta Subunit Structural Heterogeneity	Indiana Univ, Dept. Of Biology, Purdue Univ, Indiana Univ School of Med., Depts. of Cellular & Integrative Physiology and Biochemistry & Molecular Biology
	4	light, D.B., Baumann, N.L., Dahlstrom, P.K.,	P2 Receptor Activation Leads to a Calcium-Sensitive Volume Decrease in Necturus Erythrocytes	Lake Forest College, Ripon College
	5	Sarraj, B.S., and Mikecz, K.	Requirement for CD44 and L-Selectin for T-Cell Homing and Activation in Arthritis-Susceptible Balb/C Mice	Rush Univ Medical Center, Immunology and Microbiology, Orthopedic Surgery
	6	Paul, A.G., Christ, C.M., Colel, E.S., McGuire, J.M., Kirk, K.E.	Micronuclear Telomere Loss and Cell Division Arrest in Telomerase Mutants	Lake Forest College
	7	Sharma, N., Johnson, B., Herrera, S., DebBurman, S.,	Baker's Yeast Promotes Understanding of Alpha-Synuclein's Biological and Pathogenic Roles	Lake Forest College
	8	England, S., Holmes, I., Brandis, K., Deburman, S.	Schizosaccharomyces Pombe Models Alpha-synuclein Misfolding and Supports the Nucleation Polymerization Hypothesis	Lake Forest College
	9	Mann, D., Norwick, S., and Darnell, D.K.	Neural Signals Regulate Chick Midbrain Induction	Lake Forest College, Dept. of Biology
	10	Guo, Qing, Shen, Yuequan, Zhukovskaya, N.I., Flori, J., Tang, Wei-Jen	Structural and Kinetic Analyses of Interaction of Anthrax Adenylyl Cyclase Toxin with Reaction Products, cAMP and Pyrophosphate	University of Chicago

11	Shen, Y., Zhukovskaya, N.L., Zimmer, M.I., Soelaiman, S., Bergson, P., Wang, C-R., Gibbs, C.S., and Tang, C.S.	Selective Inhibition of Anthrax Edema Factor of Adefovir, a Marketed Drug Against Hepatitis B Virus	University of Chicago
12	Allen, J.A., Yu, J.Z., Donati, R.J., and Rasenick, M.M.	Stimulation of α -Adrenergic Receptors Promotes G β 's Internalization from Lipid Rafts	UIC, Depts of Physiology & Biophysics, and Psychiatry
13	Emerling, B.M., Platanias, L.C., and Chandel, N.S.	p38 α is required for hypoxic but not DFO activation of HIF	Northwestern University, Dept of Medicine
14	Murphy, S.C., Harrison, T.E., Hiller, L., Samuel, B.U., Akompong, T., Hamm, H., Speicher D., Mohandas, N., Lomasney, J., and Haldar, K.	Host signaling and raft proteins in malarial infection	Northwestern University, Vanderbilt University, and New York Blood Center
15	Herrera, S.K. and Van Eldik, L.,	Investigating Nitric Oxide Production Pathways in Alzheimer's Disease	Lake Forest College and Northwestern University
16	Swanson, K. and Radhakrishnan, S.	Structural Basis of Ubiquitin Signal Recognition Throughout the Endocytic Pathway	Northwestern University
17	Wu-Wong, J.R., Dixon, D., Ma, J., Nakan, M., Paquet, T., Saraf, A., Hessler, P., and Kroeger, P.	Binding and Functional Characteristics of Two Vitamin D Analogs	Abbott Laboratories, Abbott Park, IL
18	Chaturvedi, D., Poppleton, H.m., Stringfield, T., Taylor, S., and Patel, T.B.	p90RSK1 modulates PKAc and PKAR1 interactions	Loyola University Medical Center, Dept. of Pharmacology & Therapeutics
19	Profirovic-Pavlovic, J., Niu, J., Gorovoy, M., and Voyno-Yasenetskaya, T.	A Novel Mechanism of G-protein-dependent Phosphorylation of Vasodilator-Stimulated Phosphoprotein	UIC, College of Medicine, Dept. of Pharmacology
20	Beazely, M.A. and Watts, V.J.	PKC and EGF receptor-induced potentiation of adenylyl cyclase Type 6 signaling is Raf1-dependent	Purdue, University, Dept. of Medicinal Chemistry and Molecular Pharmacology

21	Mukhopadhyay, D., Davidson, N.O., and Borensztajn, J.	The PPAR alpha agonist ciprofibrate inhibits apolipoprotein B mRNA editing in LDL receptor-deficient mice	Northwestern University, Dept. of Pathology
22	Lo, J.C1., James, E.S1., Quiambo, R2., Kinsella, M.C1., Alegre, ML1., Weih, F3., Franzoso, G1., Hoffman*, A2., and Fu*, YX1	Coordination between NF-kappaB Family Members p105/p52 is Essential for Mediating LTbetaR Signals in the Development and Organization of Secondary Lymphoid Tissue	Univ. of Chicago, Committee on Immunology, Dept of Pathology; Univ. of California, San Diego, Signaling Systems Lab., Dept. of Chemistry and Biochemistry
23	Alam, H., Maizels, E., Park, Y., and Hunzicker-Dunn, M.	HIF-1 Activity is Necessary for Development of Ovarian Follicles	Northwestern University, Dept. of Cell & Molecular Biology
24	Donati, R.J.1, Layden, R.1, Johnson, M.E.3, Rasenick, M.M.2,	Molecular Modeling Reveals a Possible Mechanism for Antidepressant-induced Gs-alpha Dissociation from the Cytoskeleton and its Role in Antidepressant Action	UIC, Depts. Of Physiology and Biophysics1, Psychiatry2, and Cntr. for Pharmaceutical Biotechnology3
25	Ramos, M.R.1,2,4, Swanson, A.J.2, and Bass, J.1,2,3	Identification of Subtilisin-like Protease Furin in Congenital Insulin Resistance and Nutrient Signaling Response	Northwestern University, IBis1, ENHRI2, Dept. of Medicine3, American Assoc. for University Women4 (International Fellow)
26	Lalla, A. and Wang, Z.J.	Bioinformatic Analyses of the Human and Mouse MU Opioid Receptor	UIC, Biopharmaceutical Sciences
27	Gao, X. and Patel, T.B.	The Region in Protein Associated with Myc (Pam) that is Necessary for the Inhibition of Adenylyl Cyclase Activity	Loyola University Chicago, Dept. of Pharmacology
28	Chen, SH., Chen, S., Liu, F., Jedd, G., and Segev, N.	Ypt31/32 GTPases, Together with their F-Box Protein Effector, Rcy1, Play a Role in Protein Recycling through the Golgi	UIC, Dept. of Biological Sciences
29	Gorovoy, M., Profirovic, J., Minshall, R., and Voynov-Yasenetskaya, T.	LIMK1, a potential factor linking microtubule disassembly and actin polymerization.	UIC, Dept. of Pharmacology
30	Tang, L. and Wang, Z.J.	Regulation of PKC isoforms and CaMKII alpha by opioid	UIC, Dept. of Biopharmaceutical Sciences

31	Brueggemann, L.I., Cribbs, L.L., and Byron, K.L.	Four distinct non-selective cation currents in A7	Loyola University Chicago, Cardiovascular Institute
32	Kosaka, A., Joshu, C., McDearmon E., Jensen, D., Eckel, R., Lin, E., Takahashi, J., Turek, F., and Bass, J.	Role of the Transcription Factor, CLOCK, in Feeding and Energy Balance	NU, Depts. Of Medicine and Neurobiology and Physiology, Howard Hughes Insti., Uni. Of Colorado Health Sciences Cntr.
33	Holinstat, M., Samarel, A., Maik, A.B., and Mehta, D.	FAK Regulates Endothelial Barrier via p190RhoGAP Regulation of Rho	UIC Medical Cntr., Dept. of Pharmacology
34	Marcheva, B., Lin, E., Joshu, C., Ivanova, G., McDearmon, E., Takahashi, J., Bass, J.	Regulation of Pancreatic Beta-Cell Insulin Secretion by the Circadian Gene Oscillator	Northwestern University and Evanston Northwestern Healthcare Research Insti.
35	Ivanova, G. and Bass, J.	Genetic Analysis of Insulin Receptor Function in Mammalian Development, Aging and Disease	NU, Depts of Medicine & Neurobiology & Physiology, ENH Research Institute
36	Muddasani, P., Pacione, C., Zhao, L.J., Rangan, J., Mikecz, K., Richard, L., and H-J Im	Basic Fibroblast Growth Factor-mediated MMP-13 Stimulation is via FGFR1-PKC-dependent activation of MAP Kinase in Human Adult Articular Chondrocytes	Rush University Medical Center
37	Nash, Piers D.	Mapping Protein-Protein Interactions with High Density Peptides Arrays	University of Chicago, Ben May Institute
38	Vracar-Grabar, M. and Russell B.	CK 3'UTR RNA Binding Activity is Independent of Exzyme Activity	UIC, Dept. of Physiology and Biophysics
39	Bhowmick, R., Aslanukov, A., Lu, X., and Ferreira, P.A.	The RanBP2 Associates with two Novel Mitochondrial Components, Hexokinase and Cox11, and Modulates the Activities of Hexokinase	Medical College of Wisconsin, Dept of Pharmacology,
40	Popova, J.S. and Rasenick, M.M.	Clathrin-mediated Endocytosis of m3 Muscarinic Receptors. Roles for Gbetagamma and Tubulin	University of Illinois at Chicago

- 41 Lee, J. and Magnuson D. Preservation of Muscarinic M1 Receptor Coupling in the Lewy Body Variant of Alzheimer's Disease Loyola University Chicago, Dept. of Pathology and Pharmacology
- 42 Koshman, Y., Vracar-Grabar, M. and Russell B. Mechanical Stretch Sensor Machinery in Cardia Cells Involves Multiple Protein Phosphorylation University of Illinois at Chicago