

18th Chicago Signal Transduction Symposium



May 19, 2005, NORTHWESTERN UNIVERSITY
Chicago campus, Thorne Hall, Lake Shore Drive & Chicago Ave

CORI BARGMANN

Rockefeller University
*OXYGEN SENSATION AND NAVIGATION
IN THE NATURAL WORLD*

JEFF BENOVIC

Thomas Jefferson University
ARRESTING DEVELOPMENTS IN CELL SIGNALING

JOAN BRUGGE

Harvard Medical School
ANALYSIS OF SIGNAL TRANSDUCTION PATHWAYS THAT CONTROL ONCOGENESIS

JACQUES POUYSSEUR

Centre National de la Recherche Scientifique
*HYPOXIA SIGNALING, ANGIOGENESIS,
AND TUMOR PROGRESSION*

XIAODONG WANG

UT Southwestern Medical Center
MITOCHONDRIAL PATHWAY OF APOPTOSIS

ZENA WERB

UCSF
*ECM SIGNALING REGULATES MAMMARY
DEVELOPMENT*

MASASHI YANAGISAWA

UT Southwestern Medical Center
*LESSONS LEARNED FROM LIGANDS OF
(PREVIOUSLY) ORPHAN GPCRS*

For information, registration, and poster submission visit

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

Preregistration deadline: May 3, 2005; 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 2005



May 19, 2005, Northwestern University
Chicago Campus, Thorne Hall, Lake Shore Drive & Chicago Ave

SYMPOSIUM ORGANIZING COMMITTEE

Mary Hunzicker-Dunn, Northwestern University, Chairperson
Nava Segev, University of Illinois at Chicago, Co-Chairperson
Navdeep Chandel, Northwestern University, Fund Raising Coordinator

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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

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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: *Marsha Rosner*

9:05 AM **ZENA WERB, ECM SIGNALING REGULATES MAMMARY DEVELOPMENT**

9:45 AM **JOAN BRUGGE, ANALYSIS OF SIGNAL TRANSDUCTION PATHWAYS
THAT CONTROL ONCOGENESIS IN 3D EPITHELIAL CELL CULTURES**

10:25 AM **Coffee Break**

Session Chair: *Jon Lomasney*

11:00 AM **JEFF BENOVIC, ARRESTING DEVELOPMENTS IN CELL SIGNALING**

11:40 AM **MASASHI YANAGISAWA, LESSONS LEARNED FROM LIGANDS OF
(PREVIOUSLY) ORPHAN GPCRS**

12:20 PM **LUNCH (Rubloff Atrium, Law School—adjacent to Thorne Hall)**

1:20 PM **Poster Session (Rubloff Atrium, Law School)**

Session Chair: *Mark Rasenick*

2:45 PM **CORI BARGMANN, OXYGEN SENSATION AND NAVIGATION IN THE
NATURAL WORLD**

3:25 PM **JACQUES POUYSSEGUR, HYPOXIA SIGNALING, ANGIOGENESIS, AND
TUMOR REGRESSION**

4:05 PM **XIAODONG WANG, MITOCHONDRIAL PATHWAY TO APOPTOSIS**

4:45 PM **CLOSING REMARKS and POEM**

The 19th 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 2005

Number	Authors	Title of Abstract	Institution
1	Hu, G., Vogel, S.M., Visintine D.J., Malik, A.B., and Minshall, R.D.	PMN-Dependent Increase in Vascular Permeability is in Part the Result of Activation of a Non-Hydraulic Albumin Transport Pathway in Endothelial Cells	University of Illinois at Chicago
2	Connelly, R.L., Gasser, K.W.,	Nitric Oxide Promotes Both Secretion and Activation of the Erk Signaling Cascade in Pancreatic Acinar Cells	Northern Illinois University
3	Sarraj, B., S. ndor Sz. ntU, Istv. n G. l, Zolt. n SzabU, Glant, T. T., and Mikecz, K.	Requirement for CD44 and L-selectin for T-Cell for Activation and Disease Progression in Proteoglycan-induced Murine Arthritis	Rush University Medical Center, Depts. Of Orthopedic Surgery & Immunology/Microbiology
4	Huang, JS., Dong, L., and Le Breton, G.C.	Mass-Dependent Signaling Between G-Protein Coupled Receptors	University of Illinois at Chicago
5	Nagasaka, K., Iwasaki, K., and Teramoto, T.	Genetic Dissection of the IP3-dependent Ca ⁺⁺ Signaling Pathway in <i>C. elegans</i>	Northwestern University, Dept. of Molecular Pharmacology & Biological Chemistry
6	Sanober, A. and Bulun, S.E.	Role of IL-1beta in Epithelial-stromal Interactions in a Model of Breast Cancer	Northwestern University, Dept. of OB/GYN
7	Eng, E., Holgren, C., Hubchak, S., Naaz, P., and Schnaper, H.W.	Hypoxic amplification of PDGF-B signaling in mesangial cells	Northwestern University, Depts. of Medicine and Pediatrics
8	Teramoto, T., Lambiel, E.J., and Iwasaki, K.	Differential regulation of TRPM channels for electrolyte homeostasis in the <i>C. elegans</i> intestine.	Northwestern University, Institute of Neuroscience and Molecular Pharmacology & Biological Chemistry
9	Eldakak, A.H. and Hulett, F.M.	Redox Regulation on the Histidine Kinase PhoR in <i>Bacillus Subtilis</i>	University of Illinois at Chicago, Molecular Biology
10	Pazin, M.V.	TBA	Northwestern University

11	Chen, L. and Carter-Su, C.	The Adapter protein SH2-Bbeta regulates nerve growth factor-induced gene expression and neurite outgrowth	University of Michigan Medical School, Dept. of Molecular and Integrative Physiology
12	Murphy, S.C. and Haldar K.	Accessing Erythrocyte Signaling Components	Northwestern University
13	Talovskaya, E., Gorovoy, M., Parfyonova, E., Rubina, K., Tkachuk, V., and Voyno-Yasenetskaya, T.	T Cadherin Regulates Rho Family Proteins	University of Illinois at Chicago
14	Dave', R. and Rasenick, M.M.	mGluR1-mediated Activation of Adenylyl Cyclase Does not Require PLCbeta Activation	University of Illinois at Chicago, Dept of Physiology and Biophysics and Neuroscience Program
15	Shen, L. and Turner, J.R.	Actin Depolymerization Disrupts Tight Junction Structure and Function via Caveolae-Mediated Endocytosis	University of Chicago, Dept. of Pathology
16	Wang, J., Levenson, A.S., Thurn, K.E., and Satcher R.L.	Gene Expression Profiles of Direct Cell-Cell Contact in Prostate Cancer Bone Metastases	Northwestern University, Dept. of Orthopaedic Surgery
17	West, M.A., Koons, A., and Du, N.	Impact of Surgery of Sepsis on LPS-stimulated p38 Kinase and ERK Signalling in Leukocytes	Northwestern University, Dept. of Surgery
18	Lindsey, S.C., Lu, Y, and Eklund E.A.	NoxA10 Overexpression Blocks Myeloid Differentiation	Northwestern University
19	Jiang, H., Luo, S., and Li, H.	Cdk5 Activator-binding Protein C53 Regulates Genotoxin-Induced Apoptosis via Modulating the G2/M DNA Damage Checkpoint	Children's Memorial Research Center, Cancer Center and Northwestern University
20	Strohecker, A., Chen, F., Yehiely, F., and Cryns, V.L.	Caspase Proteolysis of HER-2 Subverts its Anti-Apoptotic Function by Releasing a Pro-Apoptotic Cleavage Product	Northwestern University, Cell Death Regulation Laboratory
21	Pals-Rylaarsdam, R., Mitchell, J., Koster, M., and Ooms, L.	An Intragenic Suppressor of an Activating Mutation in GPA1	Trinity Christian College

22	Sverdlov, M., and Minshall, R.D.	Positive Regulation of Filamin-Caveolin Interactions by Caveolin-1 Phosphorylation in Microvascular Endothelial Cells	University of Illinois at Chicago, Dept. of Pharmacology
23	Layden, B.T., Donati, R.J., Yang, S., Mulhearn, D.C., Johnson, M.E. and Rasenick, M.M.	Structural Model of a Complex Between the Heterotrimeric G Protein, Gs(alpha) and Tubulin	University of Illinois at Chicago, Dept. of Physiology and Biophysics
24	Bogusz, A.M., Brickley D.R., and Conzen S.D.	Ubiquitination and Degradation of the Serine-threonine Kinase SGK-1 is Mediated via an N-terminal Domain	University of Chicago, Depts. of Pathology and Medicine
25	Moyano, J.V., Evans, J.R., Chen, F., Lu, M., Werner, M.E. Yehiely, F., Turbin, D., Nielsen T.O., Perou, C.M., and Cryns, V.L.	AlphaB-crystallin: A Novel Oncoprotein that Transforms Mammary Epithelial Cells by a MEK1/2-dependent Mechanism and Predicts Poor Clinical Outcome in Breast Cancer	Northwestern University, Univ. of British Columbia, and Univ. of North Carolina at Chapel Hill
26	Menendez, J.A., Papadimitropoulou, A., Vellon, L., and Lupu, R.	Malonyl-coenzyme A: A Novel Mediator Connecting Endogenous Fatty Acid Metabolism and Her-2/neu Oncogene Expression in Cancer Cells	Evanston Northwestern Healthcare Research Institute
27	Saengsawang, W., Layden B.T., Kobayashi, T., and Rasenick, M.M.	Dissecting Gs(alpha)-Tubulin Interaction using Gs(alpha)-derived Peptides: Implications for the Transactivation of Gs(alpha) by Tubulin	University of Illinois at Chicago, Dept. of Physiology and Biophysics
28	Brueggemann, L. and Byron, K.	Inhibition of K ⁺ Current by Vasopressin in Single A7r5 Cells involves PKC Activation	Loyola University Chicago
29	Lu, X., Guruju, M., Oswald, J., and Ferreira, P.A.	Limited Proteolysis of RFGRIPI that are Distinctly Affected by Mutations in Leber's Congenital Amaurosis	Medical College of Wisconsin, Dept. of Pharmacology and Toxicology
30	Allen, J.A., and Rasenick, M.M.	Internalization and Lipid Raft Trafficking of G alpha s Alters Adenylyl Cyclase Activity	University of Illinois at Chicago, Dept. of Physiology and Biophysics
31	Guzy, R., Mack, M., Mansfield, K., Simon, M.C., and Schumacker, P.	Role of the Mitochondrial Electron Transport Chain in Oxygen Sensing and Hypoxic HIF-1 alpha Stabilization	University of Chicago
32	Yau, D. M., Yokoyama, N., Goshima, Y., Siddiqui, Z.K., Siddiqui, S.S., and Kozasa, T.,	Involvement of GPA-12 CeRhoGEF Pathway in C. Elegans Neuronal Function	University of Illinois at Chicago, Dept. of Pharmacology

33	Han, X., Rajangam, K., Lin, L., Stupp, S., McPherson, D., and Lomasney, J.W.	A Synthetic Nanofiber Scaffold Promotes Angiogenesis and Preserves Heart Function after Myocardial Infarction	Northwestern University, Dept. of Pathology
34	Brandis, K., Holmes, I., England, S., and DebBurman, S.	Fission Yeast Model Recapitulates alpha-Synuclein Misfolding	Lake Forest College, Biology Department
35	Vellon, L., Menendez, J.A., and Lupu, R.	A Bidirectional "alpha (v) beta (3) Integrin-ERK2 MAPK" Molecular Connection Regulates Heregulin (HRG)-overexpressing Breast Cancer Cells Growth	Evanston Northwestern Healthcare Research Institute, Dept. of Medicine, Breast Cancer Translational Research Lab and Northwestern University
36	Murthy, P., Chung, P.H., Lin, L., and Lomasney, J.W.	Human Phospholipase C Epsilon, a Multidomain and Multifunctional Protein, is Regulated by Lipids	Northwestern University, Dept. of Pathology
37	Pan, H., Niu, J. and Voyno-Yasenetskaya, T.	Visualization of Galpha13YFP in Living Cells	University of Illinois at Chicago
38	Profirovic, J., Niu, J., Gorovoy, M. and Voyno-Yasenetskaya, T.	A Novel Signaling Pathway: Galpha13-VASP	University of Illinois at Chicago, Dept. of Pharmacology
39	Gorovoy, M., Neamu, R., Niu, J., Miyoshi, J., Takai, Y., and Voyno-Yasenetskaya, T.	Increased Endothelial Permeability in RhoGDI alpha Null Mice Due to the Activation of RhoA Signaling Cascade	University of Illinois at Chicago, Dept. of Pharmacology and Osaka University Medical School, Dept. of Molecular Biology and Biochemistry
40	Tawil, W. and Conway, S.	Effect of Alcohol on GH-induced JAK-STAT Signaling Pathway: Is Alcohol a Risk Factor for Obesity	Northern Illinois University
41	Edwin, F., Singh, R., Lim, R., Baker, S.J., and Patel, T.B.	PTEN is Necessary for Human Sprouty 2 Mediated Inhibition of Cell Proliferation	Loyola University, Strick School of Medicine and St. Jude Children's Research Hospital, Dept. of Developmental Neurobiology
42	Khasawneh, F., Huang, J-S., Turek, J., and Le Breton, G.	Identification of the Amino Acids Mediating Thromboxane A2 Receptor-Ligand Coordination	University of Illinois at Chicago, Dept. of Pharmacology
43	Chaturvedi, D., Poppleton, H.M., Stringfield, T., Barbier, A., and Patel T.B.	Subcellular Localization and Biological Actions of Activated RSK1 are Determined by its Interactions with Subunits of PKA	Loyola University Medical Center, Dept. of Pharmacology