

Symposium Program

Stony Brook Symposium on New Horizons in Organic Chemistry

September 29-30, 2005
Charles B. Wang Center

Celebrating the Achievements of

Dr. Iwao Ojima

*Distinguished Professor of Chemistry
Director, the Institute of Chemical Biology & Drug Discovery*

On the Occasion of His 60th Birthday

Symposium Sponsors:

Central Glass Co., Ltd., Crystal Brook M.I., Mitsubishi Chemical Group, Ajinomoto Co., Inc., Great Lakes Chemical Corp., AMGEN, Cytokinetics, Inc., INDENA, Sp.A., Merck Research Laboratories, OSI Pharmaceuticals, Yuki Gosei Kogyo Co., Ltd., Abbott Bioresearch Center, AstraZeneca R&D Boston, Chisso America, Inc., Epix Pharmaceuticals, Givaudan Flavors Corporation, Hoffmann-La Roche, Kyowa America, Inc., Pfizer Global Research and Development, Schering-Plough Research Institute, Wyeth Pharmaceuticals



Dr. Iwao Ojima

**Distinguished Professor of Chemistry
Director, the Institute of Chemical Biology & Drug Discovery
State University of New York at Stony Brook**

Iwao Ojima was born in Yokohama, Japan in 1945. He received his B.S. (1968), M.S. (1970), and Ph.D. (1973) degrees from the University of Tokyo, Japan. He joined the Sagami Institute of Chemical Research and held a position as Senior Research Fellow until 1983. He joined the faculty at the Department of Chemistry, State University of New York at Stony Brook first as Associate Professor (1983), was promoted to Professor (1984), Leading Professor (1991), and then to Distinguished Professor (1995). He served as the Department Chairman from May 1997 through October 2003. Since early 2003 he has been the founding Director of the Institute of Chemical Biology and Drug Discovery at Stony Brook.

He has a wide range of research interests in synthetic organic, organometallic and medicinal chemistry, including asymmetric synthesis, organic synthesis based on homogeneous catalysis, peptide and peptide mimetics, β -lactam chemistry, enzyme inhibitors, anticancer agents, antithrombotic agents, and medicinally relevant organofluorine compounds.

He is a recipient of the E. B. Hershberg Award (for Important Discovery of Medicinally Active Substances) (2001) and the Arthur C. Cope Scholar Award (1994) from the American Chemical Society; the Chemical Society of Japan Award (for distinguished achievements) (1999) and National Young Investigator's Award from the Chemical Society of Japan (1976). He is a Fellow of the J. S. Guggenheim Memorial Foundation (1995), the American Association for the Advancement of Science (1997), and The New York Academy of Sciences (2000). He also received the Outstanding Inventor Award from The Research Foundation of the State University of New York in 2002, and a NYSTAR Faculty Development Award in 2003 from the Governor of the State of New York.

He has served as an advisory committee member for the National Institutes of Health, National Science Foundation and the U.S. Department of Energy. He has served or currently serves as Editorial Advisory Board member of *Journal of Organic Chemistry*, *Organometallics*, *Journal of Molecular Catalysis*, *Current Topics in Medicinal Chemistry* (current), *Medicinal Chemistry* (current), and *Letters in Drug Design & Discovery* (current).

He has published more than 340 papers and reviews in leading journals as well as edited 5 books. He currently holds or has applications pending for more than 140 patents. SciFinder lists more than 600 publications to his credits. Since he started his career in the U.S. at Stony Brook university in 1983, he has given more than 400 invited lectures at universities, research institutes, and industries. Also, he has given more than 70 Plenary and Invited Lectures at international conferences and symposia.

Stony Brook Symposium on New Horizons in Organic Chemistry

September 29-30, 2005

The Charles B. Wang Center

Thursday, September 29

8:00 AM – 1:00 PM Registration

11:45 AM- 1:00 PM: Buffet Lunch for Registered Participants and Poster Setup

Opening Lecture (1:00-2:00 PM)

Greetings: Dr. **Robert L. McGrath**, Provost

Moderator: Professor **Michael G. White**, Chair, Department of Chemistry

Professor **Ryoji Noyori**

(Nobel Laureate in Chemistry, 2001; President, RIKEN, Japan)

“Asymmetric Hydrogenation: Science and Opportunities”

Session I: Medicinal Chemistry and Drug Discovery (2:00-5:30 PM)

Moderator: Professor **Frank W. Fowler**

2:00 – 2:30 Professor **Gunda I. Georg** (University of Kansas)
“Taxol Brain Delivery”

2:30 – 3:00 Dr. **Alain Commerçon** (Aventis-Sanofi, France)
“New Generation Taxoids: Discovery and Development of RPR109881”

3:00 – 3:30 Dr. **John Piwinski** (Schering-Plough Research Institute, NJ)
“Utilizing SAR and SBDD to Discover Novel Antiviral Agents”

3:30 – 4:00 *Coffee break, Poster Session*

Moderator: Professor **Joseph W. Lauher**

4:00 – 4:30 Dr. **Ezio Bombardelli** (Indena, SpA, Italy)
“Colchicine and its analogues as potential anticancer drugs”

4:30 – 5:00 Dr. **Ralph J. Bernacki** (Roswell Park Cancer Institute)
“IDN 5390, a novel seco-taxane with anti-angiogenic activity, inhibits endothelial cell motility at sub-cytotoxic concentrations”

- 5:00 – 5:30 Professor **David G. I. Kingston** (Virginia Tech.)
“The shape of things to come: structural and synthetic studies of Taxol and related compounds”
- 5:30 – 6:15 **Short talks by poster presenters**
- 6:15 – 7:00 **Reception, Student Activity Center Ballroom A**
(Registered Participants Only)
- 7:00 – 9:30 **Symposium Banquet, Student Activity Center Ballroom B**
(Registered Participants Only)

Friday, September 30

- 8:00 – 8:40 *Continental Breakfast, Charles B. Wang Center*
- 8:40 *Greetings: Dr. James V. Staros, Dean, College of Arts and Sciences,*

Session II: Synthetic Methodology and Organic Synthesis (8:45-12:30)

Moderator: Professor Kathlyn A. Parker

- 8:45 – 9:15 Professor **Eiichi Negishi** (Purdue University)
“ZACA Reaction: Zr-Catalyzed Asymmetric Carboalumination of Alkenes”
- 9:15 – 9:45 Professor **Masahiro Murakami** (Kyoto University, Japan)
“Torque Control by Metal-Orbital Interactions”
- 9:45 – 10:15 Professor **Hisashi Yamamoto** (University of Chicago)
“Designer Acid Catalysis for Selective Organic Transformation”
- 10:15-10:30 *Short Coffee Break*
- Moderator: Professor Nancy S. Goroff*
- 10:30 – 11:00 Professor **Michael P. Doyle** (University of Maryland)
“New Advances in Catalysis with Dirhodium(II) Compounds”
- 11:00 – 11:30 Professor **Gary A. Molander** (University of Pennsylvania)
“Expanding Organoboron Chemistry with Organotrifluoroborates”
- 11:30 – 12:00 Professor **Thomas W. Bell** (University of Nevada, Reno)
“Synthesis and Photochemistry in Pursuit of a Light-Driven Molecular Motor”
- 12:00 – 12:30 Professor **Eiichi Nakamura** (University of Tokyo)
“Organic Synthesis: The Key Science for the Future”
- 12:30 – 1:30 *Lunch, Poster Session*

Session III: Bioorganic Chemistry and Chemical Biology (1:30-5:30 PM)

Moderator: Professor Dale G. Drueckhammer

1:30 – 2:00 Professor **Koji Nakanishi** (Columbia University)
“Bioorganic studies on ginkgolides”

2:00 – 2:30 Professor **Peter J. Tonge** (Stony Brook University)
“Mycolic Acid, Menaquinone and Mycobactin Biosynthesis: Mining the Magic Mountain for Novel Tuberculosis Chemotherapeutics”

2:30 – 3:00 Professor **Scott M. Sieburth** (Temple University)
“Silicon as a Central Drug Design Component”

3:00 – 3:30 *Coffee Break, Poster Session*

Moderator: Professor Daniel P. Raleigh

3:30 – 4:00 Professor **Nicole S. Sampson** (Stony Brook University)
“Multivalent and Stereoregular Polymers to Probe Fertilin β Function in Fertilization”

4:00 – 4:30 Professor **Steven Rokita** (University of Maryland)
“Selective Alkylation of DNA through a Recognition-Dependent Process”

4:30 – 5:00 Professor **Cynthia J. Burrows** (University of Utah)
“Heterocyclic Chemistry leading to Mutagenesis via Oxidation of DNA Bases”

5:00 – 5:30 Professor **Glenn D. Prestwich** (University of Utah)
“Injectable synthetic extracellular matrix for tissue engineering and repair”

5:30 *Closing Remarks: Robert C. Kerber, Associate Chair, Department of Chemistry*

SBU Alumni Symposium

September 29 (9:00 – 10:40 AM), 2005

8:30 – 9:00 *Coffee and Danish, Charles B. Wang Center*

Greetings: Dr. **Donna M. Iula**, Chair of Organizing Committee, Pfizer

Moderator: Dr. **Seung-Yub Lee**, ICB & DD

9:00 – 9:20 Dr. **Scott D. Kuduk** (Merck Research Laboratories, PA)
“2,3-Diaminopyridine Bradykinin B₁ Receptor Antagonists”

9:20 – 9:40 Dr. **An T. Vu** (Wyeth Research, PA)
“2-Phenylquinolines as Potent and Selective Estrogen Receptor beta (ER β) Ligands”

9:40 – 10:00 Professor **Thierry Brigaud** (Université de Cergy-Pontoise, France)
“Chiral fluorinated imines and oxazolidines: synthons for organofluorine chemistry and asymmetric synthesis”

10:00 – 10:20 Dr. **Joseph Zhu** (Amgen, Inc., CA)
“Design and Synthesis of Conformationally Constrained TRPV1 Antagonists”

10:20 – 10:40 Dr. **Matthew M. Zhao** (Merck Research Laboratories, NJ)
“Development of the Manufacturing Process to Emend[®] (Aprepitant), Winner of 2005 Presidential Green Chemistry Challenge Award”

10:40 – 11:00 Dr. **Ivan Habuš** (Ruđer Bošković Institute, Croatia)
“Diels-Alder reactions on imines derived from 3-amino- β -lactams”

11:00 – 11:20 Dr. **Masakatsu Eguchi** (Institute for Chemical Genomics, WA)
“Design, Synthesis, and Application of Peptide Secondary Structure Mimetics”

11:20 – 11:40 Professor **Elke Schoffers** (Western Michigan University)
“Looking for a Ligand with a New Twist? Chiral Phenanthrolines for Organic Chemistry”

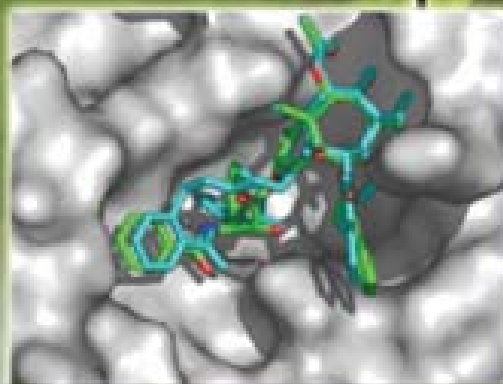
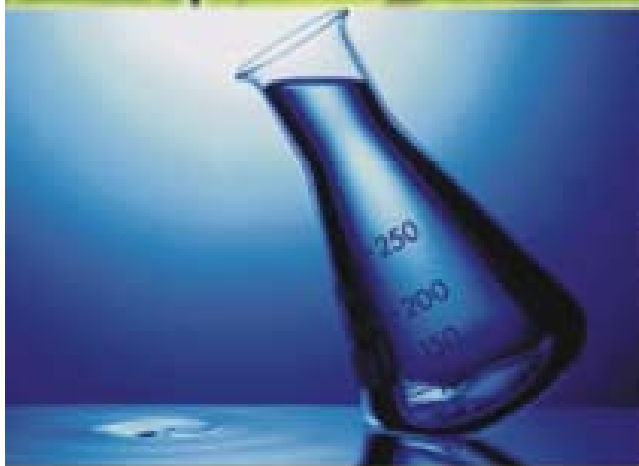
11:40 *Greeting and Remarks:* Professor Iwao Ojima

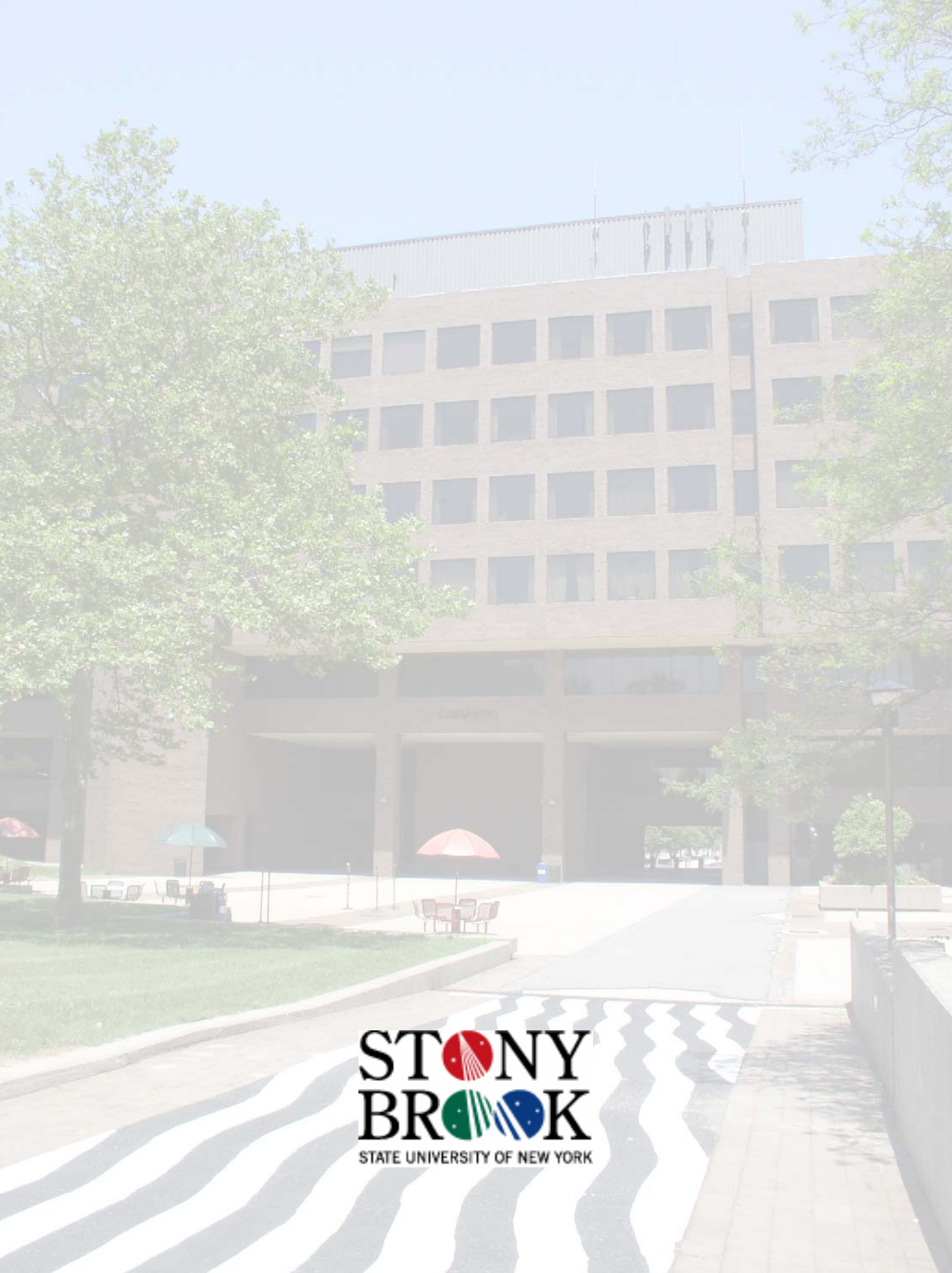


ICB&DD

INSTITUTE OF CHEMICAL BIOLOGY & DRUG DISCOVERY
AT STONY BROOK UNIVERSITY

*Biomedical Research innovation
Through Multidisciplinary and
Translational Research
– From Bench to Bed Side –*





**STONY
BROOK**
STATE UNIVERSITY OF NEW YORK