

CHIRALITY – 2007
19th International Symposium on Chirality

Scientific Program

SUNDAY, JULY 8, 2007

8:30 am – 4:00 pm Short Course #1:
Chiral Chromatography: Analytical & Preparative
Meeting Room Location: Marina 2 (*must be pre-registered*)

8:30 am – 4:00 pm Short Course #2:
NMR and Chiroptical Spectroscopy Methods for Studying Chirality
Meeting Room Location: Marina 3 (*must be pre-registered*)

Opening of Program and Chirality Award Lecture

Meeting Room Location: Harbor Island 2

5:30 pm OPENING REMARKS AND PRESENTATION OF CHIRALITY MEDAL

5:45-6:45 pm CHIRALITY MEDAL AWARD LECTURE
(L-1) **Porphyrin-Based Chiroptical Sensors: Application in Stereochemical Studies.** Nina Berova, Columbia University, New York, NY, USA

6:45-8:00 pm CHIRALITY MEDAL RECEPTION (sponsored by JASCO)
Location: Nautilus Exhibit Hall

MONDAY, JULY 9, 2007

PLENARY SESSION I

Meeting Location: Harbor Island 2

Chair: Timothy Ward

8:30-9:10 am (L-2) **The Secret Life of Enzymes.** K. Barry Sharpless, The Scripps Research Institute, La Jolla, CA, USA [Plenary lecture]

9:10-9:50 am (L-3) **The Concerted Application of Density Functional Theory Calculations of Vibrational Circular Dichroism, Electronic Circular Dichroism, and Optical Rotation to the Determination of Absolute Configuration.** Philip J. Stephens, Frank J. Devlin, J.J. Pan, University of Southern California, Los Angeles, CA, USA [Plenary lecture]

9:50-10:20 am BREAK (Nautilus Exhibit Hall)

MONDAY, JULY 9, 2007

CHIROPTICAL SPECTROSCOPY I (*parallel session*)

Meeting Location: Harbor Island 2

Co-Chairs: Prasad Polavarapu and Kevin Schug

- 10:20-10:50 am (L-4) **CD Analysis of Cyclopeptides and Mitochondrial-Targeting Sequences.** Peter Wipf, University of Pittsburgh, Pittsburgh, PA, USA [Keynote lecture]
- 10:50-11:20 am (L-5) **(R)-(+)-[VCD(+)⁹⁴⁵]-4-Ethyl-4-methyloctane, the Simplest and Basic Chiral Hydrocarbon with a Quaternary Stereogenic Center.** Nobuyuki Harada^{1,3}, T. Fujita¹, K. Obata¹, S. Kuwahara¹, N. Miura², A. Nakahashi², K. Monde², J. Decatur³, ¹Tohoku University, Sendai, JAPAN; ²Hokkaido University, Sapporo, JAPAN; ³Columbia University, New York, NY, USA [Keynote lecture]
- 11:20-11:40 am (L-6) **Biomolecular Interactions of Non Immobilized Systems by CD Spectroscopy.** Giuliano Siligardi, Rohanah Hussain, Diamond Light Source Ltd., Oxfordshire, UNITED KINGDOM
- 11:40 am-12:00 pm (L-7) **Methods for Increasing the Sensitivity of VCD Measurements.** Richard A. Larsen¹, Wayne Kottkamp¹, John Carriker¹, Jun Koshoubu², Kenichi Akao², Toshiyuki Nagoshi², Ettore Castiglioni², Hisako Sato³, Akihiko Yamagishi⁴, ¹Jasco Inc., Easton, MD, USA; ²Jasco Corporation, Tokyo, JAPAN; ³The University of Tokyo; PRESTO, Japan Science and Technology Corporation (JST); Tokyo, JAPAN; ⁴Ochanomizu University, Tokyo, JAPAN
- 12:00-12:20 pm (L-8) **Novel Chiroptical Analysis of Glycoconjugates by Vibrational Circular Dichroism (VCD).** Kenji Monde, Tohru Taniguchi, Atsufumi Nakahashi, Masumi Fukuzawa, Mai Hashimoto, Nobuaki Miura, Hokkaido University, Sapporo, JAPAN

MONDAY, JULY 9, 2007

ENANTIOSELECTIVE SYNTHESIS (*parallel session*)

Meeting Location: Harbor Island 3

Co-Chairs: Eiji Yashima and Thomas Wenzel

- 10:20-10:50 am (L-9) **Control of Symmetry and Topology in Molecular Design and Synthesis.** Jay S. Siegel, Organic Chemistry Institute, University of Zürich, 190 Winterthurerstr, Zürich CH-8057 SWITZERLAND [Keynote lecture]
- 10:50-11:20 am (L-10) **Chiral Ions in Asymmetric Synthesis and Catalysis.** Jérôme Lacour, University of Geneva, Genève, SWITZERLAND [Keynote lecture]
- 11:20-11:40 am (L-11) **Discrimination of Carbon Isotope Chirality by Asymmetric Autocatalysis with Amplification of Chirality.** Tsuneomi Kawasaki, Takashi Tsutsumi, Yukari Matsumura, Kenso Soai, Tokyo University of Science, Tokyo, JAPAN
- 11:40 am-12:00 pm (L-12) **High-Throughput Reaction Monitoring of Interconverting Stereoisomers and Enantioselective Reactions.** Oliver Trapp, Sven Weber, Sabrina Bauch, Max-Planck-Institut für Kohlenforschung, Mülheim an der Ruhr, GERMANY
- 12:00-12:20 pm (L-13) **Stereo and Enantio-selective Photochemical Reaction of Achiral 2-arylthio-3-methylcyclohexene-1-ones in the Solid and Solution Phases.** Reiko Kuroda^{a,b}, Y. Imai^b, N. Tajima^b, ^aThe University of Tokyo, Tokyo, JAPAN; ^bJapan Science and Technology Agency, Tokyo, JAPAN

VENDOR SEMINARS

- 12:30-1:30 pm **Chiral Selectivity: Fast Track HPLC Options.**
Sponsored by Supelco/Sigma-Aldrich
Meeting Room: Marina 2
- 12:30-1:30 pm **Discover VCD and What You Can Do With It.**
Sponsored by BioTools
Meeting Room: Marina 3
- 12:30-1:30 pm **Preparative Chromatography for Enantiomeric Separations; Screening and Method Development Protocols with Immobilized Polysaccharide-based Chiral Stationary Phases.**
Sponsored by Chiral Technologies
Meeting Room: Marina 6
- 1:30-3:30 pm **POSTER SESSION / EXHIBITS** (*Nautilus Foyer & Exhibit Hall*)

MONDAY, JULY 9, 2007

CHIRAL DRUG and METHOD DEVELOPMENT (*parallel session*)

Meeting Location: Harbor Island 2

Co-Chairs: Christopher Welch and Domenico Misiti

- 3:30-4:00 pm (L-14) **Development of a Highly Convergent, Asymmetric Manufacturing Process for Laropiprant: From Milligrams to Metric Tonnes.** Guy Humphrey, Merck & Co., Rahway, NJ, USA
[Keynote lecture]
- 4:00-4:20 pm (L-15) **Chiral Method Development Strategies for Early Phase of Drug Development: A Case Study.** Hongfei Yue, Xin Bu, Anwar Hussain, Joel Young, Bristol-Myers Squibb, New Brunswick, NJ, USA
- 4:20-4:40 pm (L-16) **Analytical and Thermodynamical Study of HPLC Separation of Some Enantiomers of Local Anaesthetics Using Macrocyclic Glycopeptides.** Jozef Lehotay¹, T. Rojkovičová¹, D. W. Armstrong², ¹Slovak Technical University, Bratislava, SLOVAK REPUBLIC; ²University of Texas at Arlington, Arlington, TX, USA
- 4:40-5:00 pm (L-17) **Streamlining Chiral Chromatographic Selectivity Screening.** Mike A. McBrien¹, David Snyderman¹, David S. Bell², J. T. Lee², ¹Advanced Chemistry Development, Toronto, CANADA; ²Supelco, Bellefonte, PA, USA
- 5:00-5:20 pm (L-18) **Chiral Method Development Screening Using Multiparallel Capillary Liquid Chromatography.** Jason A. Starkey, Eksigent Technologies, Dublin CA, USA

MONDAY, JULY 9, 2007

CHIROPTICAL SPECTROSCOPY II (*parallel session*)

Meeting Location: Harbor Island 3

Co-Chairs: Peter Wipf and Philip Stephens

- 3:30-4:00 pm (L-19) **Renaissance in Chiroptical Spectroscopic Methods for Molecular Structure Determination.** Prasad L. Polavarapu, Vanderbilt University, Nashville, TN, USA [Keynote lecture]
- 4:00-4:20 pm (L-20) **Photomodulation of a Chiral Nematic Liquid Crystal by the Use of a Photoresponsive Ruthenium(III) Complex.** Akihiko Yamagishi^{1,2}, Tadashi Mitsuoka³, Hisako Sato^{4,5}, Jun Yoshida⁴, Yasuaki Einaga³, ¹Ochanomizu University, Tokyo, JAPAN; ²CREST, Japan Science and Technology Agency, JAPAN; ³Keio University, ³Yokohama, JAPAN; ⁴The University of Tokyo, Tokyo, JAPAN; ⁵PRESTO, Japan Science and Technology Agency, JAPAN
- 4:20-4:40 pm (L-21) **First Principle Calculation of Circular Dichroism in Carbon Nanotubes.** Andrea Sanchez-Castillo^{1,2}, C. Noguez¹, ¹Instituto de Física, Universidad Nacional Autónoma de México, México D. F., MEXICO; ²Universidad Autónoma de Puebla, Puebla, MEXICO
- 4:40-5:00 pm (L-22) **Vibrational Circular Dichroism Shows Extraordinary Sensitivity to the Dynamics of Protein Fibril Formation in Solution.** Shengli Ma^a, Xiaolin Cao^a, Igor Lednev^b, Rina K. Dukor^c, Laurence A. Nafie^{a,c}, ^aSyracuse University, Syracuse, NY, USA; ^bUniversity at Albany SUNY, Albany, NY, USA; ^cBioTools, Inc., Jupiter, FL, USA
- 5:00-5:20 pm (L-23) **Incorporating Circular Dichroism in the Undergraduate Chemistry Curriculum.** Dani Nott, Trace Jordan, David Clevette, Erin Wilson, Andrea E. Holmes, Doane College, Crete, NE, USA

TUESDAY, JULY 10, 2007

VENDOR SEMINARS

7:30-8:30 am **Application of Capillary Electrophoresis as a Robust Chiral Separation Tool.**
Sponsored by Beckman Coulter
Meeting Room: Marina 6

PLENARY SESSION II
Meeting Location: Harbor Island 2
Chair: David Walba

8:30-9:10 am (L-24) **Vancomycin: Synthetic and Mechanistic Studies.**
Dale L. Boger, Department of Chemistry and The Skaggs Institute
for Chemical Biology, The Scripps Research Institute, 10550 North
Torrey Pines Road, La Jolla, CA 92037, USA [Plenary lecture]

9:10-9:50 am (L-25) **New Classes of Chiral Selectors: Their Mechanisms
and Actions.** Daniel W. Armstrong, University of Texas at
Arlington, Arlington, TX, USA [Plenary lecture]

9:50-10:20 am BREAK (Nautilus Exhibit Hall)

TUESDAY, JULY 10, 2007

HPLC (*parallel session*)

Meeting Location: Harbor Island 2

Co-Chairs: Daniel Armstrong and Laurence Nafie

- 10:20-10:50 am (L-26) **The Challenge of Molecular Recognition of Topological Chirality: Chromatographic Enantiomer Separation of Trefoil-Knots.** Wolfgang Lindner^a, Norbert M. Maier^a, Jens Brüggemann^b, Fritz Vögtle^b, ^aUniversity of Vienna, Vienna, AUSTRIA; ^bKekulé-Institut für Organische Chemie und Biochemie der Universität Bonn, Bonn, GERMANY [Keynote lecture]
- 10:50-11:10 am (L-27) **Polysaccharide Based Chiral Stationary Phases as Tools for Separation of Enantiomers in Drug Discovery and Development.** S. Åkerlund¹, H. Nelander, K. Öhlén, L. Thunberg, S. Andersson, ¹Karstad University, Karlstad, SWEDEN; Medicinal Chemistry, AstraZeneca R&D Mölndal, S-431 83 Mölndal, SWEDEN
- 11:10-11:30 am (L-28) **Journey from Brush-type to Polysaccharide CSPs.** Vitomir Sunjic¹, Marin Roje¹, Darko Kontrec², Vladimir Vinkovic², ¹Chirallica d.o.o., Zagreb, CROATIA; ²Rudjer Boskovic Institute, Zagreb, CROATIA
- 11:30-11:50 am (L-29) **The Chiral “Finger-Print” of an Herbicidal Product Resolved by SFC.** Les Dolak, Jaci Cole, Jennifer L. Lefler, Thar Technologies, Inc., Pittsburgh, PA, USA
- 11:50 am-12:10 pm (L-30) **Enantioseparations Using Functionalized Surfaces by Affinity Capillary Electrophoresis and Capillary Electrochromatography.** Yukihiro Okamoto, Masato Kamiya, Fumihiko Kitagawa, Koji Otsuka, Kyoto University, Kyoto, JAPAN

TUESDAY, JULY 10, 2007

CHIRAL CHEMISTRY: SUPRAMOLECULAR / SYNTHESIS

(parallel session)

Meeting Location: Harbor Island 3

Co-Chairs: Jerome Lacour and Jay Siegel

- 10:20-10:50 am (L-31) **Double Helical Polymers and Oligomers: Synthesis, Structures and Functions.** Eiji Yashima, Nagoya University and ERATO, JST, Nagoya, JAPAN [Keynote lecture]
- 10:50-11:10 am (L-32) **Chiral Memory in Supramolecular Porphyrin Aggregates.** Roberto Purrello, Università di Catania, Catania, ITALY
- 11:10-11:30 am (L-33) **Synthesis of Polyarylacetylenes Directed Toward Rotaxane-functionalized Helices.** Toshikazu Takata, Kei-ichiro Fukasawa, Takashi Sato, Tokyo Institute of Technology, Tokyo, JAPAN
- 11:30-11:50 am (L-34) **Out Sourcing Chiral γ -butyrolactones for the Synthesis of (+) Phaseolinic Acid, (+) Nephromopsiric Acid, L- β -hydroxy Paraconic Acid, (4R, 5R)-4,5-dimethyldihydro-2(3H)-furanone.** Ibrahim Ibnusaud, Susan Varughese, H. Simimole, Deenamma Habel, Mahatma Gandhi University, Kerala, INDIA
- 11:50 am-12:10 pm (L-35) **Photochemical Synthesis of Novel Pyrrolo-[1,4]-benzodiazepines involving a Memory of Chirality Effect via a Triplet 1,7-Biradical.** Wolfgang H. Kramer¹, Axel G. Griesbeck², ¹Millsaps College, Jackson, MS, USA; ²University of Cologne, Köln, GERMANY

VENDOR SEMINARS

- 12:30-1:30 pm **Kromasil[®] AmyCoat[™] – An Amylose Based Chiral Media for Pharmaceutical Analysis and Purification.**
Sponsored by Akzo Nobel/Eka
Meeting Room: Marina 2
- 12:30-1:30 pm **Eurocel and Europak: The Knauer Chiral Family Based on Cellulose and Amylose Derivatized Stationary Phases.**
Sponsored by Knauer ASI
Meeting Room: Marina 3
- 12:30-1:30 pm **New Strategies for Chiral Process Development.**
Sponsored by NovaSep
Meeting Room: Marina 6
- 1:30-3:30 pm **POSTER SESSION / EXHIBITS** (*Nautilus Foyer & Exhibit Hall*)

TUESDAY, JULY 10, 2007

PREPARATIVE SEPARATIONS (*parallel session*)

Meeting Location: Harbor Island 2

Co-Chairs: Myung Ho Hyun and Josef Lehotay

- 3:30-4:00 pm (L-36) **A New Generation of Powerful Chiral Stationary Phases for HPLC, SFC, and SMB.** Eric Francotte, NOVARTIS Institutes for BioMedical Research, Discovery Technologies, Basel, SWITZERLAND [Keynote lecture]
- 4:00-4:20 pm (L-37) **Integrated Operation of SMB and Biotransformation for the Production of Optically Active Molecules in High Yield.** Matthias Bechtold, Stefan Makart, Sven Panke, ETH Zürich, Zürich, SWITZERLAND
- 4:20-4:40 pm (L-38) **Use of Large Scale Chromatography in the Preparation of Armodafinil.** Willy Hauck¹, Philippe Adam², Nelson Landmesser³, ¹Novasep Inc., Boothwyn, PA, USA; ²Novasep SAS, Pompey, FRANCE, ³Cephalon, West Chester, PA, USA
- 4:40-5:00 pm (L-39) **Comparison of Different Chromatography Techniques in the Production of an API in Mg to Kg Quantities for Early Studies.** Kerstin Larson, Staffan Karlsson, Eva Pålsson, Kristina Öhlén[°], AstraZeneca Process R&D, Södertälje, SWEDEN; [°]AstraZeneca R&D, Mölndal SWEDEN
- 5:00-5:20 pm (L-40) **Manufacture of Chiral Alcohols by Asymmetric Ketone Reduction.** Marvin S. Hoekstra, Codexis, Inc., Redwood City, CA, USA

7:00 pm **SYMPOSIUM DINNER CRUISE**

We invite you to join the Chirality 2007 International Scientific Committee for the Symposium Dinner Cruise. Dine with us on the Spirit of San Diego while taking in the scenic view of San Diego's magnificent skyline.

If you have not purchased your dinner ticket, tickets may be purchased at the Symposium Registration Desk at a cost of \$75 each. Tickets are on sale until Tuesday at 4:00 PM, or until sold out.

The dock is located directly behind the Sheraton's East Tower Lanai area, across from Shoreline, the outdoor dining restaurant. A representative will be available to direct guests from the lobby area to the dock. Boarding is from 6:30 p.m. to 7:00 p.m.; 7:00 p.m. to 10:00 p.m. is cruising; and return to the dock 10:00 p.m. to 10:15 pm.

MUST present ticket to cruise representative in order to board the ship—no exception! Misplaced or lost tickets will not be replaced.

TUESDAY, JULY 10, 2007

MASS SPECTROMETRY / NMR (*parallel session*)

Meeting Location: Harbor Island 3

Co-Chairs: Nina Berova and Nobuyuki Harada

- 3:30-4:00 pm (L-41) **Cyclodextrins, Crown Ethers, and calix[4]resorcarenes as Enantioselective NMR Shift Reagents.** Thomas. J. Wenzel, Bates College, Lewiston, ME, USA [Keynote lecture]
- 4:00-4:20 pm (L-42) **Electrospray Ionization-Mass Spectrometry: Old Tools, New Tools, Applications, and Key Aspects of Quantitative Binding Determinations in Chiral Recognition Systems.** Kevin A. Schug, Petr Frycak, Manishkumar Joshi, Aruna Wijeratne, University of Texas at Arlington, Arlington, TX, USA
- 4:20-4:40 pm (L-43) **Effects of Backbone and Side-Chain on the Molecular Environments of Chiral Cavities and Chiral Recognition in Polysaccharide-Based Sorbents.** Rahul B. Kasat, N.-H. Linda Wang, Elias I. Franses, Purdue University, W. Lafayette, IN, USA
- 4:40-5:00 pm (L-44) **High Throughput Intelligent Chiral Method Development and Optimization by Parallel SFC/MS.** Lu Zeng, Ronda Xu, Daniel B. Kassel, Takeda SD, Inc., San Diego, CA, USA
- 5:00-5:20 pm (L-45) **Direct Screening of Chiral Discrimination Abilities of Chiral Hosts Using Mass Spectrometry.** Motohiro Shizuma^a, H. Adachi^b, D. Ono^a, H. Sato^a, M. Nakamura^a, ^aOsaka Municipal Technical Research Institute, Osaka, JAPAN; ^bOsaka University, Osaka, JAPAN

WEDNESDAY, JULY 11, 2007

PLENARY SESSION III

Meeting Location: Harbor Island 2

Chair: Yoshio Okamoto

- 8:30-9:10 am (L-46) **Chirality in Pheromone Science.** Kenji Mori,
The University of Tokyo, Tokyo, JAPAN [Plenary lecture]
- 9:10-9:50 am (L-47) **Chiral Interaction and Asymmetry in Crystallization.**
Dilip Kondepudi, Thurman D. Kitchin, Wake Forest University,
Winston-Salem, NC, USA [Plenary lecture]

9:50-10:20 am BREAK (Harborside Foyer)

BIOLOGICAL CHIRALITY (*parallel session*)

Meeting Location: Harbor Island 2

Co-Chairs: Christopher Welch and Oliver Trapp

- 10:20-10:50 am (L-48) **Fate and Effects of the Enantiomers of Chiral Environmental Pollutants.** Arthur Wayne Garrison, U.S.
Environmental Protection Agency, Athens, GA, USA
[Keynote lecture]
- 10:50-11:20 am (L-49) **Controlling Handedness and DNA Binding Properties of Peptide Nucleic Acids (PNAs) through Chirality.**
Roberto Corradini, University of Parma, Parma, ITALY
[Keynote lecture]
- 11:20-11:40 am (L-50) **Biological Investigation of Some 2-Aryl-2-fluoro-propionic Acids as Anti-allergy and Anti-Alzheimer's Disease Agents.** Tomoya Fujiwara¹, Hidehito Fujisawa¹, Yoshio Takeuchi¹, Takashi Morihara², Masatoshi Takeda², Miku Todo³, Michiko Yoshii³, Koichiro Ozawa³, ¹University of Toyama, Toyama, JAPAN; ²Osaka University Graduate School of Medicine, Osaka, JAPAN; ³Hiroshima University, Hiroshima, JAPAN
- 11:40 am-12:00 pm (L-51) **Bioinspired Chemical Inversion of L-Amino Acids to D-amino Acids.** Kwan Mook Kim, Ewha Womans University, Seoul, KOREA
- 12:00-12:20 pm (L-52) **Investigation of the Structural Basis of Antibody Stereoselectivity Using Homology-based Protein Modeling and Ligand Docking.** Daniel I. Ranieri, Heike Hofstetter, Oliver Hofstetter, Northern Illinois University, DeKalb, IL, USA

WEDNESDAY, JULY 11, 2007

CHIRAL SENSORS and SURFACE INTERACTIONS

(parallel session)

Meeting Location: Harbor Island 3

Co-Chairs: Kazuhiko Saigo and Bezhana Chankvetadze

- 10:20-10:50 am (L-53) **Development of Colorimetric and Fluorescent Chiral Sensors.** Myung Ho Hyun, Hee Jung Choi, Yoon Kyung Kim, Min Ki Choi, Pusan National University, Busan, KOREA
[Keynote lecture]
- 10:50-11:20 am (L-54) **Stochastic Sensing of Enantiomers in an Engineered Nanopore.** Xiyun Guan, Qitao Zhao, Dilani A. Jayawardhana, University of Texas at Arlington, Arlington, TX, USA
- 11:20-11:40 am (L-55) **Chirality and Enantiospecific Adsorption in Gold Nanoparticles.** Xóchitl López-Lozano, Luis. A. Pérez, Ignacio L. Garzón, Universidad Nacional Autónoma de México, MÉXICO
- 11:40 am-12:00 pm (L-56) **Temperature-induced Inversion of the Elution Order of Enantiomers in Gas Chromatography.** Pavel A. Levkin, Anna Levkina, Harri Czesla, Volker Schurig, University of Tübingen, Tübingen, GERMANY
- 12:00-12:20 pm (L-57) **Gas Chromatographic Determination of the Activation Energy for Interconversion of Dialkyl 2,3-Pentadienedioate Enantiomers.** Jan Krupcik¹, J. Mydlova¹, D.W. Armstrong², ¹Slovak University of Technology, Bratislava, SLOVAKIA; ²University of Texas at Arlington, Arlington, TX, USA
- 12:20 pm PAUSE (lunch on own)

WEDNESDAY, JULY 11, 2007

PLENARY SESSION IV

Meeting Location: Harbor Island 3

Chair: Eric Francotte

1:30-2:10 pm (L-58) **Bloopers in Chirality: Use and Abuse of Stereochemical Language.** Joseph Gal, University of Colorado Health Sciences Center, Denver, CO, USA (presented by Christopher Welch, Merck & Co., Inc.) [Plenary lecture]

NEW CHIRAL PHASES

Meeting Location: Harbor Island 3

Chair: Wolfgang Lindner

2:10-2:40 pm (L-59) **Immobilization of Polysaccharide Derivatives as Chiral Stationary Phases for Enantioseparation.** Yoshio Okamoto, Nagoya University, Nagoya, JAPAN [Keynote lecture]

2:40-3:10 pm (L-60) **Application of Capillary Electrophoresis for Studies of Enantioselective Intermolecular Interactions.** Bezhan Chankvetadze, Tbilisi State University, Tbilisi, GEORGIA

3:15 pm **CLOSING CEREMONY**
Presentation of Best Poster Awards
Invitation to Chirality—2008 (www.chirality2008.org)

3:30 pm **Adjourn**

POSTER PRESENTATIONS - Monday

Location: Nautilus Foyer & Exhibit Hall
Poster Board Size: 8 feet wide by 4 feet high

- P-101 **Highly Sensitive Analysis of Vigabatrin Enantiomers by Fluorogenic Derivatization and Liquid Chromatography.** Chun-Yu Hsieh^a, Shing-Yaw Wang^b, Aij-Lie Kwan^c, Hsin-Lung Wu^{a*}, ^aGraduate Institute of Pharmaceutical Sciences, College of Pharmacy, Kaohsiung Medical University, Kaohsiung, TAIWAN; ^bDepartments of Internal Medicine and Psychiatry, Chung-Ho Memorial Hospital, Kaohsiung, TAIWAN; ^cDepartments of Neurosurgery, Chung-Ho Memorial Hospital, Kaohsiung, TAIWAN
- P-102 **Resolution and Quantitation of A Pharmaceutical Drug Candidate and Its Stereoisomeric Impurities: A Case Study.** Brian Lingfeng He, Yueer Shi, Bristol-Myers Squibb, New Brunswick, NJ, USA
- P-103 **Strategies for the Development of Enantiomer Separations Using Immobilized Polysaccharide-based Chiral Stationary Phases.** C. W. Amoss, B. C. Coryell, G. B. Cox, P. Franco^a, C. Suteu^a, T. Zhang^a, Chiral Technologies, Inc., West Chester, PA, USA; ^aChiral Technologies, Europe, Illkirch, FRANCE
- P-104 **Optimizing Chiral Separations via an Automated Parallel Scouting System for On-Line Preparative Chiral Purification.** Joan M. Stevens, Mark Crawford, Gilson, Inc., Middleton, WI, USA
- P-105 **Optimization of Steady State Recycle SSR Parameters Utilizing Polarimetry in Chiral Separations.** Mark Crawford, Joan Stevens, Luke Roenneburg, Gilson, Inc., Middleton, WI, USA
- P-106 **Chiral Retention Behavior of β -Lactam Compounds on Different Types of Polysaccharide CSP.** Silvia Marten, Knauer GmbH, Berlin, GERMANY
- P-107 **Liquid and Supercritical Fluid Chromatographic Chiral Separation and Purification of Nutlin-3—A Small Molecule Antagonist of MDM2.** Zhenyu Wang, Malgorzata Jonca, Ted Lambros, Stephen Ferguson, Robert Goodnow, Hoffmann-La Roche Inc., Nutley, NJ, USA
- P-108 **Axially Chiral 2-arylimino-3-aryl-thiazolidine-4-one Derivatives: Enantiomeric Separation and Determination of Racemization Barriers by Chiral HPLC.** Sule Erol, Ilknur Dogan, Boğaziçi University, İstanbul, TURKEY
- P-109 **Evaluation of an HPLC Chiral Separation Flow Scheme for Small Molecules.** V. Scott Sharp, Donald S. Risley, Trent J. Oman, Eli Lilly and Company, Indianapolis, IN, USA
- P-110 **Chiral Chromatography: How to Provide Quick Access to Chiral Pure Compounds.** V. Pinilla, A. Brémaud, M. Van Thuyne, D. Sénéchal, R. Jacqmin, D. Lagneaux, E. Cavoy, UCB Pharma, Braine L'Alleud, BELGIUM

POSTER PRESENTATIONS - Monday

Poster Board Size: 8 feet wide by 4 feet high

- P-111 **Investigation and Application of “Superoptimal” Flow Rates with Preparative Supercritical Fluid Chromatography.** Wesley W. Barnhart, Kyung H. Gahm, Zheng Hua, Amgen Inc., Thousand Oaks, CA, USA
- P-112 **Development and Validation of a Capillary Electrophoresis Method for the Determination of Enantiomeric Impurities of a VEGFR-2 Inhibitor Compound.** Qinggang Wang, Bristol-Myers Squibb, New Brunswick, NJ, USA
- P-113 **Improving Solubility, Resolution and Production Rate by SFC Employing A Dual Co-solvent System on a Welk-O 1 CSP.** Ted Szczerba, Zahid Ali, Regis Technologies, Inc., Morton Grove, IL, USA
- P-114 **Epimerization Study of a Thermal Decomposition Product of Dihydroartemisinin by Dynamic HPLC.** W. Cabri^a, A. Ciogli^b, L. D’Acquarica^b, M. Di Mattia^a, F. Gasparri^b, F. Giorgi^a, A. Mazzanti^c, M. Pierini^b, M. Quaglia^a, ^aSigma-Tau SpA, Pomezia, ITALY; ^bUniversità “La Sapienza”, Roma, ITALY; ^cUniversità di Bologna, Bologna, ITALY
- P-115 **Direct Chromatographic Enantioresolution and Absolute Configuration Determination of a New Chiral Oxadiazol-3-one Calcium Channel Blocker.** P. J. Stephens^a, F. J. Devlin^a, F. Gasparri^b, A. Ciogli^b, D. Spinelli^c, B. Cosimelli^d, ^aUniversity of Southern California, Los Angeles, CA, USA; ^bUniversità “La Sapienza”, Roma, ITALY; ^cUniversità di Bologna, Bologna, ITALY; ^dUniversità di Napoli “Federico II”, Napoli, ITALY
- P-116 **Chromatographic Enantiomer Separation of Chiral Amines with a Novel Strong Cation Exchange Type Chiral Stationary Phase.** Christian Hoffmann, Michael Laemmerhofer, Wolfgang Lindner, University of Vienna, Vienna, AUSTRIA
- P-117 **Structural Elucidation of Cation Exchange Type Chiral Selectors for Enantiomer Separation Using Liquid Chromatography, NMR Spectroscopy and X-Ray Diffraction Analysis.** Christian Hoffmann, Hanspeter Kählig, Michael Laemmerhofer, Wolfgang Lindner, University of Vienna, Vienna, AUSTRIA
- P-118 **Enantioselective C – H Functionalization: Making the Green Reaction Greener.** Phillip M. Pelphrey, Huw M. L. Davies, University at Buffalo, Buffalo, NY, USA
- P-119 **Chiral Methods and Analysis of PCB 95 and cis-permethrin in Environmental Samples from the CTEPP Study.** E. M. Ulrich¹, T. Cummings², A. W. Garrison³, M. K. Morgan¹, ¹U.S. Environmental Protection Agency, Research Triangle Park, NC, USA; ²North Carolina Central University, Durham, NC, USA, currently U.S. EPA, Washington, DC, USA; ³U.S. Environmental Protection Agency, Athens, GA, USA

POSTER PRESENTATIONS - Monday

Poster Board Size: 8 feet wide by 4 feet high

- P-120 **Gaseous- Versus Solution-phase Recognition of Some Aromatic Amino Esters by 2,8,14,20-tetrakis(L-valinamido)[4]resorcinarene.** Bruno Botta, Caterina Frascchetti, Laura Nevola, Deborah Subissati, Fabiana Subrizi, Danila Tullo, Maurizio Speranza, Università di Roma "La Sapienza", Roma, ITALY
- P-121 **Cellulose-based CSPs as Effective Tools for Enantioselective Separation of Structurally Different Disubstituted Binaphthyls.** L. Loukotková, Z. Bosáková, E. Tesařová, Charles University, Prague, CZECH REPUBLIC
- P-122 **Enantioselective Analysis of Cloprostenol by HPLC.** Květa Kalíková, Zuzana Bosáková, Eva Tesařová, Charles University, Prague, CZECH REPUBLIC
- P-123 **Capillary Liquid Chromatography with Teicoplanin and Teicoplanin Aglycone Chiral Selectors for Separation of Profen Enantiomers; Evaluation of Preparation of Chiral Capillary Columns.** M. Vadimská¹, Z. Bosáková¹, E. Tesařová¹, J. Ševčík², D. W. Armstrong³, ¹Charles University, Prague, CZECH REPUBLIC; ²Palacky University, Olomouc, CZECH REPUBLIC; ³University of Texas at Arlington, Arlington, TX, USA
- P-124 **Separation Behavior of Amylose Derivatized Chiral Stationary Phase Europak 01 in Different Polar Modes.** Silvia Marten, Dr. Ing. Herbert Knauer GmbH, Berlin, GERMANY
- P-125 **Robustness of -Tocopherol Enantioseparation with Europak 01.** Silvia Marten, Dr. Ing. Herbert Knauer GmbH, Berlin, GERMANY
- P-126 **Investigation of the Interconversion of Tris(1,10-phenanthroline)-metal-complexes by Dynamic Micellar Electrokinetic Chromatography.** S. Bauch, S. K. Weber, O. Trapp, Max-Planck-Institut für Kohlenforschung, Mülheim an der Ruhr, GERMANY
- P-127 **Kromasil AmyCoat, A New Polysaccharide-based Chiral Stationary Phase for Rapid and Efficient Chiral Resolution.** Maria Eliasson, Eric Collet, Britt Kofoed-Hansen, Kristina Hallman, Eka Chemicals, Bohus, SWEDEN
- P-128 **From Screening to Purification, Presentation of a Strategic Approach to Solving Chiral Separation Issues by HPLC.** Kristina Hallman, Sylvia Winkel Pettersson, Britt Kofoed-Hansen, Eka Chemicals, Bohus, SWEDEN

POSTER PRESENTATIONS - Monday

Poster Board Size: 8 feet wide by 4 feet high

- P-129 **Resolution of Aryl α -amino Ketones on Silanol Group-modified Chiral Stationary Phase Based on Optically Active (3,3'-diphenyl-1,1'-binaphthyl)-20-crown-6.** Hee Jung Choi, Min Sub Shin, Myung Ho Hyun, Pusan National University, Busan, KOREA
- P-130 **Resolution of β -amino acids on a Modified New CSP Based on Optically Active (3,3'-diphenyl-1,1'-binaphthyl)-20-crown-6.** Hee Jung Choi, Hyun Ju Ha, Sang Cheol Han, Myung Ho Hyun, Pusan National University, Busan, KOREA
- P-131 **Liquid Chromatographic Resolution of Tocainide and Its Analogues on a Modified New CSP Based on Optically Active (3,3'-diphenyl-1,1'-binaphthyl)-20-crown-6.** Hee Jung Choi, Hyun Ju Ha, Bu Sung Kang, Myung Ho Hyun, Pusan National University, Busan, KOREA
- P-132 **Liquid Chromatographic Resolution of γ -amino Acids Including Vigabatrine on Crown Ether-based Chiral Stationary Phases.** Su Jin Lee, Hwan Sun Cho, Hee Jung Choi, Myung Ho Hyun, Pusan National University, Busan, KOREA
- P-133 **Enantiomeric Separations of Ruthenium(II) Polypyridyl Complexes Using High Performance Liquid Chromatography (HPLC) with Cyclodextrin Chiral Stationary Phases (CSPs).** Ke Huang, Ping Sun, Arthi Krishnan, Abhishek Yadav, Kelly Wouters, Frederick M. MacDonnell, Daniel W. Armstrong, University of Texas at Arlington, Arlington, TX, USA
- P-134 **Theoretical Studies on the Mechanism of the Enantioselective Discrimination in the Pauson-Khand Reaction.** Torstein Fjermestad, Feliu Maseras, Miquel A. Pericàs, Institute of Chemical Research of Catalonia (ICIQ), Tarragona, SPAIN
- P-135 **A Prominent Effect of Orientation of Amide Groups on Enantiomeric Separations of Two New Synthetic Polymeric Chiral Stationary Phases on HPLC and SFC.** Xinxin Han, Jeffery W. Remsburg, Jeffrey Crank, Daniel W. Armstrong, University of Texas at Arlington, Arlington, TX, USA
- P-136 **Separation of Epimeric, Diastereomeric, and Polymorphic Peptides on Macrocyclic Glycopeptide Chiral Stationary Phases.** Renee J. Soukup-Hein, Daniel W. Armstrong, University of Texas at Arlington, Arlington, TX, USA
- P-137 **Chiral Screening in the Chemical Development Department of GlaxoSmithKline's Research Triangle Park.** Christopher G. Henry, GlaxoSmithKline, RTP, NC, USA

POSTER PRESENTATIONS - Monday

Poster Board Size: 8 feet wide by 4 feet high

- P-138 **Enantiomeric Separation of β -Lactams and Synthetic Amino Acids Using Capillary Zone Electrophoresis.** Chunxia Jiang, Andrew W. Lantz, Antal Péter, Daniel W. Armstrong, University of Texas at Arlington, Arlington, TX, USA
- P-139 **Determination of Binding Constants of Chiral Catalyst Stereoisomers to Cyclodextrins Using Capillary Electrophoresis.** Chunxia Jiang, Junming Huang, Xiaotong Zhang, Daniel Armstrong, University of Texas at Arlington, Arlington, TX, USA
- P-140 **Enantiomeric Separation of Chiral Ruthenium(II) Complexes Using Capillary Zone Electrophoresis.** Ben Tong, Chunxia Jiang, Ye Bao, Junming Huang, Frederick MacDonnell, Daniel Armstrong, University of Texas at Arlington, Arlington, TX, USA
- P-141 **Evaluation of Pentaproline-based Chiral Stationary Phase by High-Performance Liquid Chromatography.** Y. Bao¹, J. Huang², D. W. Armstrong², T. Li³, ¹Iowa State University, Ames, IA, USA; ²University of Texas at Arlington, Arlington TX, USA; ³Mississippi State University, Mississippi State, MS, USA
- P-142 **Click Chemistry as Innovative Tool for the Preparation of Chiral Stationary Phases. Triazolo-Linked *Cinchona* Alkaloid Carbamate Anion Exchange-Type CSPs.** Karol Kacprzak, Norbert Maier, Wolfgang Lindner, Vienna University, Vienna, AUSTRIA
- P-143 **Using Supercritical Fluid Chromatography (SFC) and Tandem Mass Spectrometry Detection for the Development of a Qualitative Tandem Column Chromatographic Separation of Six Stereoisomers of Aprepitant.** C. M. Chavez-Eng, W. F. Kline, R. W. Lutz, M. L. Constanzer, E. J. Woolf, Merck & Co., Inc., West Point, PA, USA
- P-144 **Improvements in Parallel Chiral Column Screening with New Hardware and Software Add-Ons.** Holger Gumm, A. Bredebusch, Sepiatec GmbH, Berlin, GERMANY
- P-145 **Enantiomeric Resolution of Primary Amine Compounds by Covalently Bonded Macrocyclic Antibiotic, Boromycin, HPLC Chiral Stationary Phase.** Chunlei Wang, Daniel W. Armstrong, University of Texas at Arlington, Arlington TX, USA
- P-146 **Chiral Screen Evaluation using Supercritical Fluid Chromatography and Normal Phase HPLC.** Ling S. Xiao, James B. Murphy, Mary Gasper, Pfizer Global Research & Development, Chesterfield, MO, USA

POSTER PRESENTATIONS - Monday

Poster Board Size: 8 feet wide by 4 feet high

- P-147 **An Examination of the Impact of the Sugar Moiety on Glycopeptides with Respect to Enantioselectivity.** Beth Ann Baker, Aprile Gilmore, Courtney Vowell, Matthew Oglesbee, Erin Redman, Keith Parsons, Timothy J. Ward, Millsaps College, Jackson, MS, USA
- P-148 **Analytical HPLC Direct Comparison of RegisCell™ and CHIRACEL® OD®- H.** F. Mannerino, T. Szczerba, J. Kocergin, A. Miles, Regis Technologies, Morton Grove, IL, USA
- P-149 **Preparation and Evaluation of a New Synthetic Polymeric Chiral Stationary Phase Based on the *trans*-9,10-dihydro-9,10-ethanoanthracene-(11*S*,12*S*)-11,12-dicarboxylic Acid bis-4-vinylphenyl-amide Monomer.** Chunlei Wang, Xinxin Han, Ke Huang, Lingfeng He, Thomas E. Beesley, Daniel W. Armstrong, University of Texas at Arlington, Arlington, TX, USA
- P-150 **Can Linear Solvation Energy Relationships Give Insights into Chiral Recognition Mechanisms?** Alain Berthod^a, Clifford R. Mitchell^b, Daniel W. Armstrong^c, ^aLaboratoire des Sciences Analytiques, CNRS, Université de Lyon Villeurbanne, FRANCE; ^bAbbott Laboratories, North Chicago, IL, USA; ^cUniversity of Texas at Arlington, Arlington, TX, USA
- P-151 **Enantiomeric Separation of Unusual Amino Acids Using Cyclodextrin-based Stationary Phases.** Zachary S. Breitbach¹, Jeffrey W. Remsburg¹, Daniel W. Armstrong¹, Antal Péter², University of Texas at Arlington, Arlington, TX, USA; ²Attila Jozsef University, Szeged, HUNGARY
- P-152 **A New Revised HPLC Chiral Selectivity Screening and Method Development Protocol.** J. T. Lee, Thomas E. Beesley, David S. Bell, Supelco Inc., Bellefonte, PA, USA
- P-153 **Properties of New Immobilized Cellulose Chiral Stationary Phases in Supercritical Fluid Chromatography.** Christelle Delobel¹, Didier Thiébaud¹, M.-C. Hennion¹, Raphaël Duval², ¹Ecole Supérieure de Physique et de Chimie Industrielles de la Ville de Paris, Paris, FRANCE; ²Chirosep, La Fresnaye, FRANCE
- P-154 **Enantioresolution of Racemic Alcohols and Amines by Steroidal Inclusion Crystals.** Kazuaki Aburaya, Yusuke Yamahata, Ichiro Hisaki, Norimitsu Tohnai, Mikiji Miyata, Osaka University, Suita, Osaka, JAPAN

POSTER PRESENTATIONS - Monday

Poster Board Size: 8 feet wide by 4 feet high

- P-155 **A New Chromatographic Technique in the Study of Adverse Effect of Pindolol Enantiomers in Rat.** Mohamed M. Hefnawy^a, Hamad A. Al-Khamees^a, Abd-Rahman A. Al-Majed^a, Mohamed G. Kassem^a, Kamal El-Dine H. El-Tahir^b, ^aDepartment of Pharmaceutical Chemistry, King Saud University, Riyadh, SAUDI ARABIA; ^bDepartment of Pharmacology, King Saud University, Riyadh, SAUDI ARABIA
- P-156 **Chromatographic Enantiomer Separation of Topologically Chiral Trefoil-Knots.** Norbert M. Maier^a, Wolfgang Lindner^a, Jens Brüggemann^b, Fritz Vögtle^b, ^aUniversity of Vienna, Vienna, AUSTRIA; ^bUniversität Bonn, Bonn, GERMANY
- P-157 **Expanding Use of the "Inverted Chirality Columns Approach" for Enantiomeric Excess Evaluation in Absence of Reference Compounds: Successful Application to a Water-soluble Camptothecin Derivative.** E. Badaloni^a, W. Cabri^a, A. Ciogli^b, R. Deias^a, F. Gasparini^b, F. Giorgi^a, A. Vigevani^a, C. Villani^b, ^aSigma-Tau SpA, Rome, ITALY; ^bUniversità "La Sapienza", Rome, ITALY
- P-158 **Direct Enantioselective HPLC Monitoring of Lipase-catalyzed Kinetic Resolution of Phenoxy Propionic Acid in Non-standard Solvents.** Ashraf Ghanem, Farrag El-Behairy, Mohammed Al-Ahdal, King Faisal Specialist Hospital and Research Centre, Riyadh, SAUDI ARABIA
- P-159 **Enantiomeric Separation of Neutral Flavonoids and Triterpenoids of *Ficus Retusa*.** Swapnadeep Parial¹, D. C. Jain², S. B. Joshi³, B. R. Nahata, College of Pharmacy (Affiliated to Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal), Mandsaur, INDIA; Ministry of Science and Technology, New Delhi, INDIA

POSTER PRESENTATIONS - Tuesday

Location: Nautilus Foyer & Exhibit Hall
Poster Board Size: 8 feet wide by 4 feet high

- P-201 **Yeast Mediated Enantioselective Synthesis of Chiral *R*(+)- and *S*(-)-1-Phenyl-1-Butanol from Prochiral Phenyl *n*-Proyl Ketone in Hexane-Water Biphasic Culture.** Cheanyeh Cheng, Hsiang-Rong Tsai, Chung Yuan Christian University, Chungli, Taiwan, REPUBLIC OF CHINA
- P-202 **Asymmetric Radical Polymerization and Copolymerization of N-[(4-Butylphenyl)dibenzo-suberyl]methacrylamide Leading to Optically Active Helical Polymers.** A.K.M. Fakhru Azam¹, Masami Kamigaito¹, Yoshio Okamoto², ¹Department of Applied Chemistry, Nagoya University, Nagoya, JAPAN; ²EcoTopia Science Institute, Nagoya University, Nagoya, JAPAN
- P-203 **Real Time Chiral Reaction Monitoring with Micro-Scale HPLC.** J. Kittell, S. Hobbs, P. Deland, J. Rehm, Eksigent Technologies, Dublin, CA, USA
- P-204 **Induced Chiral Fields.** Hiroshi Ohrui, Yokohama College of Pharmacy, Yokohama, JAPAN
- P-205 **Chiral Discrimination of 3-O-methyl- α -cyclofructan Toward Ammonium Ions of Amino Acid Esters in FAB Mass Spectrometry.** M. Shizuma^a, H. Terauchi^b, H. Adachi^c, D. Ono^a, H. Sato^a, O. Shimomura^b, R. Nomura^b, M. Nakamura^a, ^aOsaka Municipal Technical Research Institute, Osaka, JAPAN; ^bOsaka Institute of Technology, Osaka, JAPAN; ^cOsaka University, Osaka, JAPAN
- P-206 **A Chiral Piece of the Pie – Optimizing Chiral Separations through Selective Sample Slicing and Column Switching.** Mark Crawford, Joan Stevens, Luke Roenneburg, Gilson, Inc., Middleton, WI, USA
- P-207 **VCD Application for Chiral Nematic Liquid Crystals.** Hisako Sato^{1,2}, Tohru Taniguchi³, Kenji Monde³, Akihiko Yamagishi^{4,5}, ¹The University of Tokyo, Tokyo, JAPAN; ²PRESTO, Japan Science and Technology Agency, JAPAN; ³Hokkaido University, Sapporo, JAPAN; ⁴Ochanomizu University, Tokyo, JAPAN; ⁵CREST, Japan Science and Technology Agency, JAPAN
- P-208 **Incorporating Circular Dichroism in the Undergraduate Chemistry Curriculum.** Katie Wilcox, Andrea E. Holmes, Doane College, Crete, NE, USA
- P-209 **Asymmetric Oxidation of Acyloxyalkenes Leading to Acyloxyfurans Using Hypervalent Iodine Reagents.** Morifumi Fujita, Sakuro Okuno, Hee Jin Lee, Takashi Sugimura, University of Hyogo, Hyogo, JAPAN

POSTER PRESENTATIONS - Tuesday

Poster Board Size: 8 feet wide by 4 feet high

- P-210 **Asymmetric Synthesis of Optically Active Peroxides Using Reactions of Naphthalenes with Singlet Oxygen.** Morifumi Fujita, Yoshihiro Akiyama, Takashi Sugimura, University of Hyogo, Hyogo, JAPAN
- P-211 **Catalytic Enantioselective 1, 4-addition with α' -Phosphoric Enones and α' -Sulfonic Enones.** Hyeyeon Yang, Kyoung-Chan Lim, Sunggak Kim, Korea Advanced Institute of Science and Technology, Daejeon, KOREA
- P-212 **Enantioselective Addition of Aniline to Epoxide in a Homochiral Porous Metal-organic Framework.** K. Tanaka^a, S. Oda^a, M. Shiro^b, ^aKansai University, Osaka, JAPAN; ^bRigaku Corporation, Tokyo, JAPAN
- P-213 **Triangleamine as Chiral Shift Reagent for Secondary Alcohols.** K. Tanaka, T. Fujiwara, N. Fukuda, Kansai University, Osaka, JAPAN
- P-214 **Optical Resolution of Medium-size Lactones by Inclusion Crystallization with Optically Active Host Compounds: Odd-even Effects on the Chiral Recognition.** K. Tanaka^a, D. Kuchiki^a, M.R. Caira^b, ^aKansai University, Osaka, JAPAN; ^bUniversity of Cape Town, Rondebosch, SOUTH AFRICA
- P-215 **Parallel SFC/MS-IPOCSS Screening for Enantiomeric Purity Assessment.** Derek B. Laskar, Lu Zeng, Rongda Xu, Daniel B. Kassel, Takeda San Diego, San Diego, CA, USA
- P-216 **Syntheses, X-Ray Structures and Circular Dichroism of Cobalt and Nickel Complexes of N,N-Dialkylmethionine Derivatives.** Debasis Das¹, Zhaohua Dai^{1,2}, Andrea Holmes^{1,3}, James W. Canary^{*1}, ^{*1}New York University, New York, NY, USA; ²Pace University, New York, NY, USA; ³Doane College, Crete, NE, USA
- P-217 **Immobilization of Polysaccharide Derivatives onto Silica Gel through Intermolecular Polycondensation and Its Chiral Recognition Abilities.** Tomoyuki Ikai¹, Chiyo Yamamoto^{1,2}, Masami Kamigaito¹, Yoshio Okamoto³, ¹Nagoya University, Nagoya, JAPAN; ²Suzuka National College of Technology, Suzuka, JAPAN; ³EcoTopia Science Institute, Nagoya University, Nagoya, JAPAN
- P-218 **Assigning the Absolute Stereochemistry of Pyranonigrin A by Electronic CD and ORD.** Tohru Taniguchi¹, Gerhard Schlingmann², Nina Berova¹, ¹Columbia University, New York, NY, USA; ²Wyeth Research, Pearl River, NY, USA
- P-219 **A Catalytic Asymmetric Three-Component 1,4-Addition/Aldol Reaction: Enantioselective Synthesis of the Spirocyclic System of Vannusal A.** K.C. Nicolaou, Wenjun Tang, Philippe Dagneau, Raffaella Faraoni, Merck & Co., Inc., Rahway, NJ, USA

POSTER PRESENTATIONS - Tuesday

Poster Board Size: 8 feet wide by 4 feet high

- P-220 **Synthesis and Polymerization of Chiral Maleimide Derivatives Having Unsaturated Group as N-Substituent.** T. Oishi, H. Gao, Y. Isobe, K. Onimura, Yamaguchi University, Yamaguchi, JAPAN
- P-221 **Synthesis of (S)-BINOL-Terminated Poly(ethylene glycol) Polyrotaxane Including α -Cyclodextrin.** Kenjiro Onimura, Masayuki Kawashima, Kazuhiro Yamabuki, Yukio Isobe, Tsutomu Oishi, Yamaguchi University, Yamaguchi, JAPAN
- P-222 **Synthesis of Chiral Dianionic Ionic Liquids from Simple Sugars.** Aruna B. Wijeratne, Pritesh S. Sharma, Jeffrey A. Crank, Junmin Huang, Kevin A. Schug, Daniel W. Armstrong, University of Texas at Arlington, Arlington, TX, USA
- P-223 **Combination of Chemical Reaction and Analysis with Chiral Camphor-based Transition Metal Catalysts in One Chromatographic Reactor.** S. K. Weber, S. Bauch, O. Trapp, Max-Planck-Institut für Kohlenforschung, Mülheim an der Ruhr, GERMANY
- P-224 **Resolution of Fluoroquinolone Antibacterials on a Modified New CSP Based on Optically Active (3,3'-diphenyl-1,1'-binaphthyl)-20-crown-6.** Hwan Sun Cho, Hee Jung Choi, Sang Cheol Han, Myun Ho Hyun, Pusan National University, Busan, KOREA
- P-225 **Chiral Crystal of Achiral Cytosine as an Origin of Biochirality in Conjunction with Asymmetric Autocatalysis.** Kenta Suzuki, Yuko Hakoda, Tsuneomi Kawasaki, Kenso Soai, Tokyo University of Science, Tokyo, JAPAN
- P-226 **Stereoselective Isomerization and Degradation of Ticarcillin in the Presence of Human Serum Albumin.** Y. Tsuda, T. Itoh, Kitasato University, Tokyo, JAPAN
- P-227 **Saccharide Recognition of Double Helical Oligoresorcinols via Heterocomplex Formation through Noncovalent Interactions in Water.** Hidetoshi Goto¹, Yoshio Furusho¹, Eiji Yashima^{1,2}, ¹ Japan Science and Technology Agency, Nagoya, JAPAN; ²Nagoya University, Nagoya, JAPAN
- P-228 **Solid-state Diffuse Reflectance Circular Dichroism (DRCD) Spectroscopy.** T. Harada¹, N. Asano², T. Sato¹, T. Konno², R. Kuroda^{1,2}, ¹Japan Science and Technology Agency, Tokyo, JAPAN; ²The University of Tokyo, Tokyo, JAPAN
- P-229 **Chiral Solvent Induction in Asymmetric Synthesis: Room-temperature Ionic Liquids Move to the Forefront.** Junmin Huang, Xiaotong Zhang, Daniel W. Armstrong, University of Texas at Arlington, Arlington, TX, USA

POSTER PRESENTATIONS - Tuesday

Poster Board Size: 8 feet wide by 4 feet high

- P-230 **Enantioselective Organocatalyst Tagged by a tert-butylphenyl Group for Highly Efficient Asymmetric Synthesis in a Water-cyclodextrin System.** Junmin Huang, Xiaotong Zhang, Daniel W. Armstrong, University of Texas at Arlington, Arlington, TX, USA
- P-231 **Design of B23 Circular Dichroism beamline at Diamond Light Source.** Giuliano Siligardi, Rohanah Hussain, Diamond Light Source Ltd., Oxfordshire, UNITED KINGDOM
- P-232 **Helical Induction Controls DNA Binding in Chiral PNAs with Two Stereogenic Centers.** Stefano Sforza, Tullia Tedeschi, Roberto Corradini, Rosangela Marchelli, University of Parma, Parma, ITALY
- P-233 **Circular Dichroism Study of DNA Binding by a Potential Anticancer Peptide Nucleic Acid (PNA) Targeted Against the MYCN Oncogene.** Roberto Corradini^a, Andrea Faccini^a, Andrea Tortori^b, Tullia Tedeschi^a, Stefano Sforza^a, Roberto Tonelli^b, Andrea Pession^b, Rosangela Marchelli^a, ^aUniversità di Parma, Parma, ITALY; ^bUniversity of Bologna, Bologna, ITALY
- P-234 **Chiral Influence on Helical Sense Choice in Duplex PNA Tests the Cooperativity of the Double Helix of this DNA Mimic.** Filbert Totsingan^{a,b}, Vipul Jain^b, Roberto Corradini^a, Andrea Faccini^a, Tullia Tedeschi^a, Rosangela Marchelli^a, Loren A. Day^c, Mark M. Green^b, ^aUniversity of Parma, Parma, ITALY; ^bPolytechnic University, Brooklyn, NY, USA; ^cPublic Health Research Institute, Newark, NJ, USA
- P-235 **Supramolecular Tilt Chirality Based on 21 Helical Assemblies.** Ichiro Hisaki, Norimitsu Tohnai, Mikiji Miyata, Osaka University, Osaka, JAPAN
- P-236 **Attempts to Measure Magneto-Chiral Circular Dichroism - The Cross Effect of Natural CD and MCD.** Sumio Kaizaki, Osaka University, Osaka, JAPAN
- P-237 **A Supramolecular Acid Catalysed Racemisation Process for Atropisomeric N-(2-aminophenyl) thiazoline-2-thione.** Federico Andreoli, Nicolas Vanthuyne, Christian Roussel, Ibon Alkorta*, I, José Elguero*, Paul Cézanne University, Marseille, FRANCE; *Inst. Quim. Med., Madrid, SPAIN
- P-238 **Synthesis of Optically Active Poly(arylene-ethynylene) having C₂ Chiral Spirobifluorene Skeleton in the Main Chain.** Ryota Seto, Takashi Sato, Toshikazu Takata, Tokyo Institute of Technology, Tokyo, JAPAN
- P-239 **Vibrational Circular Dichroism used for Diastereodiscrimination of Bilirubin, Biliverdin and Bilirubin Ditaurate.** Iryna Goncharova, Marie Urbanová, Institute of Chemical Technology, Prague, CZECH REPUBLIC

POSTER PRESENTATIONS - Tuesday

Poster Board Size: 8 feet wide by 4 feet high

- P-240 **Determination of the Absolute Configuration of a Planar Chiral (η^6 -arene) chromium Tricarbonyl Complex by DFT Calculation of Vibrational CD.** C. Villani^a, F. Gasparrini^a, S. Levi Mortera^a, F. J. Devlin^b, P. J. Stephens^b, ^aSapienza Università di Roma. Rome, ITALY; ^bUniversity of Southern California, Los Angeles, CA, USA
- P-241 **Memory of Chirality in Triplet Radical Chemistry: Photochemical Synthesis of Novel Pyrrolo-[1,4]-benzodiazepines.** Andrew S. Olinger^{*}, Wolfgang H. Kramer^{*}; Axel G. Griesbeck[#], ^{*}Millsaps College, Jackson, MS, USA; [#]University of Cologne, Köln, GERMANY
- P-242 **Near-Infrared Excited Raman Optical Activity.** Laurence A. Nafie^{1,4}, Bruce E. Brinson², Xiaolin Cao^{1†}, David A. Rice³, Omar M. Rahim³, Rina K. Dukor⁴, Naomi J. Halas², ¹Syracuse University, Syracuse, NY, USA; ²Rice University, Houston, TX, USA; ³Critical Link, LLC Syracuse, NY, USA; ⁴BioTools, Inc., Jupiter, FL, USA
- P-243 **Effects of Substituents on Uryl Based Binol Aldehyde Receptor: Enantioselective Recognition of Amino Acids and Amino Alcohols.** Raju Nandhakumar, Jayoung Ryu, Hyunjung Park, Lijun Tang, Sujung Choi, Kwan Mook Kim, Bio-Chiral Lab, Ewha Womans University, Seoul, SOUTH KOREA
- P-244 **Deposition of Crystalline Films of Amino Acid Using a Vacuum Evaporation Method.** T. Suzuki¹, T. Asahi¹, M. Tanaka², K. Tatsuta¹, T. Osaka¹, ¹Waseda University, Tokyo, JAPAN; ²National Institute of Advanced Industrial Science and Technology, Tsukuba, JAPAN
- P-245 **Chiral Molecules with a Polyhedral T, O or I Symmetry: Theoretical Solutions to an Open Problem in Stereochemistry and Their Significance in Forming New Phases of Liquid Crystals.** Sri Kamesh Narasimhan, Preeti Sejwal, Xiaoying Lu, Yan-Yeung Luk, Syracuse University, Syracuse, NY, USA
- P-246 **Synthesis, Resolution and Determination of Absolute Configuration of a Class of C₃-Dissymmetric Trioxatricorn: New Structure for Asymmetric Catalyst and Nanometric Multivalent Agents.** Yan-Yeung Luk, Teresa B. Freedman, Sri Kamesh Narasimhan, Jun Li, Rosina Lombardi, Syracuse University, Syracuse, NY, USA
- P-247 **A Single Abiotic Chiral Event Could have been the Key to the Origin of Biological Homochirality.** Sylvain Smadja, Lycee Francais de Los Angeles, Los Angeles, CA, USA
- P-248 **Chirality Change of Peptides by Alanine Racemase Chiral Analogue, ARCA.** Hyunjung Park, Lijun Tang, Raju Nandhakumar, Kwan Mook Kim, Ewha Womans University, Seoul, SOUTH KOREA

POSTER PRESENTATIONS - Tuesday

Poster Board Size: 8 feet wide by 4 feet high

- P-249 **Synthesis and Function of Complementary, Optically-Active Double Helices Utilizing Amidinium-Carboxylate Salt Bridge Formation.** Takashi Hasegawa^{1,2}, Hiroshi Katagiri¹, Yoshio Furusho¹, Eiji Yashima^{1,2}, ¹Japan Science and Technology Agency, Nagoya, JAPAN; ²Nagoya University, Nagoya, JAPAN
- P-250 **Highly Enantioselective Recognition and Resolution of Chiral Amino Alcohols by Guanidinium Based Chiral Receptors.** Lijun Tang, Hyunjung Park, Raju Nandhakumar, Kwan Mook Kim, Ewha Womans University, SOUTH KOREA
- P-251 **Lipase-catalysis in Non-standard HPLC Organic Solvents: A Versatile Method in Chiral Separation.** Ashraf Ghanem, King Faisal Specialist Hospital and Research Centre, Riyadh, SAUDI ARABIA
- P-252 **Enantioselective Gas Chromatographic Separation of Racemic *N*-alkylated Barbiturates and Cyclopropane Derivatives: Application of C11-Chirasil-Dex as Chiral Stationary Phase in GC.** Ashraf Ghanem¹, Volker Schurig², ¹King Faisal Specialist Hospital and Research Centre, Riyadh, SAUDI ARABIA; ²University of Tübingen, Tübingen, GERMANY

EXHIBITORS

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Kromasil® is a spherical silica media for analytical to process-scale HPLC applications. Kromasil has superior mechanical and chemical stability with high available surface area. Products include Kromasil 100Å as Silica, C4, C8, C18, Phenyl and Amino; Kromasil 60Å as Silica, Diol and Cyano; Kromasil 300Å; Chiral phases as TBB, DMB and the new Cellulose based CelluCoat™ and AmyCoat™ phases.

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17546 Bee Line, Jupiter, FL 33458, USA

Phone: 866-BTOOLS1 or 561-625-0133 / Fax: 561-625-0717

www.btools.com

BioTools, known for unique instrumentation for chiral analysis, was the first to introduce dedicated spectrometers for the measurement of VCD & ROA—the Chiral/IR™ and Chiral/RAMAN™. VCD has recently evolved as one of the most sought-after tools for the unambiguous determination of absolute configuration, as well as determination of enantiopurity and solution conformations.

BECKMAN COULTER

4300 N. Harbor Boulevard, Box 3100, Fullerton, CA 92834-3100, USA

Phone: 800-742-2345

www.beckmancoulter.com

Beckman Coulter, the world leader in capillary electrophoresis technology, provides solutions for the analysis of enantiomers, nucleic acids, proteins, carbohydrates, ions, organic acids, metabolites and basic drugs. The exhibit will include the latest information on applications, chemistry and hardware systems for the implementation of chiral and other microscale bioseparations.

CHIRAL TECHNOLOGIES, INC.

800 North Five Points Road, West Chester, PA 19380, USA

Phone: 610-594-2100 or 800-6-CHIRAL / Fax: 610-594-2325

www.chiraltech.com

Chiral Technologies Inc. of West Chester, Pennsylvania, offers a full range of chiral chromatography products and chromatography services for chiral separations. The services offered range from assistance with analytical method development through outsourcing separation services for the purification of gram to multi kg quantities.

CHIRALLICA d.o.o.

Bijenicka cesta 54, 10002 Zagreb, CROATIA

Phone: 385-1-4571282 / Fax: 385-1-4578283

gsm: +385 98 98 62 548, +385 98 98 01 972

www.chirallica.hr

Products and services offered by CHIRALLICA: Original patent protected brush-type chiral stationary phases (CSP's); Taylor made brush-type CSP's; Polysaccharide type CSP's (amylose and cellulose); Free substance screening; Chromatographic separation service using HPLC and SMB technology; Chiral chromatographic columns; Custom syntheses.

EXHIBITORS

CHIROSOLVE INC.

5941 Optical Ct., San Jose, CA 95138, USA

Phone: 408-834-8597 / Fax: 408-694-3844

www.chirosolve.com

ChiroSolve Inc. offers ChiroSolv® kits which can be used to identify chiral resolution process for a racemate within 24 hours that would normally take up to 2 months. Six disposable kits offer 576 combinations of resolving agent and solvent to screen against a racemate which can be of type acid, base, alcohol, amino acid, aldehyde or ketone. Company also offers Chiral Enhancement Services where the kits are used to identify the resolution process and further bench-top scale-up determines the purification steps to obtain certain enantiometric purity.

EKSIGENT TECHNOLOGIES

5875 Arnold Road, Dublin, CA 94568, USA

Phone: 925-560-2600 / Fax: 925-560-2700

www.eksigent.com

Eksigent creates microfluidic systems for use in proteomics, drug discovery, and other life science applications. NanoLC-1D™ and NanoLC-2D™ systems for proteomics research generate precise LC gradients at nanoliter-per-minute flow rates. ExpressLC™-100 and ExpressLC-800 systems deliver increased sample throughput making them perfect for high throughput applications in drug discovery and development.

JASCO

8649 Commerce Drive, Easton, MD 21601, USA

Phone: 800-333-5272

www.jascoinc.com

JASCO manufactures a full range of instrumentation for chiral analysis including Circular Dichroism Spectrometers (ECD), Vibrational Circular Dichroism Spectrometers (VCD), Polarimeters and Chiral detectors for HPLC. Our new CD and VCD systems offer the highest possible sensitivity and are controlled by our Spectra Manager software. Chiral detectors include both OR and CD.

KNAUER-ADVANCED SCIENTIFIC INSTRUMENTS

Hegauer Weg 38, D-14163 Berlin, Germany

Phone: +49 30 809 727-0 / Fax: +49 30 801 50 10

www.knauer.net

German LC pioneer KNAUER Advanced Scientific Instruments display their analytical HPLC Smartline instruments as well as the newly expanded line of polysaccharide-based chiral stationary phases (CSP) to solve almost any chiral separation task. The cellulose-based Eurocel and the amylose-based Europak columns are available in for analytical and preparative HPLC and offer excellent enantioselectivity, outstanding eluent flexibility, high loadability, and stable performance.

METTLER TOLEDO BERGER SFC®

7075 Samuel Morse Drive, Columbia, MD 20146, USA

Phone: 410-910-8500 / Fax: 410-910-8600

www.mt.com/bergersfc

METTLER TOLEDO Berger SFC® is the world leader in the analysis and purification of compounds using Supercritical Fluid Chromatography (SFC). SFC is at least three to five times faster than HPLC. The high resolution of SFC makes it ideal for the separation and purification of difficult samples, such as chiral enantiomers and natural products. SFC is normal phase chromatography, so it offers a complimentary selectivity to HPLC. To find out how SFC can eliminate your analysis and purification bottlenecks, visit us at our booth, or visit our web site at www.mt.com/bergersfc.

EXHIBITORS

NOVASEP, INC.

23 Creek Circle, Boothwyn, PA 19061, USA

Phone: 610-494-0447 / Fax: 610-494-1988

www.novasep.com

NOVASEP PROCESS specializes in the development of purification processes and the design, installation of turnkey plants for the pharmaceutical, biotech and food ingredient industries. NOVASEP PROCESS offers a broad range of proprietary technologies including; High Performance Chromatography (HPLC, SFC, SMB, VARICOL, S-SMB, NS2P, Cyclojet), Ion Exchange, cross flow membrane (MF, UF, NF, RO), evaporation, extraction and crystallization.

SEPIATEC GMBH

Louis Blériot-Str.5, 12487 Berlin, Germany

Phone: +49-30-63 22 34 0 / Fax: +49-30-63 22 34 10

www.sepiatec.com

Sepiatec provides innovative solutions for drug discovery and development such as the Sepmatix System, an 8 channel parallel HPLC suitable for fast method development or high sample throughput. The Sepmatix System with specialized Chiral Screening Software showing 80 chromatograms / screen is the ultimate tool for Chiral Column Screening.

SUPELCO/SIGMA-ALDRICH

595 North Harrison Road, Bellefonte, PA 16823, USA

Phone: 800-247-6628

www.sigma-aldrich.com/supelco

We provide chromatography columns and supplies for analysis and purification. Product areas include: Ascentis® HPLC columns, Discovery® SPE product lines, Discovery BIO HPLC columns for biopharmaceutical applications, flash chromatography systems, radiello® sampling system, Equity™ and SLB™-5ms capillary GC columns, packed GC columns, chiral columns, solid phase microextraction (SPME), molecular imprinted polymer technology, chemical standards, ProClin™ preservatives, ion exchange and adsorbent resins, carbon adsorbents, TLC, and chromatography accessories. Customized products and services, including application development, resin processing, and small-unit packaging. For the latest product and technical information, visit our web site, <http://sigma-aldrich.com>.

THAR TECHNOLOGIES, INC.

575 Epsilon Drive, Pittsburgh, PA 15238, USA

Phone: 412-967-5665 / Fax: 412-967-9446

www.thartech.com

Two new prep SFC systems for the lab in 2007 include – the compact benchtop SFC Prep 80 and the first ever integrated mass-triggered prep SFC. A third new system is the SFC Prep 10K, a production-scale system using a 35 cm I.D. DAC column for kilos to ton capacity with flow rates reaching 10 kg/min.