

MONDAY POSTER PRESENTATIONS

June 27, 2011
6:00 PM - 8:00 PM
Ballroom (Marriott)

SESSION PA1: General
Monday Evening, June 27, 2011
6:00 PM
Ballroom (Marriott)

PA1.1

Highly Ordered Self-assembled Nanostructures Based on Poly(propylene imine) (PPI) and PPI-DNA Dendrimer Hybrids. Jan Maly¹, Marek Maly¹, Alena Semeradtova¹, Dietmar Appelhans² and Elzbieta Pedziwiatr-Werbicka³; ¹Department of Biology, UJEP, Usti nad Labem, Czech Republic; ²Leibniz-Institut für Polymerforschung, Dresden, Germany; ³Department of General Biophysics, University of Lodz, Lodz, Poland.

PA1.2

Pyridoxal 5'-phosphate Binding in Lysine-Modified PAMAM Dendrimers. Ching-Hua Tsai and Chai-Lin Kao; Department of Medicinal and Applied Chemistry, Kaohsiung Medical University, Kaohsiung, Taiwan.

PA1.3

Tubular Assembly of Hexameric Macrocycles with Tunable Chirality. Myongsoo Lee and Zhegang Huang; Chemistry, Seoul National University, Seoul, Korea, Republic of.

PA1.4

DNA Cleavage by Copper Complex of Pyridine- modified Poly (amidoamine) Dendrimers. Yi-Hsuan Tang, Yeh-Long Chen and Chai-Lin Kao; Department of Medicinal and Applied Chemistry, Kaohsiung Medical University, Kaohsiung, Taiwan.
Pyridoxal 5'-phosphate Binding in Lysine-Modified PAMAM Dendrimers. Ching-Hua Tsai and Chai-Lin Kao; Department of Medicinal and Applied Chemistry, Kaohsiung Medical University, Kaohsiung, Taiwan.

SESSION PB1: Dendrimer Synthesis &
Characterization
Monday Evening, June 27, 2011
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PB1.1

Synthesis of Internally Branched Chiral PAMAM Dendrimers and Dendrons. Johannes F. Petersen, Christian Tortzen and Jørn B. Christensen; Department of Chemistry, University of Copenhagen, Copenhagen, Denmark.

PB1.2

Approaches to the Preparation of Bioconjugates by Functionalization of Dendrigrraft Poly-L-Lysines (DGL). Thomas Regnier¹, Helene Collet¹, Auguste Commeyras², Laurent Garrelly², Andréa Molero Bondia¹, Laurent Boiteau¹, Jean-Christophe Rossi¹ and Robert Pascal¹; ¹IBMM, Montpellier, France; ²Colcom, Montpellier, France.

PB1.3

Ferrocenyl Cross-Linked PAMAMOS Dendrimer Networks. Marta Herrero¹, Carmen M. Casado¹, Beatriz Alonso¹, Jose Losada² and Maria P. Garcia-Armada²; ¹Inorganic Chemistry, Universidad Autónoma de Madrid, Madrid, Spain; ²ETSII, Universidad Politécnica de Madrid, Madrid, Spain.

PB1.4

Biferrocenyl Dendritic Materials as Electrochemical Sensors. Carmen M. Casado¹, Carlos Villena², Jose Losada², Maria P. Garcia-Armada² and Beatriz Alonso¹; ¹Química Inorgánica, Universidad Autónoma de Madrid, Madrid, Spain; ²Ingeniería Química Industrial, ETSII, Universidad Politécnica de Madrid, Madrid, Spain.

PB1.5

Synthesis and Acid-induced Disassembly of Sterically Congested Oligoether Dendrons. Jeny Karabline and Moshe Portnoy; School of Chemistry, Raymond and Beverly Sackler Faculty of the Exact Sciences, Tel-Aviv University, Tel-Aviv, Israel.

SESSION PD1: Biological Studies
Monday Evening, June 27, 2011
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PD1.1

Bioconjugate Model Systems: Non-covalent Attachment of Glycodendrimers to Proteins - An Investigation of Size, Molar Mass and Binding Capacity. Franka Ennen¹, Dietmar Appelhans¹, Alben Lederer¹, Jan Hoffmann², Ullrich Oertel¹, Hartmut Komber¹ and Brigitte Voit¹; ¹Polymerstrukturen, Leibniz-Institut für Polymerforschung Dresden e. V., Dresden, Saxony, Germany; ²Institute for Physical and Theoretical Chemistry, Johann-Wolfgang-Goethe Universität, Frankfurt/Main, Baden-Württemberg, Germany.

PD1.2

Cationic Carbosilane Dendrimers in Biomedical Applications. Elena Fuentes-Paniagua¹, M. Angeles Munoz-Fernandez², Silvia Fernandez², Jose Luis Copa-Patino³, Juan Soliveri³, Jose Manuel Hernandez-Ros³, Rafael Gomez¹, Javier Sanchez-Nieves-Fernandez¹ and Fco. Javier de la Mata¹; ¹Química Inorgánica, Universidad de Alcalá, Alcalá de Henares, Madrid, Spain; ²Laboratorio de Biología Inmunomolecular, Hospital Gregorio Marañón, Madrid, Madrid, Spain; ³Microbiología, Universidad de Alcalá, Alcalá de Henares, Madrid, Spain.

PD1.3

PAMAM Dendrimers Decorating Carbon Nanohorns Surface as Efficient Gene Delivery Materials for Prostate Cancer Cells. Francisco Javier Guerra Navarro^{1,2,3}, Maria Antonia Herrero¹, Blanca Carrion², Francisco C. Perez-Martinez², Maribel Lucio¹, Noelia Rubio¹, Sonia Merino¹, Prado Sanchez-Verdu¹, Maurizio Prato⁴, Valentín Cena^{5,2} and Ester Vazquez¹; ¹Inorganic, Organic and Biochemistry Department, Facultad de Ciencias Químicas-IRICA-UCLM, Ciudad Real, Spain; ²NanoDrugs, S.L., Albacete, Spain; ³Parque Científico y Tecnológico de Albacete, Albacete, Spain; ⁴Center of Excellence for Nanostructured Materials, University of Trieste, Trieste, Italy; ⁵Unidad Asociada Neurodeath, Farmacología, CSIC-UCLM, Albacete, Spain.

PD1.4

The Gene-expression Profiles of HeLa Cancer Cells Treated with Activated and Non-activated Poly(amidoamine) Dendrimers, and their DNA Complexes. Jung-hua S. Kuo and Chia-Wei Lin; Graduate Institute of Pharmaceutical Science, Chia Nan University of Pharmacy and Science, Tainan, Taiwan.

PD1.5

Biocompatibility of Supramolecular Complexes of Quantum Dots-PAMAM(-FA) on Red Blood Cells. Esteban Duran-Lara¹, Daniela A. Geraldo¹, Luis Guzman-Jofre² and Leonardo S. Santos^{1,3}; ¹Laboratory of Asymmetric Synthesis, Chemistry Institute of Natural Resources, Universidad de Talca, Talca, Chile; ²Department of Biochemistry, Faculty of Health Sciences, Universidad de Talca, Talca, Chile; ³Fraunhofer-Chile Institute, Nanotechnology Division, Universidad de Talca, Talca, Chile.

PD1.6

Glycodendrimer Mediation of Galectin-3 Induced Cancer Cell Aggregation. Anna K. Michel, Hillary Stacey and Logan Schaezel-Hill; Montana State University, Bozeman, Montana.

SESSION PE1: Drug Delivery
Monday Evening, June 27, 2011
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PE1.1

Cancer Targeting Potential of Some Ligand-anchored Poly(propylene imine) Dendrimers: A Comparison. Prashant Kesharwani, Rakesh K. Tekade, Virendra Gajbhiye and Narendra K. Jain; Pharmaceuticals Research Laboratory, Department of Pharmaceutical Sciences, Dr. Hari Singh Gour University, Sagar, MP, India.

PE1.2

Systemic Administration of Dendrimer-siRNA Complexes Efficiently Suppresses HIV-1 Infection. Jiehua Zhou¹, C. Preston Neff², Xiaoxuan Liu^{3,4}, Jane Zhang¹, Haitang Li¹, David D. Smith⁵, Piotr Swiderski⁶, Ling Peng⁴, Ramesh Akkina² and John J. Rossi¹; ¹Molecular and cellular Biology, City of Hope Beckman Research Institute, Duarte, California; ²Department of Microbiology, Immunology and Pathology, Colorado State University, Fort Collins, Colorado; ³College of Chemistry and Molecular Sciences, Wuhan University, Wuhan, Hubei, China; ⁴Centre Interdisciplinaire de Nanoscience de Marseille, Marseille, France; ⁵Division of Biostatistics, Beckman Research Institute of the City of Hope, Duarte, California; ⁶Department of Molecular Medicine, Beckman Research Institute of the City of Hope, Duarte, California.

PE1.3

Synthesis, Characterization, and Biological Activity of Triazine Dendrimers Decorated with Brefeldin A: A Comparison of Michael-linked and Ester-linked Conjugates. Changsuk Lee¹, Clinton D. Allred² and Eric E. Simanek¹;

¹Chemistry, Texas Christian University, Fort Worth, Texas;

²Nutrition and Food Science, Texas A&M, College station, Texas.

PE1.4

Dendrimer-mediated siRNA Removal of beclin-1 Potentiates NMDA-mediated Toxicity in Rat Cortical Neurons. Maria D. Perez-Carrion⁴, Francisco C. Perez-Martinez⁴, Sonia Merino³, Jose Martinez-Hernandez⁵, Rafael Lujan⁵, Maria Prado Sanchez-Verdu³ and Valentin Cena^{1,2}; ¹Unidad Asociada Neurodeath, Universidad de Castilla-La Mancha, Albacete, Spain; ²CIBERNED, Instituto de Salud Carlos III, Madrid, Spain; ³Departamento de Química Inorgánica, Orgánica y Bioquímica, Facultad de Química-IRICA, Ciudad Real, Spain; ⁴NanoDrugs, S.L., Albacete, Spain; ⁵Ciencias Médicas, Universidad de Castilla-La Mancha, Albacete, Spain.

PE1.5

Protein-induced Disassembly of Dendritic Supramolecular Assemblies Using Lipophilic Ligands.

Rajasekhar Reddy Rami Reddy, Volkan Yesilyurt, Malar A.

Azagarsamy and Sankaran Thayumanavan; Chemistry, University of Massachusetts at Amherst, Amherst., Massachusetts.

PE1.6

Dendritic Prodrugs of GABA, Glycine and Gabapentin.

Jesus A. Valencia-Gallegos¹, Victor J. Martinez-Merino³ and Mario Alvarez²; ¹Chemistry, ITESM, Monterrey, Nuevo Leon, Mexico; ²Biotechnology, ITESM, Monterrey, Nuevo Leon, Mexico; ³Applied Chemistry, UPNA, Pamplona, Navarra, Spain.

SESSION PG1: Computational Modeling and Databases

Monday Evening, June 27, 2011

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PG1.1

Structurally Flexible PAMAM Dendrimers for DNA Delivery to Mouse Thymus: Combining Experimental and Modeling Evidences. Sabrina Pricl¹, Xiaoxuan Liu^{2,3}, Jiangyu Wu^{2,3}, Miriam Yammine⁴, Jiehua Zhou², Paola Posocco¹, Stephane Viel⁸, Cheng Liu², Fabio Ziarrelli⁷, Maurizio Fergaglia¹, Genevieve Victorero⁴, Catherine Nguyen⁴, Patrick Erbacher⁵, Jean-Paul Behr⁶ and Ling Peng^{2,3,4}; ¹MOSE-DI3, University of Trieste, Trieste, Italy; ²State Key Laboratory of Virology, Wuhan University, Wuhan, China; ³Département de Chimie, Centre Interdisciplinaire de Nanoscience, Marseille, France; ⁴INSERM, Marseille, France; ⁵Polyplus-transfection SA, Illkirch, France; ⁶Laboratoire de Chimie Génétique, CNRS, Illkirch, France; ⁷Fédération des Sciences Chimiques, Aix-Marseille Université, Marseille, France; ⁸LCP UMR, Aix-Marseille Université, Marseille, France.

PG1.2

Interaction Energies between PAMAM-G5 and Barbiturate Drugs. Encapsulation vs Electrostatic Interactions?

Claudia Sandoval¹, Luis F. Monsalve¹, Raul E. Cachau² and

Fernando D. Gonzalez-Nilo¹; ¹Center for bioinformatics and Molecular Simulations, Universidad de Talca, Talca, Maule, Chile;

²Advanced Structure Analysis Collaboratory, ISP, ABCC, SAIC-Frederick Inc., NCI-Frederick, Maryland.

PG1.3

Topology of Polyaspartate Binding to Hydroxyapatite.

Kuang-Chan Hsieh¹, Shou-Mei Wu¹ and Hui-Ting Chen^{2,3}; ¹School of Pharmacy, Kaohsiung Medical University, Kaohsiung, Taiwan;

²Department of Fragrance and Cosmetic Science, Kaohsiung Medical University, Kaohsiung, Taiwan; ³Orthopaedic Research Center,

Kaohsiung Medical University, Kaohsiung, Taiwan.

PG1.4

pH Dependence of PAMAM Conformational Changes using a Single Site and Outer Shell Titration Coordinate Models.

Daniel R. Aguayo¹, Paz V. Tapia², Raúl E. Cachau³ and Fernando D.

Gonzalez-Nilo¹; ¹Center for Bioinformatics and Molecular Simulation, Talca University, Talca, Maule, Chile; ²Nanobiotechnology Division at University of Talca, Fraunhofer Chile Research Foundation - Center for Systems Biotechnology, Talca, Maule, Chile; ³Advanced Biomedical Computing Center, NCI, SAIC-Frederick Inc., Frederick, Maryland.

PG1.5

Structural Characterization of Soft Nanobiomaterials at the Single Particle Level by High Throughput / High Contrast (low voltage) Electron Microscopy. Raul E. Cachau¹, Daniel R.

Aguayo², Hegaly Mendoza-Vilches², Luis E. Detin³, Jose R.

Casas-Finet⁴, Eugene Paransky⁵ and Fernando D. Gonzalez-Nilo²;

¹Information Systems Program, SAIC-Frederick, Frederick, Maryland;

²Center for Bioinformatics and Molecular Simulation, Universidad de

Talca, Talca, Chile; ³Georgetown University, Washington, District of

Columbia; ⁴MedImmune LLC, Gaithersburg, Maryland; ⁵Delong

America, Montreal, Quebec, Canada.

SESSION PH1: Novel Applications

Monday Evening, June 27, 2011

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PH1.1

Dendritic Antioxidants. Ajit Sharma¹, Choon Y. Lee¹ and

Rebecca L. Uzarski²; ¹Chemistry, Central Michigan University, Mt.

Pleasant, Michigan; ²Biology, Central Michigan University, Mt.

Pleasant, Michigan.

PH1.2

Nanometer-sized, Rigid and Hydrophobic Anions. David Tuerp

and Klaus Muellen; Max Planck Institute for Polymer Research,

Mainz, Germany.

PH1.3

Unique Solubility Issues by Establishing a New Type of Amphiphilicity on the Periphery of Polyphenylenedendrimers.

Rene Stangenberg and Klaus Muellen; Polymer Research, Max Planck

Institute for Polymer Research, Mainz, Germany.

PH1.4

Hyperbranched Polymers as a Flexible Platform for Paint

and Coating Surface Modification. Joshua A. Orlicki, Adam M.

Rawlett, Andre A. Williams, George R. Martin, MyVan H. Baranoski,

Nicole E. Zander, Wendy E. Kosik, John D. Demarce, Eugene

Napadensky, John A. Escarsega and Alicia Farrell; Weapons &

Materials Research Directorate, U.S. Army Research Laboratory,

Aberdeen Proving Ground, Maryland.

PH1.5

Exploration of bis-MPA Based Dendrimers as Calibrant for

Mass Spectrometry. Scott Grayson¹ and Brittany Myers²;

¹Department of Chemistry, Tulane University, New Orleans,

Louisiana; ²School of Science and Engineering, Tulane University,

New Orleans, Louisiana.