

The background features a dark, textured surface resembling a cell membrane with several red blood cells. A futuristic, metallic nanorobot with a central body and four legs is positioned in the lower right, interacting with a red blood cell. A white, wavy line representing a signal or pathway curves through the center of the scene.

Unither Nanomedical & Telemedical
Technology Conference

The Next Decade's Approach to Medicine



February 23- 26, 2010
Hotel Manoir des Sables
Quebec



**Unither Nanomedical & Telemedical
Technology Conference**

The Next Decade's Approach to Medicine

www.unithertechnologyconference.com

Conference Co-Chairs:

Martine Rothblatt, Ph.D.

Présidente directrice générale, Unither Biotech, Inc.

Baruch S. Blumberg, M.D., Ph.D.

Senior Advisor to the President, Fox Chase Cancer Center

Tuesday, February 23, 2010 – Friday, February 26, 2010

Tuesday, February 23, 2010

4:00 - 11:00 PM Hotel Check-in / Conference Check-in

6:30 - 9:30 PM Buffet Reception

Wednesday, February 24, 2010

7:00 – 7:45 AM Buffet Breakfast

7:45 - 8:00 AM **10S1OR** Opening Remarks - Martine Rothblatt, Ph.D., Conference Co-Chair

8:00 – 9:30 AM Session 1 – Telemanagement of Very Small *In Vivo* Devices

8:00 – 8:20 AM Robert C. Bourge, M.D. – Chairman & Director, Division of Cardiovascular Disease: University of
10S1P1 Alabama at Birmingham, “Future Potential of Telemedical Devices to Monitor and Enhance Patient Health.”

8:30 – 8:50 AM Christian Dahmen, M.Sc. – Head Researcher: University of Oldenburg, “*MRI-based Navigation and*
10S1P2 *Control of Micro- and Nanobots for Targeted Drug Delivery*”

9:00 – 9:20 AM **10S1P3** Sinan Haliyo, Ph.D. – Associate Professor: Université Pierre et Marie Curie, “*Artificial Helical Nanobelt Robots for Biomedical Applications*”

9:30 – 10:00 AM Coffee Break

10:00 – 12:00 PM Session 2 – Technology Development Pathways for Medical Nanobots

10:00 – 10:20 AM **10S2P1** Sylvain Martel, Eng., Ph.D., FCAE – Associate Professor: Institute of Biomedical Engineering, École Polytechnique de Montréal, “*Travelling From the Arteries to the Microvasculature with Different Types of Nanobots*”

10:30 – 10:50 AM **10S2P2** Ralph C. Merkle, Ph.D. – Senior Research Fellow: Institute for Molecular Manufacturing, “*Medical Nanorobots and Their Development*”

11:00 – 11:20 AM **10S2P3** Tad Hogg, Ph.D. – Research Fellow: Institute of Molecular Manufacturing, “*Chemical Power for Microscopic Robots in Capillaries*”

11:30 – 11:50 AM **10S2P4** Stephen C. Lee, Ph.D. – Associate Professor: The Ohio State University, “*Protein Engineering to Solve Problems at Nanoscale*”

12:00 – 1:00 PM Buffet Lunch

Sponsored by: United Therapeutics Corporation

1040 Spring Street; Silver Spring, MD 20910



1:00 – 2:00 PM **Keynote Speaker**

10S2SK Ray Kurzweil – Founder, Chairman & CEO: Kurzweil Technologies, Inc., “*The Democratization of Health and Medicine in an Era of Accelerating Technologies*”

2:00 – 2:30 PM **10S2SKQA** Ray Kurzweil – Q & A Discussion

2:30 – 3:00 PM Coffee Break

3:00 – 5:00 PM Session 3 – Nanomedical Structures and Devices in Development Today

3:00 – 3:20 PM **10S3P1** Ennio Tasciotti, Ph.D. – Assistant Professor: University of Texas Health Sciences Center, “*BioNanoScaffolds for Personalized Post-Traumatic Osteoregeneration*”

3:30 – 3:50 PM **10S3P2** Shuyi Li, M.D., Ph.D. – Research Scientist: Medical College of Georgia, “*Porous-wall Hollow Glass Microspheres as Novel Potential Nanocarriers for Biomedical Applications*”

4:00 – 4:20 PM **10S3P3** Francine Goulet, Ph.D. – Professor: CHA, Hopital de l’Enfant-Jesus, “*Nanomedical Biological Device in Development for Torn ACL Replacement*”

4:30 – 4:50 PM **10S3P4** Mark Kester, Ph.D. – Professor: Pennsylvania State Hershey College of Medicine, “*Dihydrosphingosine-1-Phosphate Triggers Lineage Switching of Myeloid-Derived Suppressor Cells to Antitumor Immune Effectors During Photoimmuno-Nanotherapy*”

7:00 – 9:00 PM Dinner at Manoir des Sables

Thursday, February 25, 2010

7:45 – 8:45 AM Buffet Breakfast

9:00 – 9:30 AM **10S4OR** Opening Remarks – Baruch S. Blumberg, M.D., Ph.D., Conference Co-Chair

9:30 – 10:30 AM Session 4 – Nano-Bio Interfaces & Hybrids

9:30 – 9:50 AM **10S4P1** William Dynan, Ph.D. – Professor & GRA Eminent Scholar: Institute of Molecular Medicine and Genetics; College of Georgia, “*Understanding and Re-engineering Nucleoprotein Machines to Cure Human Disease*”

10:00 – 10:20 AM **10S4P2** Professor Yechezkel Barenholz, Ph.D. – Professor: Hebrew University of Jerusalem, “*Phospholipid Liposomes as Potential Biolubricant Agents for Friction and Wear Reduction in Cartilage of Human Synovial Joints: The Role of Phospholipid Physical Chemistry and Nanoism*”

10:30 – 11:00 AM Coffee Break

11:00 – 12:00 PM Session 5 – Use of Systems Biology to Accelerate Nanomedical Therapies

11:00 – 11:20 AM **10S5P1** Eberhard O. Voit, Ph.D. – Professor: Georgia Institute of Technology, “*The Role of Systems Biology in Drug Delivery and Predictive Health*”

11:30 – 11:50 AM **10S5P2** James Hickman, Ph.D. – Professor: University of Central Florida, “*Functional In vitro Systems as Models for the Next Generation of Systems Biology Research and Applications.*”

12:00 – 1:00 PM Buffet Lunch



1:00 – 1:30 PM **Keynote Speaker**

10S5SK Ricardo Carvajal, J.D., M.S. – Counsel: Hyman, Phelps & McNamara, P.C., “*The Controversy Over FDA's Regulation of Nanotechnology: Potential Impacts on Nanomedicine*”

1:30 – 2:00 PM **10S5SKQA** Q & A on Regulation of Nanomedical & Telemedical Technology

2:00 – 2:30 PM Coffee Break

2:30 – 4:30 PM Session 6 – Nanomedical Pharmaceuticals

2:30 – 2:50 PM **10S6P1** Professor Yechezkel Barenholz, Ph.D. – Professor: Hebrew University of Jerusalem, “*From Nanotechnology to Nano-drugs: Our Doxil™ Experience*”

3:00 – 3:30 PM **10S6P2** Harvey E Smith *Presenting for*
Bradley K. Weiner, M.D. – Associate Professor: Weill Cornell Medical College, “*Nanoporous Silicon Particles (NSP) as a Delivery System for the Treatment of Musculoskeletal Disease*”

3:30 – 3:50 PM **10S6P3** Molly S. Shoichet, Ph.D., FRSC – Professor: University of Toronto, “*Polymeric Nanoparticles for Targeted Delivery in Cancer*”

4:00 – 4:20 PM **10S6P4** Christian Schafmeister, Ph.D. – Associate Professor: Temple University, “*Using Molecular Lego for Nanomedicine*”

10S6CR
4:30 – 4:45 PM **Closing Remarks**

7:00 – 10:00 PM **Closing Banquet at Cavallini Restaurant; 101 Rue du Moulin, Magog, QC**

Friday, February 26, 2010

12:00 PM Hotel Check Out