

## Minutes Chemistry Innovation Council

**November 2<sup>nd</sup>, 2007**

Chair: Dr. Robert Lemieux

Co-Chair: Dr. Jan Oudenes

**Attending:** Jan Oudenes, Bob Lemieux, Cynthia Fekken, Walter Szarek, John Carran, Cory Johnston, Din Lal, Walter Chan, Dale Cameron, Paul Matteau, Rui Resendes, Dan Wayner, Anne Vivian-Scott, Isobel Ralston, Wayne Schnarr, Dave Thomas and Diane Sullivan.

**Regrets:** Burton Branch, Bruce Chernoff, Lorenzo Ferrari, Heinz Plaumann, Daphne Lainson, Dinesh Vyas, Markus Wicki, Rick Friesen, Brian Robins, Richard Devereaux, Randy Gossen, Ken Reucassel and Shirley Tilghman

### MORNING SESSION:

**Jan Oudenes** provided welcoming remarks and introductions.

**New Members:** Dr. Louis Lamontagne, President and CEO, PainCeptor Pharma Corp. and Dr. Will Rogers, Manager of Research, Products & Chemicals Division, Imperial Oil.

**Bob Lemieux** welcomed the participants and reviewed the activities of the Chemistry Department.  
*Please see powerpoint presentation.*

**Rick Boswell** reported to council members on the new CRTI project "Higher Education Cooperative for Hazardous Materials and Equipment Tracking".  
*Please see powerpoint presentation.*

**Dale Cameron** updated the council on developments for the graduate module on Practical Drug Discovery.  
*Please see powerpoint presentation.*

### AFTERNOON SESSION

#### **Chemistry Road Show Presentations**

**Dr. Anne Petitjean** - Nanotechnology has evolved many nanoscopic tools which are currently mainly operating in solution. In order to provide work, nanomachines need to be isolated onto a substrate. In our laboratory, we develop nanomachines which operate on different substrates (2D surfaces, 1D strings) and which will hopefully find applications in the fields of nanoelectronics and DNA damage sensing.

*Please see powerpoint presentation.*

**Dr. Derek Pratt** – Research in the Pratt lab is carried out at the interface between the chemical and biological sciences, where they work towards a molecular-level understanding of processes involved in human health and development. The Pratt lab takes a multi-disciplinary approach that employs synthetic and mechanistic organic chemistry, as well as molecular biology and computational chemistry, to tackle many important problems including the role of free radical chemistry in disease pathogenesis and enzyme catalysis.

*Please see powerpoint presentation.*

**Dr. David Zechel** – A presentation on the workings of a biochemical lab in the department of chemistry; research towards understanding the structures and mechanisms of biocatalytic pathways; and a strategy for evolving stable proteins using green fluorescent protein

*Please see powerpoint presentation.*

**Dr. Peter Loock** – The presentation by HP Loock highlighted new and preliminary explorations in the area of analytical spectroscopy. The Loock group has developed sensors for optical absorption and refractive index measurements based on telecom equipment (i.e. fibers, telecom lasers, detectors, gratings, coupler, etc.). Two sensors were presented in some detail. A fiber optic absorption detector was developed that makes uses ring-down times as a measure for optical absorption and this detector was interfaced to analytical microdevices. A second sensor was capable of measuring acoustic waves with very high time resolution and was used to monitor the photoacoustic response of a laser excited sample. A variation of this sensor was also used as a pick-up for an acoustic guitar and was demonstrated by undergraduate student Jon Saari.

*Please see powerpoint presentation.*

**Jan Oudenes** reported on Alphora Research's Summer Internship Program. Jan felt the program was an excellent start in involving young people with industry. He felt the students were given comprehensive training on Health and Safety policies and procedures, laboratory techniques and systems, quality control and operational procedures. Jan also felt the process kept students, as well as supervisors and other employees current with the continual training of the interns. He stated hiring a 1st year student as an intern could lead to four years of summer employment and possible full time employment if the relationship between the student and the company was successful. It was decided that the QCIC website would be updated and a link placed from the Undergraduate website to the QCIC website. Council members felt it was important to advertise the QCIC and all the possibilities available to students. A list of summer internship positions and companies will also be listed on the QCIC website.

**Jan Oudenes** announced he would be continuing the Alphora Challenge for another year and pledged to match gifts to the Undergraduate Equipment Fund up to \$10,000.00. Jan thanked the council for allowing him to serve as Chair and introduced Dale Cameron as the next QCIC Chair.

**Bob Lemieux** thanked Jan for continuing the Alphora Challenge and for all his hard work as chair of the council.

**Dale Cameron** introduced his vision for the upcoming year and stated that he looked forward to chairing the Council.

*Please see powerpoint presentation.*

**Adjournment:** 3:10 pm by Bob Lemieux.