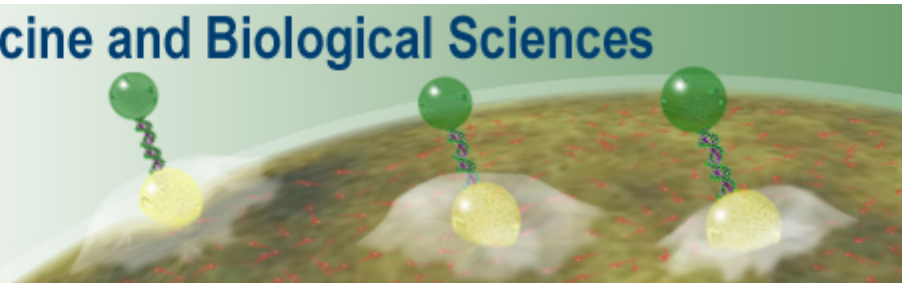
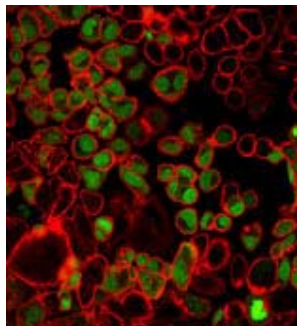


Michigan Nanotechnology Institute for Medicine and Biological Sciences



Herbert D. Doan Symposium on Nanomaterials and Nanotechniques for Biology

In conjunction with the meeting of its combined External Advisory and Executive Board, the Michigan Nanotechnology Institute for Medicine and Biological Sciences will hold a *Symposium on Nanomaterials and Nanotechniques for Biology* on Monday afternoon, September 21, 2009, 2:00 PM – 5:45 PM in the Biomedical Sciences Research Building, Kahn Auditorium, Room 1020. There will be three scientific sessions followed by a poster session of NanoBiology Certificate students.



The scientific sessions on nanomaterials and techniques will feature presentations by world famous experts in Materials Science and Physics, including Professor Gregory N. Tew, Polymer Science and Engineering, University of Massachusetts, Amherst, MA, Professor Kathryn Uhrich, Department of Chemistry and Chemical Biology, Rutgers, The State University of New Jersey and Herbert D. Doan Keynote speaker, Professor Eric Betzig, Ph.D., Group Leader at the Janelia Farm Research Campus of the Howard Hughes Medical Institute, Ashburn, VA.

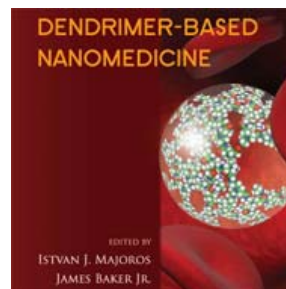
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Professor Tew will present: “Capturing Protein Activity in Simple Synthetic Polymers.” His lecture will highlight two efforts in the biomimetic arena. He will discuss how the design has led to novel antibiotics, on one hand, and cell penetrating peptide mimics on the other.

Professor Uhrich will discuss two drug delivery programs: “Polymer Therapeutics: from PolymerDrugs to Polymeric Micelles.” Polymers themselves are bioactive – they actively coordinate with binding domains on low density lipoproteins. PolymerDrugs are polymers that bio-degrade into therapeutically useful molecules. In addition, the polymeric micelles can be slightly modified for complexation with oligonucleotides and plasmids.

Dr. Betzig will present efforts to extend capabilities in areas such as superresolution optics, photodamage mediation, high speed volumetric imaging, and deep tissue imaging. Optical microscopy has been instrumental in studies of the structure and function of biological systems for centuries:

"We can at least dream now about being able to see within the cell on the molecular level, which is where all the action is. If we can do that, and study dynamics at that level, our understanding of cell biology and molecular biology should skyrocket."



The Michigan Nanotechnology Institute for Medicine and Biological Sciences is a multi-disciplinary team of chemists, physicists, engineers, toxicologists, physicians, biologists, pharmacists, and (bio)informatics specialists collaborating on nanoscience in biology and medicine. The Institute involves about 50 Faculty in a "no-walls" model using facilities in the Engineering, Medical and LS&A schools to enhance competitiveness for externally funded grants and contracts. James R. Baker, Jr., MD, Ruth Dow Doan Professor, is the Institute's Director. Our goals are:



- ~ Facilitate interaction among diverse scientific disciplines to accelerate discovery in Nanomedicine.
- ~ Foster translational science with the goal to commercialize our discoveries.
- ~ Fulfill our educational mission to build a multidisciplinary Rackham Certificate program in Nanobiology, and to offer a minor in Nanobiology for undergraduate students.

We strongly encourage you to attend and will provide light refreshments. We believe that this will be an exciting discourse that will help further define our community's perception of the possibilities for Nanomaterials and Nanotechniques for Biology.

Attendance requires registration by Sept. 18, 2009. Please send an email to: MINanotech@umich.edu with your name and interest in attending the meeting.