

RUTGERS CDR SEMINAR

Kathryn E. Uhrich

Professor, Chemistry & Chemical Biology
Rutgers University, Department of Chemistry

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“Polymeric Bioactives: Polymers from Bioactives”

BIOGRAPHY:



Dr. Kathryn Uhrich is a Professor of Chemistry at Rutgers, where she also holds graduate appointments in Biomedical Engineering, Chemical Engineering and Pharmaceutics. She received her BS degree from the University of North Dakota, and PhD degree from Cornell University. Before moving to her present post at Rutgers, she held post-doctoral positions at AT&T Bell Laboratories and Massachusetts Institute of Technology. Her research accomplishments have been disseminated in hundreds of publications, conference proceedings, and invited presentations as well as tens of millions of dollars in grant funding, hundreds of patents/filings, and several start-up companies. Her innovative research in polymer chemistry and biomaterials has trained over 160 undergraduate, graduate and high

school students as well as postdoctoral scientists. In addition to scientific publications, her research has been featured in Newsweek, Business Week, the New York Times, the New Jersey Star Ledger and the book: Aspirin: The Remarkable Story of a Wonder Drug. Kathryn has received numerous awards including Dow's Turner Alfrey Award, Outstanding NJ Scientist, and Thomas Alva Edison Patent Award as well as election as Fellow of the American Chemical Society, American Institute of Medical and Biological Engineering, and National Academy of Inventors.

ABSTRACT:

Our research centers on centers on polymeric bioactives; specifically, the design of biocompatible, biodegradable polymers that will improve human health. Given that our starting materials are naturally occurring and our polymeric bioactives safe, we incorporate green chemistry approaches to the polymer life-cycle. We use two different approaches in designing polymers - polymers that deliver bioactives and polymers derived from bioactives, which will be the focus of this seminar. As polymers derived from bioactives, PolymerDrugs are designed to biodegrade into therapeutically useful molecules. The first example was a poly(anhydride-esters) that yielded salicylic acid, the active component of aspirin, and currently in clinical trials as a biodegradable cardiac stent. This concept has been expanded to include PolyAntibiotics, PolyAntiseptics and PolyOpiates useful for localized, controlled drug delivery.

LOCATION: Life Sciences Building Rutgers - The State University of New Jersey,
145 Bevier Road, Piscataway, New Jersey 08854, New Jersey Center for
Biomaterials Suite - Conference Room 102

TIME: 5:30 PM

HOST: Bozena B. Michniak-Kohn, Ph.D., M.R.Pharm.S. Director, Center for
Dermal Research, Professor of Pharmaceutics, Ernest Mario School of
Pharmacy