Chem 395 Bioanalytical Chemistry, Spring 2007. Schedule

Speaker	Affiliation	Topics	Date
Jim Rusling	Uconn	INTRO; Disc. of student projects	Jan 16
Jim Rusling	UCONN	Introduction to electrochemical Biosensors	Jan 18
Jim Rusling	UCONN	Modern biosensor design	Jan 23
Tom Sharp	Pfizer	Intro to LC-MS	Jan 25
Jim Rusling		Schedule student presentations	Jan 30?
Daniel Pentek	Perkin-Elmer	Evolving Role of Mass Spectrometry in Bioanalysis.	Feb 1
Mike Sinz	Bristol-Myers Squibb	Drug-drug interactions (inhibition and induction)	Feb 6
Mike Telepchak	United Chemical Technologies	Mechanisms of Solid Phase Extraction to Improve Bioanalytical Results	Feb 8
Tim Olah	Bristol-Myers Squibb	LC-MS in drug discovery	Feb 13
		JR on NSF panel, no class	Feb 15
			Feb 20
Ala Nassar	Vion Pharma	Metabolite Identification in Drug Metabolism	Feb 22
1. Niamish \2. Sadogopan	Uconn	Microarrays for cancer biomarkers SPR immunosassays	Feb 27
1. Vignesh 2. Olumide	Uconn	Arrays for early disease detection MALDI and LC-MS/MS	Mar 1
		SPRING RECESS	Mar 4-10
1. Ruchica 2. \Linlin	Uconn	Cancer Biomarker discover by MS Enzymes in ionic liquids	Mar 13
1. Shenmin 2. Bhaskara	Uconn	DNA hybridization biosensors Non-spec. binding in immunoassays	Mar 15
Stuart Coleman		Theory and Applications of High Speed Chromatography for Bioanalysis	Mar 20
Stuart Coleman		As above	Mar 22
Vinod Makhijani	Technology Development	Pyrosequencing chemistry-based massively-parallel imaging system for whole genome sequencing	Mar 27
		No class - JR on NIH review	Mar 29
Chandra Prakash	Pfizer	Metabolite identification and characterization, as well as adverse drug reactions	April 3
Amin Kamel	Pfizer	Introduction of Biotransformation	April 10
Brian Marquez	Pfizer	LC-NMR in drug discovery	April 12
Carl Davis	Bristol-Myers Squibb	Predicting Human Drug Metab. and Pharmacokinetics	April 17
Xudong Yao	Uconn	Proteomics by MS	Apr19&24

T Th 11-12:15 AM T309
J. Rusling and A. Nassar, co-ordinators.

Class materials can be found at http://web.uconn.edu/rusling/
Click on Chem 395 Bioanalytical Chemistry at the bottom of our home page.

Class assignment:

One lecture and a 5-8 page paper on the same bioanalytical topic

Grading

- **15% class participation (you must ask questions!)**
- **30% your lecture**
- **30% your paper**
- **25% final exam**

Possible Topics for Student presentations:
(pick one from this list or choose your own topic; Have topic approved by me by before Feb. 3, bring a review article or other lead article on your topic as a basis for discussion. Topics should draw from current literature, e.g. 2000 or later.)
- Optical arrays to analyze DNA hybridization
- New approaches to DNA detection
- Fluorescent Protein Arrays
- Anitgen-antibody assays using surface plasmon resonance
- Non-specific binding in antigen-antibody assays
- Approaches to proteomics (choose a specific approach)
- Bioluminescence or Chemiluminescence in Biology
- NMR of proteins
- MS of proteins
- Detection of cancer biomarker proteins
- Point of care clinical analysis of blood or serum
- Bioanalytic methods for early disease detection