

“Bridging the Gap between laboratory research and Industrial Applications”

Tuesday, April 13, 2010

Hyatt Regency Cambridge

575 Memorial Drive

Cambridge, MA 02139



**Boston Area
Chapter**
ENGINEERING
PHARMACEUTICAL
INNOVATION



MIT Presentation

Modeling Protein Degradation Processes for the Development of Rational Approaches to Stabilization

Developing generally applicable models is key to shelf life prediction and the rational design of approaches to stabilize proteins against degradation processes, such as aggregation, oxidation, deamidation, and hydrolysis. We present results of modeling studies on globular proteins and antibodies using molecular simulation approaches and macroscopic modeling approaches, both combined with experimental work, to achieve the goal of developing rational approaches to stabilization. Emphasis for this talk is on protein/antibody aggregation.

MIT Speaker

Prof. Bernhardt L. Trout

Director, Novartis-MIT Center for Continuous Manufacturing

Co-Chair, Singapore-MIT Alliance, Chemical and Pharmaceutical Engineering

Professor, Department of Chemical Engineering

Massachusetts Institute of Technology

Bernhardt L. Trout is a Professor of Chemical Engineering at MIT. He is currently Director of the Novartis-MIT Center for Continuous Manufacturing and the Co-Chair of the Singapore-MIT Alliance Program on Chemical and Pharmaceutical Engineering. He received his S.B. and S.M. degrees from MIT and his Ph.D. from the University of California at Berkeley. In addition, he performed post-doctoral research at the Max-Planck Institute.

Prof. Trout's research focuses on molecular engineering, specifically the development and application of both computational and experimental molecular based methods to engineering chemical products and processes with unprecedented specificity. Since 2000, he has focused on molecular engineering for crystallization, formulation, and the development of pharmaceutical separation processes. In 2007, together with several colleagues from MIT, he set up the Novartis-MIT Center for Continuous Manufacturing, a \$65 million partnership with the objective of transforming pharmaceutical manufacturing. In addition to Novartis, he has worked with many other pharmaceutical companies in research or consulting. He has published over 80 papers and currently has 4 patent applications submitted.

Fraunhofer Presentation

Fraunhofer CMI Biomedical and Biological Engineering from a new perspective

Fraunhofer Center for Manufacturing Innovation (CMI) is committed to developing technologies to bridge the gap between laboratory research and industrial applications. The team of engineers and scientists at CMI works closely with clients and partners to design, manufacture, test and optimize prototype devices and instruments in the areas of mechanical, biotech/ biomedical, photonics and alternative energy.

Fraunhofer CMI and Boston University came together in 2007 to establish a fast-track path to develop clinical/ biomedical devices in technology areas leading to licensing or spin-offs. Under a jointly funded program,

Fraunhofer personnel are involved in developing diagnostic instruments for microbial infections, automated sample preparation instruments and optical biopsy tools. The diagnostic lab-on-a-chip instrument operates an integrated microfluidic chip with sample-to-answer capabilities. The lab-on-a-chip device has demonstrated success in identifying gram-negative bacteria like *B subtilis* and is presently undergoing suitable modifications to detect the presence of influenza virus from clinical samples. The automated sample preparation instrument has successfully isolated DNA and RNA from bacterial and mammalian cells.

Other projects at CMI include technologies involving automated factory for the manufacture of vaccines grown in plants, sample preparation for food testing, new generation optical and spectroscopic analysis.

Fraunhofer Speaker

Dr Anirban Chatterjee

Scientist

Fraunhofer CMI

Dr Anirban Chatterjee, a scientist at Fraunhofer CMI, has been working in the areas of infectious diseases, molecular diagnostics and biological sample preparation. He is currently involved in developing tools for nucleic acid based diagnostics of influenza and tuberculosis. He is also part of a team of scientist and engineers involved in designing and developing automated sample preparation instruments. Previously, Dr Chatterjee has worked at Boston Medical Center in molecular and cellular biology of cyst-forming human gastrointestinal parasites like *Entamoeba*, *Giardia*, *Cryptosporidium* and *Toxoplasma*. His work has been published in several peer reviewed journals and he has authored invited reviews and book chapters. Dr. Chatterjee received his PhD from Bose Institute, India, working in the area of cyanobacterial enzymology and evolution and has recently completed an MBA from Boston University.

Meeting Managers

David Novak, Novak Associates

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**PROFESSIONAL
EDUCATION**

PROGRAM SCHEDULE

Registration: 5:30 PM – 6:00 PM

Reception: 5:30 PM – 6:30 PM

Presentations: 6:30 PM – 8:30 PM

A networking reception, with hors d’oeuvres, will be held **BEFORE** the presentation

REGISTRATION FEES:

Registration by 4/6/2010:

After 4/6/2010:

<input type="checkbox"/>	Members	\$50	\$60
<input type="checkbox"/>	Non-members	\$95	\$115
<input type="checkbox"/>	Students	\$5	\$10

REGISTRATION IS NOW OPEN ONLINE!

Don't waste time filling in the form! Register online at www.ISPEBoston.org/Events.

Pay by credit card OR check.

Name: _____ Title: _____

Do you wish to opt out of being listed on the attendee roster:

Company: _____ Member #: _____

Address: _____ City: _____ State: _____ Zip: _____

Tel: _____ Fax: _____ Email: _____

PAY BY CREDIT CARD:

Visa

MasterCard

American Express

Card #: _____ Expiration Date: _____

Cardholder Name (as it appears on card): _____

Cardholder Signature: _____

Payment may be mailed to: ISPE, Boston Area Chapter, 411 Waverley Oaks Road, Suite 331B, Waltham, MA 02452

Telephone: 781-647-ISPE (4773) ☒ Fax: 781-647-7222 ☒ Email: ispe@camihq.com

****PLEASE NOTE: CANCELLATIONS RECEIVED AFTER Apr 6th ARE SUBJECT TO BILLING****

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DIRECTIONS AND PARKING:

Hyatt Regency Cambridge
575 Memorial Drive
Cambridge, MA 02139

Parking Rate:
8\$ for attendees

FROM THE WEST:

From Mass Pike: Take exit 18 - *Allston/Cambridge* (left hand exit). Follow the signs for Cambridge. Cross the River Street Bridge, exit right at the end of the bridge onto Memorial Drive. Hyatt is 1/2 mile up on Memorial Drive (Route 3) on the left hand side. Turn left at the traffic light to access the hotel entrance and parking garage.

FROM THE SOUTH:

From I-93: Take exit 26 - *Storrow Drive/Back Bay/Cambridge*. Stay in the right lane (*Storrow Drive*). Go 3/4 mile and take second exit on left, *Government Center/Kendall Square*. Go up the ramp and stay in the right lane. Turn right at the stop sign; go across the Longfellow Bridge. Take the first right off bridge and turn onto Memorial Drive (Route 3). Stay on Memorial Drive approximately 1 mile on right, at light turn right. Hyatt is on your left.

FROM THE NORTH:

From I-93 or Route 1: Take exit 26 - *Storrow Drive* and follow "FROM THE SOUTH" directions.

FROM LOGAN INTERNATIONAL AIRPORT:

Follow signs to the Mass Turnpike: 90 Boston/Williams Tunnel. Pay toll upon exiting airport. You will be heading West on 90. From 90 West, take exit 20 Brighton/Cambridge (pay another toll). Out of the toll booth, bear right following sign for Cambridge/Somerville exit. From this exit ramp, stay straight through two lights and cross over the bridge. Just over the bridge, turn right at the light onto Memorial Drive. Stay in the left lane. Continue up/over overpass keeping in left lane. At the first light on Memorial Drive make a left and then another quick left into the Hyatt front circle.

