The W.M. Keck Laboratory for Biological Imaging and the Laboratory for Optical and Computational Instrumentation at the University of Wisconsin-Madison, in cooperation with Promega Corporation and the BioPharmaceutical Technology Center Institute are pleased to present

The 3rd Symposium on

Biological Imaging

Multidimensional Biological Imaging: Approaches and Innovations

Friday, September 9, 2005
Promega Corporation
BioPharmaceutical Technology Center
5445 East Cheryl Parkway
Madison, WI 53711

Keynote Speaker: Stefan Hell, Department of NanoBiophotonics, Max Planck Institute for Biophysical Chemistry.

Lectures by: Wolfhard Almers, Kevin Eliceiri, Sanjiv Sam Gambhir, Jennifer Lippincott-Schwartz, Badrinath Roysam, Ted Salmon, Bruce Tromberg.

Workshops: Fluorescence Lifetime Imaging Microscopy, Becker and Hickl; and Automated Methods for Light Microscopy Imaging and Analysis, Molecular Devices Corporation.

Online registration is available at www.btci.org/bioimaging/2005/
The 3rd Symposium on Biological Imaging
Multidimensional Biological Imaging: Approaches and Innovations

INTRODUCTION

The ability of imaging technology in biology to move beyond the generation of static two-dimensional images of fixed specimens has become increasingly important in understanding the real-time dynamics of biological systems, whether they are cells in culture or intact organisms. A shift towards multidimensional in vivo imaging is key not only for the study of normal structure and function, but also for shedding light on the pathophysiology of actual or model diseases, the pharmacology of drugs, as well as the potential toxicity of drugs and environmental contaminants. The addition of information about volume to image data, typically by the collection of multiple XY image planes, has allowed for the visualization of living structures as they exist in three dimensions. It has also created the demand for increasingly sophisticated imaging software to collect, display, and analyze the large data sets that are generated. Adding the dimension of time to two or three-dimensional images introduces similar computational challenges, but has been invaluable in visualizing and quantifying protein interaction and transportation, membrane dynamics, nucleic acid modification, and changes in ion concentration within cells. Although there has been substantial progress in improving the time scale and spatial extent of imaging data collected, the traditional lateral and axial resolution limits that are imposed when images are collected with wavelengths of visible light have remained largely intact. The Symposium keynote address will be delivered by Stefan Hell. His lecture will describe imaging techniques recently developed in his laboratory at the Max Planck Institute for Biophysical Chemistry in Gottingen, Germany that have exceeded the diffraction limit of visible light, allowing a substantial increase in the resolution of fluorescence microscopy to nanometer scale imaging. The Symposium will also present other recent advances in multidimensional biological imaging. Lectures and poster presentations will highlight how these techniques can be applied in solving a variety of biological problems, ranging from imaging subresolution structures to intact human tissue. Topics covered will include: total internal reflection (TIRF) microscopy, fluorescence resonance energy transfer (FRET), whole animal molecular imaging, protein tracking with GFP, nanoscale fluorescence microscopy, multidimensional image analysis, and near-infrared diffuse optical imaging. In addition, the Symposium will feature interactive workshops on fluorescence lifetime imaging microscopy (FLIM) and automated software-based methods for image acquisition and analysis.

REGISTRATION

The Symposium will be limited to the first 250 registrants. Advanced registration deadline is August 26, 2005. Please print all information including your daytime phone number and email address.

Name: _________________________________________________________________
Position/Title: __________________________________________________________
Company/Institution: ____________________________________________________
Email: _________________________________________________________________
Fax: ___________________________________________________________________
Address: ___________________________________________________________________
City: ___________________ State: _______ Zip: _____________________________
Daytime phone (_______-_______-_______): _________________________________
Method of payment (check one)  
❑ Check (made payable to Promega Corporation and annotated with 151-6155.)  
❑ Mastercard  
❑ American Express  
❑ Visa  
❑ Cancelled (make payable to Promega Corporation and annotated with 151-6155.)  
Credit Card Number: _______________________________________________________
Expiration: ____________________________________________________________

The above fees include breakfast, workshops, poster session, lunch, lectures and social hour.

Cancellation Policy: In order to receive a prompt refund, your notice of cancellation must be received in writing (by letter or fax) no later than 10 working days prior to the Symposium. We regret cancellations will not be accepted after that date. However, we will be pleased to transfer your registration fee to another member of your institution at any time. If you plan to send someone in your place, please notify us as soon as possible so that materials may be prepared.

Please mail or fax this information to: Karin Borgh  
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6445 East Cheryl Parkway  
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Fax: 608-273-6902  
Email: karin.borgh@promega.com

For further information and online registration please visit the Symposium website at www.btci.org/bioimaging/2005/ or contact Karin Borgh, at the BioPharmaceutical Technology Center Institute 608-277-2508 or karin.borgh@promega.com.

If your work involves biological imaging and you would like to present a poster, please visit the Symposium website for abstract submission information.

Online registration and payment options are available at www.btci.org/bioimaging/2005/