



The Histochemical Society NEWSLETTER

Winter 2011

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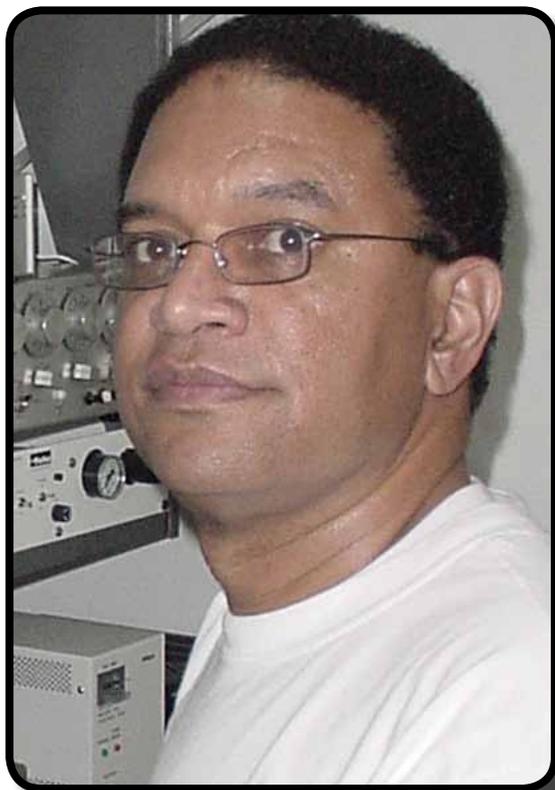
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3D Image of Motorneuron
Courtesy of Eduardo Rosa-Molinar and Jose Serrano-Velez

Dear Colleagues,



Meeting again at the Marine Biological Laboratory in 2011, The Histochemical Society's annual meeting March 30-April 1 ventures into a new area with its theme, "Immunohistochemistry and Microscopy of Modified Forms of Proteins".

There are challenges in characterizing the rapidly growing number of new native proteins and post-translational modifications of proteins in cells and tissues. The organizers have gathered speakers whose expertise with proteins offer attendees assistance understanding this rapidly growing field.

Furthering all of our understanding of new techniques in immunohistochemistry and microscopy, HCS is introducing Technology Reviews. The goal of the technology reviews is to provide a forum for the interaction of lecturers with researchers, students and industrial participants. The technology reviews will provide participants three learning situations: informal lectures, small group discussions, and laboratories.

Using audio-visual aids and outlines of important concepts to be discussed, lecturers will provide information about immunohistochemistry and/or modern optical microscopy principles. Following the lectures, small group discussions will afford participants the opportunity to discuss the immunohistochemical

and/or modern optical microscopical concepts with the lecturer and each other. Finally, laboratories will permit participants to engage in hands-on work that will reinforce the immunohistochemical and modern optical microscopy principles and concepts covered in lectures and discussions.

The Technology Reviews will also be incorporated into the HCS Short Course as an enhancement to the laboratory sessions. The HCS Short Course precedes the Annual Meeting and continues to build on past years' successes with additional faculty and modules. This year the didactic session be directed to attendees with a range of previous experience with immunohistochemistry (IHC). Topics include: basic principles associated with the application of IHC, antibodies, antigen retrieval, fluorescence and confocal microscopy, amplification methods, double labeling and co-localization strategies and important elements of laboratory operations and troubleshooting as applied to both research and clinical laboratories.

The Woods Hole setting has proved to be a perfect venue for an HCS sized meeting, big enough that everyone can find a quiet spot for contemplation yet small enough that you won't miss meeting up with any of your colleagues. The food is good, the scenery gorgeous and the science cannot be beat. Make your plans early and join us for Histochemistry 2011.

Ed Rosa-Molinar
President, HCS

RENEW YOUR 2011 MEMBERSHIP IN HCS!

Visit: <http://www.histochemicalsociety.org/membership/dues.shtml>

Histochemical Society Meeting

March 30-April 1, 2011

The Marine Biological Laboratory, Woods Hole, MA

Meeting Theme: *Detection of Phosphorylated Proteins*

REGISTRATION is OPEN:

<http://www.regonline.com/Register/Checkin.aspx?EventID=902116>

Preliminary Program

Wednesday, March 30

12:00-4:00 PM Registration, arrival of participants at MBL
4:00-6:00 PM HCS Welcoming Reception
6:00-7:00 PM Dinner at MBL

7:30 PM **Journal of Histochemistry and Cytochemistry Plenary Lecture**
Translation Of Landmarks Found By Multiphoton Imaging Of Living Breast Tumors To Prognosis Of Risk In Patients.

John Condeelis

Judith & Burton P. Resnick Chair in Translational Research, Professor and Co-Chair, Anatomy and Structural Biology Department, Albert Einstein School of Medicine, NY, NY

Thursday, March 31

8:00-8:15 AM Opening Ceremony.
Session Chair: **Nancy M. Sawtell**, University of Cincinnati School of Medicine, and Children's Hospital Medical Center, Cincinnati, OH

8:15-9:00 AM **Overview of Protein Phosphorylation**
James W. Mandell, University of Virginia Sch. Medicine, Charlottesville, VA

9:00-9:30 AM **Application Of Phosphorylation State-Specific Antibodies**
Nancy M. Sawtell, University of Cincinnati Sch. Medicine, and Children's Hospital Medical Center, Cincinnati, OH

9:30-10:00 AM **Biochemical Validation Of Phosphorylation State-Specific Antibodies**
Irving Vega-Vega, University of Puerto-Rico-Rio Piedras, San Juan, PR

10:00-10:15 AM Refreshment Break

10:15—11:15 AM Presentations from Submitted Abstracts Related to Meeting Theme

11:15-11:45 ***Proximal Ligation Assay (PLA): A Solution To The Phosphorylation State-Specific Antibody Specificity Problem – A Case Study***

Mats Gullberg, Olink AB, Uppsala, Sweden

11:45-Noon Round Table Discussion: ***Phosphorylation Related Topics***

Round Table topics will be chosen based on attendees suggestions posted on meeting bulletin board.

12:00-1:30 PM Lunch with Four Moderated Breakout Sessions

1:30-3:00 PM Poster Session 1

The “***Technology Review Sessions***” at this years meeting will be small interactive sessions that will focus on recent methodological and technological advances, and challenges to study protein phosphorylation. Each instructor will identify and use the best techniques and state of the art imaging technologies to study protein phosphorylation.

3:15-5:00 PM Technology ***Review 1:***

Advances In Immunohistochemistry: Refinement Of Microwave Instrumentation

Mark A. Sanders, University of Minnesota, St. Paul, MN and Rick Giberson, Ted Pella, Inc.

3:15-5:00 PM Technology ***Review 2:***

Recent Advances In Fluorescence Microscopy: Deconvolution, Confocal And Super-Resolution - When Each Technology Provides Best Images And Information For Your Research.

Paul Goodwin, Applied Precision, Inc., Bothell, WA

Charles Frevert, University of Washington School of Medicine, Seattle, WA

6:00-7:00 PM Dinner

7:00-9:00 PM Business Meeting, Awards and Reception

Friday, April 1

8:00-8:30 AM ***Introduction: Imaging Proteins***

Session Chair: **Eduardo Rosa-Molinar**, University of Puerto-Rico-Rio Piedras, San Juan, PR

8:30-9:00 AM ***Imaging Receptor Tyrosine Kinase Activity In Cells And Tissue***

Jonathan V. Rocheleau, University of Toronto, Toronto, Canada

9:15-9:30 Break

9:30-9:45 AM ***Monitoring Diffusion Dynamics Of Plasma Membrane Serotonin 5-HT_{2C} Receptors Using Fluorescence Correlation Spectroscopy (FCS)***

Joseph E. Mazurkiewicz, Albany Medical College

9:45-10:15 AM Talks chosen from abstracts related to theme of meeting

10:15-11:45 AM **Round Table Discussion: Phosphorylation Related Topics**

Round Table topics will be chosen based on attendees suggestions posted on meeting bulletin board.

12:00- 1:30 PM Lunch with moderated breakout sessions

1:30-3:00 PM

Technology Review 3:

Microfluidic Devices as Tools for Immunofluorescence Imaging

Jonathan V. Rocheleau, University of Toronto

Technology Review 4:

Advances In Image Analysis: Automation Enhances The Ability To Obtain Quantitative Measurements From Immunohistochemistry.

Charles Frevert, University of Washington School of Medicine, Seattle, WA

3:00-4:00 PM Marine Resources Center Tour

4:00-5:00 PM Poster Session 2 (coffee and dessert)

6:00-8:00 PM Dinner and Farewell Reception

Saturday, April 2

Depart MBL.

Applications Deadline for HCS Awards is Extended to January 31, 2011

This includes the Gomori, Carpenter-Rasch, student travel awards, research scientist travel awards, HCS Outstanding Young Investigator, Vector and Lillie Awards.

For complete information on the awards visit:

<http://www.histochemicalsociety.org/awards/>

Abstract Submission Deadline is Extended to January 31, 2011

Abstracts should be submitted by January 31, 2011.

For information visit :

<http://www.histochemistry2011.org/abstractsPosters.html>

IFSHC Newsletter

The December 2010 newsletter of the International Federation of Societies for Histochemistry and Cytochemistry can be found on the IFSHC webpage: www.ifshc.com/

HCS Annual Short Course
Immunohistochemistry and Microscopy
Hands-on Laboratory Sessions

The Marine Biological Laboratory, Woods Hole, MA
March 27 – 30, 2011

Sunday, March 27th – Arrival and introductory lectures in evening
Monday-Tuesday, March 28-29 – Lectures and laboratory sessions
Wednesday, March 30 – Half-day session
(NOTE: Wednesday, March 30 - HCS Annual Meeting begins.)

Short Course Topics include:

IHC Overview, Chromogen and Fluorescence Detection Strategies, Controls, Fixation, Antigen Retrieval, Basic anatomy of tissues, Microscopy and Fluorescence Primers, Image Processing and Ethics, Amplification Methods, Microwave Processing of Images for Co-Localization Analysis, Troubleshooting.

Early Bird Pricing for Short Course until February 21, 2011 (37% savings).

MORE INFORMATION: <http://immunohistochem.com/>

REGISTRATION is now OPEN at:

<http://www.regonline.com/Register/Checkin.aspx?EventID=902116>

PRELIMINARY SCHEDULE

Sunday, March 27, 2011

12 Noon-6:00 PM	Arrival at MBL
6:00-7:00 PM	Dinner with Faculty
7:00 PM	Optional Tutorial: Primer on Microscopy
8:00 PM	Tutorial: Anatomy of Tissue used in Course

Monday, March 28

7:00-7:45 AM	Breakfast at MBL
7:45 AM	Welcome
8:00-8:15AM	Lab Safety
8:15-9:30AM	LAB Groups A & B: <i>Chromogen module</i> LAB Groups C & D <i>Fluorescence module</i>
9:45-10:30AM	LECTURE: <i>Introduction to Immunohistochemistry</i>
10:30-10:45 AM	LECTURE: <i>Lab flow – imaging sessions</i>
10:45-11:45AM	LAB SESSIONS: A & B <i>Continue Chromogen</i> Groups C & D <i>Continue Fluorescence Module</i>
12:00-100PM	LUNCH at MBL

1:00-1:30PM	LAB SESSIONS: Continue Chromogen & Fluorescence work
1:30-2:00PM	LECTURE: Fixation
2:00-2:30PM	LECTURE Controls
2:30-3:00PM	LECTURE: Microwave Processing for IHC
3:00-5:45PM	LAB SESSIONS: Groups A & B Complete Chromogen Groups C & D Microwave Module
6:00 PM	DINNER at MBL
7:00 PM	Optional Tutorial: Essentials of Fluorescence Microscopy
7:00 PM	Labs open to students – Microscopy and Imaging Sessions

Tuesday, March 29

7:00-8:00AM	BREAKFAST at MBL
8:00-9:30AM	LAB Groups C & D: Chromogen module (reverse of Monday) LAB Groups A & B Fluorescence module
9:45-10:15AM	LECTURE: Amplification Strategies
10:15-10:45AM	LECTURE: Antigen Retrieval
10:45AM-Noon	LAB SESSIONS: Continue Chromogen & Fluorescence Modules
12:00-1:00PM	LUNCH at MBL
1:30 PM	Optional TUTORIAL: Co-localization analysis/cases
2:00-2:30PM	LECTURE: Antibody Basics
3:00-5:30 PM	LAB Groups A & B: Microwave Module LAB Groups C& D: Finish Chromogen module
6:00-7:00PM	DINNER at MBL
7:00PM	Tutorial: Tyramide Amplification Labs open to students –Microscopy and Imaging sessions

Wednesday, March 30

7:00-8:00AM	BREAKFAST at MBL
8:00-8:40AM	LECTURE: Image Management and Ethics
9:00AM	Student presentations/discussions/Troubleshooting
1:00PM	Depart MBL (Annual HCS Meeting begins and ends on Friday evening)

VISIT SLIDESHOW

You may view a slide show from the 2010 HCS Short Course on Immunohistochemistry and Microscopy at Woods Hole:

<http://immunohistochem.com/2011/01/04/slideshow-from-2010-course/>

Mark A. Smith, Ph.D., 1965-2010.



Mark A. Smith, a renowned Alzheimer's disease researcher and long-time member of HCS died early December 19th after being struck by a car in Bainbridge Township, Ohio.

Case Western Reserve President Barbara R. Snyder said. "His death is a tragedy for his field, for Case Western Reserve and most of all for his family."

Professor Smith earned his undergraduate and doctorate degrees in England and then spent two years as a research fellow in Austria. He joined Case Western Reserve in 1992, launching an academic career that quickly drew attention and accolades. His work focused on understanding how and why neurons cease to function in cases of neurodegenerative diseases. He published more than 800 peer-reviewed articles, and his work was cited more than 21,000 times. In 2007, he was named as the 21st most-cited author (of 3,170) in the fields of neuroscience and behavior over the previous ten years.

Early in his career Professor Smith twice won the Ruth Salta Junior Investigator Achievement Award from the American Health Assistance Foundation, becoming the first individual ever to receive the honor more than once. He went on to receive several other honors from organizations focused on aging neurochemistry and Alzheimer's disease. This year he won the 2011 American Society for Investigative Pathology Outstanding Investigator Award, which honors mid-career investigators who have demonstrated excellence in research in experimental pathology. He also received the 2011 Goudie Lecture and Medal, presented to a distinguished active scientist who is making seminal contributions to pathological science and the understanding of disease mechanisms.

Along with international recognition, Professor Smith also earned multiple campus awards for teaching and mentoring. In 2009, he received the J. Bruce Jackson, M.D., Award for Excellence in Undergraduate Mentoring, one of the highest University honors given to a member of the faculty. Professor Smith is survived by his wife, Gemma Casadesus, an assistant professor of neurosciences, and his sons, Luke and William

Free Imaging Forum

Some of you may know Jerry Sedgewick, author of "Scientific Imaging with Photoshop." He was a faculty member at last year's Short Course and he will be teaching two sessions at this year's course. He is an expert on best management of images for scientific publications. He is a primary advocate for ethical representation of digital images in scientific works.

HCS hosted a tutorial at the ASCB 2010 Annual Meeting which Jerry taught on imaging ethics. We expected maybe 25-30 people and had over 60, some standing for the entire hour.

Jerry is now hosting a free forum on scientific imaging and image analysis. It is not a listserv, but a web forum to give users the option of uploading images for evaluation. His forum will be worth frequent visits.

Visit: <http://www.imagingandanalysis.com/instruction.html>

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