



New Trends in Microscopy & Immunohistochemistry

61st Annual Meeting
The Histochemical Society

AND

HCS Annual Course in
Immunohistochemistry



March 21-23, 2010

March 23-26, 2010

The Marine Biological Laboratory, Woods Hole MA

Image courtesy, Mezaki et al., JHC DOI: 10.1369/jhc.2009.953208

3D Imaging Technologies: Bridging the Gap Between Light and Electron Microscopies

Focus on breakthroughs in new 3D imaging technologies and the tools (i.e. reagents as well as preservation and instrumentation methodologies for subcellular and molecular level studies) required to achieve their full potential and advance cell biological and biomedical research.

Organized by
Eduardo Rosa-Molinar, Ph.D., Univ of Puerto Rico.
Mark A. Sanders, Ph.D., Univ of Minnesota.

Imaging Modalities & Techniques - Meeting Topics:

- ◆ Confocal and Interference Microscopies
- ◆ Non-Linear Microscopies
- ◆ Transmission Electron Microscopy
- ◆ Scanning Electron Microscopies

See reverse side for scientific program

Sessions include invited speakers and those chosen from submitted abstracts. Abstracts for posters related to the general theme of the meeting or general topics of histochemistry and cytochemistry are welcome.

- ◆ Annual meeting registration fee includes three nights accommodations, meals, refreshment breaks and banquet.
- ◆ One day registration is available.
- ◆ Travel and achievement awards available.

Abstract Deadline: January 22, 2010

Early Registration Deadline: February 26, 2010

For information about meeting and course, please visit website or contact:

William L. Stahl, wlstahl@u.washington.edu

Meg McGough,

mmcgough@histochemicalsociety.org

Awards Deadline: January 8, 2010

For award information, please visit website or contact:

Tanda Jaipean,

tjaipean@histochemicalsociety.org

Immunohistochemistry & Microscopy: A Hands-on Short Course

An integrated, intensive short course which emphasizes basic understanding of the principles and methods and offers practical information on using IHC in the laboratory. Course intended for researchers working in basic research laboratories looking to expand their techniques and knowledge of IHC.

Organized by
William L. Stahl, Ph.D., Univ of Washington.
Eduardo Rosa-Molinar, Ph.D., Univ of Puerto Rico.
Denis G. Baskin, Ph.D., VA Puget Sound Med. Ctr.
and Univ of Washington.

Course Topics

- ◆ Acquiring and validating image authenticity
- ◆ Amplification methods
- ◆ Controls
- ◆ Double labeling and co-localization strategies
- ◆ Visualization techniques by light and fluorescent microscopy
- ◆ Overview of electron microscopy IHC
- ◆ Antigen retrieval
- ◆ Troubleshooting

Laboratory Topics

- ◆ Labeling
- ◆ Antigen retrieval
- ◆ Direct & indirect staining
- ◆ Visualization techniques

See reverse side for course program

- ◆ Short Course registration fee includes three nights accommodations, meals and refreshments.
- ◆ One full registration scholarship available from HCS



New Trends In Microscopy & Immunohistochemistry

61st Annual Meeting of The Histochemical Society and HCS Annual Short Course



Annual Meeting Preliminary Program

SUNDAY, MARCH 21

Registration, Opening Ceremony, Dinner

Journal of Histochemistry and Cytochemistry Plenary lecture:

Live cell imaging of insulin secretion mechanisms.

David Piston, Vanderbilt Univ.

MONDAY, MARCH 22

AM: Imaging Modalities & Techniques (IMT) 1: Confocal & Interference Microscopies

Advances in sample preparation and imaging methods for relational 3D confocal and electron optics. **Mark A. Sanders, Univ of Minnesota.**

Hyperspectral pathology: New opportunities for tissue analysis from the convergence of optics and chemistry. **Brian Wilson, Univ of Toronto.**

Optics and applications in fluorescence and related microscopies. **Michael Stanley, Chroma Technologies Corp.**

PM: IMT 2: Non-Linear Microscopies

Multimodal nonlinear optical microscopy for biological and biomedical applications. **Eric O. Potma, Univ of California-Irvine.**

Thin-sheet laser imaging and 3D reconstruction of the inner ear in the mouse and zebrafish. **Peter A. Santi, Univ of Minnesota.**

Imaging Beyond the Diffraction Limit. **Stephen T. Ross,**

Nikon USA Inc

Poster Session

Evening Lecture: Tailoring Fluorescent Dyes for Imaging.

Luke Lavis, HHMI Janelia Farms.

TUESDAY, MARCH 23

AM: IMT 3: Transmission Electron Microscopies

Electron tomography of frozen-hydrated cells and tissue: FIB-milling of specimens for cryo-TEM imaging. **Carmen Manella, Wadsworth Center.**

Freeze-fracture replica immunogold labeling (FRIL): Beauty AND brains. **John E. Rash, Colorado State Univ.**

3D Imaging: Bridging the gap between light microscopy and electron microscopy. **Wim F. Voorhout, FEI Company, The Netherlands.**

PM: IMT 4: Scanning Electron Microscopies

Advances in serial block-face scanning electron microscopy for the 3D reconstruction of a spinal neural circuit. **Eduardo Rosa-Molinar, Univ of Puerto Rico-Rio Piedras.**

Not just for TEM: High-Resolution SEM Gold Labeling. **Rick Powell, Nanoprobes Inc.**

Introduction to atmospheric scanning electron microscopy: Correlative microscopy applications. **Donna Guarrera, JEOL USA Inc.**

HCS/JHC Business Meeting/JHC Editorial Board Meeting/Outstanding Young Investigator Presentation/Presentation of Awards. Banquet

Evening Lecture: Nanoparticle labels for co-localization at high spatial resolution. **Ralph Albrecht, Univ of Wisconsin.**

Short Course Preliminary Program

Scholarships and travel awards are offered by The Histochemical Society.

TUESDAY, MARCH 23

Registration, Dinner (Registration: includes meals, refreshments, banquet and accommodations).

Orientation session. **William L. Stahl, Univ of Washington.**

WEDNESDAY, MARCH 24

Introduction to immunohistochemistry. **Charles W. Frevert, Univ of Washington.**

Laboratory session.

Antibodies I - general principles. **Hinke A. B. Multhaupt, Univ of Copenhagen.**

Antigen retrieval. **Allen Gown, PhenoPath Laboratories.**

Laboratory session.

Controls and fixation. **Denis G. Baskin, VA Puget Sound Med. Ctr. and Univ of Washington.**

Double labeling/localization techniques. **Gloria Hoffman, Morgan State Univ.**

Open Laboratory (Antigen retrieval demonstration).

Optimization of workflow and throughput in a modern histology core environment. **Hermann Ulbrich, Leica Systems.**

THURSDAY, MARCH 25

Laboratory session.

Antibodies II - testing/troubleshooting. **Hinke A.B. Multhaupt, Univ of Copenhagen.**

Principles of fluorescence microscopy. **Margarida Barroso, Albany Medical College.**

Principles of electron microscopic immunohistochemistry.

Antonio Nanci, Univ of Montreal.

Laboratory session.

Amplification methods. **Kevin A. Roth, Univ of Alabama.**

Laboratory session.

Molecular labeling technologies for fluorescence microscopy.

Iain Johnson, Invitrogen/Molecular Probes.

Open Laboratory session.

FRIDAY, MARCH 26

Authentication of images. **Eduardo Rosa-Molinar, Univ of Puerto Rico.**

Workshop wrap-up: Questions, reports, troubleshooting.



The Eyes of Science

