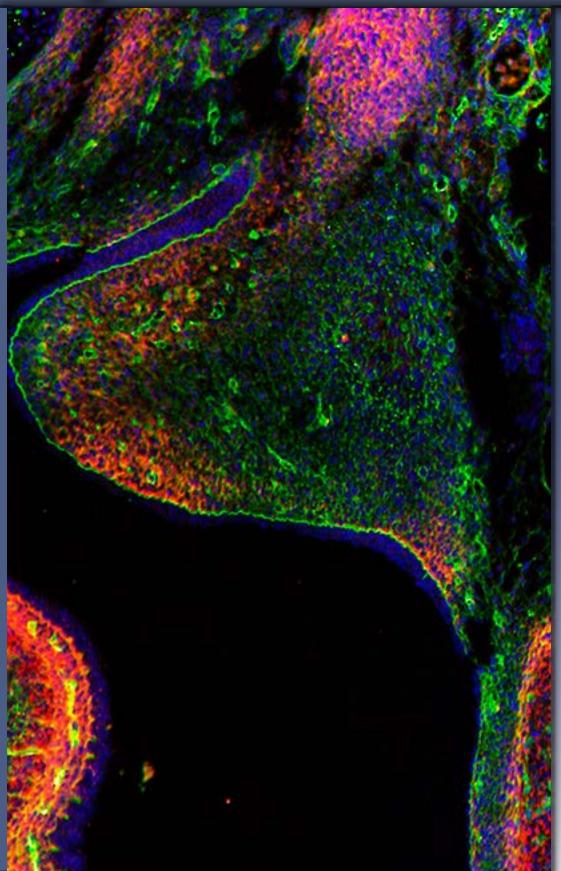


The Histochemical Society NEWSLETTER

Autumn 2013 Vol. 26 No. 3



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Courtesy of *Kyoko Oka, et. al.*JHC 60:57-68, 2012
Roles of Collagen and Periostin
Expression by Cranial Neural Crest
Cells during Soft Palate Development

A Letter to HCS Members....



Dear HCS Member.

Histochemistry 2014 (HCS 2014) is The Histochemical Society's 65th annual meeting, which will be held in San Diego, California at the San Diego Convention Center in association with Experimental Biology 2014, April 26-30, 2014. For EB2014, we are pleased to be a guest society of the American Society for Investigative Pathology (ASIP) again this year. It is my hope that you will decide to attend EB2014 in San Diego and more importantly set aside April 27 as the date to attend all the scientific sessions and social events planned for HCS 2014.

To highlight the strengths of our society, the HCS Program Committee has put together a terrific line up of speakers for the scientific symposia for HCS 2014. The symposia start off on the morning of April 27 with the session entitled, "Advanced Imaging Techniques and Systems for Live Cell Microscopy". Following this symposium, Dorit Hanein, Ph.D., of the Sanford-Burnham Medical Research Institute in La Jolla, California has been invited

to give the JHC Lecture, "Structural Mapping of Force Transmission during Directed Cell Migration; Imaging One Cell at a Time". The afternoon symposium entitled "Unlocking New Tools for Experimental Pathology: Advances in Immunohistochemistry and In Situ Hybridization" will be a perfect way to round out the scientific symposia planned for HCS 2014. Further details about the HCS/ASIP symposia are found in this newsletter.

On the evening of April 27, HCS will host our annual Awards Presentation and Business Meeting. The Awards Presentation and Business Meeting is the HCS 2014 event that will allow members to meet up with old friends and meet new aspiring histochemists. Join us for our own poster session where histochemistry is highlighted and young histochemists compete for HCS awards. One of the benefits of HCS membership is access to a number of travel awards for young histochemists from laboratories where their mentor is member of our society. The Business meeting is important as it allows members to be brought up to date on the state of the Society but mostly the evening will be a time to enjoy refreshments and spend time with friends.

In addition to HCS 2014/EB2014, we are working with ASIP to develop an Immunohistochemistry and Microscopy (IHCM) Scientific Interest Group (SIG) that will be a resource for HCS and ASIP members. I view the IHCM SIG as a way to highlight the strengths of our society and journal. Additional information about the ICHM SIG will be made available in our next newsletter. If you are interested in helping with the development of the HCS/ASIP IHCM SIG please contact the HCS office or feel free to contact me directly.

While at Experimental Biology, stop by the HCS and JHC booth in the Exhibition Hall. This is a great place to check in and see what's new with the Journal and get questions answered about your membership and HCS. Experimental Biology and San Diego has many more reasons for you to plan on attending HCS 2014 including 6 other society's meetings, over 400 exhibitors, 3 days of poster sessions and the FASEB/MARC Career Center. We look forward to seeing you in April of 2014.

Chuck Frevert President, HCS

For information about The Society, meetings, awards and related matters go to:

www. histochemicalsociety.org

HISTOCHEMISTRY 2014

The Histochemical Society Annual Meeting

April 26 - 30, 2014

San Diego, California

Meeting as a guest society of the American Society for Investigative Pathology at Experimental Biology 2014

The Histochemical Society Preliminary Scientific Program April 27, 2014 San Diego Convention Center

8:30 -10:30 AM

ADVANCED IMAGING TECHNIQUES AND SYSTEMS FOR LIVE CELL MICROSCOPY SYMPOSIUM Chaired by: Eduardo Rosa-Molinar and Paul Goodwin

Visualizing Gold Nanoparticle Uptake in Live Cells with Liquid Scanning Transmission Electron Niels de Jonge, Ph.D., ELM Leibniz-Institute for New Materials, Saarbruecken, Germany

Sharper and Faster: New 4D Imaging Technologies for Use in Biology Hari Shroff, Ph.D., NIBIB, NIH

Advances in High-Resolution Imaging of Complex Biological Systems

Scott Fraser, Ph.D., University of Southern California, Los Angeles, California

10:30 to 11:30 AM

JOURNAL OF HISTOCHEMISTRY & CYTOCHEMISTRY PLENARY LECTURE Chaired by John Couchman

Structural Mapping of Force Transmission during Directed Cell Migration; Imaging One Cell at a Time Dorit Hanein, Ph.D., Sanford-Burnham Medical Research Institute, La Jolla, California For more information about Dr. Hanein's research please view the Youtube video at: http://www.youtube.com/watch?v=ZBkaoE6CrpA

2:00 to 5:00 PM

UNLOCKING NEW TOOLS FOR EXPERIMENTAL PATHOLOGY:
ADVANCES IN IMMUNOHISTOCHEMISTRY AND IN SITU HYBRIDIZATION
Chaired by: Charles Frevert and Stephen Hewitt

Exploration of the Human Proteome Using Antibody-Based Proteomics - Updates on the Human Protein Atlas

Fredrik Ponten, Ph.D., Uppsala University, Uppsala, Sweden

Unlocking the Relationships Between Genes, the Brain, Behavior and Disease: Updates from the Allen Institute of Brain Science

Amy Bernard, Ph.D., Allen Brain Institute, Seattle, Washington

Synapse Discrimination and Classification by Array Tomography: The Synaptome meets the Connectome

Stephen J. Smith, Ph.D., Stanford University, Stanford, California

Highly Multiplexed Immunohistochemistry on Individual Cells in Tissues: The Example of Hodgkin Lymphoma

Lawrence M. Weiss, M.D., F.C.A.P., Clarient Diagnostic Services, Inc., Aliso Viejo, CA

The Histochemical Society Awards Presentation and Business Meeting

April 27, 2014 Location to be announced

6:00 - 8:00 PM

Chaired by Charles Frevert and William L. Stahl

The Histochemical Society invites all members and their guests to join us at our annual social event. HCS officers will update us on the health of the Society and its ongoing initiatives. There will be an update on the JHC from Editor-in-Chief, John Couchman. We will hold our annual HCS student poster session and celebrate all HCS meritorious awardees. Refreshments will be served and there will be ample time to catch up with colleagues and friends. **Save the Date!**

Deadlines

Abstract Submission November 8, 2013

Award Application Submission November 8, 2013

Early Registration February 21, 2014

Housing March 24, 2014

Awards Available for the HCS Annual Meeting

HCS New Investigator Award

The Histochemical Society (HCS) New Investigator Award is presented at the annual Experimental Biology (EB) meeting to a promising early career investigator who demonstrates scientific excellence through the utilization of histochemical, immunohistochemical, and imaging techniques. Ideally, the candidate will have applied these techniques to making a significant scientific advance in understanding the biochemical and molecular regulation of cell function. Candidates must be nominated by a member of the HCS, but membership is not a requirement for eligibility for the award. The Awardee will receive complimentary registration at the Experimental Biology Meeting and is expected to present a poster at the meeting. **The award consists of a \$2000 honorarium and plaque**, which are presented at the HCS Business meeting held during the EB meeting.

The recipient of this award must register for EB2014 and attend the HCS Business Meeting and Awards Presentation at EB2014 on Sunday, April 27, 2014. Awardees are expected to submit a review article based on the area of their research for publication in the *Journal of Histochemistry & Cytochemistry*. Awardees will also receive a complimentary one-year membership in The Histochemical Society.

Eligibility:

Candidates must:

- 1) Be within 10 years of their M.D., Ph.D., or equivalent degree.
- 2) Be nominated by an HCS Member (but HCS membership is not required).
- 3) Submit a nomination letter and two additional letters of recommendation.
- 4) Submit a one-page summary of their research accomplishments and a complete CV.
- 5) By November 8, 2013 submit an abstract on the *EB2014 Website*. The abstract must be presented at the meeting by the award applicant.

The nomination package must be submitted to the HCS Awards and Membership Committee at **mail@histochemicalsociety.org** by November 8, 2013. The Committee will determine if a meritorious candidate exists amongst the candidate pool, and if so a winner will be notified and announced prior to the Annual Meeting.





Ralph D. Lillie Award

Abstracts submitted by students and postdoctoral trainees for the HCS Annual Meeting that are judged superior by The HCS Awards and Membership Committee will be **awarded up to \$750 for travel expenses**. Recipients of this award must register for and attend EB2014, and present their poster at the HCS Business Meeting and Awards Presentation at EB2014 on Sunday, April 27, 2014.

Eligibility:

Candidates must:

- 1.) Be an HCS member
- 2.) By November 8, 2013 submit an abstract on the *EB2014 Website*.

The abstract must be presented by the award applicant.

3.) By November 8, 2013, submit an application **j** for the Ralph D. Lillie Award to The Histochemical Society Awards and Membership Committee at **mail@histochemicalsociety.org**.

The application form may be retrieved at: http://tinyurl.com/l4ge95j

Awards Available for the HCS Annual Meeting cont.

Research Scientist Travel Awards

Up to three (3) travel awards of \$750 will be given to early career scientists (academic, industrial, or government scientists) who submit an abstract for presentation at the HCS Annual Meeting at EB2014. , 2014. Awardees will also receive a complimentary one-year membership in The Histochemical Society.

Scientists who utilize histochemistry or molecular imaging techniques for cells and tissues in their research, and/or who have begun to work in fields relevant to the mission of the HCS are encouraged to apply. Applicants need not be members of HCS.

Recipients of this award must register for and attend EB2014, and present their poster at the HCS Business Meeting and Awards Presentation at EB2014 on Sunday, April 27, 2014.

Eligibility:

Candidates must:

1.) By November 8, 2013 submit an abstract on the *EB2014 website*.

The abstract must be presented by the award applicant.

2.) By November 8, 2013, submit an application at for the Research Scientist Travel Award to the HCS Awards and Membership Committee at mail@histochemicalsociety.org.

The application form may be retrieved at: http://tinyurl.com/l4ge95j

Annual Meeting awards will be presented at the HCS Business Meeting and Awards Presentation at EB2014 in San Diego on Sunday, April 27, 2014.





The Histochemical Society Sponsored Trainee Travel Award

To promote the entry of young scientists who use histochemical techniques into the mainstream of the basic science community and to encourage the participation of young investigative pathologists in the Annual Meeting, The HCS is offering a **limited number of Trainee Travel Awards of \$750 each** to offset travel expenses for trainee members of the HCS and/or ASIP to attend the EB Meeting. The ASIP Program Committee will select the recipients based on the scientific abstracts, which must include data based on the use of histochemical and/or immunohistochemical techniques. Abstracts will be selected for presentation in either poster sessions or in mini-symposia. These abstracts MUST be submitted to ASIP topic categories.

Recipients of this award must register for and attend EB2014, and present their posters at the HCS Business Meeting and Awards Presentation at EB2014 on Sunday, April 27, 2014.

Eligibility:

Candidates must:

- 1.) By November 8, 2013, submit an abstract on the *EB2014 website*.
- 2.) The abstract must be submitted to an ASIP Topic Category
- 3.) The abstract must include data based on the use of histochemical techniques.
- 4.) The candidate must be the presenting author.

Deadline: Applications and supporting materials for the ASIP 2014 Annual Meeting must be submitted online no later than November 8, 2013.

Please visit the *ASIP Awards Page* for submission information.

Awards Available for the HCS Annual Meeting cont.

Travel Awards for Students and Postdoctoral Trainees

Travel awards of up to \$750 will be given to students and postdoctoral trainees that are working either toward a masters/doctoral degree or are in post-doctoral fellowships (Ph.D. and M.D.). These awards are intended to support travel to EB-2014.

To receive this award for travel to EB2014, awardees must register EB2014 and present their posters at the HCS Business Meeting and Awards Presentation at EB2014 on Sunday, April 27, 2014.

Eligibility:

Candidates must:

- 1.) Be an HCS member
- 2.) By November 8, 2013, submit an abstract on the *EB2014 Website*. The abstract must be presented at the meeting by the award applicant.
- 3.) By November 8, 2013, **submit an application** for the Student/Postdoctoral Trainee Award to the HCS Awards and Membership Committee at **mail@histochemicalsociety.org**.

The application may be retrieved at: http://tinyurl.com/l4ge95j

Awardees will be notified prior to attending the meeting.

Annual Meeting awards will be presented at the HCS Business Meeting and Awards Presentation at EB2014 on Sunday, April 27, 2014.



Vector Laboratories Young Investigator Award



To be eligible for this award applicants should be either junior faculty members or postdoctoral trainees (Ph.D. and M.D.) that are within three years of their thesisearned doctorate at the time of the HCS Annual Meeting. Applicants must be the sole or senior author of an abstract accepted for presentation at the HCS Annual Meeting. Membership in the HCS is required.

This award consists of a certificate and a \$500 cash prize to defray travel expenses to the HCS Annual Meeting at EB2014. Recipients of this award must register for and attend EB2014, and present their poster at the HCS Business Meeting

and Awards Presentation at EB2014 on Sunday, April 27, 2014.

Eligibility:

Applicants must:

- 1.) Be an HCS member
- 2.) By November 8, 2013 submit an abstract on the *EB2014 Website*. The abstract must be presented by the award applicant.
- 3.) By November 8, 2013, submit an application for the Vector Award to the HCS Awards and Membership Committee at **mail@histochemicalsociety.org**.

The application may be retrieved at: http://tinyurl.com/l4ge95j

Awards Available for the HCS Annual Meeting cont.

The Anna-Mary Carpenter-Ellen M. Rasch Award

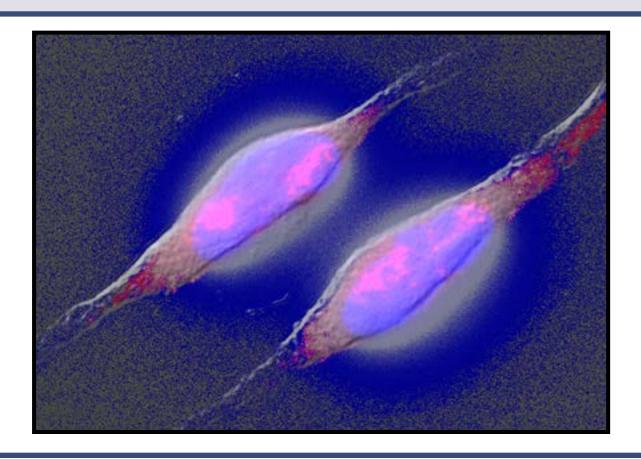
This award recognizes the outstanding efforts and contributions by Drs. Anna-Mary Carpenter and Ellen M. Rasch, and to recognize individuals who have made outstanding contributions and service to the Society.

Nominations must include a curriculum vitae or biographical sketch of the nominee, and a nominating letter describing the contributions or service of the nominee in the field of histochemistry and cytochemistry and/or the Society.

For further details go to the HCS website: http://histochemicalsociety.org/Awards.aspx.

Seeking Videos

We will be adding videos to the HCS webpage in the coming months. If you have either a video or internet link to videos related to your research, published articles, activities in your lab or other topics interest to our members please contact Bill Stahl at *mail@histochemi-calsociety.org*.



Immunohistochemistry and Microscopy (IHCM)

Directors: Eduardo Rosa-Molinar and Charles W. Frevert

Course Date: March 15-20, 2014

Online Application Form, Deadline: January 14, 2014

IHCM Website: http://hermes.mbl.edu/education/courses/special_topics/ihcm.html

<u>Course Outline:</u> The Immunohistochemistry and Microscopy (IHCM) course is four full days and evenings (11 hours daily) of lecture and laboratory sessions with experts in the field of immunohistochemistry (IHC) and microscopy. The IHCM course goal is to provide participants in-depth theory of and extensive hands-on experience with immunohistochemistry (IHC) techniques as well as theory and hands-on experience with a broad range of microscopic imaging techniques. The course emphasizes hands-on laboratory time and small breakout discussions with faculty and staff and is held at the Marine Biological Laboratory, Woods Hole, MA,

The laboratory demonstrations, exercises, discussions, and trouble-shooting sessions focus on:

- 1) Principles underlying the fixation of proteins in tissues. Because fixation and preparation of tissue prior to IHC constitutes one of the most important processes affecting the success of IHC studies, students will learn about and have multiple hands-on experiences with tissue preparation; they will also learn how to trouble shoot problems;
- **2) Antigen retrieval.** Students will learn about and discuss how the detection of many antigens can be significantly improved by antigen retrieval.
- **3) Controls.** Because IHC experiments must include positive and negative controls to support the validity of staining and identify experimental artifacts, students will learn about, discuss, and use controls that support the specificity of IHC results as well as the variances in antibody specificity and conditions that may generate inconsistent immune-staining and lead to inaccurate conclusions;
- **4) Strategies for detecting the presence of specific antigens in cells**. Students will learn about and use antibodies labeled with different fluorescent probes and analyze the results with epi-fluorescence or confocal microscopies; they will also use antibody dilution studies;
- **5) Technologies that automate immunohistochemistry.** To achieve a better understanding of when and how new technologies will benefit their research, students will be introduced to and use automated immunohistochemistry.
- **6)** Basic elements of light and fluorescence microscopies. To gain insight into how to choose the correct imaging platform for their samples, students will learn to use various imaging platforms, including bright-field, epi-fluorescence, wide-field deconvolution, and confocal microscopies. Using images collected in the course as well as previously acquired images, students will also learn about

Immunohistochemistry and Microscopy (IHCM) cont...

and discuss acceptable practice for image capture and management and appropriate use of Photoshop to develop figures for publication; and

7) Troubleshooting. How to troubleshoot problems with immunohistochemistry and images will be an integral part of the course; troubleshooting sessions will be held daily.

Who should attend?

This course is appropriate for undergraduate and graduate students, laboratory technicians, post-doctoral students, new and established faculty/clinicians seeking to expand their techniques and knowledge of IHC and microscopy. It is appropriate for beginning scientists and those with more advanced skills. Participants will be grouped appropriately. Registration is limited to thirty.

Support is provided by:

Applied Precision, A GE Healthcare company
Bitplane/Andor Technology
Carl Zeiss Microlmaging, LLC
The Histochemical Society (course founder)
Journal of Histochemistry & Cytochemisty
Leica Biosystems
SPOT Imaging Solutions, a division of Diagnostic Instruments, Inc.

REGISTRATION and AWARDS FOR THE COURSE

REGISTRATION DEADLINE at the Marine Biological Laboratory

By January 14, 2014, submit an application to attend the course at: http://hermes.mbl.edu/education/courses/special topics/ihcm.html

AWARDS DEADLINE at The Histochemical Society

HCS Travel Awards are available for young histochemists in training, working either toward a masters/doctoral degree or are in post-doctoral fellowships, to attend the course.

Information on these awards can be found on the following pages and at: http://histochemicalsociety.org/Awards.aspx.

If you wish to apply for these awards you must **ALSO** submit your application to the MBL by January 14, 2014. Correspondence related to the course should be sent to: mail@histochemicalsociety.org

Award Available for Attending IHCM

FASEB MARC Awards

The FASEB MARC Awards are for supporting attendance at the Immunohistochemistry and Microscopy Course (IHCM) taught by HCS at the Marine Biological Laboratory.

The FASEB MARC Program will sponsor the HCS/FASEB MARC 2014 Travel Awards to help support the participation of faculty/mentors, postdoctoral fellows, and students from minority institutions and historically black colleges and universities in the United States. Faculty, students, and postdoctoral fellows of underrepresented groups from majority institutions are also eligible to apply for these travel awards.

The HCS/FASEB MARC travel awards will provide up to \$1,850 in funding for travel-related expenses and course registration to each award recipient (in the form of reimbursement after the meeting).

The application deadline for 2014 MARC Travel Awards is February 7, 2014.

Information on the award will be found on the FASEB MARC Awards Website.

IMPORTANT. The application deadline for attendance at the IHCM Course must first be made to the Marine Biological Laboratory by January 14, 2014.





HCS Travel Awards for Students and Postdoctoral Trainees

Travel awards of up to \$750 will be given to students and postdoctoral trainees that are working either toward a masters/doctoral degree or are in post-doctoral fellowships (Ph.D. and M.D.). These awards are intended to support travel to IHCM at the Marine Biological Laboratory in Woods Hole, MA (March 15-20, 2014).

Awardees who receive awards for IHCM must attend the course at the Marine Biological Laboratory in Woods Hole, MA, to be held March 15-20, 2014.

Eligibility:

- 1.) By January 14, 2014, submit an application to attend the course at: http://hermes.mbl.edu/education/courses/special topics/ihcm.html
- 2.) By January 14, 2014, submit an application form and a letter indicating how attendance at the IHCM Course will enhance career development. Correspondence related to the course should be sent to: mail@ histochemicalsociety.org.

The application form may be downloaded at: http://tinyurl.com/l4ge95j

Awardees will be notified prior to attending the course.

IHCM Course awards will be presented at MBL after completion of the course.

Award Available for Attending IHCM cont...

Research Scientist Travel Awards

Up to three (3) travel awards of \$750 will be given to early career scientists (academic, industrial, or government scientists) who are accepted for attendance at the HCS Immunohistochemistry and Microscopy (IHCM) course at the Marine Biological Laboratory in Woods Hole, MA, March 15-20, 2014. Awardees will also receive a complimentary one-year membership in The Histochemical Society.

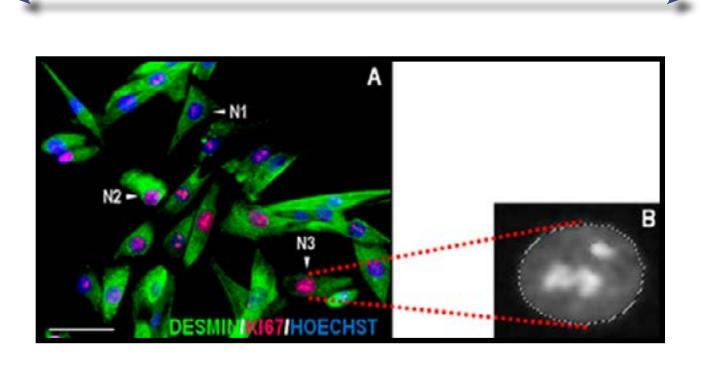
Scientists who utilize histochemistry or molecular imaging techniques for cells and tissues in their research, and/or who have begun to work in fields relevant to the mission of the HCS are encouraged to apply. Applicants need not be members of HCS.

Awardees who receive awards for IHCM must attend the course at the Marine Biological Laboratory in Woods Hole, MA, to be held March 15-20, 2014.

Eligibility:

- 1.) By January 14, 2014, submit an application to attend the IHCM Course: http://hermes.mbl.edu/education/courses/special topics/ihcm.html
- 2.) Submit a letter indicating how attendance at the IHCM Course will enhance career development.

Awardees will be notified prior to attending the meeting or course. IHCM Course awards will be presented at MBL after completion of the course.



HCS Committees 2013-2014

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