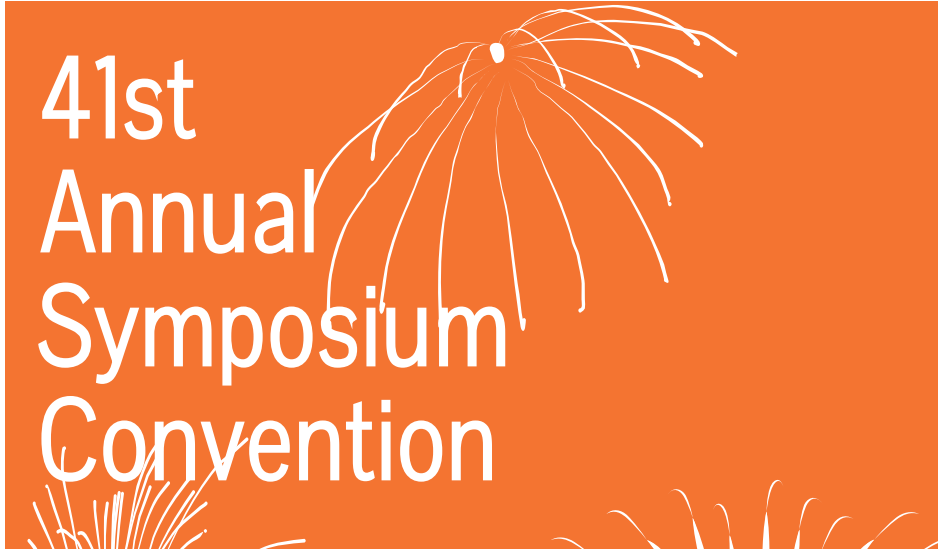


WDC



**41st
Annual
Symposium
Convention**



**AUG
28TH
THRU
SEPT
2ND**

2015



nsh

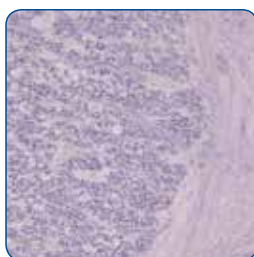
Washington, DC

REGISTRATION BROCHURE



Histology Solutions Since 1961

- Dedicated technical support staff to help you meet your goals
- High quality reagents, stains and media manufactured in the USA
- Private label manufacturing capabilities (call 1-800-523-2575 to discuss)



Staining Solution to Demonstrate Myelin

Luxol Fast Blue, Ready to Use - Cat. #24611

Demonstrates myelin and also differentiates between the white and gray matter of the brain.

Results: Myelin, including phospholipids appear blue while the gray and demyelinated white matter appear colorless.

Learn more about our Neurological Stains

Visit Booth 724/726

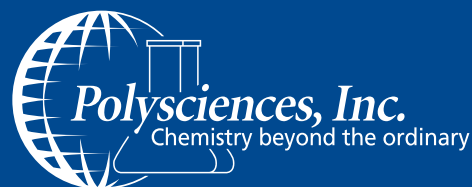


www.polysciences.com/lifesciences

Polysciences, Inc.
400 Valley Road
Warrington, PA 18976
1 (800) 523-2575
(215) 343-6484

Polysciences, Europe GmbH
Handelsstrasse 3
D-69214 Eppelheim, Germany
(49) 6221-765767

Polysciences Asia Pacific, Inc.
2F-1, 207 DunHua North Road
Taipei, Taiwan 10595
(886) 2 8712 0600



2015 NSH Annual Symposium/Convention: Washington, DC



In its 41st year the NSH Annual Symposium/Convention forms the largest educational event of its kind working to advance and promote the histology profession. NSH is the premier source of learning, knowledge and future-oriented research for histology

professionals. Attendance provides resources, education, ideas and advocacy to enhance the performance in the laboratory and ultimately the best patient care.

The Symposium/Convention has the working laboratory in mind when planning 5 educational packed days of workshops. With so much to offer, you are able to have a flexible, customizable schedule. You can attend one workshop, 12 workshops or even the exhibit hall only. Customize a schedule that fits your time out of the lab and meets your educational and budget needs at the same time. This year we are excited to introduce our 60 minute troubleshooting workshops along with our 90 minute & 3 hour sessions. With over 125 unique learning opportunities, we are confident that you will find the format that is right for you.

When

Symposium Dates: August 28 – September 2, 2015

Scientific Exhibits: August 30 – September 1, 2015

Where

Sessions & Scientific Exhibits will take place in the Prince George's Exhibit Hall AB of the Gaylord Convention Center, 201 Waterfront Street, National Harbor, Maryland 20745. NSH has reserved rooms at the Gaylord Resort. Refer to pg. 61 for hotel information.

Who Should Attend

- Lab Supervisors/Managers
- Histotechs/Cytotechs in Clinical, Veterinary and Research Settings
- Students interested in a Histology Career
- Histology/Histotechnology Teachers
- Pathologists and Pathology Assistants
- Anyone involved in the collection, processing and evaluation of tissue samples

TABLE OF CONTENTS

Schedule at a Glance	4
Exhibits Preview	6
Social Connections	7
Awards Ceremony & Celebration	8
Contests	9
Poster Sessions	10
Stuff Your Suitcase	11
Certificate of Completion	12
Program at a Glance	13
Career Development Workshops	20
Digital Pathology Workshops	22
Leadership Workshops	25
Immunohistochemistry Workshops	30
Molecular Workshops	38
Regulations Workshops	44
Safety Workshops	47
Specialties Workshops	50
Techniques & Fundamentals Workshops	54
Live Webinars – Distance Learning	60
Housing & Travel Information	61
Registration Policies	63
Registration Form	65

SCHEDULE AT A GLANCE

Friday, August 28, 2015

- 11:00am - 7:00pm Registration Opens
- 5:00pm - 6:30pm Region Director/President's Council
- 7:00pm - 9:00pm First Time Attendee Welcome Reception

Saturday, August 29, 2015

- 7:00am - 5:00pm Registration
- 7:00am - 8:00am Continental Breakfast Available
- 8:00am - 11:30am Workshops
- 11:30am - 1:00pm Lunch on Your Own
- 11:35am - 12:35pm Committee Meetings
 - Membership Committee
 - Education/CEU/Instructors Committees
- 1:00pm - 2:30pm Workshops
- 3:00pm - 4:30pm Workshops
- 6:00pm - 7:00pm Awards Celebration Cocktail Hour - Sponsored by Sakura Finetek, USA
- 7:00pm - 11:30pm The Annual NSH Awards Ceremony & Celebration

Sunday, August 30, 2015

- 7:00am - 5:00pm Registration
- 7:00am - 8:00am Continental Breakfast Available
- 8:00am - 9:30am Workshops
- 9:45am - 10:45am Keynote Lecture: Open to All Attendees
- 10:45am - 4:30pm Exhibits Open for Attendees
- 10:45am - 12:15pm Poster Sessions - Visit to vote for your favorite Poster!
- 11:30am - 12:30pm Committee Meetings
 - Hard Tissue Committee
- 1:00pm - 4:30pm Workshops
- 4:35pm - 5:30pm NSH Region Meetings (1-9)
- 4:35pm - 5:30pm International Attendee Meeting
- 5:35pm - 6:30pm Committee Meetings
 - Budget & Finance Committee
 - Quality Management Committee
 - Legislative Committee



Monday, August 31, 2015

- 7:00am - 5:00pm Registration
- 7:00am - 8:00am Continental Breakfast Available
- 8:00am - 4:00pm Board of Directors Meeting
- 8:00am - 9:30am Workshops
- 9:45am - 10:45am C.F.A. Culling Memorial Lecture - Open to All Attendees
- 10:45am - 1:30pm Exhibits Open for Attendees
- 11:30am - 12:30pm Committee Meetings
 - Immunohistochemistry Committee
- 1:00pm - 2:30pm Workshops
- 3:00pm - 4:00pm Workshops
- 4:00pm - 5:30pm Exhibits Open for Attendees
- 4:05pm - 5:00pm Committee Meetings
 - Journal of Histotechnology Editorial Board
 - Health & Safety Committee
- 5:00pm - 6:00pm Committee Meetings
 - Public Relations Committee

Tuesday, September 1, 2015

- 7:00am - 5:00pm Registration
- 7:00am - 8:00am Continental Breakfast Available
- 8:00am - 9:30am Workshops
- 9:00am - 1:00pm Last Day of Exhibits
- 9:30am - 12:30pm Ticket Auction in the Exhibit Hall
- 10:45am - 11:45am Committee Meetings
 - Veterinary/Research/Industry Committee
- 1:00pm - 4:30pm Workshops
- 4:45pm - 6:00pm NSH Membership Meeting
- 6:00pm - 7:00pm Committee Meetings
 - Bylaws Committee
 - Nominations & Elections Committee

Wednesday, September 2, 2015

- 7:00am - 2:30pm Registration
- 7:00am - 8:00am Continental Breakfast Available
- 8:00am - 11:30am Workshops
- 1:00pm - 2:30pm Workshops
- 6:00pm Sign In for House of Delegates
- 7:00pm House of Delegates Convenes



EXHIBIT HALL PREVIEW

Make sure to include the Exhibit Hall as part of your Convention experience! The Annual NSH Symposium/Convention is the largest exhibition dedicated to the field of histology. Don't miss this opportunity to preview laboratory equipment, supplies and services for your lab.

Companies currently registered for 2015:

American Society for Clinical Pathology	EMD Millipore	Polysciences, Inc.
Anatech Ltd.	Evergreen Scientific	Primera Technology
Aquaro Biosystems	Experimental Pathology Laboratories	Psyche Systems Corporation
Aureus Medical Group	General Data Healthcare	Rankin Biomedical Corporation
Avantik	Globe Scientific Inc.	Roche Diagnostics
Azer Scientific	IDEXX Laboratories	Rowley Biochemical Inc.
B/R Instrument Corporation	Jackson ImmunoResearch Laboratories, Inc.	Rushabh Instruments, LLC
BBC Biochemical	Lab Storage Systems Inc.	Sakura Finetek USA, Inc.
Biocare Medical	Label Arts	Scigen Inc.
BioGenex	LABLION - IBSG	ScyTek Laboratories, Inc.
Bradley Products, Inc.	Leica Biosystems	Simport Scientific
C. L. Sturkey, Inc.	Media Cybernetics	Source Medical products
Cancer Diagnostics, Inc.	Medical Chemical Corporation	Southeast Pathology Instrument Service, Inc
Cell Marque Corporation	MEDITE, Inc.	STAFF ICONS, LLC
CellPath Ltd	Mercedes Medical	Statlab Medical Products
College of American Pathologists	Milestone	TBJ Incorporated
Creative Waste Solutions, Inc.	MTS - Marston Technical Services	Tech One Biomedical Services, Inc.
Dako, an Agilent Technologies Company	Muto Pure Chemicals Co., Ltd	Ted Pella, Inc.
Dermatology Associates of WI/Forefront	NeuroScience Associates, Inc.	Thermo Scientific
Dermatology	Newcomer Supply	Vector Laboratories
Electron Microscopy Sciences	NovoPath, Inc	VWR International, LLC
	Poly Scientific R&D Corp	

Exhibit Hall Hours

Exhibits are located in the Convention Center and officially open on Sunday, August 30 from 10:45 am to 4:30 pm. Exhibit hours on Monday, August 31 are 10:45 am - 1:30 pm; 4:00pm – 5:30pm and Tuesday, September 1 from 9:00 am to 1:00 pm.

Exhibit Hall Fun

The Exhibit Hall not only showcases the latest in histology equipment and supplies but also hosts several events at the Symposium/Convention. Starting Sunday the Scientific Poster Session begins – attendees vote for their favorite poster. On Monday NSH will sponsor the Keynote Drawing for a lucky attendee to win their hotel stay to be funded by NSH. Then on Tuesday, the last day of exhibits, NSH will hold a Ticket Auction in the hall open to all attendees.

Exhibit Hall Only Passes

The trade show floor is open to qualified individuals in histology and pathology only. This ensures a high buyer/supplier ratio. Local technologists and pathologists unable to attend the meeting are welcome to visit the exhibits anytime during scheduled hours. Bring your business card or proof of employment to the NSH registration desk to obtain a complimentary exhibit hall only pass. Unqualified family members of registered attendees & booth attendants, who have not purchased a Guest Pass, are not permitted on the show floor. See registration policies on page 63 to review Guest Pass policies.

SOCIAL CONNECTIONS

“Pulling a good network together takes effort, sincerity and time.”

- Alan Collins, author of “Unwritten HR Rules”

Some of the best education comes from the relationships you form and the expansion of your histology network by attending social activities, committee meetings and participating in contests. The convention offers several chances to network with NSH Leaders, other histology professionals and exhibitors.

First Time Attendee Welcome Reception

Is this your first time attending the National Convention? Join us for a unique welcome to the NSH Community Friday, August 28 at 7:00pm. Hors d'oeuvres and beverages will be served. The event concludes with prize drawings.

The Annual NSH Awards Ceremony & Celebration

Kick off the 41st Symposium/Convention celebrating the stars of histology by attending the Annual NSH Awards Ceremony & Celebration, Saturday, August 29th. The NSH Awards committee works with vendor partners to handout out over \$40,000 in awards and scholarships. The evening includes a cocktail reception (sponsored by Sakura Finetek), Dinner & Dancing. Tickets are \$40.00 (nonrefundable). Dress is Semi Formal. See Page 8 for complete details.

Evening Hospitality

The Annual Scientific Exhibit Show is a large part of the S/C experience. Our vendor partners bring the best the industry has to offer during the day & sponsor great opportunities for fun at night. Keep your eyes open for invitations to industry parties, dinners and educational seminars.

Committee Fair & Meetings

NSH committees will be meeting throughout the week to discuss projects and plans for the coming year. In addition, committees have booths in the Exhibit Hall to display current resource products and to answer any questions you may have in their area of interest. Participating in committee meetings and visiting their booths in the exhibit hall is a great way for you to create a network of resources to take home with you.

Connect with NSH Online!

Stay up to date with what is happening around the convention and join discussions with other attendees using the official hashtag #NSHSC



Complete S/C Info – www.histoconvention.org



Like NSH on Facebook –
www.facebook.com/nshsc



Follow us on Instagram &
Twitter - @NS4Histotech



Find us on LinkedIn,
YouTube, & Flickr for more
discussions, videos and pictures of the society and
our members.



Symposium/ Convention Mobile App

Create your own personal schedule, access handouts, message other attendees, and see what is going on all week with our Convention Mobile App. This mobile app will help you plan your entire week at the Symposium/Convention, and is available for Android or iPhones, as well as a web version to use on your laptop or tablet. Keep an eye out for launch in June!



STARS & STRIPES

NSH Awards Ceremony & Celebration
Saturday, August 29, 2015

Join us as we kick off the 41st Annual Symposium/ Convention celebrating the stars of histology at the Annual NSH Awards Ceremony and Celebration. The event bestows over \$40,000 in scholarships and awards celebrating the value, leadership and influence of your peers in the histology profession.

Once dinner is done and the awards have been handed out enjoy an evening of dancing and fun with your colleagues.

Tickets cost \$40.00 and include the cocktail reception, dinner and dancing. They can be purchased when you register or online at a later date. Tickets are nonrefundable.

Saturday, August 29, 2015

- 6:00pm – 7:00pm:** Cocktail Hour sponsored by Sakura Finetek, USA
- 7:00pm – 9:00pm:** Dinner & Awards Ceremony
- 9:00pm – 11:00pm:** Entertainment & Dancing arranged by the Region II Local Host Committee.

Thank you to our award & scholarship sponsors:



Richard Cartun, PhD



McCormick Family Trust



CONTESTS – Join the fun & win some prizes

Vote for Your Favorite Poster

Each year attendees share their knowledge of a specific or unique nature by creating a scientific poster. These posters allow for a more personal exchange of ideas of attendees. Posters will be available for viewing Sunday – Tuesday, August 30 – September 1, in the exhibit hall. As you view the posters vote for your favorite! The winner will be announced in the exhibit hall, Tuesday September 1st during the Ticket Auction. To submit a poster visit page 10 or histoconvention.org for more details.

Culling Memorial Lecture Keynote Drawing

This year's Culling Memorial Lecture, sponsored by PolyScientific R&D, will be held on Sunday, August 30th from 9:45am-10:45am. All attendees for the lecture will be entered into a drawing for a chance to have your ENTIRE hotel paid for the week! Your session ticket will be collected when you enter the lecture and the drawing will take place at the end of the lecture. You must be present to win.

Vote for 2015 Symposium/Convention T-Shirt

Each year attendees receive a free Convention T-Shirt at check in. Potential T-Shirt designs will be posted on the Symposium/Convention Facebook page, www.facebook.com/nshsc, and sent via email to registered attendees. Each person will have a chance to cast their vote for their favorite design. The design that receives the most votes/likes will be the winner and your t-shirt this year.

3rd Annual Ticket Auction

NSH is sponsoring its 3rd Annual Ticket Auction that will take place in the Exhibit Hall on Tuesday, September 1st, 9:00am – 1:00pm. Each attendee will be given five tickets at the exhibit hall door and have the option to purchase additional tickets (all proceeds go to NSH's ADA Fund). Tickets are used to bid on items donated by exhibitors. Auction items will range from the small to the large; from the educational to the fun. Winners will be drawn on the show floor starting at 12:00pm.



POSTER SESSIONS

The purpose of the posters is to generate interest in laboratory technology and to share knowledge of a specific or unique nature. Poster Sessions provide an effective means of stimulating discussion and allow for a more personal exchange of ideas. You can design an individual poster or make it a laboratory effort!

Poster presenters are required to be registered for the Symposium/Convention. Poster presenters are eligible to earn 3.0 contact hours for their submission.

Submit your Poster Online: Poster applications must be submitted online and include title, authors, and an abstract. Visit www.histoconvention.org

and click "Submit a Poster" to complete the application.

Submission Deadline:

June 19, 2015

Acceptance/Rejection Notification:

July 17, 2015 - sent via email

Poster Format

One corkboard will be provided (8' wide by 4' high). The top of poster must include the TITLE, AUTHOR(S), and INSTITUTION(S). Recommend title lettering to be 1" high and text lettering at least 1/2" high. Author(s) is responsible for all titles and headings. Poster should be self-explanatory, simple and specific, presenting material in a logical, legible manner. Use the past tense and the third-person (avoid "I," "we," and "our"). Basic theories or hypotheses should be presented with as much supporting data as possible, including pertinent statistical analysis and a conclusion. Introduction, written material, photos, charts and graphs should be in a sequential fashion, and trademarks must be indicated where appropriate. Include references. A disclaimer may be posted to indicate that, "results and/or modifications are in preparation for publication and cannot be used without permission of author(s)."

Handout

Handout material for dissemination during the poster session is optional although recommended. Presenter is responsible for preparation and reproduction of handout. To prevent copyright infringements, copyright material and duplication from previously published articles are unacceptable.

Continuing Education Hours

NSH awards three contact hours for presenting a scientific poster at the Annual Symposium/Convention.

Onsite Schedule

Posters will be viewed Sunday through Tuesday, August 30 - September 1, concurrent with the Scientific Exhibit program. They will be accommodated in the exhibit hall. Authors can assemble their displays between 8 - 10:30AM Sunday, August 30. Posters must be ready for viewing by 10:45 AM, and will remain available for viewing during scheduled exhibit hours. Presenters are required to stand with their posters during the discussion time Sunday, August 30 between 10:45AM-12:15PM. Winner ribbons will be placed on the winning posters Tuesday morning, September 1. Posters should be dismantled and removed from the exhibit hall between Noon - 1 PM on Tuesday, September 1.

Poster Judging

Posters being judged are categorized as Veterinary/Research, Clinical or Vendor presentations. Posters are judged on technical content (abstract quality, appropriateness of materials and methods, interpretation/analysis of data, relevance, and acknowledgement of references) and appearance (overall layout, photographic quality, use of legends/captions). The winning poster from the Veterinary/Research and Clinical categories will each receive a \$250 honorarium, sponsored by Sakura Finetek U.S.A., Inc. Vendor-sponsored posters receive honorable mention only.

Security

The NSH exhibit hall is locked each evening. However, if your display includes special photographs or equipment, you may remove

your poster at the end of each day and reposition the next morning.

Responsibility

The National Society for Histotechnology cannot be responsible for expenses incurred by presenters. Authors are responsible for setting-up, maintaining, removing, storing and mailing posters, push-pins to affix posters to corkboard, availability to discuss material with convention attendees, and for all expenses incurred in preparation and presentation of poster.

Abstract Publication

Abstracts of accepted posters are formatted for and included as part of the Symposium/Convention onsite program and will be published as submitted, without editing. In addition all accepted abstracts are submitted for publication in the December 2015 issue of the Journal of Histotechnology. Any abstract that does not meet the standards of the Journal will be returned to the author for modifications and resubmission.

Extended Abstract

Publication

Presenters interested in publishing their poster via an extended abstract in The Journal of Histotechnology should indicate so in their submission email. An electronic version of your poster must be emailed to joh@nsh.org by August 3, 2015. Your email should also include the following statement "information contained in poster has not been published or submitted for publication elsewhere."

2015 Stuff Your Suitcase Campaign

Each year the NSH Convention Committee teams up with the Local Host Committee to help a charitable organization in the Convention's host city. This year we stuff our suitcase with children's books for the United Way of Central Maryland and the National Capital Area.

Donate a book and help a student succeed! Local United Ways, United Way of Central Maryland and United Way of the National Capital Area, invite you to support our work to increase student success and help stem the high school drop-out rate. Unfortunately, many children in our communities are not proficient readers and do not have books to call their own, or sufficient books in their classrooms. The Region II Local Host Committee is asking you to join us & the United Way in supporting early and middle grade student success in our communities.

We are asking Convention Attendees to donate children's books appropriate for ages 3-13. In particular the United Way is looking for bilingual books/Spanish text and books that exhibit different cultures.

Visit www.uwcm.org and www.unwnca.org for more information about the United Way and ways you can help.

Bring your books to the Local Host Team at the Maryland PR Table near registration – the team will be collecting the books and delivering them to the United Way the week of the Convention.

LIVE UNITED



United Way
of Central Maryland



United Way
of the National Capital Area



CERTIFICATE OF COMPLETION PROGRAM

The Certificate of Completion program provides attendees with a marketable certificate within a specific category of interest. This certificate provides concise documentation of continuing education for attendees who are required to provide documentation to renew their qualifications. Additionally, this certificate will provide attendees with practical, applicable skill documentation that can be used to enhance marketability within your organization. Certificates are offered in four areas: Immunohistochemistry, Management, Molecular and Safety. To receive a Certificate of Completion, attendees must accrue a minimum of 9.0 credit hours in one of the three areas by attending the workshops designated below.

Immunohistochemistry

- WS# 6 The Immunofluorescence Triple Lindy! Advanced Techniques for Dual and Multicolor Immunofluorescence - 2015
- WS# 9 Practical Gastrointestinal Pathology for the Histotechnologist
- WS# 15 Case Studies in Diagnostic Pathology with Emphasis on Immunohistochemical and In Situ Hybridization Testing
- WS# 16 A Review of Different Proximity Detection Technologies
- WS# 17 Fundamental Techniques And Theories Of In Situ Hybridization With A Comparison To Immunohistochemistry
- WS# 18 Tumor Markers-The Relationship Between Clinical Pathology and Molecular Diagnostics/Immunohistochemistry
- WS# 23 Multiplexed Imaging: Exploring Multiplexed IF Techniques and Automated Image Analysis Solutions
- WS# 25 Insect and Related Arthropod Immunology
- WS# 29 Immunofluorescence - The Dark Side Of Pathology
- WS# 32 Methods for IHC Multiplexing
- WS# 33 Unraveling the Mystery of the Microsatellite Instability (MSI) Panel.
- WS# 34 Detection of Gene Alterations in Cancer: Is There a Role for Immunohistochemistry in the Molecular Era?
- WS# 35 Validation of Breast Specimens: Pathologist & Histotechnologist Collaboration
- WS# 40 Twice As Nice - The Double Staining Wet Workshop
- WS# 41 Introduction to Manual IHC
- WS# 44 Immunohistochemical Considerations for Mouse Models
- WS# 48 Set Up and Validation of IHC Protocols
- WS# 49 Diagnostic IHC On Routine Plastic-embedded Tissue For Light Microscopy: Are We At The End Of An Era?
- WS# 50 Feasibility of Four-Color Immunohistochemistry Using Single Tissue Section
- WS# 57 Immunohistochemistry for Genitourinary Surgical Pathology: The Pathologist's Perspective

- WS# 59 Troubleshooting IHC Based On Microscopic Findings
- WS# 61 Skin Biopsy Staining for Small Fiber Neuropathy using PGP 9.5 Antibody
- WS# 62 Antibodies Cross-reacting with Human and Animal Tissues Detected by Immunohistochemistry: Preclinical and Clinical Implications
- WS# 64 Validation and Verification of Antibodies in IHC
- WS# 70 TroubleShooting Immunohistochemistry: Step by Step
- WS# 72 How Different Are We? Performing Paraffin Embedded Formalin Fixed Tissue Immunohistochemistry Across Species.
- WS# 77 Immunology Basics and Antibody Production for IHC
- WS# 84 IHC/Histology Resources - Forms, Spreadsheets, & Tools For Everyday Use
- WS# 87 Approaches to Immunohistochemistry Protocol Development and Troubleshooting
- WS#93 Why Does the Pathologist Order so Many CD Markers?
- WS# 99 Western Blot Even More Exciting Than a Western Movie
- WS# 101 The Art and Science of Zoologic IHC
- WS# 109 Immunohistochemistry For Novel Predictive Markers: Optimization and Antibody Selection.
- WS# 110 Flow-like Results From Imaging FFPE Sections: How To Do 6-Plex IHC Staining, Imaging And Analysis

Management

- WS# 19 Oh My! What does CLIA and CAP Want During And After A Inspection.....
- WS# 22 What's in a Resume and How Can You Make Yours Stand Out
- WS# 27 Laboratory Financial Management
- WS# 28 Leadership Challenges in the Histology Lab for a New Supervisor
- WS# 38 Laboratory Management: Exploring All Sizes of Laboratories
- WS# 39 Value Stream Mapping For The Histology Lab
- WS# 45 2015 CPT Coding and Compliance

- WS# 52 Sustainable Problem Solving Using LEAN A3 Thinking
- WS# 58 The Bespoke Protocol: Running a Research Core Facility
- WS# 60 A New Pathology Laboratory - 1 Year Post Opening Review
- WS# 67 Analysis of Patient Safety Metrics in Histopathology Laboratory Workflow Systems
- WS# 69 Risk Mitigation Strategies in Biosample Management
- WS# 76 Value of Informatics in the Histology Laboratory
- WS# 79 The APP for Leadership
- WS# 81 Understanding The Changes in Reimbursement and Managing Through Them
- WS# 84 IHC/Histology Resources – Forms, Spreadsheets & Tools for Everyday Use
- WS# 86 How to Get What You Want: Capital Budget Proposals, Tools and Discussion
- WS# 92 Silo Mentality
- WS# 94 Leadership - The Pinnacle of Management & Supervision
- WS# 96 Understanding Laboratory Operational Performance: Measurements, Key Metrics, and Evaluation Tools
- WS# 103 Time Management??? What Is It???
- WS# 105 Quality Management: Objectives and Dreams

Molecular

- WS# 3 Practical Aspects of Fluorescent In Situ Hybridization (FISH) Methodology
- WS# 7 Hey! Hey! It's all about DNA: Molecular Diagnostics and Us
- WS# 15 Case Studies in Diagnostic Pathology with Emphasis on Immunohistochemical and In Situ Hybridization Testing
- WS# 17 Fundamental Techniques And Theories Of In Situ Hybridization With A Comparison To Immunohistochemistry
- WS# 18 Tumor Markers-The Relationship Between Clinical Pathology and Molecular Diagnostics/Immunohistochemistry
- WS# 24 FISH Technology For Diagnostic Application – Its Importance And Its Relevance In The Histopathology Laboratory

- WS# 30 Opportunities to Gain Knowledge through Automated Microscopy and Image Analysis
- WS# 31 Introduction To Digital Pathology Lab: Technology And Applications For Your Laboratory
- WS# 33 Unraveling the Mystery of the Microsatellite Instability (MSI) Panel.
- WS# 34 Detection of Gene Alterations in Cancer: Is There a Role for Immunohistochemistry in the Molecular Era?
- WS# 54 Sequencing Technology in Molecular Diagnostic
- WS# 63 Damage to DNA and RNA Extracted From OCT-embedded Tissue
- WS# 80 Clinical Utilities Of MicroRNA ISH In Detection Of Cancer Of Unknown Primary And Undifferentiated Tumors
- WS# 97 "Molecular" Necropsy: Collection of Veterinary Research Samples for High Quality RNA/DNA/Protein Retrieval
- WS# 99 Western Blot Even More Exciting Than a Western Movie
- WS# 104 RNA and Protein: What's the connection? How to demonstrate the connection in the laboratory.

Safety

- WS# 8 The SWEET Workshop: Smart Working Environment Ergonomics Training
- WS# 26 Implementation of a Barcoding System in the Pathology Department
- WS# 36 Emerging and Re-Emerging Infectious Disease and Zoonoses
- WS# 46 Creating a Safety Culture
- WS# 66 Safe Handling of CJD and Prions in the Histology Laboratory
- WS# 69 Risk Mitigation Strategies in Biosample Management
- WS# 100 Best Practices for Emergency Preparedness in a Hazardous Environment
- WS# 106 Safety in the Anatomic Pathology Laboratory

PROGRAM AT A GLANCE

SATURDAY AUGUST 29

8:00AM – 11:30AM

WS# 1	Cutting Brain through Thick & Thin - PAGE 54	Doran, Romaine
WS# 2	From Calvaria To Vertebrae, How to Deal With Rodent Bone! - PAGE 54	Georger, Mack
WS# 3	Practical Aspects of FISH Methodology – PAGE 30	Hendershot, Burchette
WS# 4	Gross Descriptive Pathology - PAGE 54	French
WS# 5	What am I looking at? - Tissue ID for the HT Readiness Exam - PAGE 20	Jones
WS# 6	The Immunofluorescence Triple Lindy! Advanced Techniques for Dual and Multicolor Immunofluorescence - 2015 - PAGE 30	Randolph-Habecker, Melton, Goodpaster
WS# 7	Hey! Hey! It's all about DNA: Molecular Diagnostics and Us - PAGE 38	Kochar
WS# 8	The SWEET Workshop: Smart Working Environment Ergonomics Training - PAGE 47	Minshew
WS# 9	Practical Gastrointestinal Pathology for the Histotechnologist: The Gut, The Stains and The Rationale – PAGE 55	Jondle, Lahti
WS# 10	Troubleshooting Your H & E Stain - PAGE 55	Feldman
WS# 11	Broad Review of all Special Stains for Current and Future Certified Technicians - PAGE 55	Bustamante, Gonzalez

1:00PM - 4:30PM

WS# 12	I Have to Know All That for the Exam! - HT Readiness Workshop Part 1 - PAGE 20	Jones
--------	--	-------

1:00PM - 2:30PM

WS# 13	Coffee Talk for Histologists - PAGE 25	Webster
WS# 14	The Hitchhiker's Guide to Digital Pathology - PAGE 22	Glassy
WS# 15	Case Studies in Diagnostic Pathology with Emphasis on Immunohistochemical and In Situ Hybridization Testing - PAGE 30	Cartun
WS# 16	A Review of Different Proximity Detection Technologies - PAGE 31	Murillo
WS# 17	Fundamental Techniques And Theories Of In Situ Hybridization With A Comparison To Immunohistochemistry - PAGE 38	Burchette
WS# 18	Tumor Markers-The Relationship Between Clinical Pathology and Molecular Diagnostics/Immunohistochemistry - PAGE 38	Haas
WS# 19	Oh My! What does CLIA and CAP Want During And After A Inspection..... - PAGE 44	Dwyer, Siena
WS# 20	The Skeletons In Our Closet: Learning From Our Mistakes In Bone Histology - PAGE 50	Webb, Troiano
WS# 21	Routine Radiography As Part Of The Pediatric Autopsy - PAGE 56	Erickson

PROGRAM AT A GLANCE ~ CONTINUED

SATURDAY AUGUST 29

3:00PM -4:30PM

WS# 22	What's in a Resume and How Can You Make Yours Stand Out - PAGE 20	Fink
WS# 23	Multispectral Imaging: Exploring Multiplexed IF Techniques and Automated Image Analysis Solutions - PAGE 22	Lee
WS# 24	FISH Technology For Diagnostic Application – Its Importance And Its Relevance In The Histopathology Laboratory - PAGE 39	Vargas, Tacha
WS# 25	Insect and Related Arthropod Immunology - PAGE 31	Laudier
WS# 26	Implementation of a Barcoding System in the Pathology Department - PAGE 44	Morken
WS# 27	Laboratory Financial Management - PAGE 25	Wade
WS# 28	Leadership Challenges in the Histology Lab for a New Supervisor – PAGE 25	Snyder
WS# 29	Immunofluorescence - The Dark Side Of Pathology - PAGE 31	Burchette
WS# 30	Opportunities to Gain Knowledge through Automated Microscopy and Image Analysis - PAGE 39	Trask

SUNDAY AUGUST 30

8:00AM – 9:30AM

WS# 31	Introduction To Digital Pathology Lab: Technology And Applications For Your Laboratory - PAGE 22	Baradet, Smith
WS# 32	Methods for IHC Multiplexing - PAGE 31	Murillo
WS# 33	Unraveling the Mystery of the Microsatellite Instability (MSI) Panel - PAGE 32	Heller
WS# 34	Detection of Gene Alterations in Cancer: Is There a Role for Immunohistochemistry in the Molecular Era? - PAGE 39	Cartun
WS# 35	Validation of Breast Specimens: Pathologist & Histotechnologist Collaboration - PAGE 23	Bui
WS# 36	Emerging and Re-Emerging Infectious Disease and Zoonoses - PAGE 47	French
WS# 37	From Microbe To Microscope - Histology Of Infectious Agents - PAGE 50	Bryant
WS# 38	Laboratory Management: Exploring All Sizes of Laboratories - PAGE 26	Fitch, LaFriniere, Kochar, Anderson

9:45AM – 10:45AM

C.F.A. Culling Memorial Keynote Lecture - Open to All Attendees

Sponsored by Poly Scientific R&D Corp

1:00PM – 4:30PM

WS# 39	Value Stream Mapping For The Histology Lab - PAGE 26	Kolekamp, Eckley
WS# 40	Twice As Nice - The Double Staining Wet Workshop - PAGE 32	Dorner, Bowden, Burchette
WS# 41	Introduction to Manual IHC – PAGE 40	Heller, Omary
WS# 42	I Have to Know All That for the Exam! - HT Readiness Workshop Part 2 - PAGE 21	Jones
WS# 43	Histochemical Stains in Diagnosis-Views of the Histotechnologist and Pathologist - PAGE 56	Siena, Grizzle
WS# 44	Immunohistochemical Considerations for Mouse Models - PAGE 32	Randolph-Habecker, Goodpaster
WS# 45	2015 CPT Coding and Compliance - PAGE 44	Younes
WS# 46	Creating a Safety Culture - PAGE 47	Doran, Talley
WS# 47	From Calcified to Decalcified Bone and Everything Between - PAGE 50	Mack, Georger, Troiano, Webb, Bain
WS# 48	Set Up and Validation of IHC Protocols – PAGE 33	Balasi, Kahlil
WS# 49	Diagnostic IHC On Routine Plastic-embedded Tissue For Light Microscopy: Are We At The End Of An Era? - PAGE 33	Hand

MONDAY AUGUST 31

8:00AM – 9:30AM

WS# 50	Feasibility of Four-Color Immunohistochemistry Using Single Tissue Section - PAGE 34	George
WS# 51	Whole Slide Imaging: Overview of Technology and its Applications - PAGE 23	Parwani
WS# 52	Sustainable Problem Solving Using LEAN A3 Thinking - PAGE 27	Kolekamp
WS# 53	Gross Pathology Data Entry In Preclinical Toxicologic Studies In A GLP Environment - PAGE 45	Euler
WS# 54	Sequencing Technology in Molecular Diagnostic - PAGE 40	Montesinos-Rongen
WS# 55	Economic Efficiency Of Modern Laser Based Plastic Microtomy - PAGE 51	Richter
WS# 56	Cancer By Inhalation – The Dangers Of Asbestos - PAGE 56	Bryant
WS# 57	Immunohistochemistry for Genitourinary Surgical Pathology: The Pathologist's Perspective - PAGE 34	Zynger, Perrino

9:45AM – 10:45AM

General Session Lecture – Open to All Attendees

1:00PM – 2:30PM

WS# 58	The Bespoke Protocol: Running a Research Core Facility - PAGE 27	Davoli
WS# 59	Troubleshooting IHC Based On Microscopic Findings - PAGE 35	Schirripa
WS# 60	A New Pathology Laboratory - 1 Year Post Opening Review - PAGE 27	Burgess
WS# 61	Skin Biopsy Staining for Small Fiber Neuropathy using PGP 9.5 Antibody - PAGE 57	Henderson

PROGRAM AT A GLANCE ~ CONTINUED

MONDAY AUGUST 31

1:00PM – 2:30PM

WS# 62	Antibodies Cross-reacting with Human and Animal Tissues Detected by Immunohistochemistry: Preclinical and Clinical Implications - PAGE 35	Ganguly
WS# 63	Damage to DNA and RNA Extracted From OCT-embedded Tissue - PAGE 40	Watanabe
WS# 64	Validation and Verification of Antibodies in IHC - PAGE 45	Lear
WS# 65	Grossing: A New Initiative For A New Generation of Histotechs - PAGE 57	Cortinas, Lamphere
WS# 66	Safe Handling of CJD and Prions in the Histology Laboratory - PAGE 48	Zeitner

3:00PM – 4:00PM

WS# 67	Analysis of Patient Safety Metrics in Histopathology Laboratory Workflow Systems - PAGE 48	Branton
WS# 68	All About Those 'Bros: Mouse Embryo Histology 101 - PAGE 57	Fitch
WS# 69	Risk Mitigation Strategies in Biosample Management - PAGE 45	Golz
WS# 70	TroubleShooting Immunohistochemistry: Step by Step - PAGE 35	Horton
WS# 71	Social Media: Using Connections To Find Your Career Path - PAGE 21	Jury, Esposito
WS# 72	How Different Are We? Performing Paraffin Embedded Formalin Fixed Tissue Immunohistochemistry Across Species. - PAGE 35	Lambertz
WS# 73	It Could Happen To You: Hematoxylin and Eosin Staining Artifacts - PAGE 58	Leon
WS# 74	Weird Micro: Interesting Cases from the Johns Hopkins Clinical Laboratory - PAGE 51	Mister
WS# 75	High Volume Laser Capture Microdissection For Use In Nonclinical Research - PAGE 41	Stevens

TUESDAY SEPTEMBER 1

8:00AM – 9:30AM

WS# 76	Value of Informatics in the Histology Laboratory - PAGE 23	Parwani
WS# 77	Immunology Basics and Antibody Production for IHC - PAGE 36	Ramos
WS# 78	Ocular (Eye) Structures Preserving the Histology - PAGE 58	Lewis
WS# 79	The APP for Leadership - PAGE 27	Nelson
WS# 80	Clinical Utilities Of MicroRNA ISH In Detection Of Cancer Of Unknown Primary And Undifferentiated Tumors - PAGE 41	Yamagami
WS# 81	Understanding The Changes in Reimbursement and Managing Through Them - PAGE 45	Sayles
WS# 82	Understanding Bone Marrow Biopsies - PAGE 58	Grimes
WS# 83	The A to Z of Mohs Procedures:- The Laboratory Procedures - PAGE 51	Orchard, Shams
WS# 84	IHC/Histology Resources – Forms, Spreadsheets & Tools for Everyday Use – PAGE 26	Johnston

1:00PM – 4:30PM

WS# 85	Tissue Microarrays: An Updated Look at This Valuable Clinical and Research Resource - PAGE 52	Watanabe
WS# 86	How to Get What You Want: Capital Budget Proposals, Tools and Discussion - PAGE 28	Kochar, DeSalvo
WS# 87	Approaches to Immunohistochemistry Protocol Development and Troubleshooting - PAGE 36	Chlipala, Sharman
WS# 88	Laser Capture Microdissection: Setting up an LCM Core Laboratory - PAGE 42	Golubeva, Warner, Sternberg
WS# 89	Are You A Control Freak?? Do You Have Control Of Your Pre-Analytics? - PAGE 46	Ewing-Finchem, Lott
WS# 90	Techniques, Tips, And Troubleshooting The Processing And Sectioning Of Resin Embedded Samples. - PAGE 52	Seifert, Regan, Ryan
WS# 91	Sun, Surf and Melanoma: Experiences from Down-Under - PAGE 59	Brincat
WS# 92	Silo Mentality - PAGE 28	Gardner
WS# 93	Why Does the Pathologist Order So Many CD Markers? – PAGE 36	Martin, Lear
WS# 94	Leadership - The Pinnacle of Management & Supervision - PAGE 28	Brown

WEDNESDAY
SEPTEMBER 2

8:00AM – 11:30AM

WS# 95	Digital Pathology 101 Update. . . Now What Do I Do? - PAGE 24	DeSalvo, Chlipala
WS# 96	Understanding Laboratory Operational Performance: Measurements, Key Metrics, and Evaluation Tools - PAGE 29	Hladik-Cappellano, Walker
WS# 97	“Molecular” Necropsy: Collection of Veterinary Research Samples for High Quality RNA/DNA/Protein Retrieval - PAGE 42	Warner, Morgan, Golubeva
WS# 98	Tissue Identification for The Histotech – PAGE 59	Powell
WS# 99	Western Blot Even More Exciting Than a Western Movie - PAGE 43	Von Brandenstein
WS# 100	Best Practices for Emergency Preparedness in a Hazardous Environment - PAGE 48	McNabola
WS# 101	The Art and Science of Zoologic IHC - PAGE 37	Flynn, DuSold
WS# 102	Brainteaser: Murine Neurohistology, Pathology and Histotechniques - PAGE 53	Gibson-Corley, Lambertz

1:00PM – 2:30PM

WS# 103	Time Management??? What Is It??? - PAGE 29	Lindstrand
WS# 104	RNA and Protein: What’s the connection? How to demonstrate the connection in the laboratory - PAGE 43	Wineman
WS# 105	Quality Management: Objectives and Dreams - PAGE 46	Duckworth, Hopkins-Morris
WS# 106	Safety in the Anatomic Pathology Laboratory - PAGE 49	Scungio
WS# 107	The Bone Marrow Puzzle - PAGE 53	Moklebust
WS# 108	From Mouse to Me to Microscope - PAGE 59	Johnson
WS# 109	Immunohistochemistry For Novel Predictive Markers: Optimization and Antibody Selection - PAGE 37	Sharma
WS# 110	Flow-like Results From Imaging FFPE Sections: How To Do 6-Plex IHC Staining, Imaging And Analysis - PAGE 24	Mansfield, Goebel, Stack

CHOOSE WORKSHOPS THAT MEET YOUR NEEDS



DIVERSE LEARNING FORMATS TO MATCH YOUR UNIQUE TASTES

Workshops: in depth educational sessions given by scientific leaders covering all aspects of histology. Sessions run 60 minutes, 90 minutes, or 3 hours (half-day).

Computer Workshops: hands-on workshops held in the computer lab. Attendees will have access to the use of a computer to augment the learning experience. To enhance the experience and access to the instructor, attendance is limited.

Wet-Workshops: hands-on workshops held with the purpose of demonstrating a technique or process. Participants work with and are exposed to equipment, specimens, chemicals and reagents. To enhance the experience and access to the instructor, attendance is limited.

Lecture Series: gain a global perspective on the science and industry by attending the Sunday and Monday lectures for no additional cost.

WORKSHOP SUBJECT TRACKS SO YOU CAN CREATE A PROGRAM JUST FOR YOU & THE WORK YOU DO

Clinical vs. Veterinary/Research

– All workshops are first identified as a Clinical or Veterinary/Research focus and then placed in one of our subject tracks. If the session is applicable for techs working in either arena it will be labeled “Both”.

Career Development - Topics related to histotechnology training/certification and computer techniques.

Digital Pathology – Topics covering the acquisition, management and interpretation of pathology information generated from a digitized glass slide.

Immunohistochemistry

Topics related to immunohistochemistry, immunocytochemistry and related procedures

Leadership - Topics for those working in or seeking to increase their knowledge in management and communication

Molecular – Topics related to molecular pathology including ISH, CISH, and FISH

Regulations – Topics covering government regulations, quality assurance/control & improvement

Safety - Topics concerning lab safety procedures and personal safety measures including ergonomics -

Specialties - Topics related to a histology/pathology niche including Mohs, EM, Array's, Laser Capture Microscopy, Flow Cytometry and more

Techniques & Fundamentals - Topics related to histotechnology methods, techniques and theory including troubleshooting, stain methods, lab techniques, gross pathology, equipment and refresher topics

CAREER DEVELOPMENT

WS# 5 WHAT AM I LOOKING AT? - TISSUE ID FOR THE HT READINESS EXAM

Saturday, Aug 29, 2015; 8:00 AM - 11:30 AM

Clinical & Veterinary/Research: Career Development

Level: Basic Type: Workshop Contact Hours: 3

Presented by: Steven Jones, HT(ASCP), Baptist Health

Have you ever looked at an H & E or a special stain in the microscope and you wish you could identify the tissue you were looking at, or maybe remember from school how to identify it? Good News! This workshop will take specific histologic keys of the 4 major tissue types and 18 different organs in order to give you the ability to identify them microscopically. This will be a huge benefit in your everyday work in the lab or on your exam trying to identify a stain and you know what tissue you are looking at. This Tissue Identification workshop is designed to be taken on its own or in conjunction with the Have to Know All That for the Exam! (Parts 1 (WS 12) & 2 (WS 42) of the HT Readiness Workshops) to get you ready for the HT exam.

WS# 22 WHAT'S IN A RESUME AND HOW CAN YOU MAKE YOURS STAND OUT

Saturday, Aug 29, 2015; 3:00 PM - 4:30 PM

Clinical & Veterinary/Research: Career Development, Leadership

Level: Basic Type: Workshop Contact Hours: 1.5

Presented by: Josh Fink, HTL(ASCP), St. John Hospital & Medical Center

Keep applying for jobs, but never hear back from anyone? When is the last time you have updated your resume? Do you use the same resume for every job? Whether you are a new student looking to find your first real job or a veteran tech looking to make a move, your resume is the key to standing out among all of the other job seekers and get the interview. We will go over the main components in every resume as well as discuss different styles that can be utilized for your unique situation to outshine the other candidates and land the interview. We will also look at examples of good and bad resumes to highlight the common mistakes people make and how to avoid them.

WS# 12 I HAVE TO KNOW ALL THAT FOR THE EXAM! - HT READINESS WORKSHOP PART 1

Saturday, Aug 29, 2015; 1:00 PM - 4:30 PM

Clinical & Veterinary/Research: Career Development

Level: Basic Type: Workshop Contact Hours: 3

Presented by: Steven Jones, HT(ASCP), Baptist Health

This workshop will cover fixation, the chemicals used to process tissue, as well as an intro to the H& E and decalcification with the Board of Registry Exam in mind. Subjects will include: chemicals that are used in tissue processing will be identified (fixatives, dehydrating agents, clearing agents, and infiltrating medias) and their advantages and disadvantages will be discussed, embedding and microtomy methodologies and troubleshooting will be addressed, the H & E stain and the 4 methods of decalcification and methods for testing endpoint. We will cover special stains in Part 2 - workshop 42.



WS# 42 I HAVE TO KNOW ALL THAT FOR THE EXAM! - HT READINESS WORKSHOP PART 2

Sunday, Aug 30, 2015; 1:00 PM - 4:30 PM

Clinical & Veterinary/Research: Career Development

Level: Basic Type: Workshop Contact Hours: 3

Presented by: Steven Jones, HT(ASCP), Baptist Health

This workshop will cover special stains with the Board of Registry Exam in mind. We will break down the special stains into components and identify what they do. Taking this workshop will make studying for the exam not such a huge undertaking. Additional topics for the HT Exam are covered in Part 1 (workshop 12) but you are not required to take Part 1 to attend Part 2.



WS# 71 SOCIAL MEDIA: USING CONNECTIONS TO FIND YOUR CAREER PATH

Monday, Aug 31, 2015; 3:00 PM - 4:00 PM

Clinical & Veterinary/Research: Career Development

Level: Basic Type: Workshop Contact Hours: 1

Presented by: Heather Jury, CPC, IDEXX Laboratories;
Amanda Esposito, IDEXX Laboratories

This interactive panel session is designed to help attendees get an insider view of job seeking, networking, interviewing, and successfully receiving the best offer available. Attendees at this session will have the opportunity to learn about Job Searching 2.0 and ask questions and hear candid advice. Participants will have the opportunity to learn definitions of new media/social media, and specifically: what is New Media and Social Media now? How has social media has changed the landscape of job searching and networking globally? Who is really using Social Media to find employees? Why are they using Social Media to find employees? Is it necessary to participate? There will be in-depth discussion about the Social Networking Big Three: Facebook, Twitter and LinkedIn, plus other emerging tools such as Instagram, Snapchat and Pinterest. We will discuss strategies, etiquette, tips and hacks to locate optimal career choices. Participants will have immediate actions to take now and later to successfully identify their career path.



DIGITAL PATHOLOGY

WS# 14 THE HITCHHIKER'S GUIDE TO DIGITAL PATHOLOGY

Saturday, Aug 29, 2015; 1:00 PM - 2:30 PM

Clinical: Digital Pathology

Level: Basic Type: Workshop Contact Hours: 1.5

Presented by: Eric Glassy, MD FCAP, Affiliated Pathologists Medical Group

The Hitchhiker's Guide to the Galaxy, a cult favorite of the 80s, recounts the destruction of earth, an alien researcher's eponymous digital guidebook for galactic travel, and the search for the ultimate answer to life, the universe and EVERYTHING. Dr. Glassy's talk will follow a similar path: the destruction of analog pathology, the search for a killer digital pathology app and finally the discovery of the real answer to EVERYTHING DIGITAL. Using a Digital Pathology Guidebook, Dr. Glassy, will share his experience in roughing it around the whole slide imaging galaxy and will guide the listeners on a grand tour of our digital world. He'll stop off at some familiar signposts along the way: education, tumor conferences, QR codes, consultations and multiplex analyses; but then explore the promise of digital pathology and how it can be integrated into current and future workflows. So, all you digital pathology tourists, stick out your thumb drives and hitch a ride. Discover the question to the ultimate answer. The objectives are not the objective. There's more to life than stains, glass and compound lenses. 42 skidoo.

WS# 23 MULTISPECTRAL IMAGING: EXPLORING MULTIPLEXED IF TECHNIQUES AND AUTOMATED IMAGE ANALYSIS SOLUTIONS

Saturday, Aug 29, 2015; 3:00 PM - 4:30 PM

Veterinary/Research: Digital Pathology, Immunohistochemistry

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Michelle Lee, BS, HTL(ASCP), Pfizer

There has long been a demand in research to develop multiplexed protocols in order to assess the topographical relationship of multiple protein targets on one slide. The need to visualize the distribution of multiple cells and the role they play in the tumor microenvironment is a constant. Though there are limitations and difficulties when optimizing and validating these protocols,

there is also an array of techniques, such as TSA, that can be utilized to achieve success. As we develop solutions to IF multiplex staining, the demand for visualization thus increases as well. A complementary digital automated image analysis platform, using multispectral imaging, has been developed in order to yield accurate and efficient data sets. Overall, the topics covered will explore the array of IF multiplexing techniques, including the use of TSA, that can be utilized when developing protocols, along with the benefits of multispectral imaging and analysis using the Cri Vectra and Inform platform.

WS# 31 INTRODUCTION TO DIGITAL PATHOLOGY LAB: TECHNOLOGY AND APPLICATIONS FOR YOUR LABORATORY

Sunday, Aug 30, 2015; 8:00 AM - 9:30 AM

Clinical & Veterinary/Research: Digital Pathology

Level: Basic Type: Computer Contact Hours: 1.5

Presented by: Timothy Baradet, PathXL; Adam Smith, Indica Labs, Inc.

The application of Digital Pathology analytical techniques can yield a vast trove of information. Preparing your lab for this process will make the transition smooth. This workshop will serve as an introduction to the sample preparation, hardware and IT infrastructure you will need as well an overview of vast amount of information that can be gained by digital applications. There will a hands-on demonstration of software for image analysis (HALO), tissue macrodissection (TissueMark) and managing digital pathology workflow. This workshop should be of use for everyone from technicians to project coordinators and principal investigators. Topics covered will include; Project Planning & Optimizing samples; Slide scanners and Scanning; Hardware Set-up for Imaging Analysis; Database & LIMS Integration; Image Analysis; Tissue Macrodissection for NGS; Digital Pathology Analysis: Expectations & Reality.



WS# 35 VALIDATION OF BREAST SPECIMENS: PATHOLOGIST & HISTOTECHNOLOGIST COLLABORATION

Sunday, Aug 30, 2015; 8:00 AM - 9:30 AM

Clinical: Digital Pathology, Regulations

Level: Basic Type: Workshop Contact Hours: 1.5

*Presented by: Marilyn Bui, MD, PHD, Moffitt Cancer Center/
University of South Florida*

Implementing Digital Pathology into the clinical setting requires pathologists and technologists to thoroughly consider a plan for validations and changes to workflow processes. The workshop will focus on validation of the instruments and its impact on lab workflow, validation of immunohistochemistry markers, with focus on implementation of breast algorithms and CPT and ICD 9-10 coding for digital pathology. The workshop is intended for participants who have made the decision to implement digital pathology in their clinical practice. The session will provide a practical approach for implementation and validation. The discussions will center on adjusting laboratory workflow and guidelines available.

WS# 51 WHOLE SLIDE IMAGING: OVERVIEW OF TECHNOLOGY AND ITS APPLICATIONS

Monday, Aug 31, 2015; 8:00 AM - 9:30 AM

Clinical & Veterinary/Research: Digital Pathology

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Anil Parwani, University of Pittsburgh Medical Center

Whole slide imaging (WSI), introduced several years ago, and encompasses the entire process of capturing, storing, and retrieving a microscopic digital image. This image comprises an entire histology or cytology slide. Upon retrieval, the captured image of the slide can be visualized on a computer monitor without the use of an actual microscope. Automated WSI is becoming increasingly in use for clinical applications such as teleconsultation, pathology education, research and academia. Technological advancements in current WSI scanning devices have increased the capability to handle and scan hundreds of slides automatically per day. With this scanning and handling capacity increasing, utilization of WSI in clinical settings for primary diagnosis is becoming more feasible. WSI scanner technology has greatly advanced and the digital images they produce are of diagnostic quality. Today, there are high throughput

robotic scanners which are being implemented in the histology laboratory. There will be an emerging need for histotechnologists in the future that can work with these devices and understand the attributes of a good WSI system and the quality of images being produced. However, emerging regulations surrounding digital pathology remain unresolved. Laboratories have also been seeking guidance on how to best implement and validate this technology for clinical work. This session is aimed at providing participants with a practical overview of WSI and its clinical applications as well as some of the challenges in implementing it in the pathology laboratory.

WS# 76 VALUE OF INFORMATICS IN THE HISTOLOGY LABORATORY

Tuesday, Sep 1, 2015; 8:00 AM - 9:30 AM

Clinical: Digital Pathology, Techniques & Fundamentals

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Anil Parwani, University of Pittsburgh Medical Center; Liron Pantanowitz, UPMC Shadyside Hospital

Pathology informatics has become critical to help pathology laboratories meet current and future challenges. Some of these challenges include providing laboratories with new tools such as bar coding and tracking and automation and imaging tools. This educational session is specifically geared towards helping attendees understand the value of informatics for the histology lab. The speakers will demonstrate key aspects of the laboratory information systems and how tools such as bar coding and tracking and digital imaging and close integration with laboratory information system are key enablers of improved histopathology practice and workflow. Attendees will also be demonstrated the utility and value of a barcode system in the histology laboratory. This session will address the needs of the laboratory personnel as well as administrators on practical information on using these tools in the laboratory setting. This educational activity will be geared towards histotechnologists, sharing with them best practices, key concepts, and practical skills.



DIGITAL PATHOLOGY ~ CONTINUED

WS# 95 DIGITAL PATHOLOGY 101 UPDATE... NOW WHAT DO I DO?

Wednesday, Sep 2, 2015; 8:00 AM - 11:30 AM

Clinical: Digital Pathology

Level: Basic Type: Workshop Contact Hours: 3

Presented by: William DeSalvo, HTL(ASCP), Sonora Quest Laboratory/Laboratory Sciences of Arizona; Elizabeth Chlipala, HTL(ASCP)QIHC, Premier Laboratory, LLC

Digital Pathology continues to gain acceptance and placements in the Clinical Histology Laboratory. The core technology, whole slide imaging, presents a unique set of challenges to implementation. The workshop will provide discussion on scanner qualification, quality improvement opportunities, validation plans and training. There will be discussion on applications, business cases, and benefits along with advantages, constraints and limitations of digital pathology. Additionally, there will be information provided on creating standards for slide preparation and staining to include quality control and quality assurance measures and scanning considerations such as what is scanned, scanning magnification, image life cycle management and logistics. The final portion of the workshop will be a hands-on session focused on providing insights into basic principles of digital slide viewing and analysis. This workshop is intended for anyone interested in (i) obtaining a basic understanding of digital pathology, or (ii) a refresher course on the current state of digital pathology.

WS#110 IMAGING FFPE SECTIONS: HOW TO DO 6-PLEX IHC STAINING, IMAGING AND ANALYSIS

Wednesday, Sep 2, 2015; 1:00 PM - 2:30 PM

**Clinical & Veterinary/Research: Digital Pathology,
Immunohistochemistry**

Level: Advanced Type: Workshop Contact Hours: 1.5

Presented by: James Mansfield, PerkinElmer; Heike Goebel, University Hospital Cologne Edward Stack, PerkinElmer

There has been a rapid growth in the field of tumor immunobiology in the past few years as a result of recent successes in cancer immunotherapies, and it is becoming clear that immune cells play many, sometimes conflicting, roles in the tumor microenvironment. However, obtaining phenotypic information about the various immune cells that play these roles in and around the tumor has been a challenge. Existing methods can either deliver phenotypic information on homogenized samples (e.g., flow cytometry or PCR) or morphologic information with single immunomarkers (standard IHC / immunofluorescence IF). We present here a methodology for delivering quantitative per-cell marker expression and phenotyping, analogous to that obtained from flow cytometry, but from cells characterized in-situ in FFPE tissue sections. This methodology combines: a sequential multi-marker IF-labeling of up to 6 antigens using antibodies all of the same species in a single section; automated multispectral imaging to remove the typically problematic FFPE tissue autofluorescence and correct cross-talk between fluorescent channels; and an automated analysis to quantitate the per-cell marker expression, determine the cellular phenotype, count these cells separately in the tumor compartment and in the stroma and provide high-resolution images of their distributions. This workshop is dedicated to showing you the beauty of multiplexed colors and the helpful eye of a spectral camera in bringing together flow-like examinations and histology. Let us show you how amazing it is!



LEADERSHIP

WS# 13 COFFEE TALK FOR HISTOLOGISTS

Saturday, Aug 29, 2015; 1:00 PM - 2:30 PM

Clinical & Veterinary/Research: Leadership, Techniques & Fundamentals

Level: Basic Type: Workshop Contact Hours: 1.5

Presented by: Tim Webster, MA, HT(ASCP), Progenity Inc

Every year the NSH offers up a fantastic array of presentations. Sometimes however, the most immediate value to our practice comes from the Q&A session at the end. Speakers often ask for suggestions or alternative solutions from the audience, tapping into the wealth of knowledge in the room. Good presenters recognize that many of us face similar challenges - and have some pretty nifty solutions! Unfortunately, we often run out of time before the questions can be answered. This non-traditional workshop (first offered in 2008) is designed as a facilitated forum for attendees to discuss challenges their labs face, drawing on collective expertise, whilst also serving as a resource for others. Real time real world answers to our professional issues. Topics will be allotted specific amounts of time, with a bank of time reserved to allow for extended discussion as necessary. Each segment will begin with a "seed" question allowing the topic to grow and evolve as participants see fit. Concerned about staining? CAP regulations? IHC? Recycling? Interviewing skills? First time Supervisor? Microtomy artifact? Problem employee? Few of us live in "Histo-utopia" but we are a creative lot!. This is a safe, fun, and educational environment, and you should feel comfortable to join in. Come and join us and share your tips, tricks, and experience. (It would be beneficial for participants to email seed questions to coffeetalk@progenity.com to gauge interest in specific topics and allot provisional periods of time.)

WS# 27 LABORATORY FINANCIAL MANAGEMENT

Saturday, Aug 29, 2015; 3:00 PM - 4:30 PM

Clinical & Veterinary/Research: Leadership

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Jane Wade, BA, HT(ASCP)MLT, West Virginia University

Laboratory directors rely upon managers and supervisors to orchestrate optimal efficiency within each section of the laboratory. Histology managers, in most cases, were excellent bench techs before moving up the ladder into supervisory positions. In some cases, due to the shortage of personnel or to

downsizing, clinical laboratory managers are tasked with managing the histology lab. In either case, financial management is typically the aspect of the job in which the manager is least experienced. Budget planning, assumptions, and variances sound like simple terms until each needs to be addressed and/or executed. Preparing budgets, managing costs, identifying areas of improvement and then justifying those costs may be daunting tasks. Understanding and implementing the budget development phases -planning, controlling, and monitoring - will enable the manager to perform this portion of the management job. So, what is a variance report? How are justifications made? How is a capital equipment cost analysis performed, and then how is that cost depreciated on the budget report? How do workload units assist in justifying the number of FTE's Explanations, definitions and tools will be discussed to address each of these questions.

WS# 28 LEADERSHIP CHALLENGES IN THE HISTOLOGY LAB FOR A NEW SUPERVISOR

Saturday, Aug 29, 2015; 3:00 PM – 4:30 PM

Clinical & Veterinary/Research: Leadership

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Malissa Snyder, HT(ASCP), Moffitt Cancer Center

This workshop will focus on the main challenges that histotechnologists who are in leadership roles face on a continuous basis, while maintaining a strong emphasis on patient care. The first focus will be on high volumes of work and how to keep quality control while still getting work out as quickly as possible. This will include workload measurement and deciding proper staffing levels. Strategies for prioritizing workflow will be demonstrated. Strategies for managing high pressure to get work out in short periods of time will also be discussed. Tips for troubleshooting common problems and challenges that arise will then be given. Tools for effective communication between all team members in the laboratory will also be discussed. Lastly, managing side projects and deadlines while maintaining lab efficiency and cohesion will be outlined.

LEADERSHIP ~ CONTINUED

WS# 38 LABORATORY MANAGEMENT: EXPLORING ALL SIZES OF LABORATORIES

Sunday, Aug 30, 2015; 8:00 AM - 9:30 AM

Clinical & Veterinary/Research: Leadership

Level: Basic Type: Workshop Contact Hours: 1.5

*Presented by: Rebecca Fitch, MPH, HTL(ASCP), University of Texas at Austin;
Michael LaFriniere, HT(ASCP), ccplab Olga Kochar, MS, Hospital; Lois Anderson,
BS, CM, Johns Hopkins Medical Laboratories*

A panel focused on management, leadership and the dynamics within varying histology laboratory environments. Represented on the panel will be managers from: a small clinical laboratory, a medium clinical Laboratory, a larger clinical laboratory, a small research/core laboratory and a medium/ larger research/ core laboratory. The format will be a combination of an overview of topics from the panelists and questions from attendees. Some of the topics that will be discussed are: -Dynamics with researchers/physicians and managing expectations; -Setting standards and evaluating employee performance; -Motivating staff/ meeting employee needs; -Managing changes; -Conflict management; -Budgeting; -Opportunities to reduce costs.

WS# 39 VALUE STREAM MAPPING FOR THE HISTOLOGY LAB

Sunday, Aug 30, 2015; 1:00 PM - 4:30 PM

Clinical & Veterinary/Research: Leadership, Career Development

Level: Basic Type: Computer Contact Hours: 3

*Presented by: Sarah Kolekamp, Mercy Health Saint Mary's; Stephanie Eckley,
Saint Mary's Health Care*

In this workshop participants will learn what is a value stream map, what is the value in understanding processes so deeply and what can be gained through the experience. We will walk through the skeleton of a robust and proper map and discuss how we can equip leaders to better understand how to walk a team through this exercise when back at their own institutions. In addition to understanding value stream mapping participants will spend time working with Microsoft Visio to archive their value stream map in electronic form. The presentation format will be very interactive, requiring that participants come prepared with their own process to map. The first third of the workshop will be teaching with the remaining time spent on doing-with support of the

presenter, along with a question and answer session to share the learning. The desired outcome of this workshop will leave participants with the skills needed to use Visio without the support of the presenter along with the solid step by step plan for how to conduct a Value Stream Map.

WS# 84 IHC/HISTOLOGY RESOURCES - FORMS, SPREADSHEETS, & TOOLS FOR EVERYDAY USE

Tuesday, Sept 1, 2015; 8:00 AM – 9:30AM

Clinical: Leadership, Regulations

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Jeremy Johnston, Northwest Pathology

NSH sessions often include invaluable information that one hopes to take back and implement into their laboratory. This sessions' sole purpose is to give you, as the leader in your laboratory, as many tangible resources as possible that you will be able to implement immediately upon returning to your laboratory. You will receive templates for antibody validations, excel spreadsheets for daily/preventative equipment maintenance, personnel training templates, and more. Have you ever wanted to make a PM chart within excel that greys out boxes for the weekends without having to do it manually? We all know that our day-to-day work is often more than we can handle and we just don't have the time to invest into making the forms that would make our lives much simpler but hopefully this session will do just that. Sometimes just having the right tools in your arsenal can make your job much easier and more enjoyable. We will briefly discuss the role of using Gantt charts (conditional formatting, highlighting fields, etc.). There will also be a short period of time at the end of the session for attendees to contribute any tools not presented in the discussion that they have found helpful over the years. This presentation will be useful to labs both big and small.

WS# 52 SUSTAINABLE PROBLEM SOLVING USING LEAN A3 THINKING

Monday, Aug 31, 2015; 8:00 AM - 9:30 AM

Clinical & Veterinary/Research: Leadership

Level: Basic Type: Workshop Contact Hours: 1.5

Presented by: Sarah Kolekamp, Saint Mary's Health Care

In this workshop participants will learn what an A3 is and how and when to use when one their own. We will discuss how the disciplined approach of using an A3 results in better outcomes and process sustainability. Several different styles of A3 will be shared, including PDCA, Kata storyboards, and problem solving A3s. Regardless of the kind of A3 leveraged, participants will learn that the thought process for applying these tools is very much the same—it is the scientific method. We will walk through each of the “steps” to filling out an A3 and give practical guidance and teaching for how participants can take this learning home with them. Specifically we will talk about: Understanding the current condition around our problem, analysis, clearly defining the root cause of the problem, setting a target condition, experimentation cycles to validate the hypothesis and measuring the results. This workshop will be very interactive and participants are encouraged to bring a real life process problem to apply to the tools being shared here—we will teach for the first portion of the class and the remainder of the time will be spent working through the tools in order to equip participants with the ability to use these tools on their own.

WS# 58 THE BESPOKE PROTOCOL: RUNNING A RESEARCH CORE FACILITY

Monday, Aug 31, 2015; 1:00 PM - 2:30 PM

Veterinary/Research: Leadership

Level: Basic Type: Workshop Contact Hours: 1.5

Presented by: Katherine Davoli, BA, HTL, University of Pittsburgh

Research histology differs significantly from the clinical laboratory. For example, we all hear that patient care comes first - but what if your “patient” is a dead mouse? Or a dish of embryonic stem cells? This workshop highlights the advantages and disadvantages of working in research, with particular attention paid to the intricacies of managing a research laboratory. It will also cover the principles research labs use to tailor protocols to the specific demands of a project.

WS# 60 A NEW PATHOLOGY LABORATORY - 1 YEAR POST OPENING REVIEW

Monday, Aug 31, 2015; 1:00 PM - 2:30 PM

Clinical: Leadership

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Brent Burgess, MLT, ART, Markham Stouffville Hospital

Markham Stouffville Hospital is a community based facility located in the greater Toronto area in Ontario, Canada. The hospital was originally built to provide care to a community of 110,000 and now serves a population of over 300,000. To accommodate the population increase, a new wing totalling 382,250 square feet was constructed. Subsequently, renovations to 146,290 square feet of the existing 322,460 square foot facility took place. The pathology laboratory was included in these renovations and opened in January 2014. The newly renovated space was then equipped with virtually all new equipment from a variety of vendors. The purpose of this study is to review laboratory layout considerations, equipment selection process, equipment configuration and implementation, equipment validation and troubleshooting. The study will also review the advantages of each piece of equipment, and explore how equipment from a variety of vendors can be integrated to produce efficient, cost effective, high quality results.

WS# 79 THE APP FOR LEADERSHIP

Tuesday, Sep 1, 2015; 8:00 AM - 9:30 AM

Clinical: Leadership

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Jennifer Nelson, HT(ASCP), Memorial Hermann Healthcare System

While there is overlap between management and leadership in today's laboratories healthcare professionals are being asked to take a leadership role, in many instances this involves working in teams. This workshop will define the difference between management and leadership. We will go through the evolution of leadership theories; the main theories to be addressed are Trait Theory, Situational Leadership, Servant Leadership, and The Full Range Model-Transformational Leadership. We will apply the knowledge of the theories to practical application in the laboratory involving workplace scenarios. The goal of this workshop is to help leader effectively to be able develop teams and to influence change in the laboratory.

LEADERSHIP ~ CONTINUED

WS# 86 HOW TO GET WHAT YOU WANT: CAPITAL BUDGET PROPOSALS, TOOLS AND DISCUSSION

Tuesday, Sep 1, 2015; 1:00 PM - 4:30 PM

Clinical & Veterinary/Research: Leadership

Level: Intermediate Type: Workshop Contact Hours: 3

Presented by: Olga Kochar, MS, CSSGB, The George Washington University Hospital; William DeSalvo, HTL(ASCP), Sonora Quest Laboratory/Laboratory Sciences of Arizona

Do you ever wonder what Executives are looking for and what they are thinking about when they are reading your Capital Budget Proposal? Have you struggled with how to calculate the business benefit? Do you feel lost when someone asks you to perform analysis for your Capital Budget request? Join us for this interactive workshop and we will share with you the most successful “tricks of the trade” and how to speak the language of Finance. In today’s laboratory, it is no longer acceptable to try to justify an instrument purchase without being able to explain the need in financial terms, terms that ensure leadership will properly consider the investment. We will discuss benefits and costs of any given investment; as well as provide you with simple tools to calculate ROI (return-on-investment). We will help you define the objectives and make the tough trade-offs to determine the relative value of each capital investment project to the strategic objectives of your Organization (Private, Clinical or Research); additionally we will share our experiences on how to identify the key differences among the projects in order to make the “best value” decision, how to know if the project’s cost is justified by its benefits and most importantly we will arm you to defend the decision with senior management and with other stakeholders. Everyone is welcome!

WS# 92 SILO MENTALITY

Tuesday, Sep 1, 2015; 1:00 PM - 4:30 PM

Clinical & Veterinary/Research: Leadership

Level: Basic Type: Workshop Contact Hours: 3

Presented by: Jan Gardner, Palestine Regional Medical Center

In the 20th century organizational structures were set up with silos and worked well with people concentrating on only their area of expertise. The silo mentality no longer works in today’s fast pace of information and consumer driven needs. The problems with silos are seen with duplication of cost and

effort, the lack of synergy, alignment and overall company strategy. Silos create an environment where sharing and collaborating is sometimes not obtainable. Hospitals have many silos creating challenges with nursing, radiology, laboratory and other departments. Our biggest challenge is silos within our labs with clinical and the anatomical staff. Breaking the organizational silo barriers within the lab is the start to eliminate problems that silos cause when knowledge, focus and control are shared among other silos, seeing things from a different point of view. Breaking a silo barrier is not about proving who is “wrong” and who is “right”. Decisions to reprioritize are made because of collaboration or communication that was allowed a shift in perspective. Human nature is to focus on what we do best within our department at the expense of others. After all typical silo heads are highly competitive individuals. Some staff members have pride and ownership in their responsibilities but taken to the extreme can result in failure to listen to others input resulting in dysfunctional department. Others “it’s not my job” and don’t see the accountability except what is listed on a job description. Some individuals believe “knowledge is power” and guard their knowledge instead of sharing feeling they have gained a competitive advantage and power. This workshop will enlighten individuals on how to identify, grow and develop qualities for a winning team. The winning team’s survival requires a positive attitude where members respect others, contribute to the team and learn to trust the members. A strong team commitment has to be solid to reach their goals and a chance for success. Destroying silos encourages employee satisfaction and job involvement, which in turn demonstrates the individual’s commitment and dedication to an organization. Employee involvement will lead to accountability, ownership of the organization, increase job satisfaction and promote an individual’s general attitude toward their job.

WS# 94 LEADERSHIP - THE PINNACLE OF MANAGEMENT & SUPERVISION

Tuesday, Sep 1, 2015; 1:00 PM - 4:30 PM

Clinical & Veterinary/Research: Leadership

Level: Advanced Type: Workshop Contact Hours: 3

Presented by: H. Skip Brown, M.Div., HT(ASCP), Robert H. Lurie Cancer Center

The need for effective leadership is critical today if laboratories are to be successful and survive in our current economy. Ineffective leadership results in low quality, lost talent, wasted resources, and sub-optimal productivity. To truly manage or supervise a workgroup to maximum efficiency, it is imperative that a person understands to lead in a diverse and changing environment. Participants will learn the knowledge and skills needed to effectively influence those who they manage as well as those they must collaborate with in their work life. There is no “one size fits all” leadership

style and leaders must learn the need to be flexible and adaptable in their influencing attempts. Four leadership styles will be identified and leadership effectiveness defined. In order to increase their effectiveness as leaders the group will learn to assess the readiness level of their followers and respond with the appropriate style for the situation. Participants will have a chance to diagnose "follower readiness" which will carry over to their everyday work life when they return to work. Another major learning area will be the identification of how and when to use power. Without power, a leader cannot be successful. Class will learn how to use state of the art assessment tools to measure employee motivation and efficiency. Data is used for discussion groups to show how you could use the data to increase productivity. Join us, for a highly interactive and fun learning experience.

WS# 96 UNDERSTANDING LABORATORY OPERATIONAL PERFORMANCE: MEASUREMENTS, KEY METRICS, AND EVALUATION TOOLS

Wednesday, Sep 2, 2015; 8:00 AM - 11:30 AM

Clinical: Leadership

Level: Basic Type: Workshop Contact Hours: 3

Presented by: Christa Hladik-Cappellano, BS, HT(ASCP)QIHC, LSSBB, Roche Diagnostic Corporation; James Walker, BSME, MBA, LSSMB, Roche Diagnostic Corporation

How well is my laboratory operating in the areas of Quality, Patient Safety and Productivity? Performance metrics are necessary to drive improvement and operational performance. Understanding how to develop, measure, and utilize the performance data are key components to creating a culture for continuous improvement. The participants in this workshop will learn how to collect and evaluate key performance metrics based on lean and six sigma principles. Topics to be shared and demonstrated will be key concepts such as, measurement system analysis, Critical to Quality (CTQ), development of performance metrics, displaying key metrics, and when to take action based on specific metric results. This workshop will be interactive as the group will have opportunities to share current experiences, best practices, and concepts that will work best with their current lab conditions.

WS# 103 TIME MANAGEMENT???

WHAT IS IT???

Wednesday, Sep 2, 2015; 1:00 PM - 2:30 PM

Clinical & Veterinary/Research: Leadership

Level: Basic Type: Workshop Contact Hours: 1.5

Presented by: Kelli Lindstrand, HT, University of Arkansas for Medical Sciences

Time management is one of the most important aspects of running a successful lab. Understanding the people who work for you as well as their limits in all things Histology, is number two. By being able to understand the differences in work style and timing you can schedule your staff to better streamline your lab. This will make your lab work more efficiently. Discover how much actual time you need in each hour of the day and regulate how your employees are used to decrease downtime. Some of the staff may be better at embedding and others at sectioning; discovering which task would be best for each person can help. Then training or assisting those who are slower at one part than another will help bring everyone up to speed on all tasks. You will be able to see happier people with more to offer and having more pride in themselves and their laboratory.



IMMUNOHISTOCHEMISTRY

WS# 3 INTRODUCTION TO MANUAL IHC

Saturday, Aug 29, 2015; 8:00 AM - 11:30 AM

Clinical & Veterinary/Research: Immunohistochemistry

Level: Basic Type: Wet Contact Hours: 3

Presented by: Brent Heller, Cell Marque; Faris Omary, Cell Marque

This workshop includes all reagents necessary to complete a manual IHC stain. It is designed to give experience to those unfamiliar with IHC staining and reinforce knowledge for those who have not performed IHC staining recently. It may also be valued by those who currently use an automated system and would like to understand the theory behind the staining process. This workshop will include performing IHC stains and discussion of the concepts associated with the reactions occurring on the slide.

focus on formalin-fixed, paraffin-embedded samples; however, many of the methods are applicable to working with frozen tissue. This workshop is geared for individuals with an intermediate knowledge of IHC, including antigen retrieval and how basic detection systems work.

WS# 15 CASE STUDIES IN DIAGNOSTIC PATHOLOGY WITH EMPHASIS ON IMMUNOHISTOCHEMICAL AND IN SITU HYBRIDIZATION TESTING

Saturday, Aug 29, 2015; 1:00 PM - 2:30 PM

Clinical: Immunohistochemistry, Molecular

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Richard Cartun, MS, PhD, Hartford Hospital

WS# 6 THE IMMUNOFLUORESCENCE TRIPLE LINDY! ADVANCED TECHNIQUES FOR DUAL AND MULTICOLOR IMMUNOFLUORESCENCE - 2015

Saturday, Aug 29, 2015; 8:00 AM - 11:30 AM

Veterinary/Research: Immunohistochemistry

Level: Advanced Type: Workshop Contact Hours: 3

Presented by: Julie Randolph-Habecker, PhD, Fred Hutchinson Cancer Research Center; Kimberly Melton, Fred Hutchinson Cancer Research Center Tracy Goodpaster, Fred Hutchinson Cancer Research Center

New technologies to quantitate and co-localize antibody staining has lead to an increase in the use of immunofluorescence (IF) with multiple antibodies used in the research histology laboratory. This half day workshop will focus on techniques that will allow you to incorporate dual and multicolor IF into your laboratory. We will cover basic approaches for dual IF as well as 3 and 4 color. More advanced topics will center on strategies that allow you to use more than one antibody made in the same host in staining combinations without cross-over of detection reagents. This will also include approaches to stain mouse tissue with 2 or more mouse antibodies. Special focus will center on new and innovative approaches to amplify weak signals and using specific fluorescent molecules that allow you to avoid autofluorescence. Participants will view IF slides stained from various research projects showing examples of techniques as well as examples of common challenges, troubleshooting strategies, and the use of appropriate controls. The techniques will mainly

Various surgical pathology, cytology, and hematopathology specimens will be discussed in terms of the application of immunohistochemical and in situ hybridization testing for diagnosis and, when appropriate, identification of prognostic and predictive targets. Using Dr. Clive Taylor's "Total Test Concept", "pre-analytical" (ischemia time, fixation/processing, tissue sectioning, and test selection), "analytical" (antigen retrieval, antibodies/probes, detection systems, and use of positive and negative controls), and "post-analytical" (interpretation and quality control) issues will be covered.



WS# 16 A REVIEW OF DIFFERENT PROXIMITY DETECTION TECHNOLOGIES

Saturday, Aug 29, 2015; 1:00 PM - 2:30 PM

Veterinary/Research: Immunohistochemistry

Level: Advanced Type: Workshop Contact Hours: 1.5

Presented by: Adrian Murillo, Ventana Medical Systems

The ability to detect heterodimers and co-localized proteins has only been able to be done with rolling circle amplification or with organic fluorophores. In this workshop, we will evaluate the technology currently in use to determine whether or not two proteins are in direct proximity to one another in the context of tissue. This technology can help answer a multitude of questions and even help researchers determine if their drug is hitting its target in tissue. We will also cover new research being done as alternative approaches to current commercial products that can be used.

WS# 25 INSECT AND RELATED ARTHROPOD IMMUNOLOGY

Saturday, Aug 29, 2015; 3:00 PM - 4:30 PM

Veterinary/Research: Immunohistochemistry

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Damien Laudier, BS, HTL(ASCP)QIHC, Laudier Histology

Insects and related arthropods have evolved complex, diverse, and highly effective immune systems. This workshop will introduce attendees to the basics of insect immunology and related arthropod immune defenses through a comparison of various arthropod species. An overview of immunology nomenclature germane to insects and their relatives will be given. The differences and similarities between an insect's innate immune system and the vertebrate adaptive immune system will be discussed. Insects not only transmit, but can also suffer from viruses, bacterial and protozoan infections as well; several of the commonly known and not so well known pathogens (on both sides) will be reviewed. Additionally, the workshop will address specifics of preparing and performing Immunohistochemical and In situ hybridization assays on arthropod tissue for pathogens, including microscopic localization and visualization of infection in histologic preparations.

WS# 29 IMMUNOFLUORESCENCE - THE DARK SIDE OF PATHOLOGY

Saturday, Aug 29, 2015; 3:00 PM - 4:30 PM

Clinical & Veterinary/Research: Immunohistochemistry

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Jim Burchette, HT(ASCP), Retired

Immunofluorescence techniques do not have to be complex or overwhelming to the histotechnologist. The technical aspects of performing immunofluorescence (IF), rather than the diagnostic process, will be the primary objective of this workshop. Information presented will include history of immunofluorescence, equipment required, specimen handling, freezing techniques, fluorescing labels, direct and indirect staining protocols. Procedural "tricks"; of the trade will be shared during this presentation. Digital images of IF patterns in various tissues will be used to assist the technologist proper staining patterns and localization of proteins, immunoglobulins and complements.

WS# 32 METHODS FOR IHC MULTIPLEXING

Sunday, Aug 30, 2015; 8:00 AM - 9:30 AM

Veterinary/Research: Immunohistochemistry

Level: Advanced Type: Workshop Contact Hours: 1.5

Presented by: Adrian Murillo, Ventana Medical Systems

The ability to investigate multiple targets on one slide is becoming a more utilized technique. Researchers and clinicians want to extract as much information from a slide as possible to answer questions of protein expression, activated cells and tumor heterogeneity. In this workshop we will cover the different techniques and methods used to multiplex in brightfield and fluorescence. We will cover classic and current techniques used for multiplexing and discuss where the future of multiplexing is headed.

IMMUNOHISTOCHEMISTRY ~ CONTINUED

WS# 33 UNRAVELING THE MYSTERY OF THE MICROSATELLITE INSTABILITY (MSI) PANEL.

Sunday, Aug 30, 2015; 8:00 AM - 9:30 AM

Clinical: Immunohistochemistry

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Brent Heller, Cell Marque

The Microsatellite Instability (MSI) or Mis-Match Repair (MMR) Panel is an IHC panel that falls into a new category of testing, bringing genetic tests to IHC. The panel provides valuable information in regards to genetic disposition for patients and their propensity to develop future malignancies. This Panel also brings a new set of challenges to the histology lab for optimization and validation. This workshop is designed to help the lab technician understand this new arena of IHC staining, its complex process, barriers and challenges compared to traditional antibodies and how to come out on top.

WS# 40 TWICE AS NICE - THE DOUBLE STAINING WET WORKSHOP

Sunday, Aug 30, 2015; 1:00 PM - 4:30 PM

Clinical & Veterinary/Research: Immunohistochemistry

Level: Intermediate Type: Wet Contact Hours: 3

Presented by: Christine Dörner, HT(ASCP), LSS-Black Belt, Dako North America Inc.; Kathy Bowden, BS, HT(ASCP), Dako Theresa Burchette, Dako North America, Inc.

Are your doctors asking for double stains? Do you need help developing stains that aren't available on the market? Do you want to look at different ways to do double staining and want to understand what is going on in a double stain? Then this workshop is for you. In this workshop we will look at sequential and simultaneous methods for double stains that will include hands on staining of slides. There are many different combinations of antibodies and different ways to get to the same result. We will help you understand some of these differences and look at what will work best in your lab. We will give you ideas of things to try, theory and troubleshooting, while working up double stains and more.

WS# 44 IMMUNOHISTOCHEMICAL CONSIDERATIONS FOR MOUSE MODELS

Sunday, Aug 30, 2015; 1:00 PM - 4:30 PM

Veterinary/Research: Immunohistochemistry

Level: Intermediate Type: Workshop Contact Hours: 3

Presented by: Julie Randolph-Habecker, PhD, Fred Hutchinson Cancer Research Center; Tracy Goodpaster, Fred Hutchinson Cancer Research Center

Mice can be used as important models of human disease - including cancer and infectious disease. Whether you currently work with animal tissue or want to make yourself more marketable to the expanding biomedical and pharmaceutical research community, this workshop is designed to address the challenges and complexity of performing IHC on mouse tissue. We will discuss important considerations beginning with necropsy, tissue fixation, and decalcification. Time will be devoted to picking antibodies that work in mouse tissue and how to evaluate the staining performance and pattern of expression when compared to human tissue. We will also explore topics including detection reagents to use in mouse tissue and protein blocking strategies to reduce nonspecific staining. Special focus will center on techniques to stain mouse tissue with mouse monoclonal antibodies and dual staining strategies. In addition, we will address how to handle xenograft tissue where human cells are grown in mouse models. Finally we will discuss the importance of antibody panels and show how these are used to answer complex questions. Participants will view IHC slides stained from various research projects showing examples of common challenges and troubleshooting strategies. This workshop is designed for individuals who have an intermediate knowledge of IHC.





WS# 48 SET UP AND VALIDATION OF IHC PROTOCOLS

Sunday Aug 30, 2015; 1:00 PM – 4:30 PM

Clinical: Immunohistochemistry, Regulations

Level: Intermediate Type: Workshop Contact Hours: 3

Presented by: Jodi Balasi, H. Lee Moffitt Cancer Center; Farah Kahlil, MD, Moffitt Cancer Center

With emerging new antibodies on the market and the demand for these antibodies to be integrated into pathologist's diagnosis, histologists are challenged to test and validate new antibodies into their current IHC menu. For histologists who are starting to validate or compare other techniques, this workshop will highlight on immunohistochemistry protocol set up and validation. Areas that will be covered are antibody status (IVD, ASR, and RUO), protocol set up, testing, documentation, regulations, and quality matrix.

WS# 49 DIAGNOSTIC IHC ON ROUTINE PLASTIC-EMBEDDED TISSUE FOR LIGHT MICROSCOPY: ARE WE AT THE END OF AN ERA?

Sunday, Aug 30, 2015; 1:00 PM - 4:30 PM

Clinical & Veterinary/Research: Immunohistochemistry, Specialties

Level: Intermediate Type: Workshop Contact Hours: 3

Presented by: Neil Hand, PhD, M.Phil, C.Sci, FIBMS, Nottingham University Hospitals

For nearly 50 years numerous publications have described a plethora of techniques on semithin plastic sections for light microscopy studies. Most of the procedures have been on tissue embedded in acrylic plastics as these offer potentially the widest range of techniques including the application of IHC. However, as is evident by various comments within the scientific literature, many have found IHC at worse unreliable and at best challenging. Following the development of a simple but reliable technique by this presenter to achieve IHC, the procedure has now been used routinely over 20 years on 40,000 bone marrow trephine biopsies for diagnosis. This volume of work is unique and unpracticed with any other technique for IHC on plastic-embedded tissue, although it is possible this could soon decrease or even finish in what has been a significant development in plastic embedding. This workshop will describe in detail fixation, processing, plastic mixes, embedding, sectioning and staining required of different techniques for IHC on various plastic-embedded tissues with the presenter drawing on his personal unique experience. In addition, the reasons why in the future there could be less demand for this approach will also be examined. Participants will have the opportunity to discuss their problems, ideas and views.



IMMUNOHISTOCHEMISTRY ~ CONTINUED

WS# 50 FEASIBILITY OF FOUR-COLOR IMMUNOHISTOCHEMISTRY USING SINGLE TISSUE SECTION

Monday, Aug 31, 2015; 8:00 AM - 9:30 AM

Clinical & Veterinary/Research: Immunohistochemistry

Level: Intermediate Type: Wet Contact Hours: 1.5

Presented by: Nancy George, Diagnostic BioSystems

Submission Body: Background: Small patient biopsies with advanced lung cancer may be insufficient for multiple immunohistochemical studies. Previous studies have used two chromogens and two or more antibodies to differentiate lung adenocarcinoma from squamous carcinoma. In this study, we test feasibility of using four chromogens and four antibodies to determine if signals generated on multiplex were equivalent to single stains. Design: Immunohistochemistry on 20 formalin-fixed paraffin-embedded (FFPE) lung cancer samples (5 cases each of adenocarcinoma, squamous carcinoma, large cell neuroendocrine carcinoma, and mesothelioma) was performed using a Montage 360TM Autostainer with a sequential application of four separate primary antibodies, four polymer detection systems, and four different colored chromogens to label each antibody with a distinct color. Multiple stains were compared with single stains for intensity and distribution of staining. Evaluation of stains was performed without knowledge of histologic subclassification of tumor. Primary antibodies included TTF-1 (clone B8G7G3/1) paired with High Contrast DAB chromogen, cocktail CD56 (clone 123C3.D5)/Synaptophysin (clone SYP02)/Chromogranin A (clone LK2H10) paired with PermaBlue Plus AP chromogen, Calretinin (polyclonal) paired with PermaRed Plus AP chromogen and cytokeratin 5/6 (clone D5/16B4) paired with HRP Yellow chromogen. Slides were counterstained with Methyl Green and coverslipped with permanent mounting medium. Results: In 18 of 20 cases (90%), immunohistochemical subclassification based on multiplex stain correlated with histologic diagnosis. The intensity of staining of each antibody correlated with the single stains except in two cases where there was reduction in intensity of CK 5/6 (yellow) and neuroendocrine marker (blue), although staining intensity was still adequate for interpretation. Conclusion: In conclusion, we demonstrate that four-color multiplex staining on single FFPE tissue section is feasible. This technique may be useful for small biopsy and cytology specimens preserving tissue material for further molecular studies. Four color staining using DBS detection systems may also be useful for other tissue types.

WS# 57 IMMUNOHISTOCHEMISTRY FOR GENITOURINARY SURGICAL PATHOLOGY: THE PATHOLOGIST'S PERSPECTIVE

Monday, Aug 31, 2015; 8:00 AM - 9:30 AM

Clinical: Immunohistochemistry

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Debra Zynger, MD, The Ohio State University Medical Center; Carmen Perrino, MD, Washington University/Barnes-Jewish Hospital

This seminar will review immunostains commonly utilized in the work-up of prostate, kidney, bladder and testicle tumors, including markers that have been in use for many years as well as newly described antibodies. Two genitourinary pathologists will describe the rationale for ordering markers and will discuss how the immunohistochemical results help the pathologist arrive at a diagnosis. The immunohistochemical staining pattern found in the most common tumors of the prostate, kidney, bladder and testicle will be described. Easy to use reference immunohistochemical tables will be provided. The audience will actively participate in the analysis of immunohistochemical results and will practice using the results to make diagnoses. Examples of antibodies to be covered include prostate: AMACR, p63, HMWK, PSA, PSAP, androgen receptor, NKX3.1; kidney: CAIX, CD10, vimentin, TFE3, PAX8; bladder: p40, CK7, CK20, GATA3; and testicle: PLAP, CD117, D2-40, OCT4, CD30, AFP, glypican 3, HCG. After this lecture, participants will have a better understanding of why certain immunohistochemical markers are ordered and how the results aid in the diagnosis of genitourinary specimens.



WS# 59 TROUBLESHOOTING IHC BASED ON MICROSCOPIC FINDINGS

Monday, Aug 31, 2015; 1:00 PM - 2:30 PM

Clinical & Veterinary/Research: Immunohistochemistry

Level: Advanced Type: Workshop Contact Hours: 1.5

Presented by: Christine Schirripa, MLT, Dako

This workshop will discuss the microscopic evaluation of IHC stains. A systematic approach for stain evaluation will be presented. This approach will allow for the identification and categorization of staining problems. The microscopic findings can then be used as starting points for specific troubleshooting techniques. The workshop will be given in presentation form with photomicrographs illustrating potential staining problems as well as excellent staining, "unknown" stains to evaluate as a group, troubleshooting flow charts and actual resolutions.

WS# 70 TROUBLESHOOTING IMMUNOHISTOCHEMISTRY: STEP BY STEP

Monday, Aug 31, 2015; 3:00 PM - 4:00 PM

Clinical: Immunohistochemistry

Level: Basic Type: Workshop Contact Hours: 1

Presented by: Debra Horton, MT(ASCP)QIHC, University Hospital

Knowing how to troubleshoot an IHC staining issue is what seems to be the biggest hurdle. What you do or where to start once you see the problem seems to take more time than needed. Some of the questions could be: What happened to the red staining that was there earlier? Why do I have no DAB staining? Why didn't the CD3 control work? Why did half the slide stain and the other half not? The answers may not always be the same depending on the circumstances. This workshop will cover these real world IHC issues and more. We will troubleshoot poor quality staining and go step by step to making the perfect slide.

WS# 62 ANTIBODIES CROSS-REACTING WITH HUMAN AND ANIMAL TISSUES DETECTED BY IMMUNOHISTOCHEMISTRY: PRECLINICAL AND CLINICAL IMPLICATIONS

Monday, Aug 31, 2015; 1:00 PM - 2:30 PM

Clinical: Immunohistochemistry

Level: Intermediate Type: Workshop Contact Hours: 1.5

*Presented by: Aniruddha Ganguly, PhD, QIHC (ASCP),
National Cancer Institute/NIH*

It is known that each immunoglobulin molecule possess a specific amino acid sequence that provide an antibody the ability to interact with only the corresponding antigen (epitope) that evoked its synthesis. However, an antibody specific for an epitope can be shared by members of a group of antigens with identical functional epitopes. It has been noted that antibodies generated against, for example, human, dog or mouse antigens are often shown to have inter-species cross-reactivity. This information can be relevant for selecting an antibody for pre-clinical and clinical applications. The session is focused on demonstrating examples of antibodies that recognize epitopes distributed across different species (human, animals), the advantages and disadvantages of having inter-species cross-reactivity of an antibody, and how the cross-species reactivity information can be useful in pre-clinical and clinical applications. This presentation is designed to offer a comprehensive understanding of inter and intra-species cross-reactivity of antibodies.

WS# 72 HOW DIFFERENT ARE WE? PERFORMING PARAFFIN EMBEDDED FORMALIN FIXED TISSUE IMMUNOHISTOCHEMISTRY ACROSS SPECIES.

Monday, Aug 31, 2015; 3:00 PM - 4:00 PM

Veterinary/Research: Immunohistochemistry

Level: Basic Type: Workshop Contact Hours: 1

Presented by: Allyn Lambertz, MS, University of Iowa

Our laboratory's affiliation with both a teaching hospital and a research university provides us the opportunity to work with paraffin embedded formalin fixed tissues from humans and a variety of research animals. This workshop will begin with an overview of immunohistochemistry (IHC) protocol development. From there, it will focus on development of a protocol from an antibody that is not recommended for the organism being studied. We will also cover how to determine which antibody to purchase for the tissue being studied. Finally, we will discuss how to troubleshoot IHC protocol issues. The troubleshooting will apply directly to modification of a current protocol for use with a different organism. Throughout this workshop, examples will be provided which we have developed in our laboratory, including antibodies that are being utilized across human, mouse, ferret, and porcine tissues.

IMMUNOHISTOCHEMISTRY ~ CONTINUED

WS# 77 IMMUNOLOGY BASICS AND ANTIBODY PRODUCTION FOR IHC

Tuesday, Sep 1, 2015; 8:00 AM - 9:30 AM

Clinical & Veterinary/Research: Immunohistochemistry

Level: Basic Type: Workshop Contact Hours: 1.5

Presented by: Jason Ramos, PhD, Biocare Medical

This overview of immunology is designed to ensure all participants have a concrete understanding of the biological principles of immunology, how antibodies are made in cells, and the implications of cellular protection on diseases and cancer. Recent developments in the fields of cell biology and immunology will be highlighted to build upon knowledge attendees may already possess. Antibody production and isolation for IHC purposes will also be discussed, focusing on the benefits and limitations of monoclonal and polyclonal antibodies. All of the topics covered will be tied back to the IHC laboratory and protocol to improve basic immunological and IHC-specific knowledge.

that is as accurate and consistent as possible. During this session, we will give a general description of the fundamental concepts of IHC staining, discuss a detailed method for developing reliable IHC staining protocols, and present useful approaches to troubleshooting. Topics will include: how to research and select the right antibody and control tissues, comparison of different detection systems, protocol optimization and troubleshooting options, and proper documentation and record keeping.

WS# 93 WHY DOES THE PATHOLOGIST ORDER SO MANY CD MARKERS?

Tuesday, Sept 1, 2015; 1:00 PM – 4:30 PM

Clinical: Immunohistochemistry

Level: Intermediate Type: Workshop Contact Hours: 3

Presented by: Alvin Martin, MD, CPA Laboratory; Sheron Lear, HT(ASCP)HTL, QIHC(ASCP), CPA Lab

WS# 87 APPROACHES TO IMMUNOHISTOCHEMISTRY PROTOCOL DEVELOPMENT AND TROUBLESHOOTING

Tuesday, Sep 1, 2015; 1:00 PM - 4:30 PM

Clinical & Veterinary/Research: Immunohistochemistry

Level: Intermediate Type: Workshop Contact Hours: 3

Presented by: Elizabeth Chlipala, BS, HTL(ASCP)QIHC, Premier Laboratory, LLC; Faye Sharman, PhD, Premier Laboratory, LLC

Although immunohistochemistry (IHC) is a powerful tool for detecting and localizing expression of specific proteins in tissues, protocol development and troubleshooting require an in-depth understanding of the staining process. Since the binding reaction between each antibody and its specific epitope is unique, there is no universal protocol that works for all antibodies on all tissues in all species. For this reason, IHC protocol development should be carefully documented and follow a detailed process. This not only helps establish clean and accurate staining, but also standardizes and validates the staining interactions between the antibody, control tissues (positive and negative) and the reagents used to detect the antibody. This approach ensures that the final staining protocol is optimized for its intended use and provides staining

Immunophenotyping (by either immunohistochemistry (IHC) or flow cytometry) has developed into an extraordinary array of various CD markers that are available to assist in the diagnosis of lymphoma and leukemia. Not only is immunophenotyping available but many molecular techniques are as well. How does the pathologist put this all together with the morphology and arrive at a diagnosis? The purpose of this workshop will be several fold. It will include a discussion of all aspects of the pathology of hemato pathology, which include specialized aspects of tissue handling, tissue processing, use of multiple antibodies/chromogens as well as "How does a pathologist utilize CD markers and molecular techniques to arrive at a diagnosis". The technical aspect discussion will include how to validate these antibodies; choosing the appropriate controls, which chromogens are more stable and troubleshooting. The participants of this workshop will be encouraged to bring any problems or questions regarding CD markers with them so we may discuss these problems during the workshop.



WS# 101 THE ART AND SCIENCE OF ZOOLOGIC IHC

Wednesday, Sep 2, 2015; 8:00 AM - 11:30 AM

Veterinary/Research: Immunohistochemistry

Level: Intermediate Type: Workshop Contact Hours: 3

Presented by: Debra Flynn, HT(ASCP)QIHC, Biocare Medical LLC; Dee DuSold, HTL(ASCP), Purdue University - ADDL

The world of IHC is not limited to human patients. Our furry, feathery, and scaly friends in the animal kingdom are also victims of malignancies, infectious diseases, and illnesses that require histology and IHC for proper diagnosis and treatment. In addition to these conditions, animals that are raised for food face specific health screenings to make sure the food supply is safe. Our presentation will cover the technical aspects of veterinary histology and IHC from “man’s best friend” to exotic animals. We will also discuss animal models for research and the Animal Genome Project. This presentation is designed to provide not only a glimpse into the animal world for the clinical technologist, but also a refresher course on animal IHC to the veterinary technologists, and is open to all attendees who have an interest in Veterinary Histology.

WS# 109 IMMUNOHISTOCHEMISTRY FOR NOVEL PREDICTIVE MARKERS: OPTIMIZATION AND ANTIBODY SELECTION.

Wednesday, Sep 2, 2015; 1:00 PM - 2:30 PM

Clinical & Veterinary/Research: Immunohistochemistry

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Rajni Sharma, Johns Hopkins University

Selection of the correct primary antibody for detection of an antigen on any tissue is key to performing a successful immunohistochemistry assay (IHC). To achieve successful immunostaining, it is important to analyze various characteristics of the antibody of interest, such as specificity and sensitivity. The proper selection of the antibody impacts the outcome of the IHC results and thus, the potential use of the antibody as a clinical marker or a therapeutic agent. The goal of this study was to compare various clones of antibodies for Programmed death ligand-1 (PD-L1) and to select a clone that showed high specificity for tumor cells with optimal intensity. PD-L1 is a ligand for the PD1 receptor and is expressed on the membrane of antigen-presenting cells, in addition to tumor cells, in certain diseases. Blocking the PD1/PD-L1 inhibitory signals has been shown to decrease tumor growth. Recent clinical studies have shown promising therapeutic effects of a particular PD-L1 antibody (MEDI4736). Immunostains for predictive markers are evaluated by trained pathologist who grade the staining using a criteria-based quantitative method that varies from marker to marker. In some cases patients are included in clinical trials based on such quantitative evaluation of immunostaining, a subset of which may be performed on small needle biopsy material. It is therefore essential to select an antibody that demonstrates high specificity and optimal staining intensity in patient tissue. An emphasis on good, reproducible staining techniques is also placed since errors in staining techniques usually lead to nonspecific staining, which results in poor quality and incorrect evaluation. A comparative analysis of immunohistochemical staining with three different PD-L1 antibodies in lung cancer specimens is presented.



MOLECULAR

WS# 7 HEY! HEY! IT'S ALL ABOUT DNA: MOLECULAR DIAGNOSTICS AND US

Saturday, Aug 29, 2015; 8:00 AM - 11:30 AM

Clinical: Molecular

Level: Basic Type: Workshop Contact Hours: 3

Presented by: Olga Kochar, MS, CSSGB, The George Washington University Hospital

This is an excellent Workshop for those that would like to learn essential concepts in molecular diagnostics and molecular diagnostics impact on the identification of novel markers of human diseases, develop and apply useful molecular assays to monitor disease, determine appropriate treatment strategies, and predict disease outcomes. We will discuss "get to know" our magical DNA, nucleic acids and chromosome structure; we will learn about some mutations; and cover specimen collection, mutation detection and overall quality control. It does not matter if you are just starting out or if you have been working with molecular techniques for a while, I am sure I can offer a new glimpse into the amazing world of human genetics!

WS# 17 FUNDAMENTAL TECHNIQUES AND THEORIES OF IN SITU HYBRIDIZATION WITH A COMPARISON TO IMMUNOHISTOCHEMISTRY

Saturday, Aug 29, 2015; 1:00 PM - 2:30 PM

Clinical & Veterinary/Research: Molecular, Immunohistochemistry

Level: Basic Type: Workshop Contact Hours: 1.5

Presented by: Theresa Burchette, BS, MT(ASCP)HTL, Agilent

In situ hybridization (ISH) is a diagnostic technique currently used in molecular laboratories. In recent years, ISH techniques have been migrating more towards the anatomical pathology laboratories. This migration is largely due to the use of ISH on FFPE tissue for detecting over expression of genes and viruses, along with new easy to use probes and detection systems. ISH has also been popularized by the use of the combination of FDA approved in situ hybridization and immunohistochemistry detection systems to determine the proper diagnosis and treatment for patients. Molecular techniques, such as in situ hybridization, deal with targeting nucleic acids, the steps preceding the biological process of the making of a protein. The immunohistochemistry



technologists who deal with detecting proteins in tissue, may be unfamiliar with the molecular process and the techniques used in detecting molecular elements in the tissue. With a little molecular knowledge, any technologist will find that In Situ Hybridization is similar to doing Immunohistochemistry and will be able to expand their expertise in this area.

WS# 18 TUMOR MARKERS- THE RELATIONSHIP BETWEEN CLINICAL PATHOLOGY AND MOLECULAR DIAGNOSTICS/ IMMUNOHISTOCHEMISTRY

Saturday, Aug 29, 2015; 1:00 PM - 2:30 PM

Clinical: Molecular

Level: Basic Type: Workshop Contact Hours: 1.5

Presented by: Thomas Haas, DO, Mercy Health Systems, Inc.

This presentation will highlight the use of tumor markers in serum chemistry, and their relationship to the diagnosis and monitoring of patients with malignant disease. Tumor markers are molecules occurring in blood or tissue that are associated with cancer, and whose measurement or identification is useful in patient diagnosis or clinical management.

The ideal marker would be a "blood test" for cancer in which a positive result would occur only in patients with malignancy, one that would correlate with stage and response to treatment, and that is easily and reproducibly measured.

No tumor marker now available has met this ideal, but development and discovery continues in the use of these markers for clinical use. This presentation will explore the use of common markers such as CA-125, Carcinoembryonic Antigen (CEA), Alpha-FetoProtein (AFP), CA 72.4, CA 15.3, CA19.9, Prostate Specific Antigen (PSA), and a variety of other enzymes and proteins now in use for the diagnosis and monitoring of malignancy.

WS# 24 FISH TECHNOLOGY FOR DIAGNOSTIC APPLICATION – ITS IMPORTANCE AND ITS RELEVANCE IN THE HISTOPATHOLOGY LABORATORY

Saturday, Aug 29, 2015; 3:00 PM - 4:30 PM

Clinical: Molecular

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Joseph Vargas, MS, HTL(ASCP), Biocare Medical, LLC; David Tacha, HTL(ASCP), PhD, Biocare Medical

Tissue-based testing of tumors has evolved from serving a primary diagnostic purpose to providing additional genetic information about prognosis, or the likelihood a particular cancer will respond to specific therapeutic agents. Fluorescence in situ hybridization (FISH) analysis is now widely used by pathologists to detect neoplastic genomic rearrangements of clinical importance. A significant advantage of FISH is that it may be performed on standard formalin-fixed paraffin-embedded (FFPE) sections. This presentation will provide an overview of common FISH technologies applied to lung, breast and prostate tumors. An overview on different kinds of probe technology, such as 2- and 4-color, break-apart, deletion and amplification probes, will be presented. Technical and troubleshooting protocols will also be presented. A novel DNA probe design that minimizes the effect of sectioning losses or “nuclear truncation” artifacts when scoring FFPE tumors for suppressor gene deletions will be discussed.

WS# 30 OPPORTUNITIES TO GAIN KNOWLEDGE THROUGH AUTOMATED MICROSCOPY AND IMAGE ANALYSIS

Saturday, Aug 29, 2015; 3:00 PM - 4:30 PM

Clinical & Veterinary/Research: Molecular

Level: Advanced Type: Workshop Contact Hours: 1.5

Presented by: Joseph Trask, The Hamner Institutes for Health Sciences

The innovation and recent modernization of advanced cell and tissue based microscopy techniques and labeling technologies have provided insights into the underlying mechanisms to identify biomarkers for diseases and understanding the mode of action of therapeutic drugs. While the number of biological indicators or probes to phenotype a disease state is often limited to basic chromophore probes of 2-3, the promise of multiplexing 3-4 or more biomarker probes using fluorescent approaches can provide not only additional knowledge into the biological mechanisms but reduce the amount of tissue or

cells required to make equivalent measurements. In this workshop, it is the goal to inform the audience with a brief introduction to the current state of automated wide-field and confocal microscopy instrumentation, how they work to capture images of cells and tissue, and the supporting infrastructure requirements. Secondly, we will focus on automated computer-assisted image analysis tools to make measurements and the commonly used output features that describe the phenotypic characterization of the model. Additional this will include a description of the opportunities to multiplex multiple probes in an individual sample tissue to make measurements at the single cell level. The final part of the workshop will be based on assay method development tools and techniques used in automated microscopy to validate a labeling procedure or assay for testing unknowns in a non-GLP research setting including the challenges and caveats of working with fluorescence in tissues and tips to help overcome nuisance autofluorescence.

WS# 34 DETECTION OF GENE ALTERATIONS IN CANCER: IS THERE A ROLE FOR IMMUNOHISTOCHEMISTRY IN THE MOLECULAR ERA?

Sunday, Aug 30, 2015; 8:00 AM - 9:30 AM

Clinical: Molecular, Immunohistochemistry

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Richard Cartun, PhD, Hartford Hospital

Detection of gene mutations and rearrangements in patients' tumors is essential for selecting targeted therapies in our changing world of “Personalized Medicine”. These tests are most often performed in the molecular and cytogenetics laboratories in large health care institutions or sent-out to reference laboratories. Today, commercially-available, gene mutation-specific and fusion protein monoclonal antibodies make it possible to detect these alterations in formalin-fixed, paraffin-embedded tissues using immunohistochemistry. This presentation will cover alterations seen in the following genes: ERBB2, KRAS, ALK, EGFR, ROS1, IDH1, ERG, and NUT. Advantages and disadvantages of immunohistochemical detection compared to traditional methods for detecting gene alterations will be examined. Optimization and validation for some of these exciting new monoclonal antibodies will be discussed.

MOLECULAR ~ CONTINUED

WS# 41 PRACTICAL ASPECTS OF FLUORESCENT IN SITU HYBRIDIZATION (FISH) METHODOLOGY

Sunday, Aug 30, 2015; 1:00 PM - 4:30 PM

Clinical & Veterinary/Research: Molecular

Level: Intermediate Type: Wet Contact Hours: 3

Presented by: Tyler Hendershot, Dako an Agilent Technologies Company; Theresa Burchette, Dako, an Agilent Technologies Company

Fluorescent in situ hybridization (FISH) assays, which were once performed in specialized laboratory departments, are increasingly becoming a more routine aspect of the pathology laboratory. This, in part, is due to their application as companion diagnostic tests, standardization of kit components, and automated FISH assay instrumentation. It is therefore necessary that the lab personnel have a greater understanding of the methodology of performing a successful FISH assay, the components of the assay and the advantages and limitations of FISH testing. A greater appreciation for recent advances in the technology will also assist in understanding of how FISH testing is an integral part of a patient's case evaluation. To this end, during the hands on FISH workshop participant will have the opportunity to execute a manual FISH assay in an interactive learning environment that is aimed to build on basic knowledge of molecular testing. The workshop agenda will include setting up a FISH assay, lecture and question and answer while the samples are hybridizing and ending with a microscopic review of the hybridized slides. Setting up the assay will start with a brief protocol introduction including the reagent and equipment used to successfully perform the assay. During the lecture we will discuss relevant aspects of molecular biology and cytogenetics, a more detailed look at the protocol steps and their purpose, and the various types of FISH probes and their utility. We will also discuss common problems that may arise while working with FISH tests and troubleshooting those problems. The lecture will end with a question and answer session where participants will be encouraged to share their previous experience with molecular testing among the group and ask questions to the presenters. We will review the slides under fluorescent microscopy and discuss the results

WS# 54 SEQUENCING TECHNOLOGY IN MOLECULAR DIAGNOSTIC

Monday, Aug 31, 2015; 8:00 AM - 9:30 AM

Clinical & Veterinary/Research: Molecular

Level: Basic Type: Workshop Contact Hours: 1.5

Presented by: Manuel Montesinos-Rongen, PhD, University Hospital of Cologne

Diagnosis and therapy stratification are determined by clinical data, histopathology, and molecular diagnostic. The field of molecular diagnostic has dramatically changed, especially regarding sequencing technologies, starting with Sanger sequencing, over pyro sequencing, up to next generation sequencing. Participants will be able to select appropriate DNA isolation/enrichment procedures, describe the basic mechanisms, and discuss common pitfalls for a given sequencing technology.

WS# 63 DAMAGE TO DNA AND RNA EXTRACTED FROM OCT- EMBEDDED TISSUE

Monday, Aug 31, 2015; 1:00 PM - 2:30 PM

Veterinary/Research: Molecular

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: April Watanabe, Translational Genomics Research Institute

Optimal Cutting Temperature compound (OCT) is a tissue-embedding medium widely utilized in histopathology for storage and cryosectioning, a common procedure used for quick microscopic analyses in oncological surgery. The Macromolecular Analysis & Processing Center (MAPC) at TGen and histopathology labs all over the world frequently use OCT-embedded tissue to make slides of specimens and perform various molecular analyses, making OCT a valuable tool in research, diagnosis, and treatment of disease. However, some researchers have observed problems with downstream assays involving OCT-embedded tissue, perhaps resulting from contamination and/or degradation of nucleic acids induced by OCT. We compared the quality of DNA and RNA extracted from OCT-embedded and fresh-frozen tissue to investigate whether OCT has significant detrimental effects on downstream analyses. Surgical excisions of squamous cell carcinoma (SCC) and basal cell carcinoma (BCC) were split in half and stored at -80C both with and without OCT. Different brands and color types of OCT were also tested. DNA and RNA were extracted from the 10 micron scrolls of OCT-embedded tissue and 30mg of their

fresh-frozen counterparts. Each nucleic acid sample was then analyzed for concentrations and purity with the NanoDrop ND-1000 Spectrophotometer, Agilent Bioanalyzer 2100, and the Qubit Fluorometer 2.0. Preliminary data obtained indicated consistent trends of higher contamination in DNA and RNA extracted from OCT-embedded compared to fresh-frozen ones. We further validated the findings and I will present the data in this workshop.

WS# 75 HIGH VOLUME LASER CAPTURE MICRODISSECTION FOR USE IN NONCLINICAL RESEARCH: TIPS AND TRICKS FOR STREAMLINING CRYOTOMY, STORAGE, STAINING, COLLECTION, AND PROCESSING FOR DOWNSTREAM APPLICATIONS

Monday, Aug 31, 2015; 3:00 PM - 4:00 PM

Veterinary/Research: Molecular

Level: Basic Type: Workshop Contact Hours: 1

Presented by: Julie Stevens, BS, HTL (ASCP), Bristol-Myers Squibb

Laser Capture Microdissection (LCM) is a technique for obtaining individual cells of interest from histologic tissue sections for molecular analysis. High volume LCM studies for animal-based research can require collection of samples from over 100 animals, compared to traditional gene expression studies that may evaluate only subsets of animals or tumors from individual patients. Scaling up for timely collection of high numbers of LCM samples for RNA evaluation/analysis can be a daunting challenge primarily because the LCM for each individual sample must be completed in a limited time frame to prevent RNA degradation. This workshop demonstrates one method for collection of large numbers of LCM samples, while maintaining sample integrity and limiting bias caused by multiple treatment groups, sex differences, tissue handling and storage time, potential RNA degradation, reagent exhaustion, and resource (personnel and/or equipment) considerations. Many of the "lessons learned" from unforeseen challenges and issues associated with LCM sample collection during method development are discussed in this workshop, which should result in increased sample collection efficiency when large numbers of samples are necessary for meeting study objectives.



WS# 80 CLINICAL UTILITIES OF MICRORNA ISH IN DETECTION OF CANCER OF UNKNOWN PRIMARY AND UNDIFFERENTIATED TUMORS

Tuesday, Sep 1, 2015; 8:00 AM - 9:30 AM

Clinical & Veterinary/Research: Molecular

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Takashi Yamagami, BioGenex

MicroRNAs (miRNAs) are short, non-coding RNAs involved in post-transcriptional regulation of gene expression. Dysregulation of miRNA is correlated with cancer formation. MiRNAs are also believed to have tissue and/or cancer type specific expression. MiRNAs can be classified as tumor suppressor miRNA and oncomiRs depending on their cell/tissue type specific expression. Increasing number of evidences are indicating the potential roles of miRNA in early diagnosis of cancers. Due to tumor type and cellular type specific expression, miRNAs are also emerging as potential tools for identifying origins of cancer of unknown primary (CUP). There are PCR-based methods available to quantify the miRNA expression, however, histological information is lost during the isolation of miRNA. In situ detection of miRNA (miRNA ISH) is a robust technology that allows the visualization of miRNA in the histological context. miRNA ISH not only provides visualization in the histological context but also imparts cell type specific expression. As miRNAs are only 22 nucleotide long, detection of these short molecules by ISH without background requires optimized probes and reagents. The clinical utilities of miRNA ISH in detecting CUP and/or tumors that cannot be classified based on IHC will be presented: 1) Differentiation of lung squamous cell carcinoma from adenocarcinoma; 2) Differentiation of cholangiocarcinoma from pancreatic ductal adenocarcinoma; 3) Detection of BRCA positive from sporadic breast cancer; 4) Detection of different grades of prostate cancer.

MOLECULAR ~ CONTINUED

WS# 88 LASER CAPTURE MICRODISSECTION: SETTING UP AN LCM CORE LABORATORY

Tuesday, Sep 1, 2015; 1:00 PM - 4:30 PM

Clinical & Veterinary/Research: Molecular, Specialties

Level: Intermediate Type: Workshop Contact Hours: 3

Presented by: Yelena Golubeva, PhD, HT(ASCP), Leidos Biomedical Research, Inc.; Andrew Warner, MS, Leidos Biomedical Research, Inc. Lawrence Sternberg, Leidos Biomedical Research, Inc.

Laser Capture Microdissection (LCM) has become invaluable in biomarkers discovery, monitoring disease onset and progression, and in the development of personalized medicine. Incorporation of a laser capture microdissection core into a traditional histopathology laboratory is therefore highly desirable. However, combining traditional pathology with a new task of preserving tissue molecular integrity for subsequent molecular studies presents challenges. This workshop will present a proven approach for developing a functional LCM Core group within a traditional histopathology laboratory. Topics will include equipment choice, sample and material handling and storage, digital imaging as part of LCM workflow, personnel training, troubleshooting, and technical development. LCM protocols designed for LCM core will be provided to the participants.

WS# 97 “MOLECULAR” NECROPSY: COLLECTION OF VETERINARY RESEARCH SAMPLES FOR HIGH QUALITY RNA/DNA/PROTEIN RETRIEVAL

Wednesday, Sep 2, 2015; 8:00 AM - 11:30 AM

Veterinary/Research: Molecular, Techniques & Fundamentals

Level: Intermediate Type: Workshop Contact Hours: 3

Presented by: Andrew Warner, MS, Leidos Biomedical Research, Inc.; Tamara Morgan, HT(ASCP), Leidos Biomedical Research, Inc. Yelena Golubeva, PhD, HT(ASCP), Leidos Biomedical Research, Inc.

Animal research frequently combines traditional pathology with molecular techniques including high-through put analysis of RNA, DNA, proteins, and specialized enrichment techniques such as laser capture micro dissection. However, the need for simultaneous delivery of quality histological preparations for pathology evaluation (H&E, special stains, IHC) as well subsequent genomic and proteomic studies impose challenges upon traditional methods of tissue collection. Quality of isolated material is critical for informative and reproducible downstream molecular analysis and discovery of disease biomarkers. This workshop will present methods for adult and embryonic rodent “molecular” necropsy in the context of a routine pathology laboratory environment. The focus will be on the practical adaptation of routine necropsy procedures and troubleshooting to facilitate molecular integrity of tissues collected for mouse model research. Participants will learn reliable, systematic, approaches for the preservation of RNA and DNA and receive detailed protocols for nuclease-free necropsy, use of RNAlater, sample handling and storage, homogenization, macro/micro scale RNA/DNA extraction, freezing, fixation, trimming, processing and paraffin embedding of “molecular” sample.



WS# 99 WESTERN BLOT EVEN MORE EXCITING THAN A WESTERN MOVIE

Wednesday, Sep 2, 2015; 8:00 AM - 11:30 AM

Clinical & Veterinary/Research: Molecular

Level: Basic Type: Workshop Contact Hours: 3

Presented by: Melanie Von Brandenstein, PhD, Institute for Pathology

Western blot even more exciting than a Western movie The isolation of proteins can be done by several different ways. In general, proteins can be isolated either from the nuclear fraction, the cytoplasm or both together, the latter called total protein extraction. The nuclear fraction e.g. is important regarding proteins involved in the transcription process. Nevertheless, it is always necessary to use a quantification method before loading the SDS-PAGE to assure that the same amount of protein is loaded in each well. Here it is important to use the right method (Bradford, BCA, etc.). Furthermore, to perform densitometry analysis an adequate housekeeping protein must be used. During the workshop the different steps performing a successful Western blot will be shown. We will start with the protein isolation, the different quantification methods, the preparation of the SDS-PAGE, the different Buffers, the different blotting methods, the incubation of the membranes. And finally we will discuss the main, as well as the unlikeliest pitfalls.

WS# 104 RNA AND PROTEIN: WHAT'S THE CONNECTION? HOW TO DEMONSTRATE THE CONNECTION IN THE LABORATORY.

Wednesday, Sep 2, 2015; 1:00 PM - 2:30 PM

Clinical & Veterinary/Research: Molecular

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Terra Wineman, HTL(ASCP)cm, Novus International

This workshop will review the steps necessary to preserve ribonucleic acid, compare spin column purification with magnetic bead purification, cDNA synthesis, and qRT-PCR. After analysis of gene transcription is analysis of gene translation. In other words is the RNA that is being generated being used to make the associated protein? This workshop will compare and contrast IHC and western blot techniques. Can you use the IHC antibody when probing a western blot membrane? Maybe yes, maybe no, we will also review antibody datasheets and answer the question, "what is this thing telling me?" This workshop will also look at the products available in the molecular industry to complete these tasks. Finally the workshop will review how these techniques are being used in the clinical pathology world.



REGULATIONS

WS# 19 OH MY! WHAT DOES CLIA AND CAP WANT DURING AND AFTER A INSPECTION.....

Saturday, Aug 29, 2015; 1:00 PM - 2:30 PM

Clinical: Regulations

Level: Basic Type: Workshop Contact Hours: 1.5

Presented by: Kathleen Dwyer, HT(ASCP), Quest Diagnostics; Debra Siena, HT(ASCP)QIHC, Statlab Medical Products

Preparing for CLIA and/or CAP inspections can be stressful. Trying to understand what each of these regulatory agencies want prior to the inspection, during the inspection and after the inspection can be confusing. This workshop will help the attendees understand how to prepare for a CLIA/CAP inspection, what the inspectors are looking for during the inspection and finally the correct and most efficient way to respond to any finding (deficiencies or recommendations) along with expected timelines by CLIA and/or CAP to receive the responses. During this workshop the speakers will take the audience through: 1) What is required of the laboratory when CLIA and/or CAP notifies them of an inspection 2) Preparing documentation and paperwork prior to the inspection 3) Identifying the TOP 10 deficiencies cited by CLIA and/or CAP and what documentation is needed for compliance 4) Summation and what questions to ask 5) Responding to deficiencies and/or recommendations.



scoping out the project, determining timelines, determining budget, writing a proposal, working with the vendor and implementing the project. Special emphasis is given to what needs to be done to improve operations before the project starts, interfacing with staining instruments and staff training. The presentation is vendor-agnostic and can be applied to any system.

WS# 26 IMPLEMENTATION OF A BARCODING SYSTEM IN THE PATHOLOGY DEPARTMENT

Saturday, Aug 29, 2015; 3:00 PM - 4:30 PM

Clinical & Veterinary/Research: Regulations, Leadership

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Tim Morken, BA, HTL, EMT, UC San Francisco Medical Center

Barcoding specimen and materials tracking in the Histology laboratory has been convincingly proven to improve patient safety by avoiding common mislabeling mistakes. Barcoding also allows precise tracking of all materials and measurement of workflow down to the minute which can help you manage the work much more effectively. You want to do it but don't know where to start or what it involves. This presentation reviews the entire process from the initial decision to implement barcoding to choosing a vendor,

WS# 45 2015 CPT CODING AND COMPLIANCE

Sunday, Aug 30, 2015; 1:00 PM - 4:30 PM

Clinical: Regulations, Leadership

Level: Intermediate Type: Workshop Contact Hours: 3

Presented by: Pamela Younes, MHS, HTL(ASCP)PA, CPC, UT Medical School Houston

Anatomic pathology relies on the expertise of its pathologists to provide the correct CPT code for the service provided. This workshop is designed to provide an overview and history of the CPT codes, and how to apply them. We will also discuss how to audit the process, and review the CPT codes and their application. The workshop will review the changes for 2015.

WS# 53 GROSS PATHOLOGY DATA ENTRY IN PRECLINICAL TOXICOLOGIC STUDIES IN A GLP ENVIRONMENT

Monday, Aug 31, 2015; 8:00 AM - 9:30 AM

Veterinary/Research: Regulations, Techniques & Fundamentals

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Catherine Euler,BS, HTL(ASCP)QIHC, Bristol-Myers Squibb

Drug safety evaluation requires accurate assessment of pathology endpoints, including accurate capture of gross necropsy findings, to assess the safety of pharmaceutical compounds and potentially provide support for future human clinical trials. The routine processes of identifying gross findings, correlation with clinical observations, organ weight measurement, differences in thresholds of data entry personnel, and photography of gross specimens are some of the topics that typically must be addressed at the necropsy stage of toxicology studies. An overview of these topics will be discussed in the context of a GLP laboratory environment.

WS# 69 RISK MITIGATION STRATEGIES IN BIOSAMPLE MANAGEMENT

Monday, Aug 31, 2015; 3:00 PM - 4:00 PM

Clinical & Veterinary/Research: Regulations, Safety

Level: Basic Type: Workshop Contact Hours: 1

Presented by: Jim Golz, FileVault

This presentation will detail useful methodologies for risk mitigation for managers of large volumes of samples. The presenters currently manage more than 30,000,000 blocks and slides for pathology operations, moving more than 50,000 samples between locations each month. They will speak to the day-to-day challenges involved in the design and operation of robust sample management systems. The discussion will cover chain of custody from accessioning to destruction, including communication, information systems, liability concerns, and the movement and storage of biosamples. This is a practical presentation designed for those seeking solutions for security, accountability, compliance and litigation concerns related to their large volumes.

WS# 64 VALIDATION AND VERIFICATION OF ANTIBODIES IN IHC

Monday, Aug 31, 2015; 1:00 PM - 2:30 PM

Clinical: Regulations, Immunohistochemistry

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Sheron Lear,HT(ASCP)HTL, QIHC(ASCP), CPA Lab

Is your lab following the latest CAP, CLIA and CMS guidelines for validation of antibodies prior to use on patient specimens when making a diagnosis? Are you verifying that each new lot number and antibody and shipment to shipment of an antibody stains identical to the last lot number or shipment? How many cases/slides need to be tested to validate that an antibody is performing as it should? When conditions change, pretreatment, clones, detection systems, how much testing is necessary? Are you checking your IHC stainers to maintain consistency and high quality? What do I do if I have weak staining on one instrument and intense staining on an identical instrument? This workshop will include a discussion of managing the data using spreadsheets and data from the IHC instrument.

WS# 81 UNDERSTANDING THE CHANGES IN REIMBURSEMENT AND MANAGING THROUGH THEM

Tuesday, Sep 1, 2015; 8:00 AM - 9:30 AM

Clinical: Regulations, Leadership

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Loretta Sayles,HT(ASCP), Sayles Lab Consulting

In an effort to cut national healthcare costs, a number of reimbursement cuts have been implemented since 2013. We will explore the effect of these changes on the AP market. 2015 brings additional changes to our business and more complicated reimbursement for pathology. We will discuss these changes and how to determine the effect on your laboratory. Lastly, we will look at solutions to help you through these market changes.

REGULATIONS ~ CONTINUED

WS# 89 ARE YOU A CONTROL FREAK?? DO YOU HAVE CONTROL OF YOUR PRE-ANALYTICS?

Tuesday, Sep 1, 2015; 1:00 PM - 4:30 PM

Clinical & Veterinary/Research: Regulations

Level: Basic Type: Workshop Contact Hours: 3

Presented by: Tanya Ewing-Finchem, HT(ASCP)QIHC, Ventana Medical Systems, Inc.; Robert Lott, HTL(ASCP),

As laboratories continue to perform and compete for business, and as new advances are made in the histology field and advanced staining, College of American Pathology (CAP) and American Society of Clinical Oncology (ASCO) will continue to require more and more standardization. Are you and your lab ready for all these changes? Let's take a look at your processes and how standardization could change those in the future. In this session we'll discuss the top sources of variation in pre-analytical processes and improvements to work toward standardization. These areas will include Collection and Handling, Fixation, Tissue Processing, Post Processing Actions (Embedding, Microtomy, slide drying, Storage of cut slides and paraffin blocks). The areas and changes to them will affect the testing that follows, i.e. H&E, Special Stains, IHC and ISH. Participants will be engaged in the discussion and receive information on the latest attempts to bring standardization to Anatomic Pathology.

WS# 105 QUALITY MANAGEMENT: OBJECTIVES AND DREAMS

Wednesday, Sep 2, 2015; 1:00 PM - 2:30 PM

Clinical: Regulations, Leadership

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Deborah Duckworth, Johns Hopkins Hospital; Anita Hopkins-Morris, Johns Hopkins Hospital

Quality management is crucial to the success of a business and must receive constant attention in order to be successful. This presentation is designed to help implement quality management programs to identify weaknesses, faults, areas for improvement and strengths. Attendees will learn how to approach issues and have the ability to set standards, make adjustments as needed and to offer greater value overall to their patients. Although the approach to solving quality issues varies with different programs and institutions, the goal remains the same—to create a high quality process and a high-performing staff that is able to meet and exceed internal and external customer expectations. This interactive workshop will provide an opportunity to discuss successes and challenges in your workplace relating to quality management.



SAFETY

WS# 8 THE SWEET WORKSHOP: SMART WORKING ENVIRONMENT ERGONOMICS TRAINING

Saturday, Aug 29, 2015; 8:00 AM - 11:30 AM

Clinical & Veterinary/Research: Safety

Level: Basic Type: Workshop Contact Hours: 3

*Presented by: Janet Minshew, HT(ASCP)HTL,
Specialized Histology Consulting, LLC*

Workplaces are stressful because workloads have increased, turn-around times are getting shorter and shorter, and qualified personnel are hard to find. Most laboratories have multiple employees who share lab space and equipment, but there are many factors that determine how the work environment will affect different individuals. We've advanced from manual to computerized data entry, but there isn't always a comfortable spot to put the keyboard. Marvelous equipment is available to automate repetitive tasks, but a lot of it is big and it's making the workspace even more crowded. Many of these changes, even the ones that we think of as small, have impacted the delicate ergonomic balance in histology labs and they are sending workers home at night with aches and pains they never had before. Let's take a look at basic ergonomic principles and some practical ideas to make ergonomic improvements in this very dynamic workplace.

WS# 36 EMERGING AND RE-EMERGING INFECTIOUS DISEASE AND ZOOSES

Sunday, Aug 30, 2015; 8:00 AM - 9:30 AM

Clinical & Veterinary/Research: Safety

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Richard French, DVM, PhD, Becker College

The interaction between human and animal health is not a new phenomenon. However, the scope, scale, and world-wide impact of zoonoses we are facing today are unprecedented. During the past 20 years, at least 30 new diseases have emerged, for many of which there is no treatment, cure or vaccine, or the possibility of effective prevention or control. In addition, the uncontrolled and inappropriate use of antibiotics has resulted in increased antimicrobial resistance and is seriously threatening drug control strategies against such common diseases as ebola, tuberculosis, malaria, cholera, dysentery and pneumonia. The unprecedented impact of globalization, industrialization,

restructuring of agricultural systems and consumerism, among others, have certainly had an impact. Also of significance and with numerous examples, world climate changes are playing a role. Most of the recent emerging diseases have an animal origin, and almost all of them have zoonotic potential. These diseases must therefore be addressed through coordinated actions between animal and public health authorities. This lecture covers issues and recent findings on a number of emerging diseases and disease outbreaks. Where do you live?

WS# 46 CREATING A SAFETY CULTURE

Sunday, Aug 30, 2015; 1:00 PM - 4:30 PM

Clinical & Veterinary/Research: Safety

Level: Basic Type: Workshop Contact Hours: 3

*Presented by: Maureen Doran, HTL(ASCP), Saffron Scientific Histology Services;
Erik Talley, MS, Weill Medical College of Cornell University*

What is "a safety culture"? It can be described as an atmosphere where the number one priority is safety and health. It consists of shared beliefs, practices and attitudes that exist at an establishment. Why would you want to develop a safety culture? It has been determined that the single greatest impact on accident reduction in any process is a strong safety culture. This workshop will review recent serious laboratory accidents that led the US Chemical Safety Board to investigate laboratory safety. Their findings as well as other cases will be reviewed. We will discuss what factors in a workplace contribute towards establishing a good safety culture. Evaluating event data trends to implement improvements in areas such as processing, microtomy and staining will be covered. This session will provide an opportunity to address strategies to reduce or eliminate risky or dangerous practices. Establishing a strong safety culture brings all levels within the organization together to work on a common goal. The benefits are typically lower accident rates, decrease employee turnover and absenteeism resulting in higher productivity. Health and safety offers significant benefits to the histology laboratory staff and creates a higher level of quality within the institution.

SAFETY ~ CONTINUED

WS# 66 SAFE HANDLING OF CJD AND PRIONS IN THE HISTOLOGY LABORATORY

Monday, Aug 31, 2015; 1:00 PM - 2:30 PM

Clinical & Veterinary/Research: Safety

Level: Basic Type: Workshop Contact Hours: 1.5

Presented by: Konstance Zeitner, HT(ASCP)HTL, SLS, Nebraska Medical Center

Does your lab staff panic when a pathologist walks into the lab and says “A suspected CJD specimen will be here soon. Please process it and give me a couple H&E slides”? All techs know that CJD is a prion disease and prions are infective proteins that cannot be killed with formaldehyde, alcohol, bleach or autoclaving methods. They know that they must use safe practices to handle the tissue but are not sure they have the knowledge to do so. In this workshop we will discuss safe tissue handling practices that will protect the grossing, autopsy and histology staff while they are working with tissue possible containing prions. Methods for grossing, processing, sectioning, staining, cleaning of equipment and disposal of non-reusable items will be presented. We will also discuss the necessity of good communication between the surgeon, OR staff, pathologists, techs and hospital safety and infection control. In addition, information will be presented for getting a CJD diagnosis on the specimen if your lab really does not want to handle the specimen.

WS# 67 ANALYSIS OF PATIENT SAFETY METRICS IN HISTOPATHOLOGY LABORATORY WORKFLOW SYSTEMS

Monday, Aug 31, 2015; 3:00 PM - 4:00 PM

Clinical: Safety, Leadership

Level: Intermediate Type: Workshop Contact Hours: 1

Presented by: Philip Branton, MD FCAP, BBRB/NCI

In successive reports over the past decade, the Institute for Medicine has emphasized real or potential errors as significant problems in the pathology laboratory as a principle threat to patient safety. In the past year, an international panel of 12 laboratory clinical and research experts from academia, government, and industry, was organized as a safety advisory board for industry. Metrics used by panel members in their own laboratories

were integrated into an aggregate listing of 49 metrics for the purpose of establishing a standard for future worldwide studies and quality improvement systems. Ranking of the 49 metrics was performed by all members with respect to possible patient risks utilizing an internet-based electronic survey. Metrics were divided by vote into 3 categories: high risk (28), low risk (12), and intermediate risk (9). Subsequent analysis revealed that those of low risk related primarily to work-flow measures for efficiency (e.g., turn-around time, case assignment to pathologist). High risk metrics related to critical manual stages involving histotechnologist input (patient-specimen mismatch, incorrect section on slide). Intermediate risk metrics are more heterogeneous, including block orientation, wrong sectioning protocol, incorrect special stain ordered, or incorrect color-coded tissue cassette. A discussion of all the metrics will be presented with audience participation encouraged. Those which involve direct technologist involvement will be emphasized and illustrated. Additionally, quality improvement concepts for ways to reduce risks to patient safety will be outlined. It is hoped that dissemination of these internationally-derived metrics will set the stage for improved patient safety methods in histopathology laboratories.

WS# 100 BEST PRACTICES FOR EMERGENCY PREPAREDNESS IN A HAZARDOUS ENVIRONMENT

Wednesday, Sep 2, 2015; 8:00 AM - 11:30 AM

Clinical & Veterinary/Research: Safety

Level: Basic Type: Workshop Contact Hours: 3

Presented by: Angela McNabola, HT(ASCP)QIHC, SLS, Bridgeport Hospital

In today's world, organizations must have a plan in place, as well as trained staff, to be the first responders in a hazardous or unexpected emergency situation. Whether it is to identify and contain a spill, or to perform decon procedures on victims as they approach the Emergency Department at a hospital, training at an awareness level is critical for all involved. Usually these first responders are not fire personnel or police. If you are part of an emergency response team at your organization—especially at a hospital, thinking about starting one up, or just have an interest in learning the best practices as a first responder in an unplanned event, this is the workshop for you. There will be a discussion of various types of disasters and emergencies as well as the phases of emergency management, including the Incident Command System. Participants will learn how to perform a hazard risk assessments using various materials, and learn how to use their assessment to select and don and doff the appropriate personal protective equipment for the particular incident. Finally, there will be

a discussion of what makes up a DECON team and the plan that needs to be in place in order to have one at your work. This will be a review at the operations level training, especially for those in a health care setting.

WS# 106 SAFETY IN THE ANATOMIC PATHOLOGY LABORATORY

Wednesday, Sep 2, 2015; 1:00 PM - 2:30 PM

Clinical: Safety

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Dan Scungio, MT (ASCP), SLS, CQA (ASQ), Sentara

Working in the Histology lab and in the Autopsy Suite requires specialized safety training and skills. Learn how to routinely spot safety hazards and how to take action on them as a part of your overall lab safety improvement process. If you are a lab safety professional and you oversee these areas, this session will clearly inventory the distinct safety pitfalls you need to be aware of and how to avoid them.



SPECIALTIES

WS# 20 THE SKELETONS IN OUR CLOSET: LEARNING FROM OUR MISTAKES IN BONE HISTOLOGY

Saturday, Aug 29, 2015; 1:00 PM - 2:30 PM

Veterinary/Research: Specialties, Techniques & Fundamentals

Level: Basic Type: Workshop Contact Hours: 1.5

*Presented by: Rose Webb, HTL (ASCP), Yale School of Medicine;
Nancy Troiano, Yale University*

Experience is simply the name we give our mistakes. -Oscar Wilde Let us show you the skeletons in our closet. In this troubleshooting workshop we will go through each step in the preparation of hard tissue including grossing, fixation, processing, embedding and staining. We will cover various embedding methods including methyl methacrylate, glycol methacrylate, paraffin and cryosectioning. We will provide examples that didn't go as planned, and then discuss how we identified and resolved the issues. We encourage open discussion, feel free to bring along some of the skeletons in YOUR labs closets, and we can troubleshoot the problems together.

WS# 37 FROM MICROBE TO MICROSCOPE - HISTOLOGY OF INFECTIOUS AGENTS

Sunday, Aug 30, 2015; 8:00 AM - 9:30 AM

Clinical: Specialties, Techniques & Fundamentals

Level: Basic Type: Workshop Contact Hours: 1.5

Presented by: Philip Bryant, PhD, ABM University Health Board

Infection is the invasion of the body by disease-causing agents collectively known as microbes or microorganisms. Although these agents are typically bacteria, fungi and viruses in the routine laboratory, protozoa and helminths occur less frequently. Histological evaluation of tissue sections by the application of controlled staining methods is a simple way of identifying agents responsible for infection. For example, the Gram stain traditionally classifies bacteria as Gram positive or Gram negative depending on the staining reaction. More specifically, identification of the organisms responsible for tuberculosis can be achieved using an acid fast staining method such as Ziehl Neelsen. Similarly, positive recognition of fungi is possible using routine methods such as the periodic acid Schiff and methenamine silver. In viral infections such as rabies, inclusion bodies may appear within the cells during multiplication of

the virus. Although these are often visualized with hematoxylin and eosin (H&E) and other stains such as Giemsa, immunocytochemistry is the preferred method for identifying viruses. Medically important protozoa and helminths require the invasion of a suitable host to complete all or part of their life cycle and as such are termed parasites. While protozoa are associated with diseases such as amoebic dysentery and malaria, helminths such as the parasitic worms produce a global disease far exceeding that of malaria or tuberculosis by currently infecting over a billion people worldwide. In the laboratory, these medical parasites can be identified microscopically using a variety of methods such as the H&E and trichrome. This workshop will review the classification and pathological significance of infective agents that may be encountered in the histology laboratory. The selection, control and clinical application of methods used for identifying them will also be described. There will be an interactive question and answer session and open discussion will be encouraged.

WS# 47 FROM CALCIFIED TO DECALCIFIED BONE AND EVERYTHING BETWEEN

Sunday, Aug 30, 2015; 1:00 PM - 4:30 PM

Veterinary/Research: Specialties, Techniques & Fundamentals

Level: Intermediate Type: Workshop Contact Hours: 3

Presented by: Sarah Mack, University of Rochester; Mary Georger, University of Rochester Wilmot Cancer Center Nancy Troiano, Yale University; Rose Webb, Yale; Carol Bain Indiana University School of Dentistry

In this workshop, a panel will discuss the many types of hard tissue as well as a number of the different techniques used in collecting and analyzing hard tissue. "From Calcified to Decalcified Bone and Everything Between" will address the various techniques and methods used when working with hard tissue. Topics to be discussed include grossing, fixation, decalcification, processing, cutting and staining. Plastics (polymethyl methacrylate and glycol methacrylate), paraffin and frozen section topics are all included in this workshop. Troubleshooting will be the main emphasis of this presentation. Come ready with your questions! Audience participation is essential in this workshop.

WS# 55 ECONOMIC EFFICIENCY OF MODERN LASER BASED PLASTIC MICROTOMY

Monday, Aug 31, 2015; 8:00 AM - 9:30 AM

Clinical & Veterinary/Research: Specialties

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Heiko Richter, Rowiak GmbH

In modern university histology labs and CRO's, quality as well as cost- and time efficiency become more important to compete in the market. Especially the throughput of plastic embedded samples is a time consuming procedure and requires specialized and experienced technicians to perform sections with either microtomes or ground section technology. Quality of the cutting is limited when it comes to compact hard tissues or implants like metal stents in vessels, as ground section technologies are limited in section thickness. This workshop will demonstrate the abilities of laser based microtomy to increase the efficiency of lab procedures which results in significant higher sample throughput. Lasermicrotomy reduces the overall processing time per sample and also the effective time a technician has to work on it. Part of the procedure is semi-automated so the attention of the technician can focus on further tasks. We will describe the procedure of processing chosen samples by laser microtomy step-by-step and compare them to process times when using the classical technologies. Beyond, quality of sections and the savings in material will be considered in comparison to the classical methods. Thin sections of non-decalcified hard tissue for IHC can be generated in adequate thickness as well as thin sections of implanted vessels and heart valves for common stainings using laser based microtomy.

WS# 74 WEIRD MICRO: INTERESTING CASES FROM THE JOHNS HOPKINS CLINICAL LABORATORY

Monday, Aug 31, 2015; 3:00 PM - 4:00 PM

Clinical: Specialties

Level: Intermediate Type: Workshop Contact Hours: 1

Presented by: Paula Mister, Johns Hopkins Hospital Microbiology

Case presentations of unusual microorganisms, or pathogens from unexpected body sources, from specimens received in the Johns Hopkins Clinical Microbiology laboratory. This presentation will be interactive: the audience will participate in making the diagnosis from basic microbiological stains and tests, patient information, and other clues provided for each case. There will be brief discussion of methods, both old and new, for identification of these organisms.

WS# 83 THE A TO Z OF MOHS PROCEDURES:- THE LABORATORY PROCEDURES

Tuesday, Sep 1, 2015; 8:00 AM - 9:30 AM

Clinical & Veterinary/Research: Specialties, Immunohistochemistry

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Guy Orchard, PhD, MSc, FIBMS, Csci, Viapath; Mohammad Shams, Bsc, Msc, Viapath

Mohs services are expanding globally as the incidence of skin cancer continues to rise. Within the specialist discipline of Histopathology there exists the need to comprehensively understand the laboratory based technical issues required for optimal Mohs service provision. The level of proficiency and the technical dexterity required by laboratory staff is high and often requires long periods of concentration by those practicing the techniques and procedures. During this workshop several key topic areas will be covered which will include a historical background to the development of the technique from its earliest inception for the treatment of skin cancers in the late sixties to current practice. There will be presentations of each key process of the laboratory techniques covering tissue registration, tissue embedding, cryostat sectioning and staining. This will include the latest developments for the application of frozen section immunocytochemistry, encompassing antibodies such as Melan A for the investigation of lentigo maligna melanoma as well as antibodies MNF116 and AE1AE3 for the evaluation of squamous cell carcinoma and CD34 for the investigation of dermatofibrosarcoma protuberans. There will be an explanation of the equipment used and guidance on what pieces of equipment are key to good practice. An understanding of the artifacts encountered in Mohs procedures will be demonstrated with examples of what issues cause them and how to adapt your techniques to minimise their impact on tissue and section quality. An understanding of the health and safety risks with Mohs procedures will be given, along with identification of the key risk factors and also how to contain these and manage them effectively within the laboratory. There will also be coverage of Mohs developments in terms of professional requirements and procedures for the evaluation of competency for those practicing Mohs laboratory techniques. Finally coverage of future developments impacting Mohs will be discussed.



SPECIALTIES ~ CONTINUED

WS# 85 TISSUE MICROARRAYS: AN UPDATED LOOK AT THIS VALUABLE CLINICAL AND RESEARCH RESOURCE

Tuesday, Sep 1, 2015; 1:00 PM - 4:30 PM

Clinical: Specialties

Level: Intermediate Type: Workshop Contact Hours: 3

Presented by: Aprill Watanabe, Translational Genomics Research Institute

Widespread applications of tissue microarrays (TMAs) in both cancer research and clinical pathology offer a versatile and portable technology, and provide important clinical validation of genomics and proteomic findings. TMAs have become widely popular over the past 15 years and a common staple technology in translational cancer research. TMAs are also a proven tool in the clinical laboratory with histological applications for IHC standardization and optimization of novel antibodies by the simultaneous assay performance on hundreds of clinical samples in sequential TMA sections with wide utility for in-situ applications (ISH, FISH, CISH). TMAs can be composed of normal tissues, organ-specific neoplasias or be multi-tumor; they can also be designed to show disease progression, or be prognosis driven, depending on the questions asked. Sectioning and storage of the TMA slide is an important issue and requires specialized techniques for uniform preservation of antigens in tissue sections. Since TMAs can hold up to hundreds of pieces of information, it will take fewer runs to find the answers needed, thus speeding up the validation of candidate biomarkers in clinical specimens. Advances in digital imaging, for example whole slide scanning or image processing and database integration has helped foster telepathology opportunities for remote image analysis. There is a wide range of techniques and instruments to aid in the construction of the TMA.



WS# 90 RESIN PROCESSING? NO PROBLEM! - TECHNIQUES, TIPS, AND TROUBLESHOOTING THE PROCESSING AND SECTIONING OF RESIN EMBEDDED SAMPLES.

Tuesday, Sep 1, 2015; 1:00 PM - 4:30 PM

Veterinary/Research: Specialties, Techniques & Fundamentals

Level: Intermediate Type: Workshop Contact Hours: 3

Presented by: Philip Seifert, Schepens Eye Research Institute / MEEI; Kathryn Regan, HT(ASCP), CBSET, Inc. Susan Ryan, Genzyme-A Sanofi Company

This workshop will present methods, tips, and problem troubleshooting relating to the resin processing, embedding and sectioning of soft and hard tissue including mineralized bone, teeth, biomaterial and device implants (e.g. coated stents.) There are numerous histology and transmission electron microscopy (TEM) resin methods and formulations that provide a wide range of techniques for routine diagnostic and research purposes. Different types of resins (e.g. MMA, GMA, Spurr's, Epon, LRWhite) are available for utilization, each with advantages and limitations. Challenges will be discussed when determining the resin and sectioning method for hard tissues. Sectioning techniques (microtomy, ultramicrotomy and micro-grinding) that enable 100-um thick sections down to routine 5-um, semi-thin (1-um) and thin-sections (90-nm) for TEM of mineralized and implanted tissues will be presented. Specific problems and pitfalls, either technical or operational associated with certain resin embedding procedures will be examined. Particular emphasis will be given to methods for automated and manual processing, sectioning, and the troubleshooting artifacts to optimize staining results. Time will be given for interactive discussion and to address questions from participants.



WS# 102 BRAINTEASER: MURINE NEUROHISTOLOGY, PATHOLOGY AND HISTOTECHNIQUES

Wednesday, Sep 2, 2015; 8:00 AM - 11:30 AM

Veterinary/Research: Specialties, Techniques & Fundamentals

Level: Basic Type: Workshop Contact Hours: 3

Presented by: Katherine Gibson-Corley, DVM, PhD, DACVP, University of Iowa Carver College of Medicine; Allyn Lambertz, MS, University of Iowa

Tissues from the central nervous system can offer unique challenges to the histotechnologist. This is magnified when dealing with these same tissues from a mouse. From understanding the different regions of the brain and their functions to proper fixation and processing, working with these tissues can be daunting. The first part of this workshop will cover the basic gross anatomy and histology of the brain and spinal cord in the mouse with comparisons to human tissues. Participants will also be introduced to common background lesions in the central nervous system of mice. The brain and spinal cord are very susceptible to handling artifacts, so tissue handling techniques will be highlighted. The second part of this workshop will focus on key histotechniques for the murine nervous system, including appropriate fixation, processing, sectioning, special stains and important immunohistochemical assays.

WS# 107 THE BONE MARROW PUZZLE

Wednesday, Sep 2, 2015; 1:00 PM - 2:30 PM

Clinical: Specialties, Techniques & Fundamentals

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Amanda Moglebust, HTL(ASCP), QIHC, Seattle Cancer Alliance

Do you know what your pathologist is looking for in a bone marrow specimen? Why do they need aspirate and peripheral blood smears? What is learned from the flow cytometry? The goal of this workshop is to provide you with a broader understanding of bone marrow interpretation. Bone marrows are important procedures that often require testing in multiple laboratory departments to determine a complete diagnosis. Like the pieces of a jigsaw puzzle coming together to form a picture, morphology, flow cytometry data, and other specialized testing are combined to form one integrated diagnosis. In this workshop we will discuss bone marrow components and structure. Hematopoiesis, the production of blood cells in the bone marrow, will be described. We will also compare the morphology of smears to routine histology preparations of aspirate and biopsy materials. In addition the utility of immunohistochemistry and special stains will be discussed. The role of flow cytometry and cytogenetics will also be presented. The majority of the workshop materials will be bone marrow samples examined at a NCI-designated comprehensive cancer center.



TECHNIQUES/FUNDAMENTALS

WS# 1 CUTTING BRAIN THROUGH THICK & THIN

Saturday, Aug 29, 2015; 8:00 AM - 11:30 AM

Clinical & Veterinary/Research: Techniques & Fundamentals

Level: Intermediate Type: Wet Contact Hours: 3

*Presented by: Maureen Doran, HTL(ASCP), Saffron Scientific Histology Services;
Morgan Romaine, BS, University of IL-Diagnostic histology laboratory*

In this wet workshop we will examine cryo-preparation of neurological specimens in both research and diagnostic applications. In research it is not uncommon to cut frozen sections at 20-40u whereas most diagnostic neurological specimens are frozen sectioned at 5-10u. We will discuss specimen preparation, i.e., freezing protocols, apparatus and cryoprotectants. Attendees will have an opportunity to frozen section specimens at various thickness using different methods and tools. We will demonstrate options for handling both sections mounted on slides and free floats for IHC and CVA staining. Troubleshooting for freeze artifact, section non-adherence and uneven staining will be discussed.

WS# 4 GROSS DESCRIPTIVE PATHOLOGY

Saturday, Aug 29, 2015; 8:00 AM - 11:30 AM

Clinical & Veterinary/Research: Techniques & Fundamentals

Level: Intermediate Type: Wet Contact Hours: 3

Presented by: Richard French, Becker College

The participant will be presented with gross specimens from different species of animals including invertebrates and primates. The objective is to identify the organ/tissue, abnormalities and properly describe, provide a descriptive diagnosis, presumptive etiology and properly section the lesion(s) for histopathology. The session will include descriptive terminology with examples and case studies. The variety of specimens and species will challenge the participant in comparative anatomy and pathology.

WS# 2 FROM CALVARIA TO VERTEBRAE, HOW TO DEAL WITH RODENT BONE!

Saturday, Aug 29, 2015; 8:00 AM - 11:30 AM

Veterinary/Research: Techniques & Fundamentals

Level: Basic Type: Wet Contact Hours: 3

*Presented by: Mary Georger, University of Rochester Wilmot Cancer Center;
Sarah Mack, University of Rochester*

Working with rodent bone in a research setting can present a unique set of challenges! In this workshop we will address all areas of optimization for successful bone processing. The topics to be discussed in-depth will include fixation, decalcification, gross dissection, processing for both paraffin sectioning and frozen sectioning, routine and special stains uniquely used in the evaluation of bone, antibody selection, antigen retrieval and specific techniques used during the IHC staining. In the second half of the workshop we will have the opportunity for hands on sectioning of both paraffin and frozen tissue. We will encourage audience participation, and hope our attendees will bring some "problem protocols" with them so we can problem solve together!



WS# 9 PRACTICAL GASTROINTESTINAL PATHOLOGY FOR THE HISTOTECHNOLOGIST: THE GUT, THE STAINS AND THE RATIONALE

Saturday Aug 29, 2015; 8:00 AM – 11:30 AM

Clinical: Techniques & Fundamentals, Immunohistochemistry

Level: Intermediate Type: Workshop Contact Hours: 3

Presented by: Daniel Jondle, MD, Arizona Digestive Health Laboratory; Karen Lahti, HT (ASCP) QIHC, MLT, Arizona Digestive Health

The gastrointestinal tract is a unique organ system from the pathologist's and technologist's perspective. The main segments of the gastrointestinal tract that are biopsied in the outpatient setting include the esophagus, stomach, duodenum, ileum, colon and rectum. Each of these segments has unique histology and histopathology that will be reviewed. Pathologists routinely order histochemical and immunohistochemical stains on biopsies from the gastrointestinal tract, and technologists are frequently asked to assess the quality of these stains before they are given to a pathologist. The participants will be educated regarding the rationale for ordering particular stains in the different segments of the gastrointestinal tract. The participants will be taught how to assess the quality of these stains. The participants will also be educated regarding basic interpretation aspects of the stains from a pathologist's perspective. Also, the participant will be given strategies on how to troubleshoot different aspects of stains.

WS# 10 TROUBLESHOOTING YOUR H & E STAIN

Saturday, Aug 29, 2015; 8:00 AM - 11:30 AM

Clinical & Veterinary/Research: Techniques & Fundamentals

Level: Intermediate Type: Workshop Contact Hours: 3

Presented by: Ada Feldman, HT(ASCP)HTL, Anatech Ltd

Hematoxylin and eosin (H&E) is the primary diagnostic stain in anatomical pathology. Each step in tissue processing and staining procedures can affect the H&E's appearance and thus potentially interfere with the diagnosis. This presentation will help the histotech troubleshoot common problems and learn to identify whether the problems are caused by processing or staining protocols. Suggestions for remedies will be provided in light of restraints of choice of equipment, chemicals and time.

WS# 11 BROAD REVIEW OF ALL SPECIAL STAINS FOR CURRENT AND FUTURE CERTIFIED TECHNICIANS

Saturday, Aug 29, 2015; 8:00 AM - 11:30 AM

Clinical: Techniques & Fundamentals

Level: Basic Type: Workshop Contact Hours: 3

Presented by: Lin Bustamante, HT(ASCP), Texas A&M University; Rayen Gonzalez, HT(ASCP)

Special stains are one of the main topics covered in the HT (ASCP) exam. The two main purposes for this workshop is to show a full and comprehensive review of all the special stains and give some in-depth details of how to study for the HT (ASCP) exam. Information will be presented through the use of an organized powerpoint supported by blank note sheets to be filled during the presentation for selected special stains. Presentation will also include pictures of each special stain to encourage visualization of protocol. Extra study material support will be given with examples of flash cards, NSH note cards, and online practice test location. At the end of this workshop, with the material provided, the technicians will be able to screen and understand the most important information given for each special stain, to efficiently organize the material and learn the mechanism of each stain. Due to the large amount of special stains covered in the HT (ASCP) exam, this workshop will help to organize the material for easier comprehension for future certified technicians as well as a review for current certified technicians.



TECHNIQUES/FUNDAMENTALS ~ CONT.

WS# 21 ROUTINE RADIOGRAPHY AS PART OF THE PEDIATRIC AUTOPSY

Saturday, Aug 29, 2015; 1:00 PM - 2:30 PM

Clinical: Techniques & Fundamentals

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Lance Erickson, PA(ASCP)HTL, MB, Primary Children's Hospital

Routine whole-body radiographs are an essential part of the pediatric autopsy. The developing skeleton can have important information relative to the autopsy report. Bony anomalies are associated with many genetic disorders and disadvantageous developmental events. Often, subtle anomalies are missed or go unreported. The workshop will address specific changes and lesions to look for on radiographs. The developmental processes for axial skeletal formation will be discussed. Proposed implications for changes to the cervical-thoracic border will be presented along with data from a recent series of routine radiographs at the presenter's institution. The case for making these studies and findings part of a complete post mortem examination will be realized.

WS# 43 HISTOCHEMICAL STAINS IN DIAGNOSIS-VIEWS OF THE HISTOTECHNOLOGIST AND PATHOLOGIST

Sunday, Aug 30, 2015; 1:00 PM - 4:30 PM

Clinical & Veterinary/Research: Techniques & Fundamentals

Level: Basic Type: Workshop Contact Hours: 3

Presented by: Debra Siena, HT(ASCP)QIHC, Statlab Medical Products; William Grizzle, MD, PhD, University of Alabama at Birmingham

This workshop focuses on the use of special histochemical stains to solve specific diagnostic problems. Short Clinical histories will be presented and used to emphasize how specific histochemical stains are important diagnostically. The diagnostic problems presented in clinical histories will include chronic liver failure, chronic kidney failure, metastatic tumors of unknown origin, infections in immuno compromised patient and chronic diffuse lung disease. Special stains discussed with respect to solving these clinical problems will be Trichrome, silver stains to demonstrate reticulum, Periodic Acid Schiff's stain, Silver stains for basement membranes, and GMS for micro-organisms.

Issues to be discussed include how Immunohistochemical stains and special histochemical stains interact in solving diagnostic problems. We will also discuss staining issues with selected histochemical stains, for example, how improper oxidation of silver stains may result in high background staining or improper staining may interfere with interpretation of clinical results. Lastly, discussion will cover the importance of proper techniques, and positive control and negative controls as well as many common staining issues that may lead to incorrect diagnostic conclusions.

WS# 56 CANCER BY INHALATION – THE DANGERS OF ASBESTOS

Monday, Aug 31, 2015; 8:00 AM - 9:30 AM

Clinical: Techniques & Fundamentals

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Philip Bryant, PhD, ABM University Health Board

Asbestos is a naturally-occurring fibrous mineral that has been exploited since the Egyptian pharaohs used it for embalming. In modern times, it has a place in many industries such as construction on account of its insulation and heat resistant properties. However, breathing in asbestos dust is known to lead to diseases such as asbestosis, mesothelioma and lung cancer and in many industrialized countries, asbestos has been banned because of these health concerns. Workers most at risk of asbestos-related diseases are those who have extensive exposure to high levels of the mineral. Also, family members may be at risk through second-hand exposure to the dust at home. These diseases can take many years to develop, are incurable and have a poor prognosis and as such, international guidelines such as the Helsinki criteria have been established in order to determine whether the diseases are asbestos related. There is doubt as to whether any safe levels of exposure exist and predictions have shown that by 2030, as many as ten million people will die from asbestos-related illnesses. Histological evidence of asbestos inhalation is provided by the identification of fibers that may lie freely in the air spaces of the lungs or become embedded in the lining of them. These fibers usually become coated with a ferroprotein (asbestos bodies) and can be demonstrated using Perl's prussian blue. Also, the application of microscopic analytical techniques to demonstrate retained mineral particles in lung tissue can also provide information for understanding the relationship between occupational and environmental lung disease. This presentation will illustrate the various types, uses and regulation of asbestos and examine the health concerns of those at risk. The development and pathology of related lung diseases will also be described together with methods applicable to identification and analysis of the mineral in the histology laboratory.

WS# 61 SKIN BIOPSY STAINING FOR SMALL FIBER NEUROPATHY USING PGP 9.5 ANTIBODY

Monday, Aug 31, 2015; 1:00 PM - 2:30 PM

Clinical: Techniques & Fundamentals, Specialties

Level: Advanced Type: Workshop Contact Hours: 1.5

Presented by: Don Henderson, University of Rochester

Skin biopsies stained with the sensitive panaxonal marker anti-PGP 9.5 demonstrate intraepidermal fibers. This allows the visualization and quantification of unmyelinated nerve fibers. This simple and repeatable technique is a reliable method for the quantitation of small cutaneous sensory fibers. In addition, skin biopsies may be useful in assessing the course and spatial distribution of involvement in peripheral nerve disease. Many physicians are unfamiliar with the testing and are unsure where to send the specimens for testing. There are academic and commercial laboratories that offer this testing. This specialty testing requires 3 mm skin biopsies fixed in Zamboni or PLP fixative. The diagnosis of a Small Fiber Neuropathy is the result of a decrease in fibers crossing from the dermis into the epidermis. The fibers crossing the intraepidermal junction are counted and an Epidermal Nerve Fiber Density is determined. This staining is technically challenging in that it is a free floating immuno stain. Care needs to be taken with the fixation and shipping of the samples as over fixed or samples frozen in the fixative will look like neuropathy specimens due to technical issues. The goal of this presentation is to discuss the details of the collection, preparation, and staining of the specimens. By the end of the talk the participants will be able to understand the testing and determine how it can be incorporated into their laboratory.

WS# 65 GROSSING: A NEW INITIATIVE FOR A NEW GENERATION OF HISTOTECHS

Monday, Aug 31, 2015; 1:00 PM - 2:30 PM

Clinical: Techniques & Fundamentals

Level: Basic Type: Workshop Contact Hours: 0

Presented by: Elma Cortinas, Children's Medical Center Dallas; Michelle Lamphere, HT(ASCP), Children's Medical Center

Due to dwindling healthcare reimbursement and the rising cost of medical supplies and tests, this large metropolitan pediatric healthcare facility was forced to re-evaluate their resources and make their processes more efficient. Accordingly, the group investigated the possibility of utilizing existing histology technicians to develop an effective surgical pathology grossing

program without adding additional costs or workflow burden. This facility developed and implemented a program that trained existing personnel to perform gross examinations of a variety of tissue types without compromising quality and accuracy. In determining the personnel qualifications for grossing specimens, they followed the Clinical Laboratory Improvement Amendments (CLIA) guidelines for High Complexity Testing (HCT) personnel. In addition, they evaluated their resources to ensure that they had adequate staffing, physical space, equipment, and safety measures in place to implement the program. The facility designed and implemented an illustrated grossing guideline manual, dictation templates, written policies and procedures, and competency assessments. Finally, they ensured a pathologist was available to perform the didactic and practical training. This resulted in a successful implementation of an effective, quality grossing program that helped maintain consistency in the gross room. This initiative also provided professional and educational career growth opportunities for HCT personnel by adding a higher level of skilled value to their repertoire.

WS# 68 ALL ABOUT THOSE 'BROS: MOUSE EMBRYO HISTOLOGY 101

Monday, Aug 31, 2015; 3:00 PM - 4:00 PM

Veterinary/Research: Techniques & Fundamentals

Level: Intermediate Type: Workshop Contact Hours: 1

Presented by: Rebecca Fitch, MPH, HTL, University of Texas at Austin

Dealing with whole organism histology can be quite the challenge, especially when a day or even a few hours of development can warrant distinct protocols. Indeed, at early stages, mouse embryos require delicate handling but many protocols permit less attention later. Determining where efficiency wins over coddling takes much trial and error, but can save technicians significant time while producing publication worthy images. Knowing which techniques best apply to different developmental stages is, therefore, essential to collecting great data. We'll explore the world of mouse embryo histology from start (necropsy) to finish (imaging) and discuss factors that play a role at each stage of the process.

TECHNIQUES/FUNDAMENTALS ~ CONT.

WS# 73 IT COULD HAPPEN TO YOU: HEMATOXYLIN AND EOSIN STAINING ARTIFACTS

Monday, Aug 31, 2015; 3:00 PM - 4:00 PM

Clinical: Techniques & Fundamentals

Level: Basic Type: Workshop Contact Hours: 1

Presented by: Nicole Leon, HTL(ASCP), Children's Hospital of Wisconsin

This workshop will focus on troubleshooting artifacts that show up on H&E staining. There are so many variables in Histology that can lead to staining artifacts. It can take days, weeks and even months to resolve an issue. Patience is a virtue. Using specific examples I've witnessed recently, I will show stained slide artifacts and explain the process used to come to a resolution. After this workshop you will have a better understanding of troubleshooting and will know where to begin the next time a staining artifact shows up on your H&E slide.

WS# 78 OCULAR (EYE) STRUCTURES PRESERVING THE HISTOLOGY

Tuesday, Sep 1, 2015; 8:00 AM - 9:30 AM

Veterinary/Research: Techniques & Fundamentals

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Patricia Lewis, HT(ASCP), University of Florida

This workshop is lecturing on procuring ocular eye structures to identify, describe structural placement and understand the mechanism's within the eye for clinical diagnostics and/or research applications. Discussing; different fixatives, long and short ocular processing schedules, advantages of different embedding media's, and freezing techniques for ocular tissues. All of these structures (normal or abnormal) Anterior chamber, Bowman's membrane, Bruch's membrane, bulbar conjunctiva, canal of Schlemm, choroid, Angle-(ciliary body, ciliary muscle), cornea, corneal epithelium, corneal stroma, Descemet's membrane, dilator muscle of iris, endothelium of cornea, epithelium of ciliary body, fovea, inner nuclear layer of retina, inner plexiform layer of retina, iris, lamina cribrosa, layer of ganglion cells, layer of rods and cones, limbus, melanocytes of choroid, nerve fiber layer, ora serrata, posterior chamber, pupil of eye, retina, retinal pigmented epithelium, sclera, sphincter muscle of iris, trabecular meshwork, vitreous cavity. We will travel through the eye discovering how compacted,

functional, and structural design is unparalleled to any other organ. How important it is to keep these structures as "life like" for decades allowing future cellular preparations at any level. This is a detailed workshop on ocular structures, function and preserving cellular detail.

WS# 82 UNDERSTANDING BONE MARROW BIOPSIES

Tuesday, Sep 1, 2015; 8:00 AM - 9:30 AM

Clinical: Techniques & Fundamentals, Immunohistochemistry

Level: Intermediate Type: Workshop Contact Hours: 1.5

Presented by: Erin Grimes, Mayo Clinic

Introduction. The bone marrow biopsy is an important procedure in the hematopathology practice that allows for early diagnosis of many diseases. This workshop will discuss the importance of the bone marrow biopsy specimen, as well as discuss basic identification of cell identification and morphology. Additionally decalcification and ancillary testing of the bone marrow will be addressed as it is an important step for any histology laboratory in processing these samples. Problem Statement. Though bone marrow biopsies are performed every day, many histotechnologists have difficulty with the samples. Not only are they hard to cut, it is hard to understand why they are so important. This workshop will assist the histotechnologist in understanding bone marrow biopsies from cell structure to ancillary testing. Procedures. In order to fully explore the bone marrow biopsy the following will be discussed: 1. Bone Marrow Cells 2. Bone Marrow Morphology 3. Bone Marrow Procedure 4. Diseases of the Bone Marrow 5. Decalcification 6. IHC and Special Stains 7. Challenges Results. After discussing these topics, histotechs will be able to identify cells and morphology of a bone marrow biopsy. Additionally they should be able to understand why decalcification is so important and troubleshoot ancillary tests. Conclusions. Bone marrow biopsies are a very tricky specimen, but with proper understanding of the specimen every histotechnologist can work together with hematopathologist to offer the patients the best quality of care. Histology and Anatomic Pathology is an expanding field. The more we learn about bone marrow biopsies, and any samples we work with, the better equipped we can be to conquer whatever may come.

WS# 91 SUN, SURF AND MELANOMA: EXPERIENCES FROM DOWN-UNDER

Tuesday, Sep 1, 2015; 1:00 PM - 4:30 PM

Clinical: Techniques & Fundamentals

Level: Intermediate Type: Workshop Contact Hours: 3

*Presented by: Judy Brincat, B.App.Sci (Medical Technology),
Melbourne Pathology*

This workshop is based on experience gained in a large private pathology practice in Melbourne, Australia, where approximately 50% of all specimens received are skin biopsies. Australia has the highest incidence of melanoma in the world with nearly 10,000 patients diagnosed annually with melanoma. The workshop will review the structure of normal skin and the nature of the melanocyte, epidemiology and pathogenesis of melanoma and treatment following diagnosis. Protocols will be described for the optimal fixation, grossing and orientation, processing and embedding, sectioning and staining of skin specimens. The potential consequences of departing from standard protocols will be examined. The current status of accepted and potential melanoma markers and the significance of molecular studies for genetic mutations will be reviewed. Case studies will be used throughout. During the workshop ample opportunity will be provided for discussion and sharing of information and ideas.

in normal tissue and provide a comparison to that of malignant tissues. The presentation concludes with a look at how this basic knowledge can be useful in regards to both histochemical and immunohistochemical staining.

WS# 108 FROM MOUSE TO ME TO MICROSCOPE

Wednesday, Sep 2, 2015; 1:00 PM - 2:30 PM

Veterinary/Research: Techniques & Fundamentals

Level: Basic Type: Workshop Contact Hours: 1.5

Presented by: Jennifer Johnson, Genzyme Corp

For many histologists who work with rodent tissues, specimen may arrive in the laboratory already cassetted and floating in a jar of fixative. These tissues have lost some of their characteristic colors due to fixation and may be trimmed into shapes "not normally found in nature" to get them ready for processing. Standard methods of embedding are followed and the blocks are sectioned, stained, and coverslipped. Our opportunity for observation is usually only at the microscopic level - post staining when viewing the slides for a quality check. Finished slides are passed off to a study director or pathologist. We rarely get to see where it all begins. Have you ever wondered what it looks like inside of a mouse? How do the tissues fit into the mouse? How does it get removed from the mouse without getting damaged? In this class a video of a mouse necropsy will be presented. Tips and tricks on removal will be related to orientation and embedding in the lab. The goal of the class is to gain a basic understanding of where it comes from in life in order to make connections that will help us to better understand the tissues we work with in the lab.

WS# 98 TISSUE IDENTIFICATION FOR THE HISTOTECH

Wednesday Sept 2, 2015; 8:00 AM – 11:30 AM

Clinical: Techniques & Fundamentals

Level: Basic Type: Workshop Contact Hours: 3

Presented by: Sabra Powell, BS, HT(ASCP), Myriad Genetic Laboratories

Widely regarded as a responsibility of the pathologist, the importance of being able to correctly identify the different types of tissues in the human body is often overlooked by histotechs. Yet the basic knowledge of the different structures and functions of tissues not only plays a significant role in quality control and troubleshooting, but substantially increases confidence and marketability for a histotech and builds the bridge of communication between the histotech and the pathologist. This presentation provides the histotech an opportunity to take a detailed look into both the macroscopic (gross) and microscopic identification of over 30 common tissue types from 11 major body systems frequently seen in the histology lab. It will identify key histological structures



DISTANCE LEARNING



2015 LIVE WEBINAR SERIES

Can't join us in DC? You can but others in your lab can't? We have an option for you. NSH has selected six convention workshops to broadcast live via webinar during the Convention. This series gives histology professionals who cannot attend the live event a chance to experience some of the top shelf education offered during the week.

Registration Fees

>\$35 per webinar for NSH Members

>\$45 per webinar for Non Members

The registration fee includes the materials for each session and a recording of the webinar sent via email one week after.

What do I need to participate?

To participate you will need a computer with speakers and internet access. NSH uses the Adobe Connect Platform.

Do these sessions qualify for contact hours?

Registrants who attend the live session will receive contact hours (1 contact hour per 1 hour of instruction). A recording is sent to all registrants

after the live session, but the recording does not qualify for contact hours. The recording should be kept as a resource.

Can more than one person from my lab attend?

The Symposium/Convention live webinar series is designed for the individual registrant and cannot be purchased by a laboratory to train multiple people.

What if we missed the live event & want to order it?

If you purchase a webinar but miss the live event you will receive an archived version for viewing however the archived version is not eligible for contact hours. These archived versions will not be available to purchase after the live session.

Sessions available to choose from:

Monday, August 31, 2015

1:00pm – 2:30pm EST

WS# 63 Damage to DNA and RNA Extracted From OCT-embedded Tissue (see page 40)

WS# 64 Validation and Verification of Antibodies in IHC (see page X)

3:00pm – 4:00pm EST

WS#70 Troubleshooting Immunohistochemistry: Step by Step (see page 35)

WS# 72 How Different Are We? Performing Paraffin Embedded Formalin Fixed Tissue Immunohistochemistry Across Species (see page 35)

Wednesday, September 2, 2015

1:00pm – 2:30pm EST

WS# 106 Safety in the Anatomic Pathology Laboratory (see page 49)

WS#108 From Mouse to Me to Microscope (see page 59)

2015 Live Symposium/Convention Webinar Series Registration Form

Step 1: Registrant Contact Information

Name _____
 Company _____ Department _____
 Business Address _____
 City _____ State _____ Zip _____ Country _____
 Email (required for registration) _____
 Phone (_____) _____ - _____

Step 2: Select Your Sessions

Monday, August 31, 2015 - 1:00pm – 2:30pm EST	_____ WS# 63	_____ WS# 64
3:00pm – 4:00pm EST	_____ WS#70	_____ WS# 72
Wednesday, September 2, 2015 - 1:00pm – 2:30pm EST	_____ WS# 106	_____ WS# 108

Step 3: Payment Information:

(Please note that funds must be in US Dollars on a US Bank)

Check Enclosed \$ _____
 Purchase Order #: _____
 Charge my credit card \$ _____
 (Visa, Mastercard, American Express, or Discover)
 Name on Card: _____
 Cardholder Signature: _____
 Cardholder Email/Phone: _____

 CC #: _____
 Exp Date: _____ CVV: _____
 NSH Tax ID#: 52-1111284

HOUSING & TRAVEL INFORMATION



MAKING A HOTEL RESERVATION

NSH has secured a limited number of rooms at special convention rates at the Gaylord National Resort & Convention Center. The hotel reservation deadline is July 24, 2015.

The Gaylord National Resort & Convention Center anchors the 300 acre National Harbor waterfront entertainment district, only 8 miles south of Washington D.C. This first class destination provides fun for everyone including fine dining and casual restaurants, unique shopping experiences, an indoor pool and 20,000 square foot spa and fitness center. And for the late hours, there is an express elevator that takes you to the two-story rooftop Pose Ultra-Lounge.

2 OPTIONS TO BOOK YOUR RESERVATIONS:

1. Using the Online Housing Website: http://www.histoconvention.org/travel_hotel.cfm.
2. You can call the hotel directly at 1-877-382-7299 and reference the NSH Symposium/Convention to be placed into the discounted block of rooms.

DRIVING TO THE GAYLORD CONVENTION CENTER:

The official address for the Gaylord Convention Center is:

201 Waterfront St., National Harbor, MD 20745

The Gaylord National Resort & Convention Center is located in a great area that offers a variety of other transportation options to get to and from the hotel and airport. Just 15 minutes South of Washington, DC – right off the Capital Beltway (I-95/I-495). Directions can be found by visiting our website: http://www.histoconvention.org/travel_driving.cfm

The convention center does offer on-site parking for a fee of \$6 hourly or \$24 daily. Valet parking is also available for a daily fee of \$35.00. (Current rates at time of publication and are subject to change)



**Single/Double Occupancy rooms:
\$199.00 per night**

All guest rooms offer a mini-fridge, coffee maker & 2 water bottles a day.

Spacious bathrooms, flat screen TV & in room high-speed internet access



**Premium rooms (Atrium View):
\$239.00 per night**

All guest rooms offer a mini-fridge, coffee maker & 2 water bottles a day.

Spacious bathrooms, flat screen TV & in room high-speed internet access.

The Premium room offers a balcony with an Atrium View.



FLYING TO WASHINGTON, D.C.

NSH is working with Safe Harbors Travel Group located in Bel Air, MD. To book your flight reservation contact them at 800-344-5656 or 410-547-6565, Monday – Friday 9:00am – 5:00pm EST.

There are three airports located in the Washington, D.C. Metro area:

Ronald Reagan Washington National Airport (DCA) - This is the closest airport to the resort, only 8 miles West of the property. Specific transportation provided by DCA can be found on the airport website.

Washington Dulles International Airport (IAD) - This airport is a bit farther at 35 miles West of the resort. Specific transportation provided by IAD can be found on the airport website.

Baltimore/Washington International Thurgood Marshall Airport (BWI) - 42 miles North of the Gaylord, this airport is also an option for your travels. Specific transportation provided by BWI can be found on the airport website.

GETTING TO THE RESORT FROM THE AIRPORT

SuperShuttle

The preferred shuttle service to all local airports. This is the number one choice for the most efficient and cost effective airport service to all metro area airports.

From Reagan National (DCA) to Gaylord National

6:00 AM - 8:00 PM • Departs every 20 minutes

Ticket Prices*: \$18 one way/ \$33 per person, round trip/ \$85 for exclusive van service

From Dulles International Airport (IAD) to Gaylord National

\$44 per passenger/\$125 exclusive

From Baltimore/Washington Airport (BWI) to Gaylord National

\$45 per passenger/\$125 exclusive

To make your shuttle reservation, call **1-800-660-8000**, visit online at www.supershuttle.com or stop by the Transportation Desk located in the Front Lobby.

**Estimated pricing is for a one-way rate. Schedules are not determined by Gaylord National or NSH and are subject to change at any time without prior notice. Please verify directly with SuperShuttle.*

Gaylord National Airport Shuttle to Reagan National Airport (DCA)

Gaylord National offers an exclusive, express shuttle to and from Reagan

National Airport. The shuttle departs every 20 minutes from Gaylord National's front door to Reagan National Airport, and every 20 minutes from the Reagan National Airport baggage claim. Reservations are recommended; tickets are also available from the SuperShuttle desk on the lower level of the airport, near baggage claim.

Daily Shuttle Schedule: 6:00 AM – 8:00 PM

Ticket Prices*: \$18 one way • \$33 per person, round trip • \$85 for exclusive van service, booked in advance

Reservations:

Local Reservations: (301) 965-2081 • 24-hr Reservations: 1-800-660-8000

TRAVELING BY TRAIN

Amtrak to Washington, DC

Amtrak is a great alternative to travel other than flying. They have some really great affordable fares to Union Station in Washington, DC. Check out their website at: www.amtrak.com to find your closest Amtrak location. Depending on where you are coming from, fares can range from \$50-\$150 each way.

Local Residents - Access Via WMATA

The National Harbor Entertainment District and the Gaylord National Hotel are connected to the Washington Metro system (Metropolitan Area Transit Authority, or WMATA), via a limited-stop bus route. For bus schedules, route maps and current prices, please visit the WMATA website and view information on the NH1 / National Harbor Bus Line.

The National Harbor

The Gaylord is located in the National Harbor - home to more than 150 diverse shops and boutiques and over 30 dining locations. The Harbor features the thrilling Capital Wheel Ferris Wheel, The Carousel, Plaza screen and The Awakening – a great time for adults and kids alike. Visit www.nationalharbor.com to check out the Harbor and plan your downtime.



Conference Attire

Attire for the convention is business casual. Comfort is key so bring comfortable walking shoes and even though it may be hot and humid outside, remember to bring a light weight jacket for the workshop rooms, it tends to get a little chilly in the center. The NSH Awards Ceremony & Celebration is semi-formal so if you plan to attend bring your favorite cocktail dress or suit.

REGISTRATION INFORMATION & POLICIES

4 WAYS TO REGISTER

1. Online

www.histoconvention.org

2. Via Mail

NSH, 8850 Stanford Blvd., Suite 2900, Columbia, MD 21045

3. Via Facsimile/Email

443-535-4055/histo@nsh.org

4. In Person

If you are unable to register before August 26, 2015, register on-site at the Registration Desk outside of the Prince George's Exhibit Hall AB in the Gaylord Convention Center. Please note that registering onsite requires a \$130.00 registration fee for NSH members and a \$210.00 registration fee for non-members.

Registration Fees

NSH Member: \$65.00 Non Member: \$165.00

After July 31, 2015

NSH Member: \$130.00 Non Member: \$210.00

Registration Fee includes a welcome packet at check in, admittance to the Lecture Series & Exhibit Hall, and continental breakfast each day.

Workshops fees are charged on an a la carte basis.

Professional Attendees			
Type of Workshop	60 Minutes	90 Minutes	½ Day (3 hrs)
Workshops	\$25	\$30	\$45
Wet Workshops	\$25	\$30	\$45
Computer Workshops	N/A	\$35	\$60

Student Attendees			
Type of Workshop	60 Minutes	90 Minutes	½ Day (3 hrs)
Workshops	\$20	\$25	\$35
Wet Workshops	\$20	\$25	\$35
Computer Workshops	N/A	\$35	\$60

Student Discounts

Reduced workshop fees are provided to NSH student members enrolled in an accredited school of histotechnology. Verification of enrollment is required. A verification form requesting a signature of the school program director will be sent via email once your registration is processed. If the verification form is not completed on time you will be invoiced for the additional workshop fees.

Guest Passes

Registered NSH attendees can register up to 2 guests for a fee of \$30.00 per guest. Guest badges will provide access to the NSH Exhibit Hall and the daily continental breakfast. Guests are not permitted into workshops or lectures. **Guests must be at least 18 years of age.**

Exhibit Hall Only Passes

The trade show floor is open to qualified individuals in histology and pathology only. This ensures a high buyer/supplier ratio. Local technologists and pathologists unable to attend the meeting are welcome to visit the exhibits anytime during scheduled hours. Bring your business card or proof of employment to the NSH registration desk to obtain a complimentary exhibit hall only pass. Unqualified family members of registered attendees & booth attendants are not permitted on the show floor.

Payment

Payment in full is due with your registration - this includes the registration fee & all workshop fees.

Registrants can pay by:

1. Check made payable to the National Society for Histotechnology (**Canadian and Foreign checks must be paid in U.S. Funds drawn on a U.S. Bank.**)
2. Credit Card (Visa, MasterCard, American Express, Discover)
3. Fully Executed Purchase Order – a copy of the purchase order must accompany your registration form.
4. Money Order

Continuing Education Credit (Contact Hours)

All NSH sponsored educational sessions have been approved for NSH contact hours and count toward your CMP.

60 Minute Workshop	=	1.0 Hour
90 Minute Workshop	=	1.5 Hours
Half Day Workshop	=	3 Hours
Lecture Series	=	2.0 Hours

Reasonable Accommodation Requests

If you wish to register for the Convention and you have an accommodation request or special need (physical limitations, dietary restrictions, etc.) please submit your request in writing to NSH Meeting Manager, Aubrey Wanner, aubrey@nsh.org or via fax, 443-535-4055. Attendees in need of special services must register early. Registrations for the hearing impaired will require special coordination to ensure interpreters are available.

Badges

Attendees registering in advance may pick up their badge & welcome packet at the NSH Registration Desk in the Gaylord Convention Center. Attendees will not be allowed to pick up other attendee badges or materials.

Express Barcodes

You will receive an email a week before the Symposium/Convention which includes your confirmation and an express bar code. This express bar code can be printed out and scanned at our Express Check In for a quicker check in process.

Confirmation Letter

You will receive a confirmation letter via email once you are registered for the convention. If you have not received a confirmation letter within three weeks of submitting your registration, please contact an NSH staff member at 443-535-4060 or histo@nsh.org.

Email Address

NSH requires a unique email address per registration. This email is used for communications between NSH staff and the registered attendee including the registration confirmation, workshop cancellations or changes, vendor announcements etc. NSH will not register multiple people with one email address nor will NSH register an individual without an email address.

Cancellations/Substitutions

All cancellations must be received in writing by July 31, 2015. Cancellations received in writing by this date will be charged the Registration Fee but all workshop fees will be refunded. Awards Ceremony tickets are nonrefundable. Cancellations received after July 31, 2015 (without provisions for a substitute) and no-shows are responsible for all convention fees. Cancellations will not be accepted by phone. **Please note:** Cancellations, for any reason, will not be accepted for persons registering after the deadline of July 31, 2015. Substitutions will be accepted at any time, at no additional charge.

Reimbursements

No cash exchange or refunds are provided on-site. Reimbursements are processed after the conclusion of the convention and will be sent to the payer.

Consent for Use of Photographic Images

Registration and attendance at, or participation in, NSH meetings and other activities constitutes an agreement by the registrant to permit NSH's use and distribution (both now and in the future) of the registrant or attendee's image or voice in photographs, videotapes, electronic reproductions, and audiotapes of such events and activities.



2015 NSH 41ST ANNUAL SYMPOSIUM/CONVENTION REGISTRATION FORM

STEP 1: REGISTRANT CONTACT INFORMATION

Name: _____ Credentials (HT, MD, PhD etc) _____
 Badge Name: _____
 Title: _____ Company: _____
 Email (required for registration): _____ Department _____
 Business Address: _____
 City: _____ State: _____ Zip: _____ Country: _____
 Phone: (_____) _____ - _____
 Emergency Contact Name: _____ Phone: (_____) _____ - _____

STEP 2: REGISTRANT DEMOGRAPHICS

Gender: Male Female
 Are you certified through ASCP? Yes No
 Primary area of practice? Clinical Hospital Clinical Private Lab Clinical University Pharmaceutical
 Research Veterinary Industry/Vendor
 Position description? Student Trainee Lab Assistant Technician/Scientist Supervisor Lab Manager Pathology Assistant
 Pathologist Educator Industry Sales Industry Technical Representative

STEP 3: GUEST CONTACT INFORMATION

I don't plan to bring a guest
 I would like to bring a guest (cost \$30.00) Guest Name: _____
 Email: _____
 Telephone: (_____) _____ - _____

STEP 4: CHECK YOUR NSH MEMBERSHIP STATUS (this information determines convention pricing)

Current member, my dues are paid
 Current member, I would like to renew for 2016 (\$80)
 New member, I would like to join today (\$140, Membership Expires 12/31/2016)
 No thanks, I am not a member and don't wish to join

STEP 5: SOCIAL FUNCTIONS (ticket required)

First Timers Reception – Friday, August 28, 2015 at 7:00pm
 I am a first time attendee and will attend the Friday evening Welcome Reception (Cost is \$0)
 I am a first time attendee but WILL NOT attend the Friday evening Welcome Reception
NSH Awards Ceremony & Celebration – Saturday, August 29, 2015 at 7:00pm
 I plan to attend the Awards Celebration on Saturday & wish to purchase
 _____ # of tickets x \$40 = total amount due \$ _____



STEP 6: WORKSHOP SELECTION

Please indicate your 1st, 2nd & 3rd choice by writing the Workshop Number in the appropriate time slot on the Workshop Selection Chart below. NSH Staff will do our best to assign you the workshops of your choice however workshops are assigned on a first come, first serve basis and therefore your 2nd & 3rd choices are very important. Please note if you select an All Day workshop as a 1st choice please include 90 minute or half day sessions as a 2nd choice. Changes to workshop schedules may incur administrative fees.

Day/Time	Available Workshops	1st Choice	2nd Choice	3rd Choice
Saturday 8am – 11:30am	WS 1-11			
Saturday 1pm – 4:30pm	WS 12			
Saturday 1pm – 2:30pm	WS 13-21			
Saturday 3pm – 4:30pm	WS 22-30			
Sunday 8am – 9:30am	WS 31-38			
Sunday 9:45am – 10:45am	KEYNOTE LECTURE OPEN TO ALL			
Sunday 1pm – 4:30pm	WS 39-49			
Monday 8am – 11:30am	WS 50-57			
Monday 9:45am – 10:45am	KEYNOTE LECTURE OPEN TO ALL			
Monday 1:pm – 2:30pm	WS 58-66			
Monday 3pm – 4pm	WS 67-75			
Tuesday 8am – 9:30am	WS 76-84			
Tuesday 1pm – 4:30pm	WS 85-94			
Wednesday 8am – 11:30am	WS 95-102			
Wednesday 1pm – 2:30pm	WS 103-110			

STEP 7: PAYMENT INFORMATION (your registration will not be processed without full payment)

Membership Dues	\$
Registration Fee	\$
Workshops Fees	\$
Guest	\$
Awards Ceremony Tickets	\$
GRAND TOTAL DUE:	\$

CONVENTION FEE: NSH Member: \$65.00 Non Member: \$165.00
 (\$130.00/\$210.00 After July 31, 2015)
 Guest Fee: \$30.00 Awards Ceremony & Celebration Fee: \$40.00

Professional Attendees				
Type of Workshop	60 Minutes	90 Minutes	½ Day (3 hrs)	
Workshops	\$25	\$30	\$45	
Wet Workshops	\$25	\$30	\$45	
Computer Workshops	N/A	\$35	\$60	
Student Attendees				
Type of Workshop	60 Minutes	90 Minutes	½ Day (3 hrs)	
Workshops	\$20	\$25	\$35	
Wet Workshops	\$20	\$25	\$35	
Computer Workshops	N/A	\$35	\$60	

Payment Information: (Please note that funds must be in US Dollars on a US Bank)

- Check Enclosed \$ _____
 Purchase Order #: _____
 Charge my credit card \$ _____
(Visa, Mastercard, or AmEx, Discover)

Name on Card: _____
 Cardholder Signature: _____
 Cardholder Email/Phone: _____
 CC #: _____ Exp Date: _____ CVV: _____

NSH Federal Tax ID 52-1111284

STEP 8: SUBMIT YOUR REGISTRATION

Please note that submitting your registration binds you to all NSH registration policies found in the NSH SC Registration Brochure.

Email: histo@nsh.org Fax: (443) 535-4055 Via Mail: 8850 Stanford Blvd, Suite 2900, Columbia, MD 21045



State of the Art Histology with Quality and Reliability
Visit Booth 336 to Experience Innovative Technology in Histology

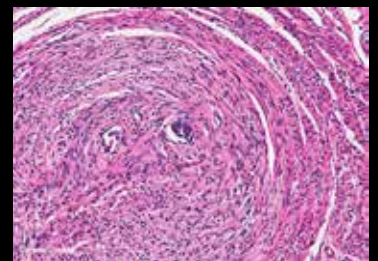
Phantom® Rapid Tissue Processor with New Innovative Technology



- Non-microwave technology
- Needle Biopsy processing in one hour
- Up to 6mm specimens processing in four hours
- Formalin free tissue processing
- Single Processing reagent
- Cost effective

Phantom® Hematoxylin and Eosin Premium Staining System

- Premium Buffered Bluing Reagent increases slide throughput
- Premium Modified Harris Hematoxylin does not form crystals
- Premium Clear Contrast Differentiator produces slide clarity
- Eosin-Y pH 4.7-5 for enhanced 3 color cytoplasmic staining
- High throughput; 5,000 slides per liter
- Consistent clarity, slide after slide



Certified Formalin Disposal

- Government Seal of Approval
- Reduce your Liability
- Down-The-Drain Disposal
- Time efficient
- Cost effective



NEUTRALEX®

CERTIFIED ENVIRONMENTAL WASTE TREATMENT

For information on pricing contact your
Distributor or Scigenus.com





National Society for Histotechnology
8850 Stanford Blvd., Suite 2900
Columbia, MD 21405
443.535.4060 Fax: 443.535.4055

Pre-Sorted
First Class Mail
U.S. Postage
PAID
Rockville, MD
Permit No. 800

Become a NSH Member Today!

For only a \$80.00 membership look what NSH has to offer:

- NSH Membership
- Discounted Price to NSH Events
- Membership Scholarships and Awards (Over \$30,000 worth)
- JOH Subscription (\$181 value)
- Employment and Resume Listings on NSH website
- Access to Leaders in the Histology profession
- Mentoring Program available to help guide you through your career
- Discount on Textbooks
- Ability to earn up to 6 contact hours through Quick Quizzes and JOH Tests
- Volunteer Opportunities (A great resume builder)
- Free Resources from NSH Resource Committees
- Access to Membership Directory
- Contact Hour Transcripts



The National Society for Histotechnology is a non-profit organization who's mission is:
TO EMPOWER THE PROFESSION OF HISTOTECHNOLOGY THROUGH COLLABORATION, EDUCATION AND INNOVATION.

www.nsh.org