

The Tarheel Histo News

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A Letter from the President

Greetings Colleagues,

Hope this letter finds you all well. We survived the winter and are hopefully ready for summer; hard to believe it's here again. I want to apologize to everyone that a Newsletter has not been published since October 2015. It was a hectic winter and now I am hopeful we can get back on track with a quarterly issue. David Weil, Newsletter Editor & Laura Shewmon (Assistant) have graciously agreed to continue to work with the officers to publish the Newsletter for NCSH.

In the October 2015 Newsletter we did a membership drive offering 4 prizes to be given away at the 2016 Spring Meeting. The drawings were held on April 9, 2016 during the morning break. 1st prize was a one night hotel stay at the host hotel, Hilton Doubletree at Research Triangle Park. The recipient had to be present to win, were required to use it at the 2016 Spring Meeting (approximate value \$109 +tax). There were two entries and only one of the eligible entries attended the meeting; congratulations Jane Ingram from Carolinas Healthcare System in Charlotte, NC.

The NCSH Spring Meeting was held April 7-9 at the RTP Doubletree on Page Creek Road in Durham/RTP, NC. We had approximately 114 total attendees, including 11 speakers and 31 vendors (representing 20 companies). We had phenomenal speakers, great food and excellent networking opportunities. The reviews and comments were positive. If you were able to attend, thank you for your support and if you were unable to attend hopefully we will see you next year.

The Annual Business Meeting was held on Saturday, April 9. *A draft of the minutes from the meeting was emailed for your review and is available on the website. Please let the officers know if there are any mistakes, questions or concerns. The minutes will be approved at the 2017 Annual Business Meeting.* We discussed NCSH providing CEU's as per the ASCP CMP guidelines. CEUs were awarded through NCSH for the 2016 Meeting and the vote was to continue that practice moving forward. We will post the CMP Guidelines on the website with a link to ASCP for your information.

With the dissolution of the Board of Directors (December 12, 2015), NCSH had to revert back to the last-voted-on Bylaws, which were the Bylaws for NCSHT from 2008. The 2008 Bylaws needed to be updated to include current information and to incorporate some of the information from the 2012 Bylaws. The **Bylaws revision for March 2016** was passed with minor changes at the 2016 Annual Meeting and will be published on our website with the [Job Descriptions](#), [Conflict of Interest Statement](#) and any other pertinent documents for your review.

We now have an Executive Committee, inclusive of the officers and immediate past president as follows; President, Tonia Crook; Vice President, Deborah Sawyer; Secretary, Elizabeth McNeil; Treasurer, Otis Lyght; and Immediate Past President, Delorise Williams. It is our goal to make sure that we communicate with members on a regular basis and make all public information available upon request.

Sadly, Mary Parker passed away on March 12, 2016. She was a longtime active member of NCSHT and NCSH. It was decided to send a \$100.00 memorial in her memory to the Garner Police Athletic Fund, as requested by the family in lieu of flowers.

We are excited to announce the location for the 2017 Spring Meeting. The contract is signed and everything is in place for the **Wilmington Hilton Riverside March 23-25, 2017**. We have not been to Wilmington since 2011 and it will be nice to return. Start thinking about topics, speakers and what else we might consider for the meeting. Please contact the officers with any ideas or suggestions.

The Executive Committee will be taking a break for the summer effective May 1 until mid-August when we will resume our regular meetings. We will be working on the Newsletter and other small projects and will be available to you as needed.

Kindest Regards,

Tonia M. Crook
Tonia M. Crook, NCSH President



Highlights of the 2016 NCSH Spring Meeting



New this year:

- ✓ Registration Late Fees were lifted to increase participation. 5 people took advantage & NCSH gained 5 members.
- ✓ The Business Meeting lunch was complimentary to members, to increase participation.
- ✓ T-shirts were printed and distributed free of charge with registration, featuring the new logo and message: *We're the Tarheel Histotechs travelling from the Coast to the Piedmont and the Mountains. Our Goals: Learning, Networking, Seeing old friends and Making new friends. Please spread our news and partner up with NCSH. This is our Past, Present and Future.* (remaining shirts can be purchased for \$10 size L and \$12 size XL/XXL + \$3 shipping/handling)
- ✓ CEUs are now awarded directly from the Society and approved by the NCSH President, a cost-saving measure which also frees us to expand educational opportunities for all NCSH members. A CEU Coordinator position is being developed & NCSH will be seeking a dedicated volunteer for this important role.



Congratulations. Award Winners:

Aurel Alston – Histologist of the Year, for outstanding service and dedication to NCSH, sponsored by Leica Biosystems
Deborah Sawyer – Lifetime Achievement Award, for outstanding service and dedication to NCSH, sponsored by NCSH
Catrina McMaster – Lyle L. Baker Memorial Scholarship, sponsored by Tech One Biomedical



'Manual' Heat-Induced Epitope Retrieval (HIER) Versus 'Automated' HIER: Which is Better?

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Heat-induced epitope retrieval (HIER) is a laboratory technique that improves the immuno-(staining)-reactivity of formalin-fixed, paraffin-embedded tissue specimens by breaking protein cross-linkages that are created during fixation. These methods were originally developed using a microwave oven as the source of heat, and later, other 'household appliances' including vegetable steamers and pressure cookers were employed for this purpose. The latter devices have continued to be used with significant technical/clinical success and cost-effectiveness. HIER technology has also been incorporated into automated slide staining systems, resulting in the use of the expression 'on-line' HIER, to contrast this with systems that cannot perform HIER, thereby requiring use of an 'off-line' HIER device(1).

One of the most controversial aspects of use of automated systems that possess heat-retrieval capabilities is the misconception that on-line HIER is 'better' than off-line HIER. Slide stainers that incorporate HIER undoubtedly provide greater convenience for the individuals who would otherwise be responsible for performing (off-line) HIER procedures, but, beyond this advantage, on-line HIER is not clinically, technically, or financially better than off-line HIER. Before proceeding to offer specific arguments to support this claim, it is important to acknowledge that one of the primary goals of using an automated system is achievement of a greater *consistency* in staining results through the application of similar (if not identical) volumes of reagents which are then incubated for similar (if not identical) periods of time, at the same temperature. These instruments are also designed to reduce the infrequent but potentially problematic 'operator errors' that occur when such procedures are performed 'byhand'.

Assuming that obtaining consistent results is of paramount importance, consider the following scenario: Let's say that a group of 24 'unstained' slides are placed in a slide 'rack' and that this rack is then submerged into a retrieval solution; this container is then placed in a suitable heating device (such as a 'programmable' pressure cooker) which heats these specimens to a particular temperature for a specified period of time. Under these conditions, each and every slide is exposed to an abundance of retrieval reagent and the specimen material on these slides is heated to the exactly same temperature for exactly the same amount of time, resulting in significant consistency within this 'batch' of retrieved slides.

Now let's consider placement of 24 slides on an automated stainer: Once 'unstained' slides are loaded onto the staining platform and the system is started – *despite the intended hardware and software designs* – the instrument does NOT apply exactly the same amount of reagent to each slide, nor does it heat each slide to exactly the same temperature for exactly same period of time; rather, a slightly different amount of reagent is applied to each slide, which are then heated to slightly different temperatures for slightly different amounts of time, resulting in an immeasurable degree of inconsistency. So, is on-line HIER better?

In the author's opinion, no discussion of laboratory testing is complete without addressing the financial aspects of the methods in question. One should, therefore, also consider the difference in cost between off-line and on-line HIER, as shown below:

"OFF-LINE" RETRIEVAL:

Description	List Price per Unit	Cost per RTU Milliliter
Tris/EDTA-based Heat Retrieval Solution, 1X Ready-To-Use, 1 Gallon (3785mL)	\$264.00	\$0.07

EXAMPLE:

Quantity of slides processed:	24
² Total volume of reagent (in mL):	250
Volume of reagent per slide (in mL):	10.5
¹ Cost per RTUmL (from above):	\$0.07
Total cost of "batch":	\$17.44
Cost per slide:	\$0.73
Annualized slide volume	x 6240
Total annual cost:	\$4533.69

"ON-LINE" RETRIEVAL:

Description	List Price per Unit	Cost per RTU Milliliter
Tris/EDTA-based Heat Retrieval Solution, 1X Ready-To-Use, 1 Liter	\$1631.00	\$1.63

EXAMPLE:

Quantity of slides processed:	24
³ Total volume of reagent (in mL):	3.6
Volume of reagent per slide (in mL):	86.4
¹ Cost per RTUmL (from above):	\$1.63
Total cost of "batch":	\$140.92
Cost per slide:	\$5.87
Annualized slide volume	x 6240
Total annual cost:	\$6638.78

¹RTU = Ready-To-Use

²One (1) Tissue-Tek™ container

³Nine (9) applications of 400ul – for 'mild' procedure; 'extended' consumes more

⁴Twenty-four (24) slides per day x 260 working days per year

References:

1. Myers J: Automated IHC/ISH slide staining systems: Current technologies and other considerations. Medical Laboratory Observer 44(7): 48- 50, 2012.
2. Myers J: A review of automated slide stainers for immunohistochemistry and in situ hybridization. Med Lab Observer 40(1): 41-44, 2008.
3. Myers J: Antigen retrieval: A review of commonly used methods and devices. Med Lab Observer 38(6): 10-15, 2006.
4. Myers J: Automated slide stainers for special stains, immunohistochemistry, and in situ hybridization: A Review of current technologies and commercially available systems. Med Lab Observer 36 (1): 28-30, 2004.

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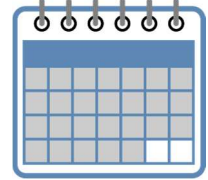





ANNOUNCEMENTS

Are you attending the NSH Symposium in Long Beach, CA? NCSH has 2 delegate positions and 2 alternates for the House of Delegates (HOD) on 7pm, Wed Sept. 21, 2016. The HOD determines the policies which govern NSH and represent the concerns of the membership. Delegates must be current NSH members for years 2015-16. Contact tmcrook@hotmail.com for more information. See also <http://nsh.org/content/leadership-house-delegates>

NCHistochatter is LIVE! The Society has created a googlegroup for members (and friends of the Society) to quickly disseminate Society-related information and increase member cross-communication. The group is open to all, but you have to subscribe to be added (<https://groups.google.com/forum/#!forum/nchistochatter>). Current NCSH members are automatically subscribed upon renewal. Need help with a histology question? Subscribers can contact everyone on the list by simply sending an email to nchistochatter@googlegroups.com.

SAVE THE DATE



-  42nd Annual NSH Symposium/Convention **Sept. 16-21, 2016** in Long Beach, CA
(www.histoconvention.org)
-  South Carolina Society of Histotechnology (<http://scsht.net/index.html>) Fall Meeting **October 7-9, 2016** at Litchfield Beach and Golf Resort, Pawley's Island, SC.
-  NC Society of Histotechnology Spring Meeting **March 23-25, 2017** at the Wilmington Hilton
Riverside, Wilmington, NC

DIRECTOR'S CORNER

Starting in the next edition-
Sue Clark, Region II Director, will be
contributing updates on NSH and
Region III.

Get Your CEUs!

Don't miss these **free** CEU opportunities online:

- ✓ **Sakura:** May 19, 1PM Eastern time
[Histology Quality: Ensuring Best Patient Care](#)
Video Library ([link](#))
- ✓ **Leica:**
May 25 (2 time slots): *Image Analysis Verification- A Process Approach*
June 29: *Automation in a Cytogenetic Laboratory*
Video Library ([link](#))

Additional Links (cost per CEU varies by provider)

- ✓ [NSH](#): teleconferences, member benefits
- ✓ [ASCP](#): multiple offerings, webcasts, Journal CE
- ✓ [LabCE \(for HT/HTL\)](#) (\$65/yr for 39.5CEU)
- ✓ [Advance Healthcare Network](#)

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NORTH CAROLINA SOCIETY OF HISTOTECHNOLOGY

2016 Membership Fee \$15.00

Save paper! This form can be completed (and payment submitted via PayPal) online:
<http://www.ncsh.info/online-ncsh-application.html>

Name (First and Last): _____ **Date:** _____

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****This email will be used for all NCSH-related communications & included in the membership directory via NCHistochatter (googlegroup)****

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Please check all that apply:

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<input type="checkbox"/> Research	<input type="checkbox"/> HTL	<input type="checkbox"/> 6 – 10 <input type="checkbox"/> 21 – 24
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- I am interested in volunteering for NCSH
- I am a current NSH member
- I am a student

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