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PARAFFINALIA NEWSLETTER

VOLUME 23, NUMBER 4
October, 2017

The HGV aims to provide a dynamic continuing education program in which all persons with an interest in Histology and Histotechnology are freely invited to participate.

CONTENTS:

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Committee Page

The members of the Histology Group of Victoria 2017 are:

Name	Institution
Kellie Madigan	Leica Biosystems
Adrian Warmington	Clinicallabs
Kerrie Scott-Dowell	Dorevitch Pathology/LeicaBiosystems
Elizabeth Baranyai	Cabrini Health
Samantha Arandelovic	Clinicallabs
Alison Boyd	St. Vincent's Pathology
Kellie Vukovic	Sullivan Nicolaides Pathology
Sue Sturrock	Peter MacCallum Cancer Centre
Meghan Leo	Peter MacCallum Cancer Centre
Mark Bromley	Sullivan Nicolaides Pathology
Darcee Mc Nair	Cliniclabs

Contact us at
http://www.hgv.org.au/contact-us
Membership enquiries: membership@hgv.org.au
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Author enquiries and readers wishing to contribute articles or reports can contact the Editor - editor@hgv.org.au

Please email articles (preferably Microsoft Word format) for inclusion in the next edition to editor@hgv.org.au All items submitted for publication will then become the sole property of the Histology Group of Victoria Inc.

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President's Report

Hello Everyone

Since our last Paraffinalia, you may have noticed a change. Sadly for us here in Victoria, Mark Bromley has moved to a new role managing the Anat Path at Sullivan Nicolaides Pathology, Brisbane. Congratulations to Mark on his move. I am sure that he will face exciting new challenges in the Sunshine state. Luckily for us, Mark will be continuing his role as a HGV committee member. However, he has relinquished his role as President and instead re-takes on the role of Treasurer. He assures us, this can be done remotely. Our thanks to Mark for his year as President, as it has been a big year requiring dedicated input to keep both HGV and the NHC on track. Mark has also hosted the committee meetings at Melbourne Pathology for many years now and along the way introduced some of the committee to an excellent wine bar situated just across the road, for which we say Thank you.

Thank you also to Liz who filled the role of Treasurer during 2016-17 and those who remain on the Committee and retained any roles. We also welcome a new committee member Darcee, and this is a fantastic opportunity to put the call out for new committee members. We do have positions available and it is always great to have new people and ideas on the Committee. As the current committee ages gracefully, we would love to have younger committee members providing us with feedback about what matters to them, and assist us with keeping up with new trends/innovations in the world of Histology. Become the representative for your generation of Histologists.

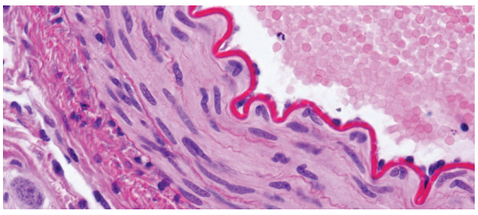
As November approaches, we are excited about the upcoming National Histology Conference to be held in Hobart across the weekend of 16-19 November. This is a great event which provides not only a fantastic educational program, but a large trade representation and opportunity to see what is on offer for 2018 and beyond. We are thrilled with the large numbers of delegates who have registered so far – it was always a risk to move the event to Tasmania, but we think it has paid off. The workshops are well attended and provide a range of topics to suit all experience levels and roles in the modern Histo lab. http://www.nationalhistologyconference.com/

I look forward to seeing many of you at the NHC and future HGV educational meetings. Please don't hesitate to approach/ contact me or any committee member if you would like to suggest a topic you want an opportunity to learn more about, or to present to the Histo community, or have a great idea you want the HGV to explore further.

Kellie

TRAJAN

For quality



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UNDER THE MICROSCOPE :

GINA TRITT, Dorevitch Pathology

Anatomical Pathology

1. What was your first part-time job?

I played in a band

2. How long have you worked in histology?

Since the dark ages. I started with Kerrie Scott at The Alfred in 1989

3. When people ask, "So, what do you do?" How do you explain Histology?

We cut up and analyse people's bits

4. What is a skill you'd like to learn and why?

To Surf - The rest of my family can surf but I am hopeless

5. If money was no object, what would you do all day?

Get a personal trainer, redecorate my house and cook

6. What's an ideal weekend for you?

Some sport and time at the beach, with good food, wine and company

7. If you could take only THREE items with you to a deserted island, what would they be?

1)Bluetooth speaker with phone 2)Fully stocked fridge 3)Thermomix

8. What is the best conference you have ever attended?

AIMS at Jupiter's Casino- I don't get out much

9. What's on your bucket list this year?

Skydiving- (maybe next year)

10. Where do you most want to travel, but have never been?

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Review of Immunochemistry Speaker at previous HGV Meeting

The HGV hosted 3 speakers on 21st Sept to discuss their immunochemistry projects. They were Kathrine Dunne (Dorevitch), Andy Dinnan (Alfred) and David Byrne (PeterMac) . Meghan Leo reviewed the hot topic of the moment PD-L1 with the second speaker David Byrne.

David is a researcher at Peter Mac and in the last few years has spent a decent amount of his time working on Programmed Death Ligand 1 (PD-L1) and its mysteries.

David's presentation "Technical comparison and assessment of PD-L1 immunohistochemistry" gave us an insight into just how complex PD-L1 is and the amount of work he has done with working with different clones, platforms and procedures.

The significance of PD-L1 and its expression or absence of expression and using immunotherapy to target it is still very uncertain. A large number of clinical trials are currently underway in order to try and determine the significance of PD-L1 and David himself is performing the testing in some of these clinical trials.

There are multiple different PD-L1 clones available on the market, there is the DAKO 28-8 and 22C3, the Ventana SP142 and SP263, Cell Signalling E1L3N to name a few and more. There are also multiple scoring systems in use for both tumour and immune cells all with different negative/positive cut off values.

One interesting project that David was involved in was the NSCLC Comparison Project where the aim was to determine whether four PD-L1 IHC assays were equivalent and whether the antibodies could be used on alternate staining platforms. After testing 368 cases it was determined that when the four assays were performed and scored apart from the DAKO 28-8 and 22C3 they could not be used interchangeably in clinical practice.

David certainly impressed me with his knowledge and the amount of testing and research that he has put into investigating PD-L1, also his use of captivating pictures, graphs and jokes kept me entertained.

Arthur Bailey Surgico

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pfm medical´s electronic rotary microtomes are equipped with a modern touch screen system. The control panels and display elements are clearly arranged according to their functions. This makes the microtome easy and convenient to operate.

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Samples can be positioned quickly and easily on the X and Y axes using the object orientation system and the colour-marked zero position indicators. Advancing the sample towards the knife/blade edge is therefore very simple.

Suitable for large samples

pfm medical´s rotary microtomes are also suitable for use with large universal cassette clamps and can be converted without difficulty. This means that samples of different sizes can be processed depending on customers´ requirements.

Easy cleaning and care

The surface of the housing is fully anodised and easy to clean. The waste produced during sectioning is caught by the integrated section waste tray and is then easy to discard. The section waste tray is also anodised and easy to clean.

Arthur Bailey Surgico
Established 1920

Interesting finding

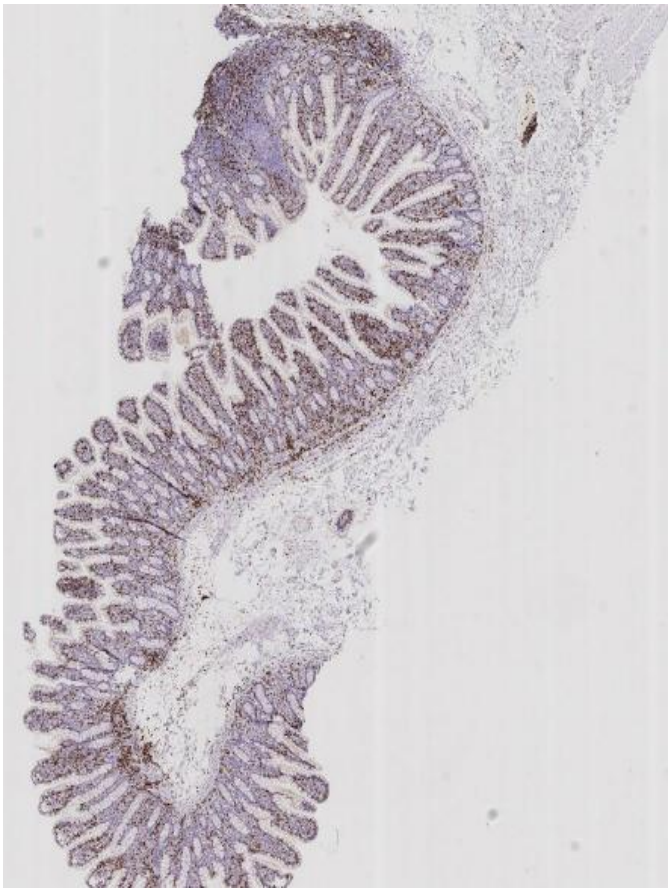

Image of bowel stained with CD8

A seahorse

Thanks to Dean Talia of Leica for submitting his aquatic find

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Review of Workshops at the National Society of Histotechnology Symposium

by Kerrie Scott

I was fortunate to attend the annual NSH symposium with my colleague, Kellie Madigan. It was held in Orlando, Florida just after Hurricane Irma had passed through. The convention centre and our accommodation were not affected, and to our enormous relief Disneyland, Universal Studios and NASA were up and running when we were free. -Back to the conference.

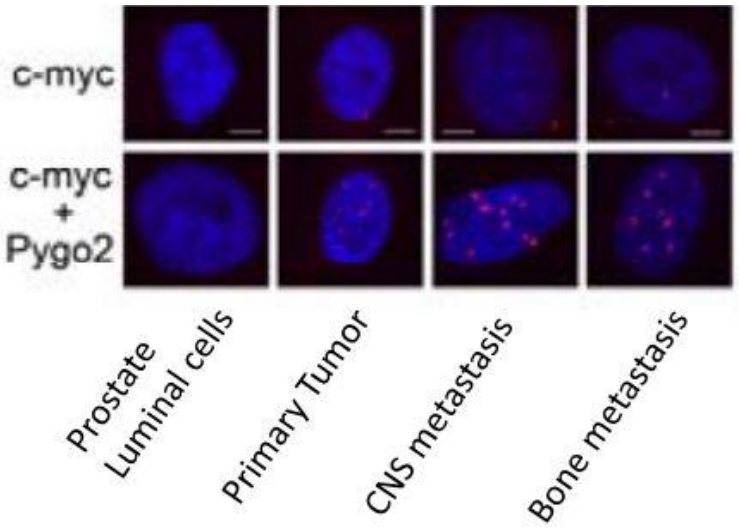
Many of the workshops I attended were looking at the advances in molecular pathology and IHC and I will review 2 in this edition of Paraffinalia.

Proximity Ligation Assays- Merging Molecular with Immunohistochemistry

One such talk was on Proximity Ligation Assays (PLA). PLA is the next level of complexity of protein detection in cells and tissues beyond IHC and is used to detect proteins in close proximity/interacting, and assumes the idea that if proteins are in contact, the cellular processes that they direct are active.

Where IHC detects protein in sub-cellular components the signal reveals only the presence not whether the protein is active or not. PLA detects only the proteins that are close enough for the detection system to work indicating they are interacting within an intracellular pathway. PLA is essentially an IHC protocol requiring multiplexing with antibodies directed against proteins that are known to interact with each other demonstrating the in situ localization by IHC, IF or ICC. PLA utilizes molecular methods for detection as the antibodies are chemically conjugated with DNA and the specific detection is dependent on formation of a concatemeric DNA strand. PLA requires careful consideration of the detection systems as they need to be complementary as well as compatible. Detection is by amplification of complementary DNA strands conjugated to 2nd antibodies. PLA can be used to quantify proteins.

The example of PLA use was in prostate cancers. C-myc gene copy number alterations are associated with adverse prognosis and Pygopus expression is elevated in prostate cancer tumours. MYC-PYGO2 interactions are more frequent in aggressive prostate cancer cells as seen in the image below.



This talk made me think about the possibilities of giving patients more prognostic relevant information, so thank you to Dr Kenneth Kao of EHRHA, St John's , NF who will shortly release a paper showing MCY depends on the Pygopus for prostate cancer cell growth.

IHC and Molecular Staining Used to Help Pathologists in the Diagnosis of some Brain Tumours

Having not been involved in a big public hospital for some time, I was interested in learning what was new in brain immunohistochemistry, since GFAP was the only antibody used.

An antibody that is still research only , but seems to have great diagnostic potential is ATRX (Alpha thalassemia/mental retardation syndrome X linked homolog antibody). Loss of exression of ATRX is associated with astrocytic tumours (non-oligo types) and a strong diffuse ATRX expression means it could be an oligo type, but you would need to confirm with a 1p19q probe.Probe 1p19q co-deletion is a chromosomal alteration associated with primary brain tumours of oligdendroglial histology.In glial tumours , the loss of heterzygosity of the 1p19q chromosomal arm is thought to be a marker of good prognosis in oligodendroglial tumours.

IDH1 antibody is probably the most important antibody now in the diagnosis of brain tumours. The presence of the IDH1 mutations in diffuse gliomas is associated with a favourable survival time and 70% of all gliomas exhibit the IDH1 point mutation. From the workshop it appeared from the audience that consistency of staining was an issue, as was variation between different clones available.

Suggested panels for brain tumours were IHC -ATRX, GFAP, Ki67, p53 and IDH1 and if required ISH-1p19q or for meningioma types IHC- EMA, D2-40, E-cadherin and Ki67.

I would like to thank Debra Horton University Hospital , Birmingham, AL for her informative presentation.

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Paraffin Section Mounting Bath

The low profile unit has a removable rectangular glass basin for easy cleaning. The glass basin is obliquity illuminated by LED which results in a high contrast, glare-free image. When the light is off the specimens are seen against a black background.

See page U9, cat. no. UM-WBG

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See page U5, cat. no. UM-TP

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See page U5, cat. no. UM-EC2800

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Future Events:

2017

Thursday 16-17th November
National Histology Conference Workshops
Venue- Hobart

Saturday 18th-19th November
National Histology Conference
Venue Hotel Grand Chancellor , Hobart
Further details
http://www.nationalhistologyconference.com/

Your Invitation to Attend

November 17th – 19th 2017

The organising committee invites delegates, presenters and trade representatives to Hobart for the 8th National Histology Conference, and the first upon Tasmanian soil.

Delegates will experience a range of workshops and plenary sessions designed to provide continuing professional development in histology, showcase modern equipment and consumables and experience a little of what Hobart and Tasmania has to offer.

Registration

Early registration closes 30th September 2017

Full Registration

AUD$450 – Early
AUD$590 – Early + Dinner
AUD$550 – Standard
AUD$690 – Standard + Dinner

Student Registrations

AUD$150 – Student

Day Registrations

Saturday or Sunday

AUD$270 – Early Saturday
AUD$180 – Early Sunday
AUD$320 – Standard Saturday
AUD$230 – Standard Sunday
AUD$100 – Student Saturday
AUD$ 75 – Student Sunday

Workshops

Friday AM & PM
AUD$95

Social MONA

Friday PM
AUD$22 – Ferry
(museum entry AUD$28)

Conference Dinner

Saturday Evening 6.30-late
AUD$140

Submit an Abstract

Submission of Oral abstracts is closed. Poster submissions are still welcome. Submit via the presentation portal on the conference website.

Workshops

16th November – PM $95

- Multiplex
  Mike Verney, Biocare Medical

17th November – AM $95

- Tissue recognition – The Basics
  Dr Tayiba Tayiba

- Pathology of Surgical Cut-up
  Dr Ros Malley

17th November – PM $95

- Tissue recognition – The weird, the wonderful and the wacky
  Dr Nada Dickinson

- Perfecting the GRAM stain
  Members of the Anatomical Pathology Quality Assurance Program and Technical Committee Members

18th November – AM $70

- Molecular Breakfast
  Scott Reed, Agilent Technologies

For more full workshop descriptions click here.

CONFERENCE DESIGN

Please visit the conference website for more information

www.nationalhistologyconference.com

Conference Design | mail@conferencedesign.com.au