

Connections

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CMPT collaborates with cIQC!

In January 2010 CMPT started a partnership with cIQC, the Canadian Immunohistochemistry Quality Control program.

CMPT is helping cIQC move towards ISO certification and with the logistics that a national proficiency testing program requires.

Dr. Blake Gilks, Professor with the Department of Pathology and Laboratory Medicine at the University of British Columbia and Division Head of Anatomic Pathology at Vancouver General Hospital, discussed the cIQC program with Connections and the nature of the partnership with CMPT.

cIQC was created in response to a need for external quality assurance (EQA) for testing in immunohistochemistry (IHC), in particular for breast cancer biomarkers. This academic program has been founded by Dr. Emina Emilia Torlakovic and Dr. Blake Gilks; since April 2009 it has been available to all Canadian clinical IHC laboratories.

Breast cancer markers such as the estrogen receptor (ER), progesterone receptor (PR), and human epidermal growth factor receptor 2 (HER2) are used to predict the response to treatment and thus determine which treatment the patients would receive.

The need for a nation-wide EQA program for IHC was identified unfortunately in the press, Dr. Gilks admits, but had also been recognized by pathologists since 2005, when these tests shifted to class II tests. While class I tests are taken into account together with clinical information to make a decision about treatment, Dr. Gilks explains, class II tests are stand-alone tests which means that the result, in and of itself, determines treatment.

While IHC has rapidly become the major assay used for determining markers in breast cancer, issues around methodology and interpretation of results have left this technique in serious need of standardization. A significant problem observed with

IHC has been a lack of sensitivity; a potential 10% false negative rate might prevent thousands of newly diagnosed women from being considered candidates for treatment.

Dr. Blake Gilks, Professor, Department of Pathology and Laboratory Medicine, University of British Columbia and Division Head, Anatomic Pathology at Vancouver General Hospital.



"The lack of reference values has been problematic", says Dr. Gilks "...but we think we finally solved the problem". He refers to a recent cIQC (ready for submission) study that has shown that by using a multiple reference method they are able to tell, with great confidence, what the correct interpretation of a regular sample is. This method has shown 100% concordance with reference values that have been validated against patient outcome and independent external methodology. By relying on the majority of results, problems with reference laboratories can be picked up and the dangers of relying on just one reference laboratory can be avoided.

According to Dr. Gilks the response from the pathology laboratories has been very positive with more than half of the laboratories in Canada participating in the program. "Participants like it because it is free", he confesses, "but also because of the depth of the analysis". cIQC's use of tissue micro-arrays with 40 samples per slide also reduces cost, making it a feasible program to implement. Unique to cIQC is a website

being developed with support from Roche, where participants are able to post their scanned slides online, immediately receive their results, and compare their results to the rest of the participants.

Pathology laboratories must make quality a priority.

Dr. Blake Gilks

“What we see is an improvement over time in response to sequential runs. We are getting excellent quality both in technical staining and interpretation” Dr. Gilks claims.

One of the next steps for cIQC is to get itself accredited. With the program moving out of the research environment and into a hospital laboratory environment, consistency is key. That’s where the CMPT – cIQC collaboration comes to play; Dr. Blake Gilks thinks that, as an existing accredited and ISO certified program with a long standing ability to deliver products in a highly professional way, CMPT is the perfect partner to help cIQC achieve its goals.

The future of the IHC EQA program looks very promising. IHC is growing between 7-10% per year with no sign of slowing down. Dr. Gilks is confident about the program and its results; “... it is better than ever been reported anywhere in the world. If we compare results to any other testing programs... it is pretty exciting”.

There are still many challenges ahead. Pathology laboratories must make quality a priority but, because of lack of resources, this commitment to quality has to fit within the same budget, and that’s a challenge.

No national mandatory certification exists now in Canada. British Columbia, Ontario and Quebec have accreditation bodies that require laboratories to participate in EQA programs; however in some of the smaller provinces, joining an EQA program is left up to the individual laboratories.

Funding is also a challenge; cIQC started without funding and required a lot of outside hours from Dr. Emina Torlakovic (currently at the University of Toronto), Dr. Gilks himself, but mainly John Garratt to keep it going. cIQC has now received a grant from the Canadian Partnership Against Cancer in recognition to its efforts and achievements, but future funding sources are vague. “We fall between the cracks” says Dr. Gilks, “we are mainly a research program but we are also impacting indirectly on patient care”.

In terms of the ideal situation for quality assessment, Dr. Gilks’ preference would be for a National accreditation body for diagnostic laboratories that would identify proficiency testing programs that meet their requirements.

Dr. Gilks knows that cIQC would be one of those programs, probably the preferred program, because of what they offer and the standards they were able to set.

For more information or to contact cIQC please visit cIQC’s website: <http://www.ciqc.ca>

CONNECTIONS



Dr. Michael A. Noble

CMPT - cIQC Partnership

by Dr. Michael A. Noble, Chair CMPT

There is a lot of value for cIQC to focus on ISO certification or accreditation as its “go-forward plan”. From a pure liability perspective, cIQC has selected a very high visibility area of interest.

In assessing immunohistochemistry laboratories, cIQC cannot afford to be wrong, cannot afford to provide faulty EQA materials that either unfairly penalize good laboratories or worse, permit laboratories to slip through with invalid results.

A strong quality management system will reduce the opportunities for error and provide the mechanisms for finding the ones that slip through the cracks and fix them quickly. From a confidence level, the medical, laboratory and public communities have become increasingly aware of the role of quality and the criticality of quality management programs. In the medical and public communities it is called Patient Safety. In the laboratory, it is called Quality Assurance and in the world it is called “just good sense”.

Partnering with CMPT provides an opportunity for two sister programs within our common university department to work together for mutual benefit. CMPT mentors programs around the world in adopting quality systems. It makes sense that we provide the same at home.

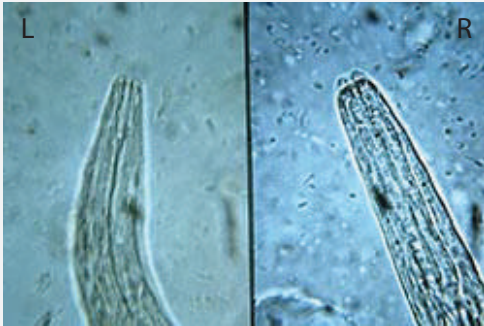
So CMPT and cIQC will work together and help create a foundation for quality for academic, research, teaching, mentoring, outreach, and service. Seems like a winning strategy.

DOWN MEMORY LANE ...

Want to test your memory and your comprehension? Try this interactive quiz to review interesting points and facts learned through the Enteric Parasitology and Mycology proficiency testing challenges during 2009.

ENTERIC PARASITOLOGY

This picture shows two larvae: hookworm and *Strongyloides stercoralis*.



1. Select the correct answer

Hookworm: R L The length of the mouth opening is one of the key morphologic differences between these larvae and those of hookworm.
S. stercoralis: R L

The buccal cavity of *Strongyloides stercoralis* larvae is short while the buccal cavity of hookworm larvae is approximately three times longer.

Courtesy of CDC/ DPDx

2. "*Necator americanus*" or "hookworm" are both accepted ways of reporting.

TRUE

FALSE

False. The Committee recommends that "hookworm" and not *Necator americanus* should be reported since the two species (*Necator americanus* and *Ancylostoma duodenale*) can not be distinguished morphologically

3. Why is important to distinguish between the two larvae (figure 1)?

Answer

They require different therapy

4. *Cyclospora cayentanensis* is an acid fast organism thus it is best detected using acid fast stain.

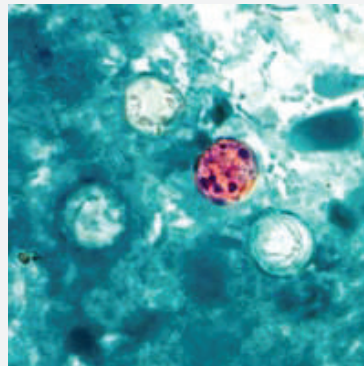
TRUE

FALSE

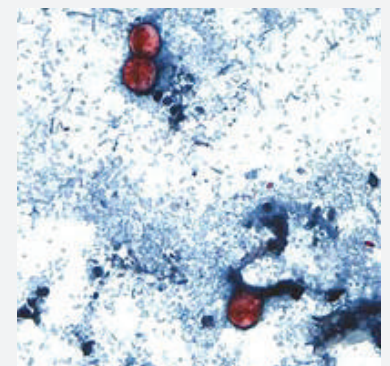
False. The decolorizer, 3 to 5% sulfuric acid, normally used in the staining process is too strong for *Cyclospora* species and over-decolorizes the oocysts. Even with the 1% sulfuric acid solution, some oocysts may appear unstained or very pale.

Safranin staining has demonstrated superior results producing reddish orange staining of more than 98% of oocysts on a slide.

Courtesy of CDC/ DPDx - Melanie Moser ID 7827(a) and 7828(b)



Acid fast stain



Safranin stain

MYCOLOGY

1. Varietal status of *Cryptococcus neoformans* can be established using Canavanine-glycine-bromothymol blue (CGB) agar. *C. neoformans* var. *neoformans* is CGB ...

Answer

Positive

2. The highest the volume of CSF on an agar slant, the higher the sensitivity.

TRUE

FALSE

False. Inoculation of more than 0.5 ml of CSF onto an agar slant is usually counterproductive. Neither *Cryptococcus neoformans* nor *Histoplasma capsulatum* will grow on agar covered with liquid.

3. Which one of these organisms is usually associated with growth in total parenteral nutrition?

Absidia species

Candida parapsilosis

Geotrichum candidum

C. parapsilosis is notorious for its capacity to grow in total parenteral nutrition and to form biofilms on catheters and other implanted devices; for nosocomial spread by hand carriage, and for persistence in the hospital environment.

Get Connected

Follow up ECCMID - Vienna, Austria April 10 - 13, 2010

Last April some members of the CMPT Advisory Committee attended the European Congress of Clinical Microbiology and Infectious Diseases (ECCMID). Here is a presentation by Judy Reid on a new technology presented at the congress.

Judy Reid is the Vancouver Coastal Health Microbiology Regional Technical Specialist and member of the Clinical Bacteriology Advisory Committee.

Automated Microbiology



What we saw
at ECCMID



Click on the slides to go through the presentation

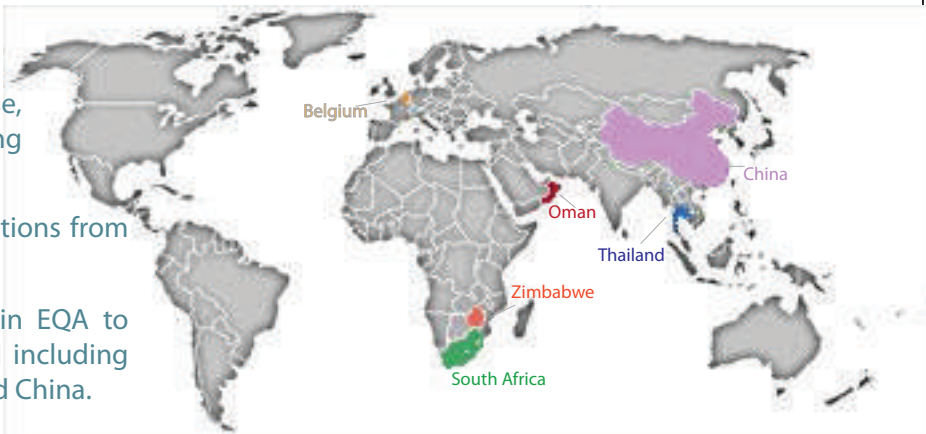
Announcements

INTERNATIONAL EXTERNAL QUALITY ASSESSMENT PROGRAM

Through its [International EQA Program](#) course, CMPT has been providing education and training in EQA to participants around the world.

This year CMPT is receiving the visit of delegations from Oman and South Africa.

CMPT has provided education and training in EQA to participants from different parts of the world including Thailand, Zimbabwe, South Africa, Belgium, and China.



RECERTIFICATION PROGRAM IN LABORATORY QUALITY MANAGEMENT

The POLQM recertification program is an opportunity for a person, previously certified by the UBC Certification Course for Laboratory Quality Management, to update their certificate.

Recertification is not a requirement but a service offered by CMPT to those individuals that would like to keep up to date with the expanding world of Laboratory Quality Management.

Recertification can be obtained through a two-month refresher course or by examination only.

Refresher course: Monday, September 13 – Friday, November 12, 2010

Examination only: the exam will be available November 5, 2010 and it is due on November 12, 2010.

For more information and application forms please contact POLQM by email at: ubc.service.polqm@gmail.com

Get Connected

Upcoming events

MAY

Banff Conference on Infectious Disease

May 26-30, 2010 - The Banff Centre, Banff, AB

More information: <http://www.biology.ualberta.ca/bcid/Home.html>

JUNE

2nd ASM Conference on Antimicrobial Resistance in Zoonotic Bacteria and Foodborne Pathogens

June 8 - 11, 2010 - Toronto, ON

[More information](#)

2010 Annual Conference of the Canadian Society of Microbiologists

June 14 - 17, 2010 - Hamilton, ON

More information: <http://csm-scm.org/english/conference.htm>

JULY

Anaerobe 2010: 10th Biennial Congress of the Anaerobe Society of the Americas

July 7 - 10, 2010 - Philadelphia, PA

More information: <http://www.anaerobe.org/2010/anaerobe2010.html>

3rd ASM Conference on Enterococci

July 30 - August 2, 2010 - Portland, OR

[More information](#)

SEPTEMBER

50th ICAAC

September 12-15, 2010 - Boston, MA

Interscience Conference on Antimicrobial Agents and Chemotherapy, organized by the American Society for Microbiology.

Conference website: <http://www.icaac.org/>

MICROBE 2010

September 24 - 26, 2010 - Sheffield, UK

More information: <http://www.microbe.org.uk/>

2nd ASMET - The ASM Emerging Technologies Conference

September 26 - 30, 2010 - Cancun, Mexico

[More information](#)

OCTOBER

ILAC/IAF 2010 Joint Annual Meetings

20 - 29 October - Shanghai, China

Meeting website: http://www.ia_lac2010.cn/

48th Annual Meeting of the Infectious Diseases Society of America

21 - 24 October, 2010 - Vancouver, BC

Meeting website: <http://www.idsociety.org/IDSA2010.htm>

ABOUT CONNECTIONS

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Editor: Veronica Restelli

Contact Connections:

By Mail:

Room 328A, 2733 Heather Street Vancouver, BC V5Z 1M9 Canada

By Phone: 604-875-4685

By Fax: 604-875-4100

By E-mail:

restelli@interchange.ubc.ca

We want to hear from you.

Have an idea for an article? Is there a topic you'd like to see covered? Do you have any questions or want to announce an event? Drop us a line.

Don't like something we're doing? Let us know.