

Connections

Winter 2009-2010

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CMPT QUARTERLY ON-LINE NEWSLETTER

Volume 13 Number 4

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**“So this is Christmas
and what have you done
another year over
and a new one just begun”**

- John Lennon -

Very Best New Year Wishes!

Dear Connections readers.

Heading into 2010, I would like to thank those people who have collaborated in different ways with Connections; without their help, I would be in real trouble.

Many thanks to Dr. Michael Noble, Esther Kwok, Shelley Tiffin, Dr. Diane Roscoe, Judy Reid, Yasmin Dhalla, Dr. Michelle Alfa, Dr. Dreidre Church, Dr. Kanchana Manickam, Dr Philippe Lagacé-Wiens, and Robin Barteluck. Special thanks to our readers who give Connections a real purpose.

As Dr. Noble mentioned in our Annual Report, 2009 has been a year of change.

“Connections” has taken a new format and will try to cover stories from all CMPT-programs.

CMPT's website has undergone mayor changes as well; Suhanya Bhuvanendran has been working hard on making the site more accessible and user friendly.

CMPT has implemented a new program, the Supplementary Gram Stain program. This program was created to respond to the needs of some participants to be more proficient in these challenges. We are pleased to say that 80 laboratories are currently participating.

CMPT has also received requests to implement a rapid antigen detection test (RADT) for group A streptococci EQA program from laboratories that perform these tests and would like to assess their performance. A survey has been sent to participants to evaluate the interest among the participant laboratories.

We hear you, and we continue to change to make improvements and address the needs of a continually evolving community.

New Year's Resolutions

This is a good time to make a few plans for the New Year. During 2009 I have had some ideas on what “Connections” should look like, and more importantly, what content it should have.

- One objective for 2010 Connections issues is to make the newsletter more interactive by incorporating multimedia. This issue is my first try, an interactive quiz to look back into what we learned during 2009.
- Starting next issue, I would also like to have regular sections on different topics in Clinical Microbiology such as History of Infectious Diseases and Molecular Methods in Clinical Microbiology.
- Lastly, and more challenging, I would like to engage more authors in the process. A bigger pool of writers can give the newsletter new and different flavors an target a broader spectrum of reader's needs and interests.

As usual, your ideas are welcome. Did you like a particular article? Do you have any comments or questions? Let us know.

Sincerely,
Veronica Restelli
Editor

DOWN MEMORY LANE ... CLINICAL BACTERIOLOGY

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

Next issue: Mycology and Parasitology

CLINICAL BACTERIOLOGY

M091-1 Pharyngitis due to beta hemolytic group G streptococcus

1. Group C and G streptococci can be biochemically differentiated from group A streptococci (GAS) by the Pyr and Taxo A tests. Which one of these options is the correct one?

GAS is Pyr (+) and Taxo A(S) while GCS and GGS are Pyr (+) and Taxo A (R)

GAS is Pyr (+) and Taxo A(S) while GCS and GGS are Pyr (-) and Taxo A (S)

GAS is Pyr (+) and Taxo A(S) while GCS and GGS are Pyr (-) and Taxo A (R)

2. True or False: GCS and GGS are positively associated with rheumatic fever.

S. pyogenes is susceptible to bacitracin and is PYR positive. Group C or G streptococci are resistant to bacitracin (Taxo A) and are Pyr negative. Definitive identification includes the demonstration of the Lancefield group C or G by immunoassay.

False. It was demonstrated *in vitro* that GCS and GGS have the potential to elicit an autoimmune response that may trigger acute rheumatic fever. However, rigorous studies on preceding GCS and GGS infections in patients with rheumatic fever have not been performed.

M091-2 VRE screening

1. True or False: all *Enterococcus* species found to be vancomycin resistant should be reported.

False. Tests should be performed to rule out the species that are intrinsically resistant to vancomycin, e.g. *E. gallinarum* and *E. casseliflavus*. Enterococci with vanC genes (intrinsically resistant) have not been associated with nosocomial outbreaks, and are not considered true VRE.

2. Choose the answer you think describes the best approach for VRE screening.

Incorrect. The use of an agar screening plate with brain heart infusion (BHI) agar, incorporating 6 µg/mL of vancomycin, is useful for **screening isolates** for vancomycin resistance, but not recommended for use with clinical specimens.

Clinical specimens should be plated on...

BHI agar plates containing 6µg/mL of Vancomycin.

Bilis Esculine agar plates containing 6µg/mL of Vancomycin.

Bilis Esculine agar plates containing 8µg/mL of Vancomycin.

Correct. Potentially vancomycin resistant enterococci produce colonies which appear to be surrounded by a black halo after 24h of incubation. Medium with 6 µg/mL of vancomycin is the recommended for VRE screening however, it has been noted to have excessive breakthrough growth requiring additional follow-up work (see answer C).

Correct but.. Many labs use media with 8 µg/mL of vancomycin because it does not require as much follow-up work however, VRE with a vanB gene and an MIC in the range of 8-16 µg/mL (considered vancomycin intermediate) could be missed (see answer B).

M091-4 Peritoneal dialysis fluid, *Gemella* species

1. True or False: susceptibility testing for *Gemella* species is not standardized.

True. At this time, there are no standardized antimicrobial testing guidelines for *Gemella* species however, in cases where the isolate is from a normally sterile site, it has been suggested that CLSI interpretive document for *Streptococcus* spp. (other than *Streptococcus pneumoniae*) can be used as a reference for *Gemella* antimicrobial testing.

http://www.cdc.gov/cliac/pdf/addenda/cliac0904/Addendum_W.pdf

M091-5 Meningitis, *Citrobacter koseri*

You isolate a *Citrobacter koseri* from a CSF obtained from a one year old patient with meningitis.

Click on ALL the antimicrobial agents that you would report to the clinician.

Ampicillin	Trimethoprim-sulfamethoxazole
Cephalotin	Ciprofloxacin
Gentamicin	Imipenem
Piperacillin-Tazobactam	Cefotaxime

The CMPT Committee recommends testing and reporting a series of antimicrobial agents. Reporting of the antimicrobial profile is considered more relevant than reporting the antimicrobial agents alone because treatment of CSF infections with *Enterobacteriaceae* usually involves a combination of antibiotics.

[Click here for complete profile.](#)

M092-3 group B *Streptococcus* (GBS), vaginal swab

1. What would your laboratory do in this scenario?

A group B *Streptococcus* is isolated from a vaginal swab of a pregnant woman with severe allergy to penicillin. The susceptibility test (disk diffusion method) yielded the following results: erythromycin: resistant; clindamycin: susceptible

- You report GBS erythromycin R, clindamycin S.
- You perform an MIC for clindamycin and erythromycin to confirm.
- You further test for inducible clindamycin resistance.

M092-4 Sepsis, *Fusobacterium nucleatum*

1. Your laboratory isolates a *F. nucleatum* from a patient's blood culture. What should you do?

- Report *F. nucleatum*, no susceptibility needed.
- Report *F. nucleatum*; perform and report susceptibility or refer for further testing.

2. True or False: CLSI recommends agar dilution and broth microdilution methods for testing antimicrobial susceptibility of *Fusobacterium* species.

According to CLSI standards, the antibiotics (group A) that should be tested and reported routinely for *Enterobacteriaceae* isolates are: ampicillin, gentamicin/tobramycin; cefotaxime /ceftriaxone (CMPT committee members also recommended the report of Imipenem / meropenem in addition or in place of 3rd gen. cephalosporins).

Incorrect. Antimicrobial agents that should not be routinely reported for bacteria isolated from CSF: agents administered by oral route only, 1st and 2nd generation cephalosporins, clindamycin, macrolides, tetracyclines, and fluoroquinolones.

Incorrect. Clindamycin needs to be further tested for the presence of inducible clindamycin resistance.

Correct. Inducible clindamycin resistance (not readily apparent until exposed to an inducing agent) needs to be tested. The disk induction test (the so-called "D test") must be performed on GBS that are erythromycin resistant and clindamycin susceptible to determine if the isolate has inducible clindamycin resistance.

As this anaerobe was isolated from blood, the CMPT committee expects laboratories to report or refer the isolate for susceptibility testing and/or provide a comment indicating local sensitivity patterns of resistance.

Broth microdilution method is only recommended by CLSI for *B. fragilis* group organisms. There are commercial broth microdilution panels that are FDA approved for testing of all anaerobes, and may work satisfactorily for certain non-*B. fragilis* group species .

E-test has been used in recent years because of its convenience and several studies indicate that results correlate with the CLSI reference method.

For further information or details, click on each of the critique numbers to go to the complete critique.

Get Connected

Follow up

Chinese delegates and Laboratory Quality Management in China

For many years CMPT has provided education and training in EQA for participants from other countries, which in the past have included Thailand, Zimbabwe, South Africa, Belgium, and China. Last year a second group of delegates from China visited CMPT. This group were from China CDC in Beijing.

The program of training was coordinated through the support and assistance of the US Centers for Disease Control and Prevention. The training of this group was coordinated through the support and assistance of the US Centers for Disease Control and Prevention. This training visit was highlighted in the 2009 summer edition of CMPT Connections.

Although CMPT has had ongoing long distance communications with all the groups that has trained and has had a conjoint research investigation, this is the first time we have had an opportunity for sustained and continuing contact.

In August 2009, Dr. Noble (CMPT) and Dr. Carlyn Collins (US-CDC the offices of China CDC), visited the laboratories of Dr. Meijing Yan and Dr. Li Jiandong in Beijing and were pleased to learn that both were already developing new EQA programs addressing Salmonella identification and virus serology.

By October, Dr. Meijing Yan had been able to complete a cycle with a group of 9 laboratories. The cycle was extremely successful. Samples were received in viable conditions and on-time by the participant laboratories. All 9 laboratories cooperated providing assessable information. Grading has been completed and the next cycle is being developed.

As for continued contact, CMPT is still in contact and opportunities for the next visit are being explored.

Announcements

POLQM Laboratory Quality Management recertification opportunities

The Program Office for Laboratory Quality Management (POLQM) is planning to offer a Recertification Program for Laboratory Quality Management graduates.

Why recertify?

As the profession's knowledge base continues to expand rapidly and new insights and practices develop, it is essential for laboratory managers to maintain their level of expertise and knowledge. The POLQM recertification program is an opportunity for individuals, previously certified by the UBC Certification Course for Laboratory Quality Management, to update their certificate.

There would be three ways of getting recertified:

- through examination only
- through a refresher (two months) course with final examination,
- or by taking the updated 20 week course a second time at a discounted cost

Interested? Send us an email to ubc.poqlm.service@gmail.com for more information.

CLSI document M100-S20 released in January 2010

The Clinical and Laboratory Standard Institute has recently published the annual update of the well-known antimicrobial susceptibility testing standard, Performance Standards for Antimicrobial Susceptibility Testing; Twentieth Informational Supplement (M100-S20).

A major change involves revised interpretive criteria (breakpoints) for several cephalosporins and Enterobacteriaceae.

[Read more.](#)

Get Connected

Upcoming events

MARCH

14th International Congress on Infectious Diseases - ICID

09 - 12 March, 2010 - Miami, FL, USA

Organized by the International Society for Infectious Diseases

The 14th ICID will be held in conjunction with the 4th Regional Conference of the International Society of Travel Medicine (ISTM) and the 2nd Congreso Latinoamericano de Medicina del Viajero (SLAMVI).

Congress website: http://www.isid.org/14th_icid/

APRIL

20th European Congress of Clinical Microbiology and Infectious Diseases - ECCMID

10 - 13 April, 2010 - Vienna, Austria

Organized by the ESCMID (European Society of Clinical Microbiology and Infectious Diseases).

ECCMID website: <http://www.congrex.ch/eccmid2010/>

MAY

Does Your Lab Measure Up? Meeting ISO Accreditation Requirements

May 6, 2010 1:00 - 2:00 PM Eastern (US) Time - TELECONFERENCE -

Speaker: Michael A. Noble, MD, FRCP(C), Department of Pathology and Laboratory Medicine, University of British Columbia, Vancouver, BC, CANADA

This program will review the international standard ISO 15189:2007, Medical laboratories - Particular requirements for quality and competence. For more information go to:

http://www.clsi.org/Content/NavigationMenu/Education/Teleconferences/2010Apr_Jun.pdf

AMMI - CACMID 2010 Annual Conference

May 6 - 8, 2010 - Edmonton, AB

Hosted by Association of Medical Microbiology and Infectious Diseases Canada - Canadian Association for Clinical Microbiology and Infectious Diseases

Conference website: <http://www.cacmid.ca/2010conference.html>

JUNE

2010 Annual Conference of the Canadian Society of Microbiologists

June 14 - 17, 2010 - Hamilton, ON

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

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/>

OCTOBER

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

"Connections" is published quarterly by CMPT and is aimed to the Microbiology Laboratory staff.

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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.