

CMPT CONNECTIONS 'ON-LINE'

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Spring 2009

"Get Connected" Passing the Hats!

This is the last issue of *CMPT Connections* that I will be editing. June 8 marks my official retirement date from CMPT. I am pleased to announce that **Veronica Restelli** has been hired as the editor of this newsletter, the annual report, and the critiques for the many CMPT programs. The CMPT web site will now be managed by **Suhanya Bhuvanendran**, while **Maggie Ma** takes over the POLQM web site. CMPT participants can expect new, fresh ideas and continual improvement for CMPT from these three talented people.

My history with CMPT is a long one, first serving as a committee member back when CMPT was first formed (1982), then working part-time as the editor of the CMPT newsletter, which was first published in March 1997. *CMPT Connections* started as 3-issues per year, but quickly grew to 4 issues per year starting in 1998. The newsletter has gone from a mailed printed version to an on-line publication. I am indebted to the many authors who gave so willingly (*some may say coerced*) of their time by writing articles, tips, and updates to augment information for the CMPT programs.

My responsibilities grew over the years and I took on the editing of the critiques and the annual report. "Old techs" can be taught "new tricks" as I became the CMPT web manager, learning first FrontPage, then Dreamweaver web programs.

The past year was extremely busy as Dr. Michael Noble involved me in an exciting joint project with the CLSI, CDC, and WHO creating and editing a laboratory quality management training toolkit for worldwide distribution. And this June, I will be in Toronto taking part in the annual Quality Management Workshop (p. 3) presented at the CACMID-AMMI Canada Conference. In August I hope to see many of you at the POLQM workshop (p. 4).

Thank-you for letting me *Get Connected* with you all these years. It has been a wonderful journey.

Robin Barteluk, ART (CM),
CMPT Editor and Web Manager

Introducing Veronica Restelli, CMPT's New Editor

Veronica Restelli is originally from Buenos Aires, Argentina. She received her BSc in Biochemistry from the University of Buenos Aires and after graduating did her residency in Clinical Microbiology at the Infectious Diseases Hospital in Buenos Aires. During this time she was elected Chief of Residents, a position that she held for a year.

Veronica worked as a Microbiologist in different laboratories, private clinics and public Hospitals in Argentina, but in 1999 made the decision to move to Canada. While in Winnipeg she went back to school to get her MSc in Biotechnology. Under the supervision of Dr Michael Butler, spent time researching glycosylation of erythropoietin under different culture conditions. In 2002 she moved to Vancouver to work as a Research Associate for Twinstrand Therapeutics. She stayed with Twinstrand for six years working with recombinant protoxins for cancer treatment and was directly involved in the company project to develop an antidote for ricin intoxication.

Veronica has extensive experience in technical writing. She says Clinical Microbiology has always been her passion and is thrilled to be involved with it again, this time working together with the staff at CMPT.

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Cephalosporin Breakpoints – CLSI, FDA, and the World!

**Robert P. Rennie PhD Professor and Site Chief,
Department of Laboratory Medicine and Pathology University of Alberta Hospitals,
Edmonton, Alberta**

For the past few years, there has been an ongoing debate about the applicability of CLSI breakpoints for cephalosporin activity against *Enterobacteriaceae*. The breakpoints, which were comparable to the existing FDA breakpoints, were established when there was little resistance among these gram-negative bacilli. The specter of beta-lactam resistance mechanisms, including extended-spectrum beta-lactamases (ESBLs), and increasing reports of clinical treatment failures of bacterial infections with cephalosporin MIC values within the 'susceptible' range, has prompted a revisit of the breakpoints for these agents. The need for cephalosporin breakpoint harmonization with Europe (EUCAST), where breakpoint values are set much lower than CLSI, has also increased the impetus for this review (see www.eucast.org). New evidence that was considered in the CLSI review included expanded MIC surveillance data, updated pharmacokinetic /pharmacodynamic (PK/PD) studies, with patient simulations (called Monte Carlo simulations - not a gambling mecca!), new animal studies, and clinical studies clearly indicating the correlation between clinical outcome and the MIC-value of the isolate. Ultimately, CLSI has recently lowered the interpretive breakpoints for the more widely used cephalosporins and aztreonam against the *Enterobacteriaceae*.

These changes were not published in the CLSI 2009 document M100-S19 because CLSI is still in the process of characterizing and validating the Kirby-Bauer disc zone diameter correlates; publication of MIC and zone diameter breakpoints is anticipated for 2010.

For laboratories that follow CLSI standards guidelines for accreditation purposes, the M100-S19 document (p. 17) indicates that newly approved or revised breakpoints may be implemented by clinical laboratories following discussions with local stakeholders (e.g., Infectious Disease Physicians, Medical staff, Pharmacy and Therapeutics Committees, etc.). If the laboratories are using a device that includes concentrations sufficient to interpret the susceptibility of an isolate using the new breakpoints (i.e., that the range of concentrations provided by the device is on-scale for the revised breakpoints) then the laboratory can choose to interpret and report those new breakpoint interpretations using the revised CLSI values, so long as the new device test is verified.

This change will not markedly increase the number of isolates reported as resistant to these beta-lactam agents but will improve the detection of those strains harbouring resistance determinants, such as ESBLs, and may obviate the need to perform a large battery of beta-lactam resistance confirmatory tests. However, there may still be value in performing confirmatory tests for epidemiological or infection control purposes.

CMPT endorses these changes and will be using the revised breakpoints for antimicrobial reporting purposes in forthcoming external quality assurance challenges where appropriate. If you have questions about these revised breakpoints and how they may be implemented in your own laboratories, please get in touch with CMPT at

www.cmpt.ca or by Email to cmpt@interchange.ubc.ca.

REFERENCE CLSI. M100-S19: Performance Standards for Antimicrobial Susceptibility Testing; Nineteenth Informational Supplement Volume 29 No. 3. Clinical and Laboratory Standards Institute, Wayne, Pa.

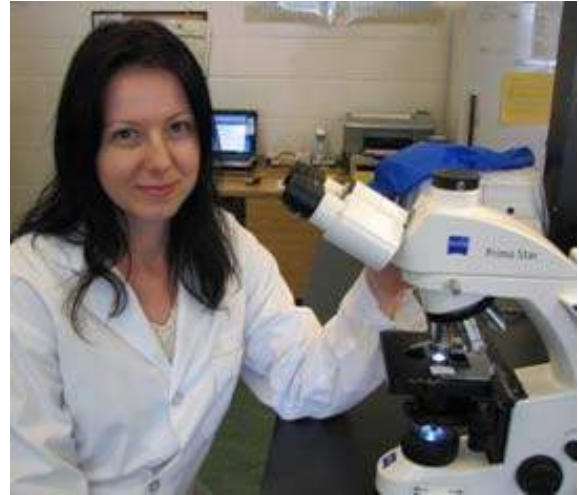
This document provides updated tables for the CLSI antimicrobial susceptibility testing standards M02-A10 and M07-A8.

Agent	New Breakpoint (mg/L)			Current Breakpoint (mg/L)		
	S	I	R	S	I	R
Cefazolin	≤1	2	≥4	≤8	16	≥32
Cefotaxime	≤1	2	≥4	≤8	16-32	≥64
Ceftizoxime	≤1	2	≥4	≤8	16-32	≥64
Ceftriaxone	≤1	2	≥4	≤8	16-32	≥64
Ceftazidime	≤4	8	≥16	≤8	16	≥32
Cefepime	≤8	16	≥32	≤8	16	≥32
Aztreonam	≤4	8	≥16	≤8	16	≥32

More CMPT Staffing Updates

Siyka Bozukova joined CMPT May 4, 2009 as a Research Assistant/Tech 2. Originally from Bulgaria, she completed her BSc in Biology and Chemistry at the University of Plovdiv, Bulgaria. After graduation in Bulgaria, she moved to Pasadena, California where she worked as a Biology assistant in the Physiology and Microbiology Laboratory at the Department of Natural Sciences at Pasadena City College.

In addition, Siyka’s work experience includes Microbiology Research assistant in the Microbiology Department at the University of Victoria, B.C. and the Molecular Genetics laboratory at Concordia University, Montreal. While in Montreal she also completed French courses at Platon College. Siyka is currently enrolled in the Bioinformatics Masters program at the University of Manchester, Manchester, UK.



Siyka Bozukova poses in the CMPT laboratory.



CMPT is pleased to announce that **Suhanya Bhuvanendran BMLSc**, our Research Assistant, takes on the additional role of CMPT’s web site manager.

The **Quality Management and Susceptibility Testing Workshop** is sponsored by



Quality Management and Susceptibility Testing Workshop

presented at the AMMI Canada—CACMID Annual conference

June 18, 2009 13:15 – 16:15

Toronto, Ontario

Sheraton Centre Toronto Hotel Room: Metro 1, City Hall

Moderator: Robert P. Rennie PhD

Robert P. Rennie PhD *International Advances in Anti-fungal Susceptibility Testing*

Robin Barteluk ART *External Quality Assessment of Laboratory Performance with ESBL Bacteria*

Candy Rutherford ART *External Quality Assessment of Laboratory Performance with MRSA*
Quality Management Program – Laboratory System, Ontario Medical Association, Toronto, ON

Stephen G. Jenkins PhD *Post Market Evaluation of Antimicrobial Susceptibility Testing*
Director, Clinical Microbiology Laboratories, New York Presbyterian Hospital/Weill Cornell Medical Center
Professor, Department of Pathology and Laboratory Medicine, Weill Cornell Medical College, New York, NY

This year the emphasis of the CMPT/POLQM Quality Management Workshop is susceptibility testing because the 16th Annual CACMID – AMMI Canada is partnering with the 26th International Congress of Chemotherapy and Infection. **To register, please visit:** http://www.ammi.ca/annual_conference/index.php

1st Annual Canadian Quality Congress—August 19-21, 2009
Focus on Future: Quality, Innovation and Social Responsibility
 with the participation of
13th World Congress for Total Quality Management
University of British Columbia, Vancouver, Canada

CMPT’s sister Program Office of Laboratory Quality Management ([POLQM](#)) is pleased to announce its participation in the 1st Annual Canadian Quality Congress. This 3-day conference includes a gathering of world leaders in the quality management field, top notch research scholars, and professionals invited from 25 countries around the world. It is a tremendous educational and networking opportunity for quality professionals.

POLQM Workshop August 20, 2009 1:00 pm to 5:00 pm

Location: UBC Hospital lecture theater - ground floor.

- **Michael Noble** *Calculating the Cost of Poor Quality*
- **Blake Gilks** *Developing a Quality Culture for Anatomic Pathology*
- **Barbara Unger** *Mentoring Quality at Muhimbili National Laboratory-Dar es Salaam*
- **Janice Nolan** *Coordinating Quality in the Multi-site Laboratory*

The **Full 3-Day Conference registration fees** include: admission to the Opening Reception on August 18, and to the Conference Banquet on August 20; admission to the technical sessions and exhibits; continental breakfast on August 19, 20 and 21; lunch on August 19 and 20; refreshments on August 19, 20 and 21; an electronic copy of the proceedings; and, a certificate of attendance.

The **One-Day registration fee** includes: admission to the technical sessions and exhibit on that respective day; the daily breakfast and lunch (lunch not served on August 21); the daily refreshment breaks; and, the conference proceedings available online.

Registration <http://www.canadianqualitycongress.com/>

Reduced rate for early bird registration by June 30

Keynote Speakers and their topics

H. James Harrington	<i>On Excellence Building</i>
Masaaki Imai	<i>On Kaizen and Lean Management</i>
Sister Mary Jean Ryan	<i>On Healthcare Quality</i>
Peter Merrill	<i>On Innovation Generation</i>
Tito Conti	<i>On Quality Systems Management</i>

The topics for the tentatively scheduled tutorials and workshops are:

- Lean Management and Six Sigma
- Patient Satisfaction and Hospital Wait Time
- ISO 9000 and ISO 14000

The Technical Program will take place in the lecture theatres in the Woodward/IRC building, located at 2194 Health Sciences Mall, The University of British Columbia, Vancouver campus.