



clinical  
microbiology  
proficiency  
testing

## ANNUAL REPORT 2018 - 2019

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Innovation • Education • Quality • Assessment • Continual Improvement

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CMPT Annual Report 2018-2019

## Clinical Microbiology Proficiency Testing

— Established 1982 —

**Michael A Noble MD FRCPC, Chair and Managing Director  
Esther Kwok BSc, RT, CLQM, Coordinator**

**ISO 9001:2015 Registration 2002**

**ISO/IEC 17043:2010 Registration 2015**

**ISO 9001:2015**

**ISO/IEC 17043:2010**



**ISO 9001**



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## CMPT QUALITY POLICY AND MISSION STATEMENT

### Innovation, Education, Quality Assessment, Continual Improvement

- We, at CMPT, are a university based, peer directed program, that provides Innovative External Quality Assessment for microbiology laboratories providing services for public and patient health.
- Our vision is to be recognized provincially, nationally, and internationally as a valued contributor of EQA innovation, education, and as passionate advocates for continued quality improvement in EQA for the benefit of healthcare, our participants, and our program.
- CMPT is committed to its Quality Management System, and regular review for continual improvement of its effectiveness.
- CMPT is committed to regulatory requirements of ISO 9001:2008 and ISO/IEC17043:2010.
- The CMPT Quality Policy is the framework for the regular establishment and review of quality objectives.
- CMPT is committed to regular review of the Quality Policy to ensure its suitability to the program.



Michael A. Noble, Chair

September 2019

## CMPT STAFF

The CMPT staff is committed to the highest standards of quality and professionalism. This dedicated team of administrative and technical staff provides support through all phases of the program.

<b>Michael A. Noble, MD FRCPC</b>	.....Chair and Managing Director
<b>Esther Kwok, BSc, RT, CLQM</b>	.....Coordinator
<b>Caleb Lee, MHA, BMLSc, CLQM</b>	.....Head Technologist
<b>Veronica Restelli, MSc</b>	.....Editor
<b>Fion Sze On Yung, MLT BSc</b>	.....Technologist

As a program in the Department of Pathology and Laboratory Medicine, University of British Columbia, CMPT acknowledges and greatly appreciates the on-going support of the following individuals:

- Michael Allard MD FRCPC. Head, Pathology and Laboratory Medicine (2011-2019)
- Aileen To. Director, Human Resources and Administration (2016-2019)
- Donald E. Brooks, PhD, FCAHS, Interim Head, Pathology (2019-Present)
- Genevieve MacMillan, Director, Human Resources and Administration (2019-Present)

## CHAIRMAN'S ANNUAL REPORT

### **CMPT Program**

First created in 1983, UBC's Clinical Microbiology Proficiency Testing program has enjoyed over 35 years of experience and expertise while consistently living its mission statement of Innovation, Education, Quality Assessment and Continual Improvement. This past year (April 2018-March 2019) CMPT continued in this long-standing tradition. We again have the opportunity to look back with pride in our successes.

### **CMPT Staff**

As the chair and managing director of CMPT, I am so impressed with the skill, talent and effort of our staff. CMPT exists and is able to shine because of the strength of our collective team. CMPT is a sum greater than its parts because of the commitment to our program of Esther Kwok, our coordinator, Caleb Lee, our senior technologist, Veronica Restelli, our web manager and editor and now safety officer, and Fion Yung, our water program technologist.

### **CMPT Volunteers**

CMPT is grateful for all the support we receive from our committee members and Chairs. Without the committee members, it would be impossible for us to maintain our challenge selection process, our assessment system, and the high quality of our critiques and newsletter.

As always, CMPT recognizes the valuable role that our committee members contribute. We receive the benefit of their time, knowledge, and expertise. All is appreciated.

We have active committees for our Clinical Bacteriology, Mycology, and Enteric Parasitology programs, and receive assistance with our Water Program chair. All members in all committees are actively involved in programmatic review and critique development. My appreciation goes out to all of them. Our committee renewal process will continue on a more regular basis, keeping in mind the importance of maintaining the right balance between experience and fresh ideas.

### **Management of CMPT Quality Management**

#### **Mission and Vision Statements**

Each year, we have the opportunity to review our mission and vision statements. They have been stable and unchanged for many years, but they continue to be both operative and relevant to what we do and to what we continue to aspire. We see no need for change at this time.

#### **Audits of the CMPT Program and Quality System**

##### **Internal Audits**

Internal audits were completed by CMPT staff in February 2019. These audits are done to ensure our compliance with international standards, with one done consistent with ISO9001 and the other consistent with ISO17043. Some minor issues were identified that required addressing the full external audits. All were successfully completed. These are done in timing prior to our two external audits.

##### **External Review**

CMPT was successfully audited by SAI Global in March 2019. Our Quality System was recognized as being in compliance with ISO 9001:2015 (Quality Management – Requirements) with no deficiencies.

In addition, in May 2019 we successfully completed our second cycle initial audit which begins for compliance with the international standard ISO/ IEC 17043:2010 (Conformity assessment -General requirements for proficiency testing) under the authority of the American Association for Laboratory

## **CHAIRMAN'S ANNUAL REPORT**

Accreditation (A2LA). We were found to have no major concerns but did have 6 deficiencies and 3 observations. All were addressed, and our accreditation certificate was received.

Over the years, we have found immense value in our decision to seek formal recognition by international certification and accreditation bodies. In addition to the recognition by our peers in the international quality assurance community, it has become a principal factor for national and international laboratories seeking providers for external quality services. Most importantly CMPT has learned the skills of Quality Management, planning and development of customer services and satisfaction. As the national community of laboratories has consolidated, we have remained financially stable and secure and found the path towards continued innovation and development.

### **Review of Laboratory Safety**

During the last 6 years CMPT has formalized its safety processes significantly. We participate in the Department of Pathology and Laboratory Medicine Safety Committee. Veronica Restelli serves as our CMPT Safety Officer, and through that capacity she ensures that we are up to date in our requirements, and performs our monthly monitoring, and keeps us apprised of any potential concerns.

In addition to our planned Quality Management System internal audits, we complete monthly Safety audits which are performed and recorded using an on-line survey. There was also an annual external safety audit performed within our university department. We continue to meet all UBC and national requirements for safety.

### **CMPT Resources**

CMPT is provided sufficient laboratory space within the Department of Pathology and Laboratory Medicine. The department provides resources and personnel to support our finance, human resources, and administrative needs. We appreciate the support we receiving from Genevieve MacMillan, Department Director and Dr. Donald Brooks, Department Interim Head.

CMPT relies on the revenues generated through program registration for cost recovery. Over the past several years, as many Canadian provinces have undergone laboratory restructuring and consolidation, this has had an impact on some of our programs.

We have found alternate revenue streams, including active research and development to develop new and novel materials for our own programs and also through collaborating with other EQA programs and providing them with consultation assistance and in some cases samples. Our meeting ISO17043:2010 has enhanced our ability to grow this additional resources arm, and allows us to support our growing staff, and to enhance our research and development programs.

### **In-house Training, Competency, Proficiency**

All CMPT members, are required to regularly take and update courses in Safety, Transport of Dangerous Goods, Confidentiality and Privacy, some through UBC, some through external agencies.

### **CMPT Annual Reviews**

#### **Review of Continuing Education for CMPT Staff**

CMPT is committed to providing opportunities for our staff to participate in education opportunities. In part, this is covered through invited speakers at our Annual General Meeting, and, in part, through the open invitation to participate in our sister program the Program Office for Laboratory Quality Management fall conference. In addition, all CMPT staff are encouraged to take advantage of the programs

## CHAIRMAN'S ANNUAL REPORT

that the university has to offer. This year, one CMPT staff member successfully participated in the POLQM Certificate Course in Laboratory Quality Management.

### **Review of CMPT Quality System**

#### **Quality System**

This year the review of our Strategic Quality Plan (SQP) and Quality Forms (SQF) resulted in some important changes.

As part of our Strategic Quality Plan review, several changes were incorporated this year. Our Quality Policy (SQP01) was revised to strengthen our statement of commitment to our staff.

We refined several essential definitions (SQP002 Definitions) including defining both our paper and video challenges as EQA measurement tools. We clarified that we view all people of all professions working within the laboratories that we serve as our customers. We clarified that we seek the opinions of all our customers, and not only top management in our customer satisfaction surveys. We clarified that our Grading Guideline is a document intended for the use of all our volunteers while grading challenges. We clarified that our investigations to understand and address nonconforming events seek to determine all the probable causes that could lead to the event occurrence.

With respect to our Opportunities for Improvement (OFI) we clarified that all OFIs are recorded on our OFI Reporting Form, and that we expect ourselves to investigate for causes and report by 14 days. We specified that the collected OFIs are reviewed twice a year in order to look for common causes and potential solutions.

We believe these changes define a program that is timely and self-informing and allows us to keep abreast of OFIs as they come along.

#### **OFI review for 2018-2019**

During the program year, 2018-2019, 31 OFI were recorded; 17 were associated with documentary concerns, and 4 were preventive actions. Of the remaining ten, 2 were identified as complaints, with one being found as a result of a transcription error appearing in a critique while the other was a found to be "no-fault" of CMPT. Seven were described as External Errors that required correction.

One was a horrific irretrievable data loss from an external provider. There was no financial loss as a result of the data loss, but it was sufficient that CMPT dropped the contract with the supplier and developed its own internal software replacement which has proved a major success, and importantly lead to improvements that will provide a better service for the customers.

Most external errors were associated with packaging or shipping. This is the result of CMPT growth in numbers of programs it offers and the number of packages being created and sent. Some of this can be addressed through the creation of checklists, but CMPT needs to be concerned as the demand for more programs increases. This may require additional consideration of increasing staff to focus more attention on packaging, labelling and shipping.

CMPT is aware of the careful balance between increasing programs and the benefits that accrue to customers and the program, and at the same time the potential risks of error that result from the increasing complexity.

The 31 OFI of 2018-2019 compare to 16 last year and 39 the year previous. We appreciate the support of our accreditation body (American Association for Laboratory Accreditation) and our certification body (Standards Australia International) for aiding us in our success.

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### Review of Programs

#### Proficiency Testing

EQA is the core activity of CMPT. The changing landscape of medical laboratories in terms of size, number, and activity has stimulated us to be ever vigilant for opportunities in EQA innovation, to which we have responded with increased variety of samples and programs. We continue to extend research and development for new assays, with the view to improve products and extend the variety of clinically relevant challenges. In addition to our programs in Clinical Bacteriology, Mycology and Enteric Pathology, Screening and Molecular testing, *Clostridium difficile*, Trichomonas and Shiga toxin detection, this year we also introduced the Enteric Panel and Acid-Fast Bacilli detection programs.

Importantly, CMPT also has a proficiency testing program that for water testing laboratories which provides samples for 96 laboratories across Canada. Samples are provided for laboratories that work with Membrane Filtration, Presence-Absence, Enzyme Substrate, and Most Probable Water methods. We also provide samples for another Canadian PT program focused on water testing laboratories. Clinical Microbiology Proficiency Testing as our organizational name may be misleading and perhaps even inappropriate because we focus much time and energy in providing samples for public health organizations.

#### Sample Provider

Because of our international status by virtue of accreditation to ISO17043:2010, and our other international activities CMPT is regularly contacted to provide samples for EQA programs in other countries, or to provide samples for laboratories. While this is a small portion of our total activities, we see them as consistent our mission and vision as a contributor to national and international Innovation, Education, Quality Assessment, and Continual Improvement.

#### International Training

CMPT has long recognized the importance of ensuring EQA proficiency based on realistic samples, not only in Canada, but also in developing regions around the world. Over the last decade, we have provided educational PT training for delegates from more than 10 countries.

In 2016-2018, we did not have any visitors for extended training. However, in 2018-2019, working through our strategic partner, Oneworld Accuracy, Dr. Noble provided EQA training on-site in National EQA Program for Nigeria and also for the National Institute for Public Health Addis Ababa, Ethiopia, and assisted with the program in Jordan.

Discussions are currently underway for a possible new international candidate program for 2020.

#### Administrative Support

As an outcome from 37 years of experience and the excellence of our Quality system and our needs to develop our own administrative program for contacts with couriers and other essential activities, CMPT provides support for other programs without the same level of expertise.

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### **CMPT Professional Development Course**

In 2014, CMPT proposed a program where laboratorians could receive continuing education credits for reading the critiques in our Clinical Bacteriology, Mycology, and Enteric Parasitology programs and answering an on-line quiz.

After a trial period and positive feedback from the participants, a decision was made to open the Professional Development Course in 2016. During the first year, the course had 156 registered participants with 98/156 completing at least one quiz and 52 participants completing at least one category (Clinical Bacteriology, Mycology, or Enteric Parasitology). Upon completion, participants received a certificate.

In 2017, CMPT opened the registration to Microbiology residents and other individuals that might be interested. In addition, we were reached by Dr. Makeda Semret from McGill University in Montreal, QC. Dr. Semret was involved in a capacity building project in Ethiopia and saw our course as a potential benefit for continuing education for laboratory technologists. The course was slightly modified to fit the needs of these participants: every week, a new small quiz would be released followed by a general quiz at the end of each module. Five participants from Ethiopia took the course in 2017 and 7 in 2018. The 2019 course had 135 participants enrolled and had not ended at the time of writing this report.

We consider the CMPT Professional Development Course an early success and a benefit to participating laboratory personnel.

### **International Proficiency Testing Participation**

CMPT views the landscape of EQA, both national and international as an opportunity for collaboration for the betterment of healthcare and patient safety.

Dr. Noble has been appointed as the Chair of the Microbiology Working Group for the European Committee for External Quality Assessment for Laboratory Medicine (EQALM) for 2015-2019. In 2018, the annual EQALM conference was held in Zagreb Croatia. (Note: While EQALM is a European based international organization, EQA programs throughout Europe, North America, South America, and southern Africa participate in EQALM). Through EQALM, Dr. Noble has been able to develop survey studies on international laboratory performance antimicrobial resistance, enteric pathogens, and clinical virology.

### **CMPT Quality Indicators**

#### **Customer Satisfaction Surveys**

In 2015 -CMPT surveyed participant attitudes towards our on-line informatics presence. Unfortunately, there were a number of concerns highlighted with respect to its functionality and friendliness. CMPT has committed to revise the site.

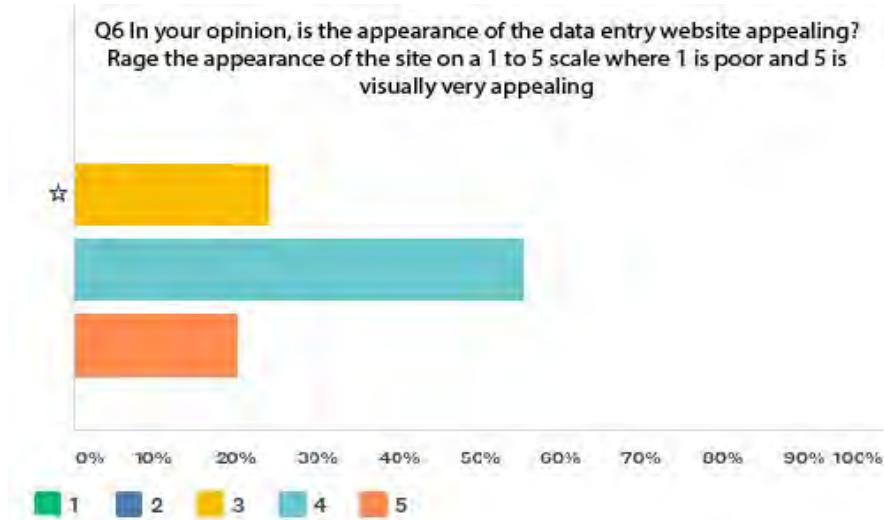
An opportunity arose in 2018 when our provider developed some in-company problems. A decision was made that current technology would allow us to return to our roots and develop an in-house online system based on the open source Wordpress platform, which was designed by Esther Kwok and Veronica Restelli. The system focused on the previous concerns.

After the system had been up and running for 6 months, a survey was sent out to all CMPT participants. A response of 54 or approximately 44% was achieved.

The distribution of responses was from across Canada, consistent with our laboratory base, and covered people in all our programs. We believe the result of the survey are generalizable to the full population of CMPT participants.

## CHAIRMAN'S ANNUAL REPORT

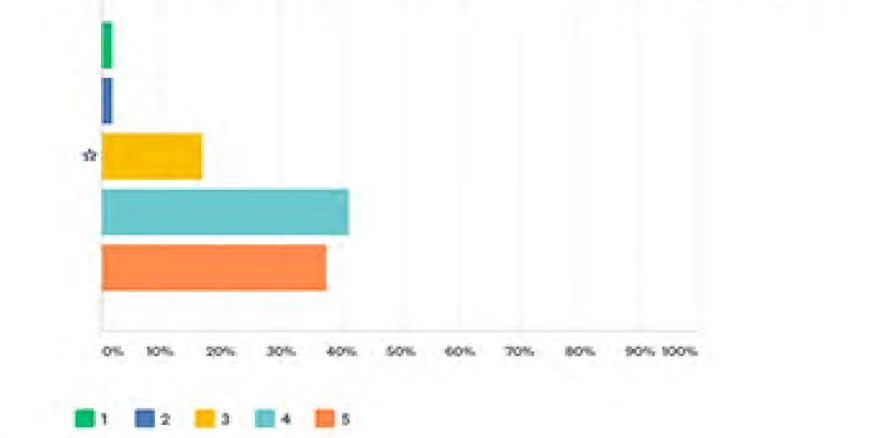
Without going into full detail, one question was based on appearance of the site and another on functionality. With respect to being new, fresh and visibly appealing the participants strongly supported the new site with 78% rating as either 4 or 5 stars (Figure 1).



**Figure 1.** Clients' opinion on appearance of data entry website

With respect to friendliness and functionality with respect to entering data, a similar sized majority rated the site as either 4 or 5 (out of 5) stars (Figure 2),

**Q7 In the previous version, to enter information often needed multiple forms for completion. In the new version most data requires only a single form. In your opinion how easy is it to use the new CMPT's website to enter information? Rate the ease of data entry on the site on a 1 to 5 scale where 1 is confusing/difficult and 5 is straight forward.**



**Figure 2.** Clients' opinion on how user friendly the data entry website is.

In a separate question, we asked if respondents were aware that CMPT maintains its library of informative critiques for clinical bacteriology, mycology and enteric parasitology available on the website for member to access. Does you or the laboratory staff use the library as a reference guide for laboratory work? We were pleased to find that almost 90 percent of respondents and their laboratories used our library of information for their clinical bacteriology, mycology and enteric parasitology research or investigations or teaching.

## CHAIRMAN'S ANNUAL REPORT

We were thus pleased that we had been able to improve our customer experience with the website. This is particularly important because as important as it is for us to provide high quality, clinically relevant samples, if our information is difficult to enter or access, that we are not meeting customer needs.

### CMPT Composite Satisfaction Score (CSS)

Each year, CMPT combines the information from the surveys with other factors (contracts, complaints, consultations) and derives a weighted composite score Customer Satisfaction. In the weighting negative comments, lost contracts and complaints are weighted greater than positive counterparts. We have been monitoring this indicator since 2002-2003 (17 years). A scale has been developed whereby great concern would result if we had a satisfaction survey with an approval score of 70 or if we lost one of more contracts as a result of dissatisfaction. A satisfaction score of greater than 90 or gaining three or more contracts would raise our composite score above 100 which we would take as evidence of excellence.

In 2018-19, CMPT had 2 new contracts (20) and 3 consultations (+30), we lost no contracts but had 2 complaints (-50). The approval rating for the satisfaction surveys was 83 (+830). In addition there were 17 free text positive comments (+85) and 3 negative one (-30). Our final score for the year was 96.5, well within our acceptable range (between 71 and 101), and just above our median composite score of 96 over the past 17 years. We anticipate that this will rise next year because of additional contract renewals and new contracts.

Over time, we have found that this score gives us a perspective on our performance, although we have observed some refinements would be appropriate. Because the same survey structure has been used for 17 years, we would not likely make any changes without considerable review and analysis. We anticipate that we will continue to complete 20 years of analysis



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### **Fully Ungraded Samples.**

As mentioned, CMPT samples may be ungraded for a variety of reasons, the most common being the laboratory reports the sample is one that is not normally processed (SNNP). On rare occasion, a sample may be deemed inappropriate for grading because it was found contaminated or faulty after it was submitted. CMPT ensures that to some degree all samples have grading potential, and monitors those samples that are fully ungraded.

Year	Fully Ungraded samples
2000-2001	0
2001-2002	3
2002-2003	3
2003-2004	3
2004-2005	3
2005-2006	3
2006-2007	4
2007-2008	3
2008-2009	1
2009-2010	2
2010-2011	0
2011-2012	0
2012-2013	3
2013-2014	0
2014-2015	0
2015-2016	0
2016-2017	0
2017-2018	0
<b>2018-2019</b>	<b>2</b>

### **Clinical Bacteriology Appeal Resolution**

CMPT provides Clinical Bacteriology samples with the intent that they can be graded to indicate test performance competency. All results from all samples are graded by the full Clinical Bacteriology Committee and are assessed on a 4-point scale.

In 2018 -2019, there were two “appeals” which did not question the grading of the challenge, but challenged some statements on the critiques, thus support or affirmation are not applicable. The committee answered both with a letter to the writers.

Year	Graded Challenges	Appeal	Support request	Affirm committee
2005-06	6378	21		
2006-07	x	20		
2007-08	x	31		
2008-09	x	15		
2009-20	x	13		
2010-11	6067	15	6	9
2011-12	6726	13	2	11
2012-13	6325	x	x	x
2013-14	6300	17	6	11
2014-15	6013	17	6	1
2015-16	6013	9	4	5
2016-17	5008	1	0	1
2017-18	4829	2	2	0
<b>2018-19</b>	<b>3506</b>	<b>2</b>	<b>n/a</b>	<b>n/a</b>

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### CMPT Presentations and Publications

- 1.Noble MA, Restelli V, Taylor A, Cochrane D, 2018. Laboratory error reporting rates can change significantly with year-over-year examination. *Diagnosis (Berl)*. 2018 Mar 28;5(1):15-19. doi: 10.1515/dx-2017-0043
- 2.Noble MA, Rennie R Combined international external quality assessment results of medical laboratory performance and reporting of samples with known antimicrobial resistance. *Diagnosis (Berl)*. 2018 Jun 15.
- 3.Noble MA. Service Excellence in Healthcare and why it is important. POLQM October Quality Conference. October 2018.
- 4.Noble MA. Building an Positive Laboratory Culture of Quality. POLQM October Quality Conference. October 2018.
- 5.Noble MA. EQALM Survey/Study Performance of Laboratories on the recovery and identification of Enteric Pathogens. EQALM. Zagreb, Croatia. October 2018.
- 6.Noble MA It is time to review and revise ISO/IEC 17043:2010? EQALM. Zagreb, Croatia. October 2018.
- 7.Laboratory Quality Management. Laboratory Quality Management Course. National Institute for Public Health Phnom Penh Cambodia. April 2019
- 8.Understanding the Management Cycle. Laboratory Quality Management Course. National Institute for Public Health Phnom Penh Cambodia. April 2019
- 9.Monitoring and Correcting for Error. Laboratory Quality Management Course. National Institute for Public Health Phnom Penh Cambodia. April 2019
- 10.Costs of Poor Quality in the Medical Laboratory. Laboratory Quality Management Course. National Institute for Public Health Phnom Penh Cambodia. April 2019
- 11.Building a Culture of Quality. Laboratory Quality Management Course. National Institute for Public Health Phnom Penh Cambodia. April 2019
- 12.Setting Goals and Objectives. Laboratory Quality Management Course. National Institute for Public Health Phnom Penh Cambodia. April 2019
- 13.Setting Missions and Visions. Laboratory Quality Management Course. National Institute for Public Health Phnom Penh Cambodia. April 2019
- 14.Organizational Mapping. Laboratory Quality Management Course. National Institute for Public Health Phnom Penh Cambodia. April 2019
- 15.Management Review. Laboratory Quality Management Course. National Institute for Public Health Phnom Penh Cambodia. April 2019

## CHAIRMAN'S ANNUAL REPORT

### **CMPT and Strategic Planning**

CMPT continues to function consistent to its Mission and Vision statements. Our long term objectives continue as iterated in our Vision statement (see above). In order to continue to meet our expectations, the following issues have been identified that need to be addressed over the shorter term: workload, financial resources, space, sample supply chain, partnerships, research, and committee structure.

### **Research**

CMPT has over the years been able to engage in a continued program of internally funded research and development that has resulted in our being leaders in the production of clinically realistic challenge samples in bacteriology and toxin testing, mycology, and water bacteriology. Lead by Caleb Lee, we have developed strategies that significantly extend the shelf and transport life of samples and developed more realistic sample simulations. These programs will continue.

### **Succession Planning**

Over the past several years, CMPT has had concerns about having an organized process to new management in order to ensure the continuity of CMPT as we go forward into the years to come. Towards that end, CMPT has identified an interim plan through the creation of a new Deputy Chair position. This position will hopefully be officially filled before the end of 2019..

### **[www.CMPT.ca](http://www.CMPT.ca) and Publications**

As previously mentioned, CMPT website has become the program's primary communication centre for data entry, preliminary results, critiques, newsletters, and the annual report. Our recent satisfaction survey focused on the value of this site. The results were mentioned previously.

### **Looking to the Future**

As a direct consequence of the recognition of our ISO17043:2010 accreditation, and our presence on the international stage, CMPT has been approached by new laboratories across Canada, Europe and Africa for new opportunities. Some of these arrangements have already come on stream in 2018 and will be cited as new activities in 2019-20. These projects broaden our outreach, create new opportunities and strengthen our financial position and future.

A Strategic Plan (SWOT) was developed in 2016. Consistent with ISO 9001:2015, the plan was developed to take into consideration both internal and external factors. The plan will be re-examined and, if necessary, updated in 2020.

### **Partnerships**

CMPT has developed partner/collaborative relationships with Canadian Immunohistochemistry Quality Control (clIQc), Oneworld Accuracy network, International Training and Education Center for Health (ITECH) in the Department of Global Health, University of Washington, and with the European Committee for EQA in Laboratory Medicine. We have renewed our work and collaboration with the Canadian Association for Laboratory Accreditation (CALA).

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As part of our Quality Management System, CMPT sets its goals and objectives for the upcoming year, as well as, reviews its success with the previous goals. Since our inception, we have only failed to meet one annual objective.

### GOALS and OBJECTIVES 2017 - 2018

P17_1	Investigate the possible acquisition of a new autoclave	On Hold
P17_2	Update the Grading Guidelines.	Ongoing
P17_3	Investigate the possibilities of new part time person	Successful
P17_4	Investigate the possibilities of a new extended international support program for developing countries.	Successful
P17_5	Seek investigation collaborations through EQALM members.	Ongoing
P17_6	Continue forward with Succession Plan	Ongoing
Q17_1	Continue with ISO9001 certification with ISO9001:2015	Successful
Q17_2	Continue with ISO17043:2010 accreditation	Successful
Q17_3	Redesign of our Strategic Quality Plan numbering system.	On Hold

### GOALS and OBJECTIVES 2018 - 2019

P18_1	Complete Chairman's succession.	Actively Ongoing
P18_2	Develop and expand new international collaborations with national and international partners.	Success and Ongoing
P18_3	Expand CMPT Professional Development Program.	Static
P18_4	Develop new provincial collaborations within British Columbia	Ongoing
P18_5	Revisit SQP renumbering project	On hold
P18_6	Celebrate CMPT with a full Annual General Meeting in 2019	Success
P18_7	Seek new members for CMPT advisory committees	Success
Q18_1	Continue with ISO9001 certification with ISO9001:2015	Success
Q18_2	Start our 2 <sup>nd</sup> A2LA cycle with ISO17043.	Success

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### GOALS and OBJECTIVES 2019 - 2020

P19_1	Complete Chairman's succession.
P19_2	Expand new international collaborations with national and international partners.
P19_3	Develop new provincial collaborations within British Columbia, including but not limited to BC Patient Safety and Quality Council
P19_4	Seek new members for CMPT advisory committees, with special reference to Water Testing Laboratories.
P19_5	Integrate new personnel into CMPT Team
P19_6	Revisit SQP renumbering project
Q19_1	Continue with ISO9001 certification with ISO9001:2015
Q19_2	Continue with A2LA certification with ISO/IEC17025:2010
Q19_3	Develop a new SWOT analysis



Signed Michael A Noble,  
Chair, CMPT September 2019

## COMMITTEE MEMBERS 2018 - 2019

Committee members volunteer their time and are essential for selecting challenges, assessing results, and producing the critiques. The efforts contributed by each committee member are critical to the function of CMPT and are very much appreciated.

### Water Microbiology Program

Chris Enick, BSc .....Exova, Surrey, BC

### Mycology Program

Robert Rennie, PhD FCCM, D(ABMM) .....University of Alberta Hospital, Edmonton, AB

Romina Reyes, MD FRCPC .....LifeLabs, Burnaby, BC

Brad Jansen BSc, MLT .....Provincial Laboratory for Public Health, Edmonton, AB

### Enteric Parasitology Program

Romina Reyes, MD FRCPC .....LifeLabs, Surrey, BC

Joan Tomblin, MD FRCPC .....Surrey Memorial Hospital, Surrey, BC

Pauline Tomlin, ART, BSc. MPH .....Provincial Laboratory for Public Health, Edmonton, AB

Quantine Wong, BSc. MLT .....BCCDC, Vancouver, BC

### Clinical Bacteriology Program

Ghada Al-Rawahi, MD FRCPC D(ABMM) .....BC Children's Hospital, Vancouver, BC

Lorraine Campbell, MLT .....Calgary Laboratory Services, Calgary, AB

Wilson Chan, MD FRCPC D(ABMM) .....Calgary Laboratory Services, Calgary, AB

John Galbraith, MD FRCPC .....Royal Jubilee Hospital, Victoria, BC

David J. M. Haldane, MD FRCPC .....Queen Elizabeth II Hospital, Halifax, NS

James A. Karlowsky, PhD (D)ABMM .....St. Boniface General Hospital, Winnipeg, MB

Brandi Keller, MLT .....Battlefords Union Hospital, North Battleford, SK

Paul Levett, PhD (D)ABMM FAAM .....Saskatchewan Disease Control Laboratory, Regina, SK

Doris Poole, MLT, BSc .....Queen Elizabeth Hospital, Charlottetown, PEI

Robert Rennie, PhD FCCM, D(ABMM) .....University of Alberta Hospital, Edmonton, AB

Denise Sitter, ART .....Cadham Provincial Laboratory, Winnipeg, MB

Titus Wong, MD .....Vancouver General Hospital, Vancouver, BC

## CLINICAL BACTERIOLOGY PROGRAM

CMPT acknowledges, with appreciation, the valuable and essential advisory and technical support of the Clinical Bacteriology Advisory Committee.

### Participant Laboratory Performance 2018-2019

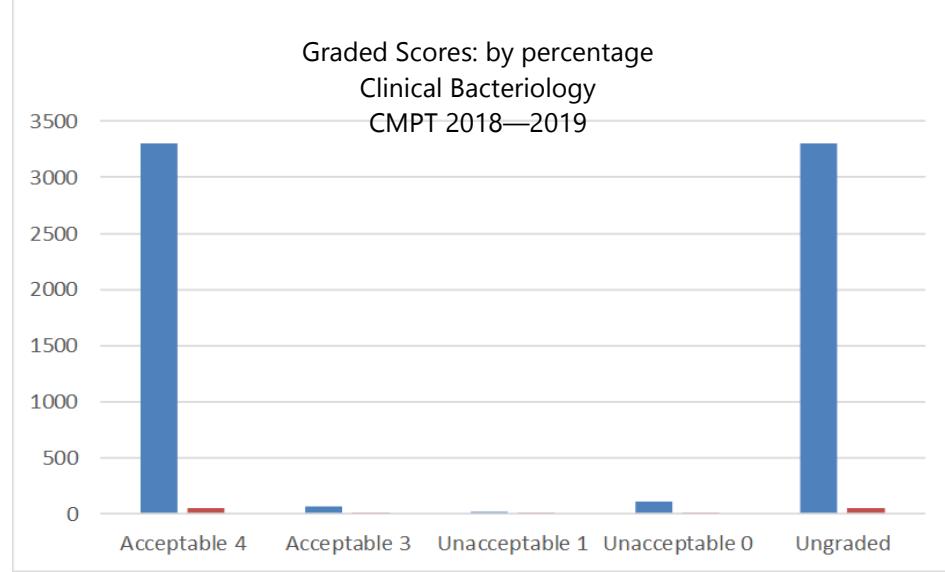
#### Clinical Bacteriology Samples submitted

In 2018-2019, CMPT provided a total of 6806 samples to Clinical Bacteriology laboratories. Of these samples, 3506 were graded and 3300 (48.5%) were not. Reasons for not grading are either the sample or a component thereof was deemed not appropriate for grading because of lack of consensus, or because the laboratory declared they do not normally perform that sample (SNNP) and thus assessing for competency would be unfair.

Individual antimicrobial susceptibilities may have been ungraded because of disparities between reference laboratories. In 2018-2019, there were no rejected samples for Quality Control reasons.

CMPT regularly monitors laboratory category performance. Over the last 15 years, we have seen great stability with Category A laboratories, but the record for smaller laboratories has been less stable. Over the last several years, we have seen definite improvement in the performance of smaller laboratories. This does not appear to be regional. We cannot account for the improvement, but we are very supportive of the new pattern of improvement. Unfortunately, consolidation and reformation of laboratories has resulted in some distortions in our CMPT classification. The number of category C laboratories has dropped so low that its mean achievement performance is not reliable. As such we have followed through with the proposal made last year to discontinue the annual monitoring of mean achieved scores. That being said, were there to be a reversal in laboratory closures with re-introduction of more local smaller laboratories, we could return to the previous analysis.

In assessing laboratory performance (and its reflection upon CMPT as the sample provider), CMPT has adopted a threshold performance expectation that 90 percent of laboratories must achieve 90 percent of their achievable score as measured over four (5) test events over 12 months. If less than 80 percent of reference laboratories are unable to achieve an acceptable score or if 50 percent of the total group of laboratories are unable to achieve an acceptable score the sample is deemed as inappropriate for assessment.



## Clinical Bacteriology - Histograms

Of graded challenges, 3371 (94.1%) were evaluated as acceptable. One hundred thirteen (113) or 3.2% were evaluated as sufficiently wrong, if they had been reported on a clinical sample, they would have been considered potentially unsafe for the patient.

In all key challenge groups, laboratories receiving CMPT challenges met the required level of ninety percent of laboratories achieving 90 percent of achievable score (see histograms).

### HISTOGRAMS 2019 - 2020

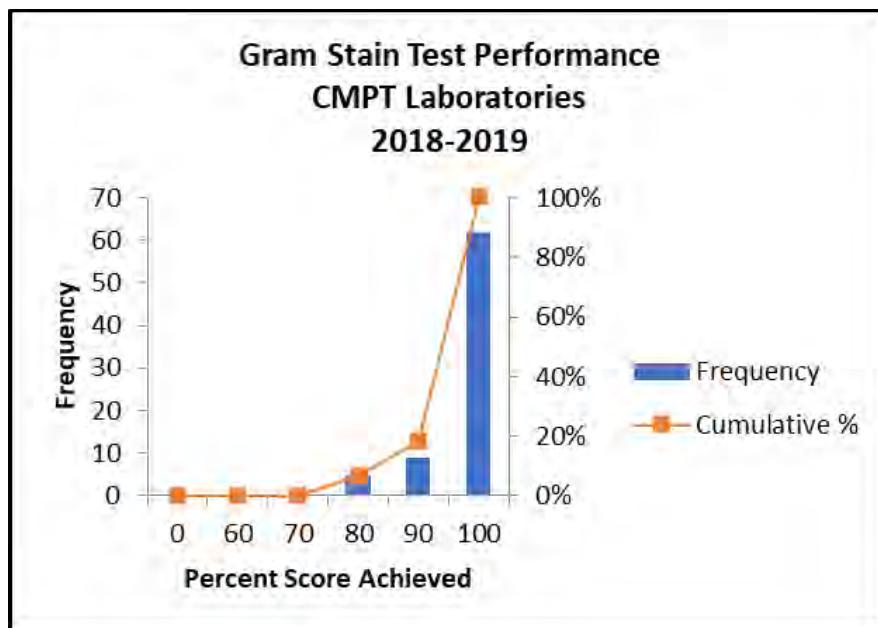
#### About the histograms

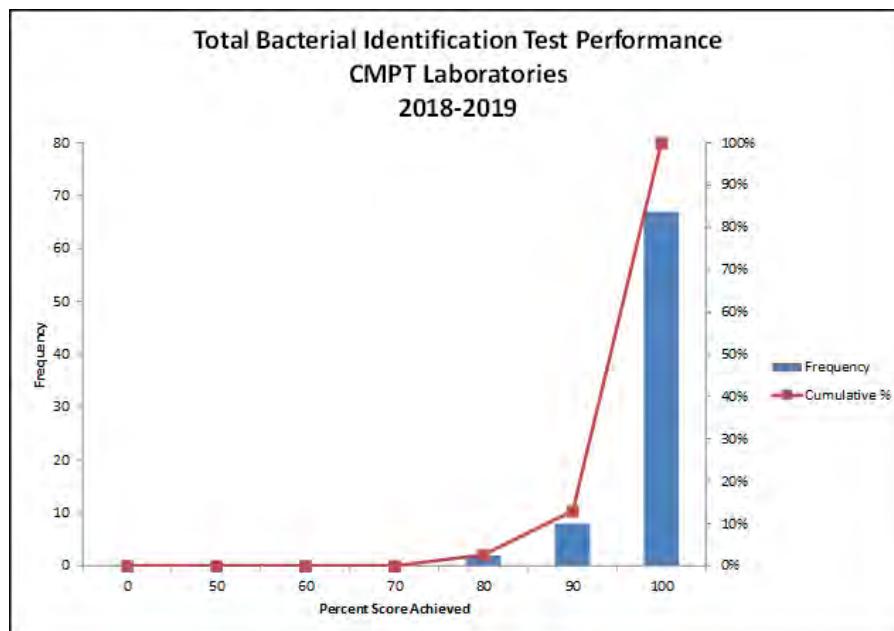
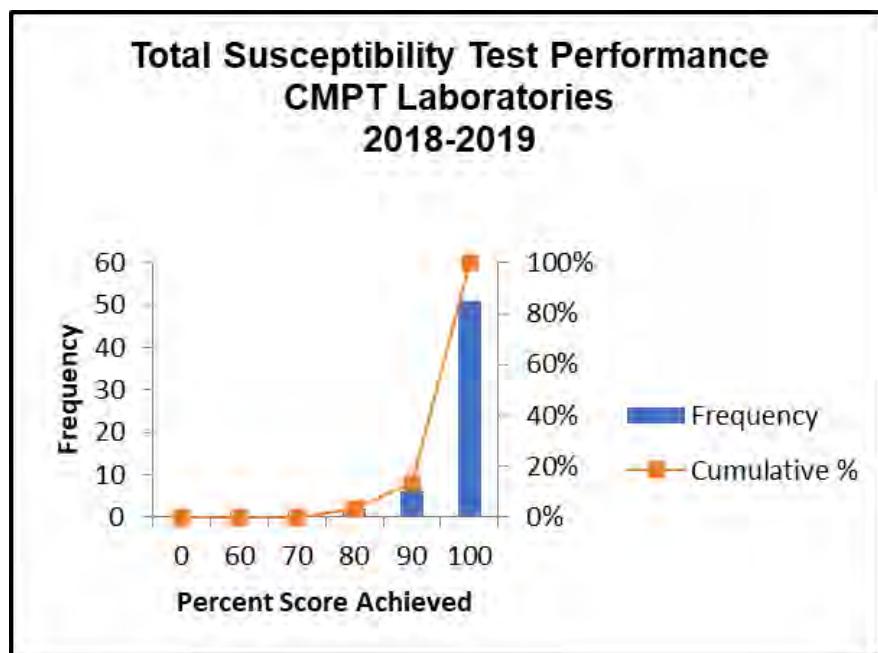
All histograms have been converted to a single format, which is the percent achievable score. For each laboratory, the sum of all challenges performed and graded was calculated, either as a total for all challenges, or within a specific category, such as "bacterial identification".

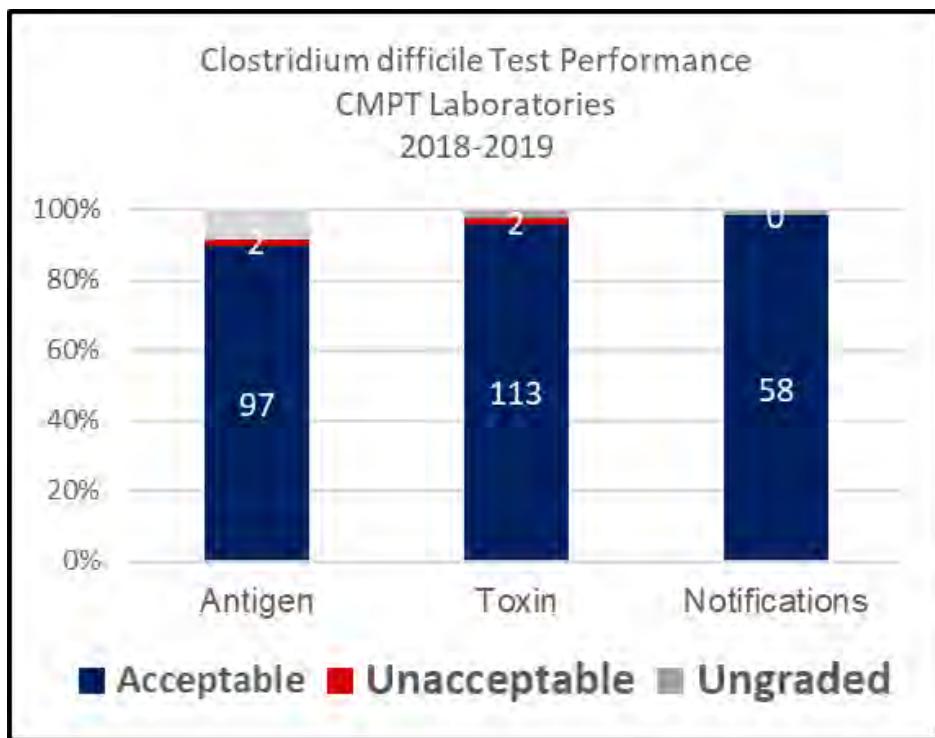
The total achievable score, that is the score the laboratory would have obtained if they received a grade of 4/4 for each graded challenge was calculated. Challenges that were ungraded were excluded. The percent achievable score was calculated as (total achieved score/total achievable score) X100. How to read the histograms

The number of laboratories achieving a specific grade is indicated by the height of the columns over the Percent Achievable Score, and is read on the LEFT side scale of the chart (frequency).

The Cumulative Scoring is indicated by the connected box-line that starts low on the left and rises to the right, and is read on the RIGHT side scale of the chart. The cumulative column indicates the percentage of laboratories that received an acceptable grade on the challenge.



**Clinical Bacteriology- Histograms**

**Clinical Bacteriology- Histograms**

## WATER MICROBIOLOGY PROGRAM

CMPT acknowledges with appreciation the valuable and essential advisory and technical support of:  
Chris Enick BSc.....Elements, Surrey, BC

CMPT participates with the following organizations to provide external quality assessment challenges and assistance for water bacteriology.

- Enhanced Water Quality Assurance (British Columbia Water Bacteriology Approval Committee)
- BCCDC Environmental Microbiology Laboratory
- British Columbia Ministry of the Environment

Drinking Water challenge surveys are shipped to laboratories three times per year. Each survey consists of sets of 4 drinking water samples. Starting in 2015, the Heterotrophic Plate Count program was offered to laboratories that tested drinking water samples with this method. Recreational Water challenge surveys are shipped two times per year. Each survey consists of one set of recreational water samples (spa water, freshwater beach or marine water). Participants participate in one, two or all the recreational challenge samples.

Not all laboratories perform all challenges and not all laboratories use the same methods when testing water samples. Laboratories perform testing use one to four methods depending on the laboratory's accreditation criteria. Laboratories also perform the Presence/Absence method, as their primary method or in addition to other methods. The drinking water bacteriology (membrane filtration, Enzyme Substrate, MPN and Presence/Absence methods) challenge records for 2018 are shown in Table 1, Heterotrophic Plate Count program records are shown in Table 2, and the recreational water challenge records are show in Table 3.

## WATER MICROBIOLOGY PROGRAM

Table 1: 2018 Drinking Water Bacteriology challenge record

Date	Sample No.	Organism	Membrane Filtration mean/median/MU% cfu/100 ml		Enzyme Substrate mean/median MPN/100 ml		MPN mean/median MPN/100 ml		Presence/ Absence (P/A)
			Total Coli-forms	E.coli	Total Coli-forms	E.coli	Total Coli-forms	E.coli	
W181 April 9, 2018	1	<i>Enterobacter</i> species	32/32/29	0/0/0	31/33	0/0	23/23	0/0	P/A
	2	no organisms present	0/0/0	0/0/0	0/0	0/0	0/0	0/0	A/A
	3	<i>Escherichia coli</i>	60/61/24	59/61/24	74/74	68/73	$\geq 23/\geq 23$	$\geq 23/\geq 23$	P/P
	4	<i>Enterobacter</i> species	13/12/45	0/0/0	15/16	0/0	17/16	0/0	P/A
W182 July 9, 2018	1	<i>Escherichia coli</i>	18/17/36	17/17/40	18/18	18/18	15/14	15/14	P/P
	2	<i>Escherichia coli</i>	15/16/36	15/16/37	19/19	19/19	$\geq 23/\geq 23$	$\geq 23/\geq 23$	P/P
	3	<i>Enterobacter</i> species	15/15/29	0/0/0	16/18	0/0	15/16	0/0	P/A
	4	<i>Enterobacter</i> species	50/54/35	0/0/0	56/55	0/0	$\geq 23/\geq 23$	0/0	P/A
W183 October 29, 2018	1	<i>Enterobacter</i> species	34/35/18	0/0/0	31/30	0/0	$\geq 23/\geq 23$	0/0	P/A
	2	<i>Escherichia coli</i>	51/52/17	51/53/16	55/56	55/56	15/14	$\geq 23/\geq 23$	P/P
	3	<i>Escherichia coli</i>	16/16/21	16/16/19	16/16	16/16	15/14	15/14	P/P
	4	no organisms present	0/0/0	0/0/0	0/0	0/0	0/0	0/0	A/A

MU% - not applicable for EST, MPN or PA methods

Table 2: 2018 Drinking Water Bacteriology for Heterotrophic Plate Count

Date	Sample No.	Organism	mean/median (cfu/ml) /MU%
H181 April 9, 2018	1	no organisms present	0/0/0
	2	<i>Escherichia coli</i>	167/171/20
	3	<i>Escherichia coli</i>	66/64/11
	4	<i>Enterobacter</i> species	80/73/27
H182 July 9, 2018	1	<i>Enterobacter</i> species	80/73/46
	2	<i>Enterobacter</i> species	91/98/45
	3	<i>Escherichia coli</i>	85/75/35
	4	<i>Escherichia coli</i>	94/89/26
H183 October 29, 2018	1	<i>Escherichia coli</i>	126/125/33
	2	<i>Escherichia coli</i>	68/69/23
	3	no organisms present	0/0/0
	4	<i>Enterobacter</i> species	58/64/33

## WATER MICROBIOLOGY PROGRAM

Table 3: 2018 Recreational Water Bacteriology challenge record

Date	Source	Challenge	mean/median/MU%	
			Membrane Filtration (cfu/100mL)	Enzyme Substrate MPN/100 ml
R181 April 9, 2018	Spa Water	<i>Pseudomonas aeruginosa</i>	401/414 /40	475/475
	Freshwater Beach	<i>Escherichia coli</i>	391/395/16	461/403
	Marine Water	<i>Enterococcus</i> species	105/101/21	85/80
R182 August 20, 2018	Spa Water	<i>Pseudomonas aeruginosa</i>	222/243/25	215/180
	Freshwater Beach	<i>Escherichia coli</i>	100/108/20	128/108
	Marine Water	<i>Enterococcus</i> species	303/295/12	248/236

MU% - not applicable for EST, MPN or PA methods

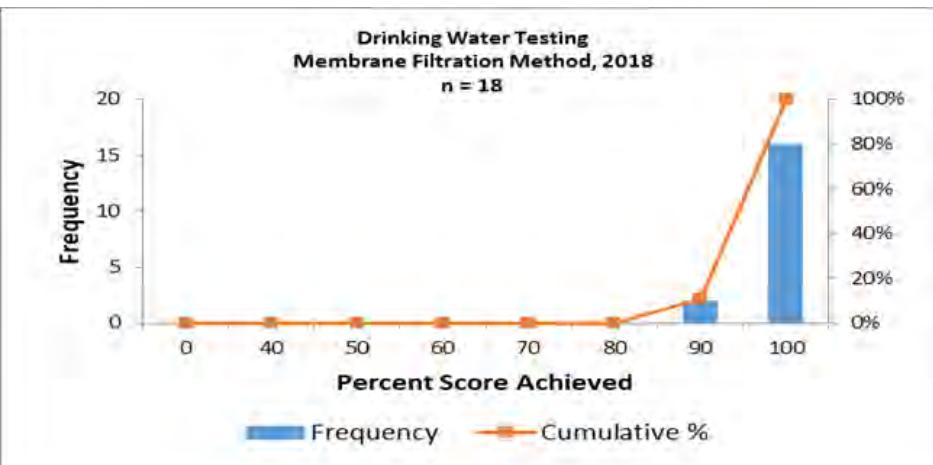
### Water Bacteriology (Drinking and Environmental Water Sample) Score

Laboratory testing results are graded based on the Membrane Filtration, Enzyme Substrate, MPN, Heterotrophic Plate Count (HPC) and/or Presence/Absence methods. All methods are graded on a point scale for assessment of water samples with the exception of the Presence/Absence method, a qualitative method and are, therefore, graded qualitatively. With 12 drinking water samples tested for the program year, the maximum score is 36. With 12 drinking water samples tested, using the HPC method, the maximum score is 36 for the program year. With 3 environmental water samples, laboratories can receive up to a maximum score of 9.

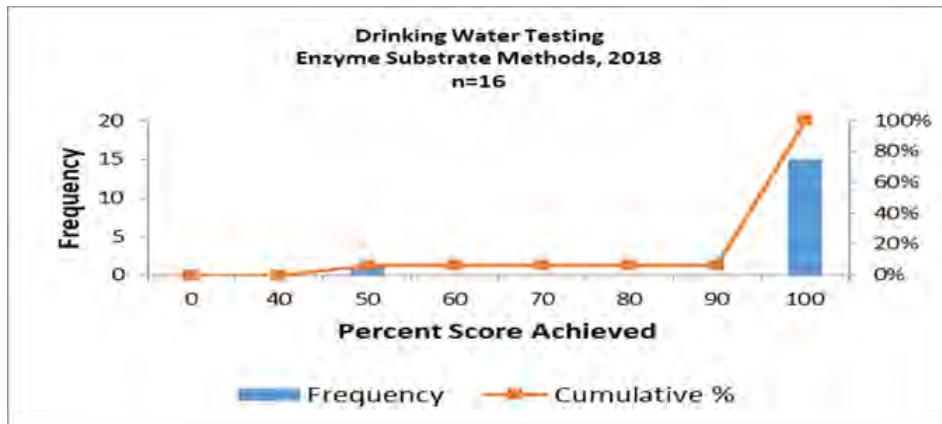
## WATER MICROBIOLOGY PROGRAM

The following Score Tables illustrate the % Achievable scores for methods used for Drinking Water samples during 2018.

Drinking Water Performance Table for the Membrane Filtration method, 2018		
% Achievable	Labs (n=18)	Cumulative %
90	2	11.11
100	16	100.00

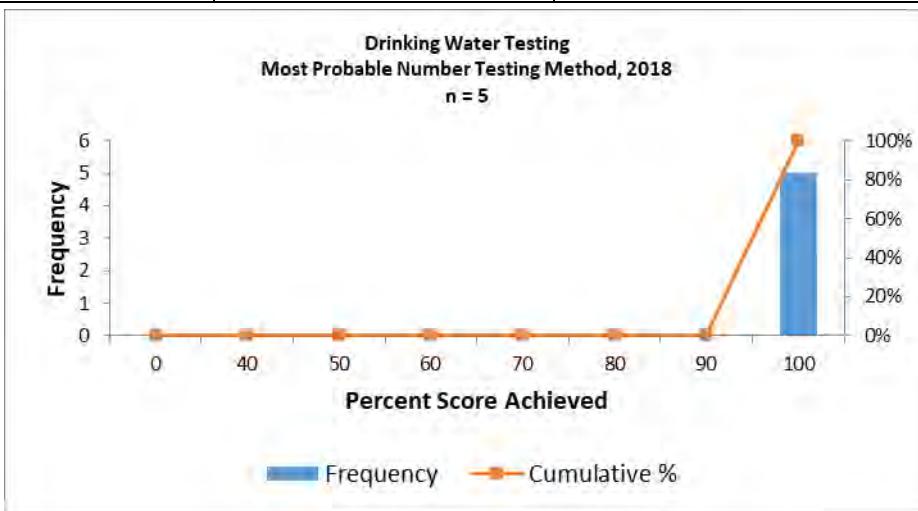


Drinking Water Performance Table for Enzyme Substrate methods, 2018		
% Achievable	Labs (n=16)	Cumulative %
50	1	6.25
100	15	100.00

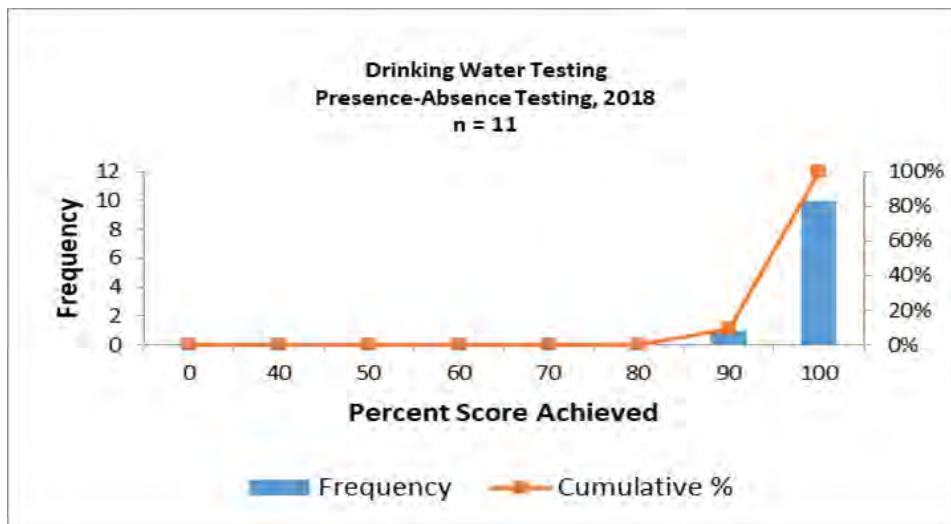


## WATER MICROBIOLOGY PROGRAM

Drinking Water Performance Table for Most Probable Number (MPN) method, 2018		
% Achievable	Labs (n=5)	Cumulative %
100	5	100.00



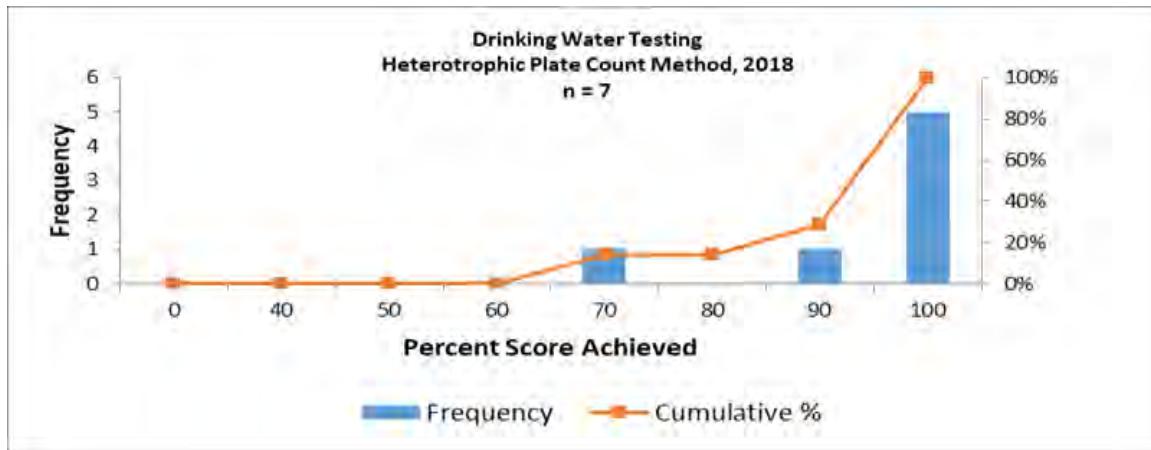
Drinking Water Performance Table for Presence/Absence methods, 2018		
% Achievable	Labs (n=11)	Cumulative %
90	1	9.09
100	10	100.00



## WATER MICROBIOLOGY PROGRAM

The following Table illustrates the % Achievable scores for the Heterotrophic Plate Count method used for Drinking Water samples during 2018.

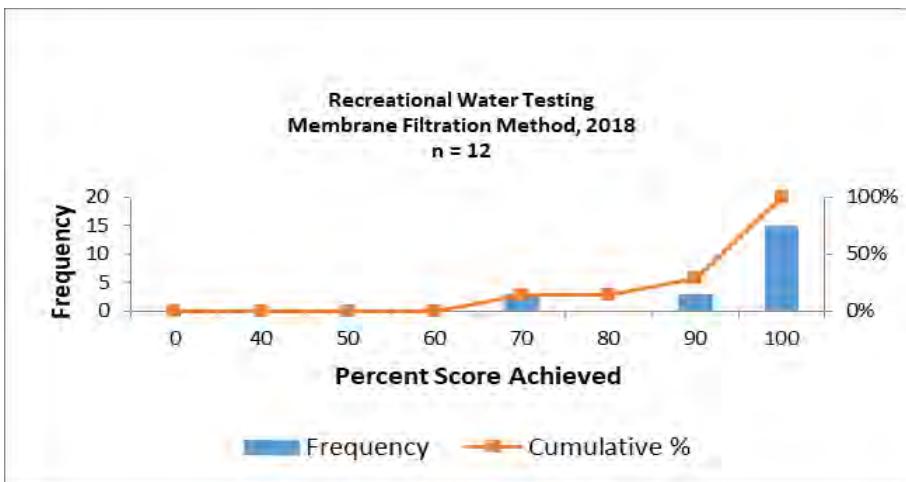
Drinking Water Performance Table for Heterotrophic Plate Count (HPC) method Table, 2018		
% Achievable	Labs (n=7)	Cumulative %
70	1	14.29
90	1	28.57
100	5	100.00



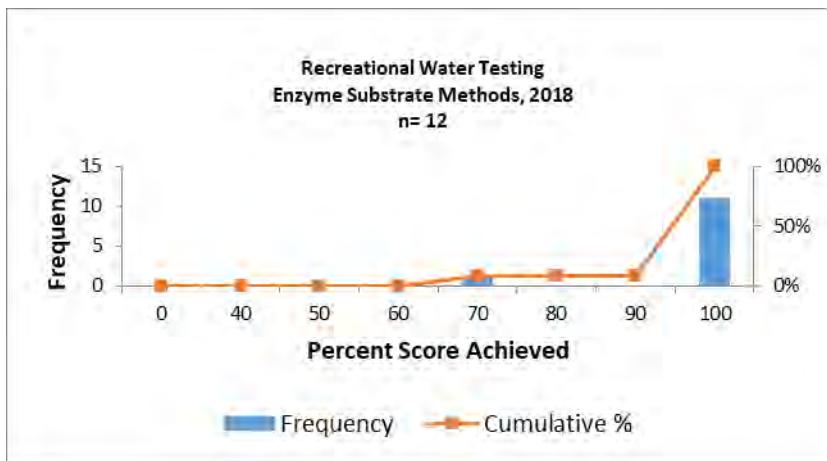
## WATER MICROBIOLOGY PROGRAM

The following Score Tables illustrate the % Achievable scores for Membrane Filtration and Enzyme Substrate methods used for Recreational Water samples during 2018.

<b>Recreational Water Performance Table for the Membrane Filtration method, 2018</b>		
<b>% Achievable</b>	<b>Labs (n=21)</b>	<b>Cumulative %</b>
70	3	14.29
90	3	28.57
100	15	100.00



<b>Recreational Water Performance Table for the Enzyme Substrate method, 2018</b>		
<b>% Achievable</b>	<b>Labs (n=12)</b>	<b>Cumulative %</b>
70	1	8.33
100	11	100.00

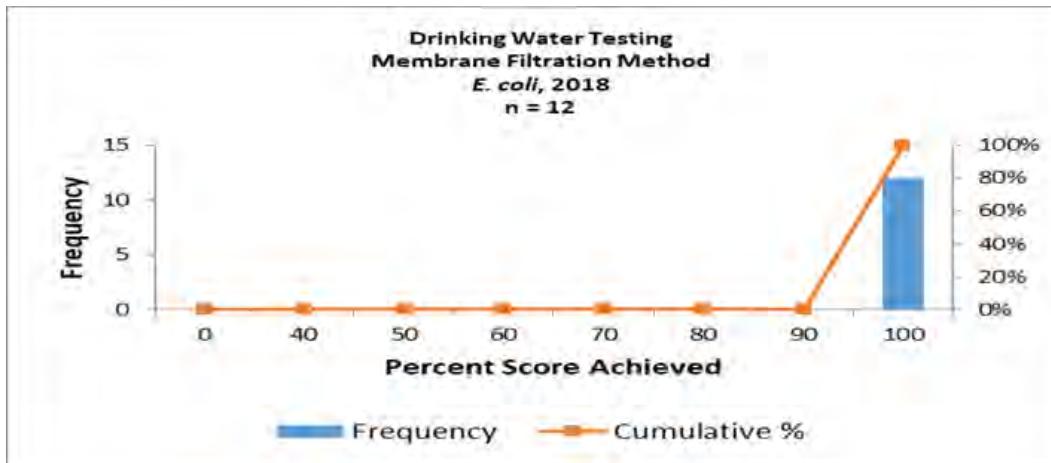


## WATER MICROBIOLOGY PROGRAM

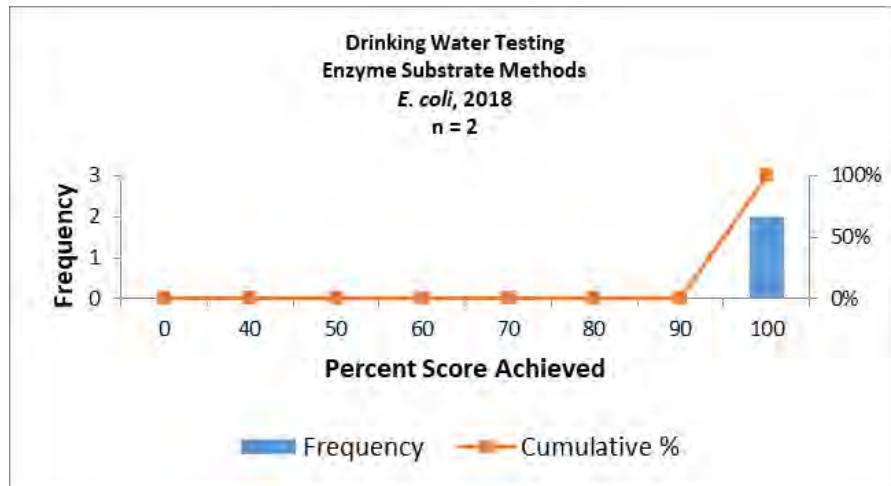
### ***E.coli* Supplemental Testing**

Laboratories perform supplemental water bacteriology testing to discern *Escherichia coli* from other thermotolerant coliforms. These laboratories are assessed as a separate group and are assessed an additional 36 points maximum for the program year per method, if *Escherichia coli* and thermotolerant coliforms are reported. The Membrane Filtration and the MPN methods are the primary methods used for testing, however, two laboratories tested the water samples using the Enzyme Substrate method.

Drinking Water Performance Table for Membrane Filtration method, <i>E.coli</i> , 2018		
% Achievable	Labs (n=12)	Cumulative %
100	12	100.00

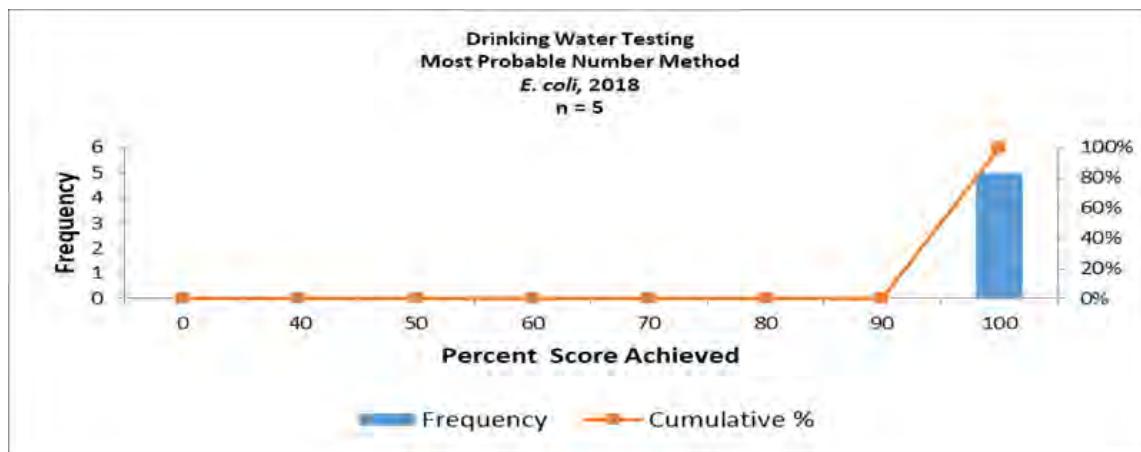


Drinking Water Performance Table for Enzyme Substrate methods, <i>E.coli</i> , 2018		
% Achievable	Labs (n=2)	Cumulative %
100	2	100.00



## WATER MICROBIOLOGY PROGRAM

Drinking Water Performance Table for Most Probable Number (MPN) method, <i>E.coli</i> , 2018		
% Achievable	Labs (n=5)	Cumulative %
100	5	100.00



## MYCOLOGY PROGRAM

CMPT acknowledges with appreciation the valuable and essential advisory and technical support of:

Robert Rennie MD FRCPC.....University of Alberta Hospital, Edmonton, AB

Romina Reyes MD FRCPC.....LifeLabs, Burnaby, BC

Brad Jansen BSc, MLT.....University of Alberta Hospital, Edmonton, AB

The Mycology Plus Program was introduced to participants in June 2001 and generally includes 3 fungal smear slides and 3 proficiency challenges for dermatophytes, common laboratory contaminants, yeast identification per survey shipment. In 2018, only 2 survey shipments were shipped to realign the shipment schedule so that all challenges are shipped in a calendar year. In 2019, the number of survey shipments will return to 3. In 2016-2017, grades were awarded to the Fungal Smears and identification challenges on a two-point scale, acceptable or unacceptable. Susceptibility challenges for yeasts were introduced in 2008 and laboratories performing anti-fungal testing were encouraged to report their results.

**Table 1: 2018 challenge results**

Survey		Samples	Grades*		
			A	U	UG
MY 1808 August 20, 2018	Fungal Smear (hyphae)	A positive	12	0	0
		B negative	12	0	0
		C negative	11	1	0
	Yeast	1 <i>Rhodotorula</i> species <i>(mucilaginosa)**</i>	10	0	2
	Dermatophyte	2 <i>Trichophyton mentagrophytes</i>	10	0	2
MY 1811 November 26, 2018	Fungal Smear (hyphae)	A negative	12	0	0
		B positive	12	0	0
		C positive	12	0	0
	Yeast	1 <i>Trichosporon asahii</i>	10	0	2
	Dermatophyte	2 <i>Trichophyton tonsurans</i>	10	0	2
	Mold	3 <i>Aspergillus fumigatus</i>	9	0	3
			<b>Totals</b>	<b>129</b>	<b>1</b>
					<b>14</b>

\*Grades: A: acceptable; U: unacceptable; UG: ungraded

\*\*susceptibilities applicable

## ENTERIC PARASITOLOGY PROGRAM

CMPT acknowledges with appreciation the essential advisory and technical support of:

Romina Reyes MD FRCPC.....LifeLabs, Surrey, BC

Joan Tomblin MD FRCPC.....Royal Columbian Hospital, New Westminster, BC

Pauline Tomlin MPH, ART, BSc.....Provincial Laboratory for Public Health, Edmonton, AB

Quantine Wong BSc.....BCCDC, Vancouver, BC

Samples are supplied by LifeLabs, DynaLife<sub>Dx</sub> and BCCDC. The program consists of 3 surveys. Each survey consists of 3 SAF preserved samples requiring a total of 9 challenge readings that include 3 concentrates and 3 stained smears.

Grading is assessed on the combined results of the stained smear and the concentrate and is based on a 2 point scale (acceptable or unacceptable). Table 1 lists the samples and grades received for the 2018 challenges.

**Table1. Enteric Parasitology Challenges 2018**

Date	Sample	Parasite	A*	U*	UG*
April 16, 2018	1804-1	<b><i>Diphyllobothrium species</i></b>	15	3	0
	1804-2	<b><i>Blastocystis species</i></b>	0	0	18
	1804-3	<b><i>Blastocystis species</i></b>	16	2	0
July 3, 2018	1807-1	<b><i>Taenia species</i></b>	14	4	0
	1807-2	<b><i>Cryptosporidium species</i></b>	18	0	0
	1807-3	<b><i>Giardia lamblia</i></b> <i>Blastocystis species</i>	16	2	0
September 24, 2018	1810-1	no ova/parasites seen	18	0	0
	1810-2	<b><i>Cyclospora cayetanensis;</i></b> <b><i>Cryptosporidium species</i></b>	14	4	0
	1810-3	<b><i>Entamoeba histolytica/dispar</i></b> <b><i>Blastocystis species</i></b> <b><i>Endolimax nana</i></b>	18	0	0
<b>Total</b>			<b>129</b>	<b>15</b>	<b>18</b>

BOLD – pathogen

Blue – potential pathogen

\*Grades: A: acceptable; U: unacceptable; UG: ungraded

## TRICHOMONAS VAGINALIS ANTIGEN PROGRAM

CMPT launched the *Trichomonas vaginalis* Antigen Program with the first shipment on August 8, 2011. The program consisted of 2 surveys in 2011. Since 2012, the number of surveys was increased to 3. Each survey consists of 4 samples which are designed to be used with any *Trichomonas vaginalis* test kit or detection method.

Grading is based on a 2 point scale (acceptable or unacceptable). Table 1 lists the samples and grades received for the 2018 challenges.

**Table 1. *Trichomonas vaginalis* Antigen Challenges 2018**

Date	Sample	Results	Acceptable	Unacceptable	Ungraded
April 16, 2018	1804-1	negative	35	0	0
	1804-2	negative	35	0	0
	1804-3	positive	35	0	0
	1804-4	positive	35	0	0
July 3, 2018	1807-1	positive	33	0	0
	1807-2	positive	33	0	0
	1807-3	negative	33	0	0
	1807-4	negative	33	0	0
September 24, 2018	1810-1	negative	34	0	0
	1810-2	positive	34	0	0
	1810-3	positive	34	0	0
	1810-4	negative	34	0	0
<b>Total</b>		<b>418</b>	<b>0</b>	<b>0</b>	

## SHIGA TOXIN PROGRAM

CMPT launched the Shiga Toxin Program with the first shipment on May 7, 2012. The program consists of 2 surveys and each survey consists of 3 simulated stool samples.

Grading is based on a 2 point scale (acceptable or unacceptable). Table 1 lists the samples and grades received for the 2018 challenges.

CMPT acknowledges, with appreciation, the essential advisory and technical support of Denise Sitter, Cadham Provincial Laboratory, Winnipeg, MB.

**Table 1. Shiga Toxin Challenges 2018**

Date	Sample	Results	Acceptable	Unacceptable	Ungraded
<b>May 14, 2018</b>	1805-1	gene and toxin negative	11	0	0
	1805-2	gene and toxin negative	11	0	0
	1805-3	gene and toxin positive	11	0	0
<b>November 5, 2018</b>	1811-1	gene and toxin positive	11	0	0
	1811-2	gene and toxin positive	11	0	0
	1811-3	gene and toxin negative	11	0	0
<b>Total</b>			<b>66</b>	<b>0</b>	<b>0</b>

## SCREENING AND MOLECULAR TESTING PROGRAM

CMPT launched the Molecular Proficiency Testing Program with the first shipment on March 23, 2009. The program consists of 2 surveys. Each survey consists of 4 samples for methicillin-resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant *Enterococcus* species (VRE) and group B *Streptococcus* (GBS). In 2018, CMPT expanded the Molecular Proficiency Testing Program to include carbapenem-resistant Enterobacteriaceae (CRE). Because all of the samples can also be tested using screening methods, such as chromogenic media, the program was renamed as the “Screening and Molecular” Program. Laboratories can participate in one, some or all of the 4 sample types.

Grading is based on a 2 point scale (acceptable or unacceptable). Table 1 lists the samples and grades received for the 2018 challenges.

**Table 1. Screening and Molecular Challenges 2018**

Date	Sample	Results	Acceptable	Unacceptable	Ungraded/DNP
April 23, 2018	<i>MRSA</i>	MR 1804-1	negative	19	0
		MR 1804-2	negative	19	0
		MR 1804-3	positive	19	0
		MR 1804-4	positive	19	0
	<i>VRE</i>	VR 1804-1	positive (van A)	16	1
		VR 1804-2	negative	18	1
		VR 1804-3	positive (van A)	17	0
		VR 1804-4	negative	18	1
	<i>GBS</i>	GB 1804-1	negative	24	0
		GB 1804-2	negative	24	0
		GB 1804-3	positive	24	0
		GB 1804-4	positive	24	0
	<i>CRE</i>	CRE 1804-1	negative	15	0
		CRE 1804-2	positive	15	0
		CRE 1804-3	positive	15	0
		CRE 1804-4	positive	15	0
<b>Total</b>			<b>291</b>	<b>3</b>	<b>4</b>

DNP – does not process/test

## MOLECULAR TESTING PROGRAM

**Table 1. Screening and Molecular Challenges 2018 cont.**

Date	Sample	Results	Acceptable	Unacceptable	Ungraded/DNP
August 13, 2018	<b>MRSA</b>	MR 1808-1	positive	20	0
		MR 1808-2	negative	19	1
		MR 1808-3	positive	20	0
		MR 1808-4	negative	20	0
	<b>VRE</b>	VR 1808-1	negative	20	0
		VR 1808-2	positive (van A)	18	1
		VR 1808-3	positive (van B)	14	2
		VR 1808-4	positive (van A)	18	1
	<b>GBS</b>	GB 1808-1	positive	25	0
		GB 1808-2	negative	25	0
		GB 1808-3	positive	25	0
		GB 1808-4	positive	25	0
	<b>CRE</b>	CRE 1808-1	positive	16	0
		CRE 1808-2	negative	16	0
		CRE 1808-3	negative	16	0
		CRE 1808-4	positive	16	0
<b>Total</b>			<b>223</b>	<b>5</b>	<b>6</b>

## ACID FAST BACILLI PROGRAM

CMPT launched the Acid Fast Bacilli Program with the first shipment on April 10, 2017. The program consists of 3 surveys and each survey consists of 3 simulated samples.

Grading is based on a 2 point scale (acceptable or unacceptable). Table 1 lists the samples and grades received for the 2018 challenges.

<b>Table 1. Acid Fast Bacilli Challenges 2018</b>					
<b>Date</b>	<b>Sample</b>	<b>Results</b>	<b>Acceptable</b>	<b>Unacceptable</b>	<b>Ungraded</b>
<b>April 16, 2018</b>	1805-1	positive	5	0	0
	1805-2	positive	3	1	1
	1805-3	positive	5	0	0
<b>July 3, 2018</b>	1807-1	negative	5	0	0
	1807-2	negative	4	0	1
	1807-3	positive	5	0	0
<b>September 24, 2018</b>	1810-1	negative	5	0	0
	1810-2	positive	5	0	0
	1810-3	positive	5	0	0
<b>Total</b>			<b>42</b>	<b>1</b>	<b>2</b>

## ENTERIC PANEL PROGRAM

CMPT launched the Enteric Panel Program with the first shipment on April 23, 2018. The program consists of 2 surveys and each survey consists of 4 simulated stool samples for the detection of enteric pathogens.

Grading is based on a 2 point scale (acceptable or unacceptable). Table 1 lists the samples and grades received for the 2018 challenges.

**Table 1. Enteric Panel Challenges 2018**

Date	Sample	Results	Acceptable	Unacceptable	Ungraded
April 16, 2018	1804-1	<i>Yersinia</i> species	2	0	0
	1804-2	<i>Salmonella</i> species	2	0	0
	1804-3	<i>Campylobacter</i> species	2	0	0
	1804-4	negative	2	0	0
August 13, 2018	1808-1	<i>E.coli</i> O157, shiga toxin producer	1	1	0
	1808-2	<i>Campylobacter</i> species	2	0	0
	1808-3	<i>Yersinia</i> species	2	0	0
	1808-4	negative	2	0	
<b>Total</b>			<b>15</b>	<b>1</b>	<b>0</b>