



CANADIAN CYTOMETRY & MICROSCOPY ASSOCIATION

ASSOCIATION CANADIENNE DE CYTOMÉTRIE ET DE MICROSCOPIE

CytoTimes

VOLUME 5, ISSUE 2

Nov 9, 2016

THE CCMA EXISTS TO:

- Encourage the sharing of knowledge regarding flow cytometry and optical microscopy;
- Create a pan-Canadian network of people interested in these cutting-edge technologies;
- Promote scientific exchange;
- Provide educational opportunities from experts in the field for technology users of all levels - beginner to expert.

CCMA Elections and General Meeting

The CCMA will hold a general meeting on **December 1st 2016 at 2pm EST**. This will be hosted online and all CCMA members are encouraged to attend. Instructions on how to join the meeting will be circulated by email or can be requested by contacting ccma.accm@gmail.com.

During the general meeting the annual financial report will be presented and elections will be held for the following Executive Board positions:

1. Co-President (Flow Cytometry)

2. Public & Corporate Relations Director

3. Treasurer

These positions will run from January 1, 2017 until December 31, 2018. If you are or anyone you know is interested in running for one of these positions, nominations should be sent to ccma.accm@gmail.com and should include a recent C.V., title of the position you are running for and a short paragraph detailing your interest (<2000 characters including spaces).

Save the date! CMCS coming to Montreal May 9th to May 12th 2017!

We invite you to attend a meeting that will bring together nationally and internationally recognized experts in the field of flow cytometry and microscopy to discuss the latest research and discoveries in biological and material sciences. **The Canadian Microscopy and Cytometry Symposium (CMCS) will be taking place at La Plaza in Montreal, Quebec, from May 9th to May 12th 2017.** It is a joint meeting held by the Canadian Cytometry and Microscopy Association (CCMA) and the Microscopical Society of Canada (MSC). The symposium will feature a keynote address given by John Bergeron, Ph.D, professor at the department of Medicine of McGill University, as well as several plenary sessions. Workshops devoted to Flow Cytometry, Light Microscopy, Biological EM and Material sciences will also be held. The Lunch-N-Learn sessions, vendor exhibits, poster sessions and banquet will give attendees many opportunities for networking and to interact with vendors and fellow scientists. The meeting will also include both associations' trademark events: the CCMA's Core Facility Manager's Meeting (CFM) and the MSC's hands-on workshops in light and electron microscopy. You are invited to submit abstracts for poster or oral presentations in the general areas of microscopy, flow cytometry and applications in both Life/Biological Sciences and Physical Sciences. The abstract submission deadline is March 1st, 2017. [Click here](#) for more information. Travel awards, registration and program information will be available soon on the CCMA and MSC websites. We hope to see you at the CMCS!

Cool Tools: power meters for microscopy

Flow cytometers usually have integrated sensors that monitor the laser power, so that the fluorescence intensity of a cell can be corrected for the illumination power. Not so with microscopes! Even our most sophisticated confocal and multi-photon microscopes generally don't give the user the ability to monitor power fluctuations, which are all too common. Now at least 2 companies, Thorlabs and Excelitas, sell power meters with sensors that are shaped like a microscope slide, allowing the user to conveniently place the sensor on upright or inverted microscopes to measure lamp or laser powers. Or if you're looking for richer software for power logging, you can forego the microscope shaped sensor and try power meters from Coherent or Newport. Here's a tip: measure laser and lamp powers on newly installed microscopes to establish a baseline for performance; measure again when you have a problem (before placing a service call); and check powers again after each maintenance visit.



uOttawa Sub-micron Flow Symposium: It's a Small World After All!

The Flow Cytometry & Virometry (FCV) Core Facility at the University of Ottawa hosted the first Canadian flow cytometry meeting dedicated to the analysis of submicron-sized particles. Talks covered a wide range of topics from on-going research to isolation/characterization methods for particles from viruses to exosomes, microparticles, & other extracellular vesicles. The meeting was well attended by 176 students and researchers from academia, government, and industry across the country including Ottawa, Toronto, Montreal, Quebec City and Manitoba.

There is increasing interest in the use of cytometers to analyze and sort submicron-sized particles and there are special challenges that need to be addressed when preparing and running these samples. Some of the common challenges are summarized below:

- 1) Small particles have significantly less available surface area for labeling and express significantly fewer antigens for labeling i.e. a 10µm cell has 2500x more surface area than a 200nm particle.
- 2) Antibody labeling of particles can cause aggregation since antibodies are bivalent and are on the same size scale as the particles they are being used to label i.e. IgG1-PE ~50nm
- 3) Small particles diffract light differently than larger ones. Light diffracted from small particles is emitted more evenly around the particle therefore they will be better resolved with SSC than FSC.
- 4) Swarm and coincidence— small particles should be run on low with serial dilutions to ensure that samples are not too concentrated. The majority of cytometers are designed to analyze cells, with core streams approximately the width of a cell.

The consensus from this meeting is that further work is needed from the flow community to meet these challenges with standardized protocols and reference materials for small particle analysis. In the absence of these materials at present the best road forward is to employ crucial controls and to utilize multiple methods/instruments to confirm findings.

CANADIAN NETWORK OF SCIENTIFIC PLATFORMS (CNSP)

The CNSP is a newly created network of scientists and administrators with responsibility for and vested interests in the sustainability of scientific infrastructure across Canada. The network has adopted a formal definition for scientific platforms (a.k.a “core facilities”) that can be found on the webpage (based on CCMA definition of cores). The network was created in August 2016, membership includes 109 scientific platforms, from 8 provinces and 33 institutions. The network represents diverse research areas including light and electron microscopy, tissue banks, micro-fabrication, MRI, mass spectrometry and NMR. One of network mandates is to **“Raise awareness, promote utility of shared scientific platforms and affect how these resources are funded in Canada.”** In light of this, the network conducted a large survey, assimilated the data and wrote a position paper on the state of infrastructure funding in Canada, the challenges scientific platforms face and recommended some potential solutions (full paper on CNSP webpage) and submitted this to the [Canadas Fundamental Science Review](#). The network is open to all who have an interest in scientific platforms across Canada. Check out the website and fill out a membership form today! The CNSP will be co-organizing the core facility managers meeting at the joint CCMA/MSF meeting in Montreal on Tuesday May 9, 2017. We hope to see you there! www.cnsp-rcps.ca





CANADIAN MICROSCOPY & CYTOMETRY SYMPOSIUM

The Canadian Cytometry and Microscopy Association (CCMA)
and the Microscopical Society of Canada (MSC)
are hosting a joint meeting, and we invite you to participate.

Please save the date:

May 9-12, 2017

La Plaza – 420 Sherbrooke West
Montreal, Quebec

Registration and program information
will be available soon on the [CCMA](#) and [MSC](#)
websites.

Contact us at
ccma-accm@curlydog.ca
to be added to our mailing list.

We hope you will join us.

Material Sciences

Flow Cytometry

Light Microscopy

Cryo EM

Correlative Microscopy

**Core Facility
Managers' Meeting (CFM)**

Hands-On Workshops

Student Travel Awards & Prizes

Lunch-N-Learn Sessions

CMCS-SCMC 2017 Joint Meeting Secretariat c/o Curly Dog Communications Inc. (CDC)
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