

attende information

**CCMA CoLD
Summit**

February 16-19 2023

OTTAWA





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CCMA CoLD Summit

February 16-19 2023



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We are so excited to have you join us at the CCMA Core and Leadership Development (CoLD) Summit! All sessions will run in parallel in 3 separate rooms- there is no need to register for what you want to attend, just show up! Mornings will start with hot breakfast and techie brekkie presentations from sponsoring vendors. Workshops will follow. Running in parallel to the workshop sessions is the demonstration hall- be sure to stop by and try out the instruments (and get some cool swag too)!

Day 1 agenda

Thurs Feb 16, 2023	
Time	Day 1
8:00	
8:30	
9:00	
9:30	
10:00	
10:30	
11:00	
11:30	
12:00	
12:30	
13:00	
13:30	
14:00	
14:30	
15:00	Hotel Check-in
15:30	
16:00	
16:30	
17:00	Opening session
17:30	(Copper Rooftop) Ice breaker/Meet & Greet
18:00	happy hour with food
18:30	
19:00	
19:30	
20:00	
20:30	
21:00	
21:30	

The CCMA CoLD Summit will kick off with a Networking event at the rooftop lounge of the Andaz Hotel- the Copper Lounge. This will be a casual Meet & Greet happy hour with light food and drinks.

You can also pick up your registration badge at the opening session.

Should you be unable to attend, registration badges can also be picked up the morning of February 17.



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Day 2 agenda

Welcome to Day 2! Join us in the morning for a techie brekkie- a hot breakfast and sessions talking about the latest and greatest from our sponsoring vendors. Throughout the day, all sessions are offered in parallel- simply show up in the room for the one you want to attend. Nothing that suits you? Take some time and explore the Demonstration Hall- it's open all day long!

Fri Feb 17, 2023				
Time	Day 2			
8:00	TB1: Thermo Fisher/ TB2: nanoFCM	TB1: bioRad; TB2: BD	TB1: Cytex Bio; TB2: Sony	Demonstration Hall (Studio 4)
8:30				
9:00				
9:30	Spectral flow	Data reporting- microscopy	Institutional policies	
10:00				
10:30	Coffee Break			
11:00	Career development	Data Analysis & Reporting- flow	Optimizing cell sorting	
11:30				
12:00	Lunch break			
12:30				
13:00	Core facility management 101	Instrument QC and maintenance- flow	Instrument QC and maintenance- microscopy	
13:30				
14:00				
14:30				
15:00	Coffee Break			
15:30	Negotiations and new instrument purchases	Instrument QC and maintenance- flow	Instrument QC and maintenance- microscopy	
16:00				
16:30				
17:00				
17:30	Open evening			
18:00				
18:30				
19:00				
19:30				
20:00				
20:30				
21:00				
21:30				



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Techie Brekkies

nanoFCM: High Sensitivity Flow Cytometry for Multiparametric High Throughput Nano Particle Analysis

Nano Analyzer combines the abilities of nanoparticle analysis with single-particle accuracy of flow cytometry. The ultra high sensitive nano analyzer with dual lasers coupled with multiple fluorescent detectors possess the capabilities to capture particle sizes from 7 -1000nm, phenotypic measurements, biochemical characterization and encapsulation studies with impeccable accuracy. Nano analyzer is ideal for studying exosome/EV based liquid biopsies using direct precleared diluted biofluids. Nano analyzer can be effectively used for measuring encapsulation efficiencies of intact Lipid Nano particle (LNP) based nucleic acid therapeutics, active pharma ingredients for chronic diseases (cancer, diabetes, neurological diseases) etc. Nano Analyzer employs enhanced technology that can capture high throughput multi parametric sample data in just three minutes per sample. Moreover, Nano Analyzer employs routine lab consumables, eliminating the use of expensive cartridges and membranes, thus enhancing productivity and discovery.

BioRad: StarBright Dyes - A Convenient Way to Increase Plexing of Your Panels

In this presentation, we will demonstrate how the exceptional brightness of StarBright Dyes, along with their narrow excitation and emission profiles, stability, and compatibility can help overcome common challenges when building flow cytometry panels. You will discover how easily they can fit into existing panels and be used in conventional and spectral flow cytometry experiments with high-parameter examples.

BD Biosciences: Innovation in Flow Cytometry

The BD FACSDiscover™ S8 Cell Sorter with CellView™ is the first high-parameter spectral cytometer that adds fluorescence imaging and image-based decisioning to sort individual cells at exceptionally high speeds. This new technology has the potential to transform immunology, cell biology and genomics research to enable new cell-based therapeutic discovery by combining imaging parameters with traditional biomarker quantification, and collection for downstream analysis. This presentation will provide a system overview and introduction to key applications. To learn more visit bdbiosciences.com/S8

Cytek Bio: Introduction to Cytek Cloud

Cytek Cloud is the new digital ecosystem that supports full spectrum flow cytometry research from panel design to data acquisition. It saves time by centralizing full spectrum panel design tools in one place and seamlessly integrating with Cytek's SpectroFlo® software. In this Techie Brekkie we'll show all of the features and have an interactive demonstration creating an 11-marker panel.



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Sony Biosciences: Delivering Intuitive Tools for Analysis of High Dimensional Immune Profiling Applications

In this talk, Sony will introduce the SFA (Spectral Flow Analysis) Cloud based analysis platform for data analysis. The SFA software will allow users to have high speed analysis using advanced analysis capabilities for every level of user that wants to use advanced analysis for their data. Attendees will learn about BL-FlowSOM, an improved clustering analysis, as well as interactive analysis using 2D plots, spectral plots, dimensionality reduction and clustering.

Workshop sessions

WS1: The Spectral Revolution

Incorporating full spectrum cytometers into your equipment arsenal and how to bring your user base along for the ride.

WS2: Data reporting- microscopy

We are facing a data reproducibility crisis in the bio-imaging sciences due to a lack of standardization in data reporting and collection methods. Experimental design and documentation of protocols should not just be an afterthought. These are critical elements in the scientific process that serve as a record and roadmap to help guide future researchers. In this session we will cover what parameters should be mentioned in a light microscopy data report and why they are important.

WS3: Institutional policies with respect to shared resources

This Q+A session will focus on various types of institutional policies with respect to cost recovery, dealing with aging instruments, and acquiring new instrumentation, with a specific focus on CFI funding models.

WS4: Career development as core facility staff

As core staff you wear many hats - but how do you continue to learn and advance in your career while maintaining a healthy work/life balance? Join us in the discussion and share your experiences.

WS5: Data Analysis Workflows & Reporting - Flow Cytometry

As the data from our experiments become increasingly complex, the best practices on how to analyze and report this data must also expand to accommodate. In this session, we discuss some of the recommended workflows and tools to use for high parameter and small particle data analysis as well as go over some recommended reporting frameworks such as MIFlowCyt and MIFlowCyt-EV.

WS6: Optimizing and troubleshooting cell sorting in a core facility

When a group of flow cytometry experts gather together, it is imperative that we discuss cell sorting issues. In this 'stump the chump' style session, we'll test our



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expert panel with issues experienced by the audience members, so bring your questions!

WS7: Core facility management 101

With a panel of veteran Canadian core managers, this session will address the basics of running a core facility - from building budgets, setting rates, managing service contracts, to growing your core and much more.

WS8/11: Instrument repair and QC- flow cytometry

A panel and Q&A session on the practical aspects of quality control and maintenance for flow cytometers; featuring service engineers from major flow cytometry companies and live demonstrations on participating platforms.

WS9/12: Instrument repair and QC- microscopy

An interactive session on the practical aspects of quality control and maintenance for microscopes including cleaning, light source monitoring, and calibrations.

WS10: Negotiations for Instrument Acquisition

Instrument acquisition is an important part of the “business” of core facilities and involves the coordination of many groups within the research community including researchers, core facilities, instrument vendors and funding agencies. This session aims to bring together representatives of the different players involved in this process to discuss our current workflow as Canadian core facilities for instrument procurement, highlighting areas of opportunity for future development.



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Day 3 agenda

Welcome to Day 3! Join us in the morning for a techie brekkie- a hot breakfast and sessions talking about the latest and greatest from our sponsoring vendors.

Throughout the day, all sessions are offered in parallel- simply show up in the room for the one you want to attend. Nothing that suits you? Take some time and explore the Demonstration Hall- this is open all day long!

There is a midday break to go enjoy the Winterlude festivities (or just give your brain a rest). Make sure to join us again for the afternoon sessions! Day 3 finishes off with a networking dinner at Starling Restaurant (pre-registration required).

Sat Feb 18, 2023				
Time	Day 3			
8:00	TB1: Beckman Coulter; TB2: BioLegend	TB1: Cytex Bio; TB2: OMIQ	TB1: PPMS Stratocore; TB2: Akoya Bio	Demonstration Hall (Studio 4)
8:30				
9:00	Methods for training in core facilities	Cross talk between cores	The 3 R's: resources, reagents and reference	
9:30				
10:00	Coffee Break			
10:30	Facility management software	High parameter data analysis	Correlative microscopy	
11:00				
11:30			Image analysis trends	
12:00	Afternoon break for Winterlude activities			
12:30				
13:00				
13:30				
14:00	Marketing strategies			
14:30				
15:00				
15:30	Small Particle FCM: EVs, Viruses, & other small stuff	Thick Sample Imaging	Org culture and staff management	
16:00				
16:30	Core Networking Dinner (tickets purchased in reg)- offsite sit down dinner - SRL networking, connecting core facilities, promote CCMA			
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Techie Brekkies

Beckman Coulter: Beyond immunophenotyping: functional assays on the CytoFLEX platform.

Your flow cytometer can do much more than immunophenotyping! Join us as we discuss functional assays such as phagocytosis, autophagy and calcium flux performed on the CytoFLEX flow cytometer.

Cytek Bio: Data Reproducibility and Simple Assay Transfer between Cytek Aurora and Aurora CS Systems

In this talk, we will discuss the concept and features of the Cytek Aurora CS. We will show how Cytek is able to achieve data reproducibility between Aurora analyzers and the Aurora CS. Finally, we will describe simple workflows to successfully transfer any panel to the Aurora CS and provide an example using Cytek's 25-color immunophenotyping assay.

OMIQ

OMIQ is a new cloud platform for cytometry analysis that is rooted in formal data science principles while still supporting classical methods. A brief overview will be provided.

PPMS: Unlocking Efficiency with a Core Facility Management Solution

Stratocore is a global leader focused on helping research institutions better manage scientific resources within core research facilities. We will explore how core facility management software can impact the efficiency and interoperability of the research organization and core facilities, along with strategies for optimizing ROI from the implementation.

Akoya Bio: You're plexy and you know it!

Akoya Biosciences®, The Spatial Biology Company®, presents the PhenoCycler® workflow for discovery and Phenolmager® workflow for translational sciences. These multiplexing whole-slide imaging platforms study cells in context, thereby gaining novel biological insights to how cells interact to influence the tissue microenvironment. Both PhenoCycler and Phenolmager workflows offer the full solution from multiplex staining, multiplex immunofluorescence imaging, and quantitative data analysis.

Workshop sessions

WS14: Methods for training in Core facilities

This workshop will highlight how the principles and practices in adult education can support the activities within scientific platforms. By analyzing platforms through the lens of an adult educator, we can more clearly identify and analyze how they



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contribute to the research landscape beyond the standard metrics, such as publications and number of users trained. Further, best practices from adult education can also strengthen the existing training programs within platforms.

WS15: Facilitating cross talk between cores and industry to execute intersectional techniques.

Cutting edge scientific techniques now require multiple experts to have the best chance at success. By highlighting problem areas and headaches that can be easily avoided by involving other experts in experimental design, a compelling case for cross-core communication can be established. This helps to optimize multi-disciplinary workflows while familiarizing core staff with other techniques, giving them a broader knowledge base to advise their users on next-gen techniques.

WS15: Resources/Reference/Reagent (The 3 R's)

Knowing where to find the right tools to aid our users is a critical part of any core manager's arsenal. This session will look at common resources and reference materials, with specific break-outs for both microscopy and flow.

WS16: Facility management software

Could the right facility management software help you to run your facility more efficiently? Join us for an interactive Q&A session where managers and developers who have implemented facility management systems share their tips and tricks for choosing and implementing the right software for you.

WS17: High parameter data analysis

With the ever increasing number of parameters in flow cytometry, understanding high parameter data acquisition and analysis is critical. This session will go over the basics of high parameter data analysis as well as the experimental setup considerations necessary for these types of analyses.

WS18a: Correlative microscopy

A discussion of Correlative Light-Electron Microscopy (CLEM) imaging of cell monolayers and tissue sections to elucidate imaging workflow using two microscopy modalities.

WS18b: Image analysis trends

What you should know about open source software, collaborative data sharing, and deep learning platforms and more.

WS19: Supporting small particle flow cytometry

This will be a discussion on supporting small particle samples in a core facility. Topics will include: instrument & sample workflows (calibrations, titrations, controls, etc), training, instrument QC & maintenance, and research acknowledgements.



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WS20: Thick sample imaging

This session will focus on several advances in sample preparation, microscopy hardware, and computing that enable 3D imaging of centimeter sized samples at cellular resolution including: tissue clearing, fluorescence labeling, lightsheet microscopy, objective lens selection, AI-assisted segmentation and cloud computing/storage.

WS21a: Marketing Strategies in support of your SRL : Creating value for new technologies

Whether you are trying to promote a new technology in your facility, introduce a new service, or grow your user base, a marketing strategy will help you clarify your objectives and the means to achieve them. During this session, we will discuss Dr. Alexander Chernev's G-STIC method using examples from the audience to illustrate how it can be implemented.

WS21b: Developing a strong organizational culture, staff management, and conflict management

The organization culture in your core facility includes an array of rules, practices, values, and expectations that impact the inner working of your group. Join us in a discussion of organizational culture. We'll play cards too. There must be a reason!

Winterlude break

Take some time in the afternoon to escape and enjoy the wonders of Winterlude. Whether this be skating on the Rideau Canal, checking out the ice sculptures, eating far too many beavertails, or getting a view of it all from the zipline- there's something for everyone! And if Winterlude isn't your jam, there are a number of excellent restaurants in the nearby Byward Market. Or escape to the comforts of your hotel room and give your brain a break!

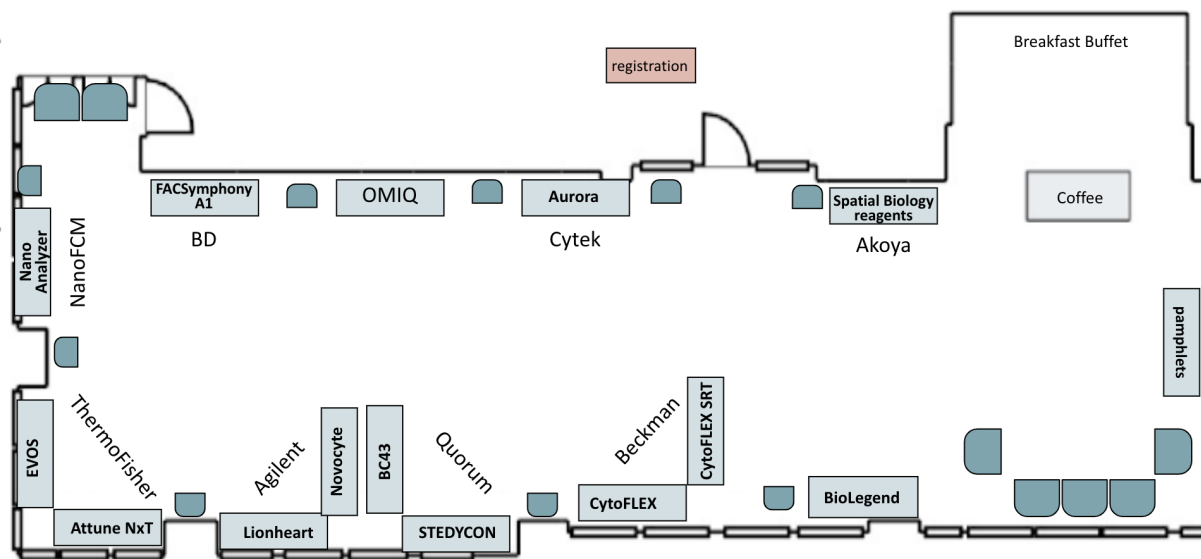
SRL Networking dinner

Advance registration is required. This delicious 4-course dinner will be hosted at Starling Restaurant.



DEMONSTRATION HALL

Each table in the Demonstration Hall will feature a technology for you to explore—come check them all out! The Demonstration Hall will run in parallel to the sessions on both February 17 and 18.



ThermoFisher Scientific

Two unique platforms will be showcased at the ThermoFisher Scientific booth: an EVOS M7000 Imaging System and an Attune CytPix. The M7000 brings high performance and fast, automated imaging right to your lab bench. This system has been designed with advanced capabilities like live-cell analysis, image tilting, and Z-stacking. Attune Flow Cytometers are compact, benchtop cell analyzers that can be configured with up to four spatially separated lasers to flexibly design, run, and analyze panels of up to 14 colors. The Attune CytPix Flow Cytometer is an advanced cell analyzer that combines acoustic focusing fluidics for high sensitivity and high throughput with a high-speed camera. Unique, powerful acoustic technology avoids clogging and dramatically reduces cell preparation and processing time even for troublesome large cells and dissociated tissue masses.

Beckman Coulter

CytoFLEX SRT & CytoFLEX S – cell sorting and small particle demonstration.

Cytek Bio

Cytek Biosciences will be demonstrating its Cytek® Aurora 5 Laser system with ASL. Make an appointment with us to see the power and ease-of-use of the Aurora! Demo kits will be available to run live on our system. You can also have a tour of SpectroFlo software or get to know our new Cytek® Cloud that integrates two online tools, Panel Builder and Experiment Builder. You already have an Aurora and are



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interested in knowing more about our reagents? Come chat with us to discover our latest released kits and antibodies! You feel competitive? Come play fun games with us and win prizes!

nanoFCM

Nanofcm will demonstrate multiparametric live performance of the ultra sensitive nano flow analyzer using GFP labeled Extracellular vesicles in the demonstration hall at the CoLD summit. Nano Analyzer will also showcase its ability to perform to the expected standards using QC silica fluorescent nanobeads and sizing silica nanospheres, every time with impeccable accuracy for measuring nano particle sizing and concentration. Nano analyzer is a one stop instrument for all nano particle (EV's, LNP, aggregates etc.,) analysis ranging from particle concentration, sizing, biochemical characterization, encapsulation analysis (Nucleic acids, API, protein) etc.

Agilent

Are you seeking new ways to understand disease onset and progression, develop novel therapeutics, uncover underlying mechanisms of action, or probe the complexities of cell biology in general? Whether your focus is detecting and characterizing your target, running a screening campaign, or providing broad application versatility for a wide set of users, Agilent's cell analysis platforms can accommodate a diverse array of workflows.

Come join us at the Agilent booth to discuss how Agilent BioTek Automated Microscopes and Cell Imaging Multimode Readers, as well as Novocyte Flow Cytometers, can help you achieve your research goals. In addition, you will be able to participate in a live hands-on demonstration of the BioTek Lionheart Automated Microscope!

Quorum

STEDYCON:

Upgrade your existing widefield system to a laser scanning confocal and STED nanoscope and visualize your samples in a stunning new level of detail. All that's required is a free camera port and a quality objective lens. The lasers of the STEDYCON are aligned by design by a patented easySTED optical arrangement, making the instrument always imaging-ready: no calibration routines are required. With a lateral resolution down to 40 nm, expect huge results and the finest details with this ultra-compact imaging platform.

BC43 – The Ultimate Benchtop Confocal Microscope:

The ideal microscope for early-stage researchers and experienced microscopists alike: no requirement for a darkroom and built-in vibration management. Access high-speed confocal imaging on the same bench as you prepare your samples. With its low barrier to entry for both cost and training, the BC43 allows you to achieve sophisticated imaging, simplified.



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BD

The BD FACSymphony A1 with Small Particle Detector option enables reproducible detection and counting of single small particles, including EVs and 90-nm polystyrene beads, over a broad dynamic range of concentration. Stop by the BD booth to see the BD FACSymphony A1, and review our published Scientific Poster that demonstrates the robustness of instrument performance and methods assessed by collecting data on multiple instruments over time.



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Day 4 agenda

Welcome to Day 4! Join us in the morning for a CCMA general meeting and hot breakfast. Following this, there will be a series of Training the Trainer tutorials- these are only available to individuals who registered in advance for them.

Sun Feb 19, 2023			
Time	Day 4		
8:00	CCMA general meeting & CoLD Summit Wrap-up (breakfast included)		
8:30			
9:00			
9:30	<i>Small particle instrument calibration and optimization</i>	<i>Cell Profiler</i>	<i>High dimensional data analysis</i>
10:00			
10:30			
11:00	<i>Break (Beverages provided from 9:30am-1:30pm)</i>		
11:30	<i>Small particle instrument calibration and optimization</i>	<i>Cell Profiler</i>	<i>High dimensional data analysis</i>
12:00			
12:30			
13:00	<i>Lunch break</i>		
13:30			
14:00	<i>Trouble shooting spectral data</i>	<i>High parameter image analysis (Akoya)</i>	<i>Strategies for panel design as a core manager</i>
14:30			
15:00			
15:30	<i>Break (Beverages provided from 1:30-4:30pm)</i>		
16:00	<i>Trouble shooting spectral data</i>	<i>High parameter image analysis (Akoya)</i>	<i>Strategies for panel design as a core manager</i>
16:30			
17:00			

Tutorial descriptions - separate registration required

TT1: Instrument Optimization and Calibration for Small Particle Flow Cytometry using FCM_{PASS}

More researchers are now exploring the use of flow cytometry for single-particle analysis of small particle samples such as extracellular vesicles and viruses. These types of samples require specific tools and procedures to be successfully supported in a core facility setting. In this tutorial we will be going through the use of FCM_{PASS}, a free software for small particle data calibration and instrument optimization.



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Attendees will have access to a practice dataset as we walk through the use of this software for small particle flow cytometry.

TT2: Cell Profiler

Microscopy and image processing methods improve every year. As the capacity to acquire and analyze images continues to grow, so too does CellProfiler, an open-source, freely-downloadable software designed for large-scale, automated phenotypic image analysis. Attendees will have a hands-on introduction to CellProfiler.

TT3: High Dimensional Flow Cytometry Data Analysis

Have you wondered how t-SNE plots are generated? This is an introduction on the workflow for dimension reduction analysis for high parameter flow cytometry data. Attendees of the tutorial will be provided with trial software and a practice dataset to learn hands-on how to analyze this data.

TT4: Troubleshooting Spectral Data

Many flow cores across Canada have recently acquired spectral cytometers. These instruments require a new set of skills for troubleshooting data. This tutorial will teach you how to deal with common issues such as unmixing errors, autofluorescence subtraction, and more.

TT5: Introducing high parameter image analysis

This is a hands-on tutorial to learn the basics of image analysis using open-source image analysis software (QuPath). Attendees will be asked to download software and data sets ahead of the tutorial so that they can follow along with a practice dataset.

TT6: Strategies for panel design as a core manager- what are your options?

As the detection capabilities on flow cytometers increase, greater demands for panel design are being placed on core facilities. Learn some tips & strategies for panel design, as well as resources to support you in this high parameter adventure!



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Location Details

Conference Hotel - Andaz Ottawa Byward Market

Situated at the heart of downtown Ottawa's historic Byward Market, the Andaz is a 200-room boutique hotel that is steps away from restaurants, bars, shops, and public transportation.

Traveling to Ottawa

Train - Those traveling to Ottawa from Toronto or Montreal may wish to consider taking VIA Rail to Ottawa and then connecting onto the O-Train (Line 1, westbound) to get downtown (Rideau Station). Rideau Station is located below the Rideau Shopping Centre, which is a few minutes walk from the Andaz Hotel.

Car - Limited parking is available at the conference hotel for a fee of \$35 per night. There are also several public indoor parking garages within walking distance of the Andaz including the Byward Parking Garage and the Parking Indigo Ottawa - Market Garage.

Plane - Those traveling to Ottawa by air will arrive at the Macdonald–Cartier International Airport, which is approximately 15km from downtown Ottawa and the Andaz Hotel. The quickest options to get from the airport to downtown is Taxi or Uber. The most economical option is to take the OCTranspo bus route 97 Hurdman to Hurdman Station and then transfer onto the O-Train Line 1 to Rideau Station (westbound to downtown). Rideau station is a short walk to the Andaz Hotel. Suggestions for local airlines: WestJet, Porter, AirCanada, Swoop, Flair.

Local Good Eats, Sights & Activities

Lunch and some dinners are not included with the registration fee. We strongly encourage you to explore the many culinary options the Byward Market has to offer that will fit a range of budgets. Stroll through the Byward Market and the surrounding downtown shops and sights for the full Ottawa experience!

Scan this QR code to check out some local recommendations!

