

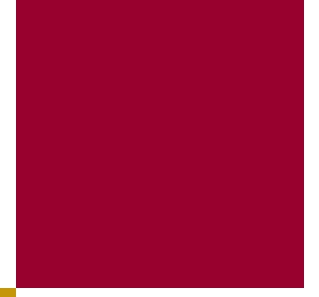
Cool Climate Oenology & Viticulture Institute

Brock University

Cool Climate Oenology and Viticulture Institute 2014-15 Year in Review

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Overview

The Cool Climate Oenology and Viticulture Institute (CCOVI) is Brock University's flagship transdisciplinary institute. CCOVI breaks free from convention, developing innovative partnerships to foster excellence in research, scholarship and creativity while contributing to the economic impact of the sector, in direct alignment with Brock's strategic priorities.

Established in 1996, CCOVI works in partnership with the Grape Growers of Ontario, the Wine Council of Ontario and the Winery and Grower Alliance of Ontario. It advances the interests of the grape and wine industry by investing time and resources on its research priorities.

CCOVI's research, continuing education and outreach are based on three pillars — quality, innovation and sustainability — which attend to the needs of individuals, organizations and institutions involved with the grape and wine industry across Canada and beyond. CCOVI networks faculty, students and staff in the University who are dedicated to advancing the Canadian grape and wine industry. However, CCOVI also extends its partnerships to external academic communities, federal and provincial government research organizations, regional grape and wine industry groups in Canada, and cool climate wine regions around the world.

As the institute has evolved, CCOVI has taken its research and services beyond the science disciplines of oenology and viticulture and expanded our activities to look at all areas of the grape and wine value chain from the vineyard to the wine glass.

The challenge

The Canadian grape and wine industry is emerging as an internationally recognized cool climate wine producer. However, the \$6.8 billion industry faces a number of challenges as it tries to continue to grow its market share and reputation within Canada and around the world.

The challenges facing the Ontario, and broader Canadian, grape and wine industry encompass a varied set of complex issues. The long-term sustainability of the industry depends on our capacity to develop innovative solutions that respond to the impact of current and future climatic conditions on wine grape production. These include winter injury; emerging insect pests and new disease pressures due to our changing climate; and the viability of current varieties in 30 to 50 years. The industry's growth is dependent on our ability to develop tools that accurately assess consumer behaviour and improve wine quality to increase the Ontario, and entire Canadian, wine market share.

Yet, its challenges also pose unexploited opportunities that could transform our industry, such as developing new clone/ rootstock combinations for our future climate using varieties with proven consumer appeal; establishing a national domestic clean plant program to support the industry's long term sustainability; developing new products matched to our climate; focussing on wines at the highquality end of the spectrum; expanding Canadian wines into new markets; and establishing a unique identity for the industry.

As a result, no single academic discipline is sufficient to helping the industry adapt and grow; what is required is research collaboration from across the entire grape and wine value-chain.

The Brock response

When you look around the world, every country with a successful wine region also has something else – a dedicated grape and wine research centre that addresses local challenges and priorities. In Ontario, that role belongs to CCOVI. CCOVI's team of researchers and support staff provide extensive research, outreach and analytical service support to grape growers and winemakers across the country.

CCOVI researchers study disciplines across the grape and wine value-chain and examine topics that address industry-driven priorities. The institute pursues excellence in research, outreach and continuing education by fostering its collaborative and transdisciplinary approach.



Taking action

As a leading transdisciplinary research centre, CCOVI positively contributes to transformative development of the Canadian grape and wine industry through its industry-driven research and focus on education and knowledge-transfer.

CCOVI currently delivers three types of services for grape growers and winemakers: research services aimed at addressing industry identified priorities; business services aimed at improving grape growers' and winemakers' productivity; and knowledge-transfer services aimed at sharing cutting-edge research outputs and best practices within the industry. The institute has a unique approach to addressing the industry's challenges — it keeps a pulse on current issues. For instance, industry representatives with various backgrounds sit with subject matter experts on the Outreach Committee to develop timely, applicable programs and professional development opportunities.

Creating knowledge

CCOVI's globally competitive research program develops solutions to immediate industry challenges and identifies new growth opportunities across the industry's entire value chain. The program is developed in partnership with industry stakeholder organizations, individual grape growers and wineries.

Through its multidisciplinary team approach, the institute uses the skills and knowledge of affiliated researchers and their teams to advance the Canadian grape and wine industry, problem-solve and work with industry partners (individual grape growers competitive advantage against foreign imports; and helping to conserve the growing environments necessary for the production of high quality wines.

Project examples include developing new wine styles to improve industry competitiveness, combatting grapevine winter injury, finding solutions to new emerging diseases in the vineyard, improving red wine quality, terroir based wine quality, and understanding the factors impacting consumer behaviour to support effective marketing strategies and increase domestic wine market share.



or winemakers) and industry stakeholder groups to advance the Ontario and broader grape and wine industry.

Research programs have mainly focused on issues of our changing climate and the impact on grape production and wine quality. Given the urgency to understand the impact of climate change in Canada, research has focused on providing the wine industry with the requisite knowledge for adopting the best adaptive strategies; contributing to the creation of more valueadded products; helping maintain Canada's CCOVI's research programs are building Canada's profile and reputation as a global leader in oenology and viticulture; and recruiting, training, and retaining world-class highly qualified personnel (HQP) to support the industry in the years to come.



Publications

CCOVI Researchers, Scientists and Fellows who are affiliated with Brock University — have communicated the results of their research formally through books, book chapters and academic publications.

During 2014-15, Brock affiliated CCOVI researchers published 3 books and published 31 academic publications on wine related topics. In addition to presentations at the annual CCOVI Lecture Series, researchers presented their findings at 28 conferences around the world.

CCOVI's commitment to knowledge transfer goes beyond academic publications. In 2014-15, CCOVI issued seven media releases, leading to 55 news stories featuring the institute's activities.



Training of highly qualified personnel (HQP)

CCOVI is committed to training and mentoring highly qualified personnel across the grape and wine value-chain. Although the undergraduate program is not run out of the institute, CCOVI has close ties to the program.

CCOVI Researchers, Scientists and Fellows have a strong track record of student supervision, and are committed to advancing the careers of both students and postdoctoral fellows.

Highly qualified personnel trained during 2014-15

Post-doctoral fellows	1
PhD students	2
Master's students	10
Undergraduate students	38



New programs

New, globally competitive research programs, developed with industry partners, will create solutions to immediate industry challenges, identify new growth opportunities across the industry's entire value chain, and accelerate the commercialization of globally competitive products and services to improve effective knowledge transfer back to the grape and wine industry.

New research programs can be categorized into the following areas:

- Agricultural productivity products and services that improve efficiency and help to avoid losses for grape growers
- Wine productivity products and services that improve efficiency and quality for wine producers
- By-product usage and product development

 products and services that create new
 revenue generating opportunities
- Precision agriculture and precision oenology — products and services to improve efficiency for grape growers and wine producers
- Consumer Behaviour understanding the drivers impacting consumer choice to develop effective strategies to increase domestic wine market share

New products, processes and services include: value-added wine products, precise decision-making tools, and real-time monitoring technologies with automation; environmental adaptation strategies for grape growers to match clone/rootstock combinations of varieties to location and optimization of vine winter hardiness: processes to improve methods for new styles of wine making; commercializing new products, such as methoxypyrazine removal technologies and yeast strains, which will improve productivity and address current challenges in the industry; and an open database of phenolics for use in terroir-based winemaking to target the consumer style preference.

CCOVI is continuously evaluating the academic and continuing education needs of the grape and wine industry in order to provide timely and effective programing. With input from industry stakeholders, alumni and partner organizations, CCOVI is also committed to fulfilling the education needs of this sector in addition to their research needs.

New funding

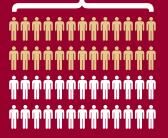
Brock researchers associated with CCOVI have received significant funding in the form of operational research grants. Over the past three years, funding provided to researchers in CCOVI from federal and provincial agencies has totalled more than \$3.88 million.

In addition to the federal and provincial support, CCOVI's success addressing industry priorities has leveraged significant investment from industry and stakeholder partners. Counting cash and in-kind investments from industry participation in research programs, CCOVI has received \$4,225,879 over the past three years. In 2014-15 CCOVI partnered with over 70 unique industry partners.

This funding helps CCOVI achieve its mandate of providing industry-driven research solutions to help grow the Canadian grape and wine industry.

Funding source	Type of contribution	2014-15	2013-14	2012-13
Government grants in partnership with industry	Funding from provincial or federal sources	\$990,500	\$786,163	\$1,219,000
Industry partners	Cash contributions	\$56,735	\$77,865	\$65,000
Government grants without industry partners	Funding from provincial or federal sources	\$260,140	\$256,140	\$99,408
Subtotal		\$1,302,375	\$1,120,168	\$1,383,408
Industry partners	In-kind contributions	\$185,526	\$69,402	\$165,000
TOTALS		\$1,487,901	\$1,189,570	\$1,548,408

Knowledge transfer



Number of views per lecture series year

2014 – 1,528 2013 – 1,405 _{2012 – 672} Providing targeted workshops, lectures and best practices guides are examples of the support CCOVI provides to the grape and wine industry.

Calibrate with CCOVI

Calibrate is a series of outreach workshops aimed at assisting members of the industry with various aspects of their operations. In 2014-15 Calibrate Your Lab helped winemakers ensure that their lab equipment was calibrated effectively prior to harvest. The Calibrate workshops are an example of knowledge from CCOVI's two senior scientists reaching the industry.

CCOVI Lecture Series

The CCOVI Lecture Series is one of the institute's long-standing events. It focuses on knowledge mobilization and technology transfer back to the grape and wine community. The lectures, which are livestreamed, feature CCOVI Researchers, Fellows and Professional Affiliates speaking about current topics of importance to industry representatives across the grape and wine value-chain.

Cold-hardiness best practices guide

At the beginning of 2015, CCOVI Researchers and Fellows released a best-practices manual to help growers mitigate the effects of cold weather events. The online manual is available for free to grape growers and is based on five years of cold-hardiness research. This is an example of how CCOVI is focused on getting the latest research findings into the hands of the people who can benefit from it most.



Global impact: lecture series videos have been viewed in more than 40 countries worldwide

Outreach Services

To more effectively serve industry with resources it helped build, CCOVI developed a series of outreach services in collaboration with industry. These programs facilitate technology transfer to end users in a timely fashion to assist the industry in its growth and development.

Analytical Services

CCOVI's Analytical Services lab fills a need in the Canadian grape and wine industry by providing juice and wine analysis at a competitive rate.

"For winemakers, the lab fills a void in available services in Canada," says Analytical Services client

Thomas Bachelder, whose Trois Terroir project makes wine in Niagara, Oregon and Burgundy.

"Every wine region has a system where there are two or three public or private labs that you can rely on," says Bachelder, "and that hadn't happened in Niagara. Brock recognized that void and stepped in to fill it."

Since opening in 2011, the lab has consistently grown both the number of clients and the number of work orders processed each year and fills requests from customers from coast-to-coast and New York state.



Analytical Services by the numbers 2014/15 2013/14 2012/13 Number of work orders 602 515 314

VineAlert's impact

The ability to avoid one cold weather event (where the damage causes five per cent vine death and 25 per cent bud injury) using VineAlert with wind machines can save grape growers:

- \$13.8 million in lost sales the year of the cold event
- \$11.7 million in lost sales over subsequent years while damaged vines recover
- \$29.1 million in vine renewal, replacement and retraining costs over four years

Preharvest monitoring program

CCOVI's wine grape Preharvest Monitoring program is a one-of-a-kind online service that helps Niagara winemakers and growers make informed decisions leading up to harvest. The program tracks key fruit ripeness indicators for Chardonnay, Riesling, Pinot noir, Cabernet sauvignon and Cabernet franc at four sites across the Niagara peninsula.

Harvest 2014 marked the fifth year of the program and the first year that it sampled Pinot noir at all

locations. Along with providing the industry with real-time data, the program also allows users to compare what they are seeing to numbers from previous growing seasons.

Although the program's target market is Ontario grape growers and winemakers, with over 90 per cent of the page views coming from Ontario, data from harvest 2014 was viewed in 23 countries around the world.

Preharvest monitoring database views			
Harvest season	2014	2013	2012
Database page views	2,106	2,510	2,803

VineAlert

VineAlert is one of CCOVI's flagship outreach programs. VineAlert tracks the cold hardiness of grapevines throughout the dormant period and warns growers when to turn on wind machines to mitigate potential damage from the frosty temperatures. The service monitors grapevine cold hardiness in the Niagara Peninsula, Prince Edward County and the Lake Erie North Shore.

In 2014-15, the VineAlert database was viewed 15,533 times with more than 354 growers

registered to receive email updates. In a 2014 economic impact analysis conducted by the Goodman School of Business, it was reported that last winter alone, VineAlert helped growers save as much as \$2.3 million in fuel costs just by alerting them when it was not necessary to run wind machines.

After seeing the success of the VineAlert program, the technology is now being applied to the tender fruit industry with the forming of TenderFruitAlert which started in fall 2014.

VineAlert database views			
Winter	2014-15	2013-14	2012-13
Database page views	15,533	16,742	9,117



Conferences

CCOVI organized and hosted two major conferences in 2014, attracting more than 360 participants. Conferences and workshops are an important element of CCOVI's commitment to the growth of the industry through the transfer of knowledge and technology.

Ontario Sparkling Wine Technical Symposium

At a time when consumer interest in sparkling wine is growing, winemakers from across North America gathered at Brock on May 6, 2014 to focus on sparkling wine. Hosted by CCOVI, the sold-out Ontario Sparkling Wine Technical Symposium was a blend of technical theory and practical solutions. The event featured international experts including Bertrand Robillard, Ed Carr, Larry Mawby and wine writer Jamie Goode as they shared global success stories and the latest developments in sparkling wine.

International Cool Climate Chardonnay Celebration (i4C)

Winemakers, grape growers and sommeliers went back to school July 18, 2014 as CCOVI played host to the i4C's education day held at Brock University. The sold-out educational session gave participants an opportunity to learn more about the impact various viticulture and winemaking practices have on Chardonnay.

Workshops and conferences			
	2014	2013	2012
Number of attendees	1,119	1,085	1,042
Number of sessions	10	11	8

Oenology and Viticulture degree program.



CCOVI's education courses poured

46,912 glasses of wine during their 2014-15 classes

Oenology and Viticulture degree program

In addition to CCOVI, Brock University is uniquely positioned in Canada to offer undergraduate, graduate and certificate programs in Oenology and Viticulture (OEVI). Although CCOVI does not administer the degree programs, the institute has close ties to the programs. CCOVI offers education sessions and volunteer opportunities to students and supports alumni with professional development after graduation.

For the 2014-15 academic year, there were 38 students studying at the undergraduate level in oenology and viticulture. Thirty were registered in the Honours B.Sc. while eight were taking the Certificate in Grape and Wine Education. There were also 10 students pursuing their masters degree and 2 students

Education

pursuing their PhD in grape and wine related fields along with one post-doctoral fellow.

Continuing education

CCOVI provides continuing education opportunities for wine enthusiasts as well as professional development courses for industry professionals.

As a program provider for the Wine & Spirit Education Trust (WSET), a highly respected and internationally transferable wine certification, the continuing education program attracts students from around the world to take part in in-class and online learning options.

In 2014, CCOVI offered five WSET and wine appreciation courses to 122 students.

Wine appreciation and WSET courses			
	2014	2013	2012
Number of courses	5	7	6
Number of attendees	122	143	122

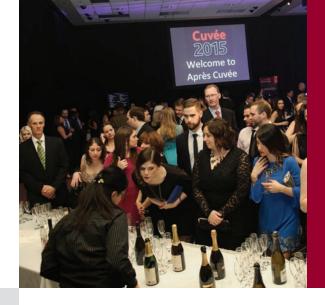
CCOVI in the community



The 2014-15 year marked an expansion of CCOVI's community engagement activities. These activities aimed to raise the profile of the institute and increase the presence of wine education opportunities at local wine events.

In July, guests attending the International Cool Climate Chardonnay Celebration's (i4C) Cool Chardonnay World Tour and Grand Tasting had the opportunity to profile their palate and learn from OEVI students and CCOVI staff. Participants examined different styles of chardonnay and learned about their own taste preferences at the 'What kind of cool are you?' booth.

One of CCOVI's largest community education events is the Educate Your Senses wine and cheese seminar series. The event takes place in Montebello Park during the Niagara Wine Festival and partners with the Dairy Farmers of Canada. The seminars connect festival attendees to winemakers as they hear the stories behind the wines being poured at the festival. In February, CCOVI's outreach manager Barb Tatarnic and OEVI student Paul van der Merwe teamed up to offer a sold-out educational tasting comparing wines from California, British Columbia and Niagara. The tasting raised \$1,000 for Red Roof Retreat – a local charity that provides programming for children with special needs



Cuvée 2015 legacy

\$33,000 raised

\$15,000 in scholarships for students studying oenology and viticulture

\$13,000 dedicated towards industry driven research

\$5,000 to support the Niagara Community Foundation



Cuvée 2015 marked an exciting milestone as CCOVI took over the stewardship of one of Canada's most prestigious wine celebrations. With the help and support of sponsors, the Ontario wine industry and our culinary partners, the 27th annual Cuvée Grand Tasting provided an extraordinary wine and food experience to a sold-out crowd. The celebration of Ontario VQA wine continued all weekend with the Cuvée en Route passport program.

The Grand Tasting, held Feb. 27 at Fallsview Casino Resort, featured 52 Ontario winemakers, each showcasing their favourite VQA wine as well as 13 of the province's top chefs who served up signature dishes at live cooking stations. The Après Cuvée after party gave guests the chance to dance the night away with a live band while tasting sparkling wine, Icewine and local craft beers.

Cuvée Grand Tasting

Special guests included Ontario Lieutenant Governor Elizabeth Dowdeswell (who attended the tasting at the request of Brock University) and several local dignitaries and leaders of the business community.

The Cuvée wine weekend continued until March 1 with the Cuvée en Route passport program providing participants access to exclusive tasting flights at more than 30 local wineries and six unique dining opportunities.

The success of Cuvée 2015 led to the creation of a legacy fund that is dedicated to providing student scholarships and funding research that addresses priorities identified by the industry.



Atlantic Wine Institute Director Donna Sears makes a toast with MP Scott Brison. CCOVI has an MOU affiliation with the Atlantic Wine Institute.

Affiliated institutes and international partners

CCOVI's international reputation for cuttingedge research has made it a sought after partner within Ontario, across the country and around the world. These partnerships enhance the impact of CCOVI's affiliation program and also expand the network of expertise that can be accessed by the local industry.

CCOVI leads and develops new opportunities for Ontario's Grapevine and Wine Research Network. It also strengthens Canada's national grape and wine research strategy through a coast-to-coast research network linking British Columbia through the PARC-CCOVI Wine Grape Research Network MOU, Quebec through CCOVI-Quebec partnerships and Atlantic Canada through the CCOVI-AWI MOU; These efforts bring forth advances in knowledge, training opportunities for students and solutions to industry issues, as well as strengthen the \$6.8 billion economic impact of the sector to Canada through technology and knowledge transfer.

CCOVI's industry partnerships ensure effective technology transfer, support the financial sustainability of our activities and provide in-kind support to research trials. CCOVI has a strong working relationship with the industry, and in particular with Ontario Grape and Wine Research Inc., on strategic projects that support the growth and sustainability of the Ontario grape and wine industry.

CCOVI researchers and scientists are also active members with international academic organizations including the American Society of Enology and Viticulture and the Academy of Wine Business Research. It is through international networks like these that researchers are able to raise the profile of their work while making connections for future formalized partnerships.

Awards and recognition

Distinguished leader – Len Pennachetti, co-founder of Cave Spring Cellars, was honoured by Brock's Goodman School of Business with their Distinguished Leader Award which honours prominent Canadian business leaders.

CCOVI director Debbie Inglis was honoured by the Greater Niagara Chamber of Commerce's Women in Niagara (WIN) counsel's Excellence in Science, Innovation and Technology Award. The award celebrates the achievements of women whose business and community contributions have made a significant difference in Niagara.

OEVI student Paul van der Merwe (top photo) received the Ontario Hostelry Institute Oenology and Viticulture Award.

Barb Tatarnic, CCOVI Outreach Manager, was inducted as a Fellow into the Ontario Hostelry Institute in recognition of professional achievements..



Awards handed out by CCOVI

Niagara-on-the-Lake grape grower Don Forrer (below) was honoured with the Cuvée Vineyard of Excellence Award sponsored by BASF Canada Inc. The award recognizes a grower who promotes excellence in their vineyard practices.

The Tony Aspler Cuvée Award of Excellence was presented to Laurie Macdonald, executive director of VQA Ontario, for overseeing the development of a provincially regulated appellation system with grace and humility.



2015 VQA Promoters award winners

The VQA Promoters Awards are given annually at CCOVI's Experts Tasting event as part of Cuvée weekend. The awards recognize individuals who consistently promote VQA wines through education and/or promotion.

- Education: Evan Saviolidis, sommelier and wine educator
- Hospitality: Darcy MacDonell, owner/ operator of the Farmhouse Tavern
- LCBO: Ed Smith, customer service representative Ottawa-Orleans LCBO
- Lifetime Achievement: Len Pennahcetti, president and co-founder of Cave Spring Cellars
- Media: John Szabo, partner and principal critic at Wine Align
- Promoter-at-large: Kimberly Hundertmark, executive director of the Niagara Grape and Wine Festival

Building for the future

CCOVI is evolving, and it's an exciting place to be.

Going forward, the institute will continue to work collaboratively with industry partners to identify local and national priority issues for the grape and wine industry.

Building on existing national and international research partnerships, CCOVI will continue to identify and build strategic partnerships and networks with research institutes across Canada and around the world. This will raise the profile of the institute on the international stage and give researchers and affiliates new avenues for collaboration and communication.

Finally, CCOVI will work towards creating a sustainable business model that will ensure the institute can grow, and continue its commitment to deliver on industry-driven priorities.

This multi-faceted approach will position CCOVI effectively as it approaches the 20th anniversary of the institute.

CCOVI Executive Committee, Advisory Committee, Outreach Committee

CCOVI Executive Committee, Advisory Committee, Outreach Committee

Gary Libben Don Cyr Patrick Gedge Matthias Oppenlaender

Allan Schmidt Donald Ziraldo Debra Inglis

CCOVI Advisory Council

Allan Jackson **Richard Linley** Ed Madronich Klaus Reif Allan Schmidt Bill George Bill Schenck Debbie Zimmerman Anthony Bristow Jim Clark Patrick Gedge Matthias Oppenlaender Dan Paszkowski Iim Brandle Donald Ziraldo Marg Bancroft Eugene Jaworski George Soleas Jeff Leal

Michael Toombs

Laurie Macdonald Craig Youdale Robert Gordon Neil McCartney Gary Libben Gary Pickering Don Cyr Barb Tatarnic Debra Inglis Chair, Vice President of Research, Brock University CCOVI Fellow Industry representative, Winery and Grower Alliance of Ontario Industry representative, Ontario Grape and Wine Research Inc. and the Grape Growers of Ontario Industry representative, Wine Council of Ontario Industry representative, CCOVI Advisory Council Ex-officio, CCOVI Director

Chair, Industry representative Industry representative, Wine Council of Ontario Industry representative, Grape Growers of Ontario Industry representative, Grape Growers of Ontario Industry representative, Grape Growers of Ontario Industry representative, Winery and Grower Alliance of Ontario Industry representative, Winery and Grower Alliance of Ontario Industry representative, Winery and Grower Alliance of Ontario Industry representative, Ontario Grape and Wine Research Inc. Industry representative, Canadian Vintners Association Industry representative, Vineland Research and Innovation Centre Invited guest, Ziraldo Estate Wines Government representative, Agriculture and Agri-Food Canada Government representative, Agriculture and Agri-Food Canada Government representative, Liquor Control Board of Ontario Government representative, Ontario Minister of Agriculture, Food and

Rural Affairs Government representative, Ontario Ministry of Agriculture, Food and Rural Affairs

Regulatory agency representative, VQA Ontario Education representative, Canadian Food and Wine Institute, Niagara College Education representative, Ontario Agricultural College, University of Guelph Brock representative, Vice President Academic Brock representative, Vice President Research Brock representative, CCOVI Researcher Brock representative, CCOVI Fellow CCOVI representative, Manager of outreach and continuing education Ex-officio. CCOVI Director

Outreach Advisory Committee

Barb Tatarnic Chair, CCOVI Manager of outreach and continuing education CCOVI oenologist Belinda Kemp CCOVI viticulturist Jim Willwerth **CCOVI** Research Associate Kevin Ker Kevin Buis Industry representative, Grape Growers of Ontario Industry representative, Wine Council of Ontario Jamie Evans Frank Hellwig Industry representative, Winery and Grower Alliance of Ontario Daniel Speck Industry representative, Wine Council of Ontario Sue Ann Staff Industry representative, Wine Council of Ontario Colin Stanners Industry representative from a grape and wine region outside of Niagara Dan Sullivan Industry representative from a grape and wine region outside of Niagara Roger Vail Industry representative, Winery and Grower Alliance of Ontario Kevin Watson Industry representative, Grape Growers of Ontario Industry representative from a grape and wine region outside of Niagara Scott Wilkins Debra Inglis Ex-officio, CCOVI Director

CCOVI Researchers, Fellows and Professional Affiliates

CCOVI Researchers

Debbie Inglis Gary Pickering Andrew Reynolds

CCOVI Scientists

Belinda Kemp Jim Willwerth

CCOVI Fellows

Ralph Brown Don Cyr Dirk De Clercq Vincenzo De Luca Ronald Jackson Lester Kwong Antonia Mantonakis Annette Nassuth Michael Ripmeester Tony Shaw Jeffrey Stuart George van der Merwe Maxim Voronov

CCOVI Director, Associate Professor Biological Sciences **Professor Biological Sciences Professor Biological Sciences**

Senior scientist in Oenology Senior scientist in Viticulture

Engineering, University of Guelph

Associate Professor, Goodman School of Business, Brock University Professor, Goodman School of Business, Brock University Professor Biological Sciences, Brock University Sensory Science, University of Manitoba Associate Professor, Social Sciences, Brock University Associate Professor, Goodman School of Business, Brock University Molecular and Cellular Biology, University of Guelph Professor, Social Sciences, Brock University Professor, Social Sciences, Brock University Associate Professor, Biological Sciences, Brock University Narongsak (Tek) Thongpapanl Professor, Goodman School of Business, Brock University Molecular and Cellular Biology, University of Guelph Associate Professor, Goodman School of Business, Brock University

CCOVI Professional Affiliates

Carl Bogdanoff Viticulturist, AAFC's Pacific Agriculture Research Centre Viticulture research scientist, AAFC's Pacific Agriculture Research Centre Pat Bowen Linda Bramble Wine writer, author and educator Sensory research scientist, AAFC's Pacific Agriculture Research Centre Margaret Cliff Global practice lead, Foreign Affairs and International Trade Canada lanet Dorozynski Co-founder Inniskillin Wines Karl Kaiser Viticulture consultant Kevin Ker Tom Lowery Entomology research scientist, AAFC's Pacific Agriculture Research Centre Alexandra Mayeski Lawyer, Mayeski Mathers LLP Extension specialist, Ontario Ministry of Agriculture, Food and Rural Affairs Wendy McFadden-Smith Plant and soil research scientist, AAFC's Pacific Agriculture Research Centre Gerry Neilson Daniel O'Gorman Research biologist, AAFC's Pacific Agriculture Research Centre **Richard Smart** Australian viticulture consultant George Soleas Senior VP logistics and quality assurance, LCBO Research Director, Vineland Research and Innovation Centre Daryl Somers Kevin Usher Oenology research scientist, AAFC's Pacific Agriculture Research Centre

Since its launch in 2004, the Triggs International Premium Vinifera Lecture Series has brought international viticultural experts to Ontario's Niagara region to share their knowledge through vineyard visits and a public lecture relating to premium vinifera wine grape production. In 2011, the series was expanded to the Okanagan wine region of British Columbia.

RIPCUR



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Brock University

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