

July 2011

CCOVi news

A newsletter from
the Cool Climate Oenology
and Viticulture Institute



CCOVi takes the lead on climate change research for Ontario's grape and wine industry



At the July 11 announcement were, from left, Brock President Jack Lightstone; St. Catharines MPP Jim Bradley; Ontario Minister of Research and Innovation, Glen Murray; research leader Gary Pickering; CCOVi Director Debbie Inglis; Brock Board of Trustees Chair Rudi Kroeker; Matthias Oppenlaender, Chair of Ontario Grape and Wine Research; and Ian Brindle, Brock Vice-President of Research.

Photo: Ron Scheffler

As vineyards struggle to survive the damages inflicted by increasingly erratic weather, the province has given \$2.86 million to a team of scientists studying how climate change impacts Ontario's grape and wine industry.

Brock University Professor Gary Pickering will lead a team of 19 researchers studying various aspects of climate change threatening Ontario grape growers. Besides Brock, the researchers also hail from the University of Guelph, Niagara College, Environment Canada

and Vineland Research and Innovation Centre.

The announcement was made at Brock on July 11 by Glen Murray, Ontario's Minister of Research and Innovation. The funding comes from the Ontario Research Fund - Research Excellence program, which helps cover the cost of conducting groundbreaking, internationally significant research.

Research support is part of the province's strategy to create the next generation of jobs and make innovation a driving force of

economic growth. The grape and wine industry contributes close to \$1 billion annually to Ontario's economy.

"Dr. Pickering and his team at Brock are making discoveries that will prepare our grape and wine industry for the challenges of climate change," Murray said at the announcement. "Our government is proud to support innovation in the Niagara region, and to support researchers who fuel our economy with new ideas."

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Students for hire

Planning to hire
vineyard, winery or
retail staff?

Recruit our
graduates and students
who are skilled in
winemaking, viticulture
and wine business.

Students in the
Oenology and Viticulture (OEVI) program at
Brock University are
seeking jobs for 2011.

To have a position
posted for our OEVI
students, call
905-688-5550 x4949
or email
jennifer.roberts@brocku.ca

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Ontario Research Fund program highlights

This Ontario Research Fund - Research Excellence program funding will be used to support six interrelated research programs based out of CCOVI in two areas:

Viticulture and Climate Research Programs

1. Climate Change

This program will use advanced modeling techniques to determine how the climates of Ontario's wine regions will evolve over the next 30 years.

2. Grapevine Hardiness

This program is aimed at optimizing grapevine winter hardiness by understanding the acclimation and de-acclimation process of grapevines, and the viticultural and environmental stresses affecting them.

3. Grapevine Molecular Biology

This program will develop plants and markers to breed for winter hardiness, and will identify genes that can act as markers for a breeding program. It will lay the groundwork for the creation of winter hardy elite *vinifera* wine varieties.

Oenology and Climate Research Programs

1. Methoxypyrazine Remediation

Methoxypyrazines are green and unpleasant tasting compounds found in wine. They are caused by Multi-coloured Asian Lady Beetles which are now prevalent in Ontario due to climate change. The focus of this program will be the application of technologies already patented by this research team, as well as the development of new approaches to removing these compounds from juice and wine.

2. Sparkling Wine Production

This program will use a system biology approach to develop strategies based on wine yeast to increase the efficiency and profitability of sparkling wine production in Ontario. This will help to solidify sparkling wine as a successful style for the province.

3. Appassimento-style Wines

Ripening grapes off-vine after harvest represents a new and exciting innovation for the Ontario wine industry to overcome climatic barriers to obtaining fully ripe grapes. The semi-dried fruit can then be fermented into an appassimento-style wine, similar to Amarone, using varieties grown here in Ontario to produce value-added quality-driven unique products with distinctive flavour profiles. The goal of this program is to identify the best drying techniques and to optimize the production process overall.

CCOVI Director Debbie Inglis presents Minister Glen Murray with wines that represent early results from the Institute's "appassimento" project for further ripening grapes off-vine prior to fermentation. Photo: Ron Scheffler

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Pickering, a Biological Sciences professor who is also a CCOVI researcher, said the evidence is "irrefutable".

"Adapting to climate change represents arguably the single most urgent challenge facing the world," he said. "Today's announcement will allow the grape and wine sector in our province to be in the best position possible over the coming years to successfully respond to current and future challenges through innovative research and networking."

This new research initiative fits squarely within the university's relationship with the surrounding community and with the private sector, said Brock president Jack Lightstone.

"Brock is committed to being a partner that helps strengthen our broader community in many ways, including economically," said Lightstone. "We

are grateful for this investment by the Ontario government that enables us to play a key role in a research initiative that supports our grape and wine industry."

Pickering, the recipient of numerous research awards, passionate about wine and wine education, and is working on a number of books. He is also North American editor of the *Journal of Food, Agriculture & Environment* and a member of the Honorary Editorial Board for the *International Journal of Wine Research*.

The announcement is part of a larger investment that will support 248 researchers across the province. Including today's investment, Ontario has committed \$556.6 million for 140 projects under the Ontario Research Fund - Research Excellence program, and leveraged more than \$1.1 billion in commitments from more than 650 industry and other partners.

Brock graduates two new PhDs



From left to right: Ian Merwin, Jim Willwerth and Andrew Reynolds

Jim Willwerth, a graduate of Brock's Biological Sciences Doctoral program, defended his thesis on April 29.

His dissertation "Delineation of within-site terroir effects using soil and vine water measurements in Riesling vineyards within the Niagara Peninsula" focuses on explaining the effects of terroir that impact wine varietal character and determine potential elements

of terroir by choosing vine water status as the major factor of the terroir effect.

Jim, who is a viticulturist at CCOVI, defended his thesis before examining committee members: Joffre Mercier, Chair; Ian Merwin, Cornell University, external examiner; Marilyne Jollineau, internal examiner; Helen Fisher and Douglas Bruce, committee Members and Andrew Reynolds, supervisor.



From left to right: Andrew Reynolds, Gabriel Balint and Sara Spayd

Gabriel Balint, a graduate of the Biological Sciences Doctoral program at Brock University, defended his thesis on May 2.

His dissertation "Impact of different irrigation strategies on grapes and wine quality of four grapevine cultivars (*Vitis sp.*) in cool climate conditions. Investigation into the relationship among ABA, water status, grape cultivar and wine quality" investigates the impact of time of irrigation initiation, water replacement level, water stress hormone ABA and dif-

ferent irrigation strategies on grape composition and wine sensory profiles from four grape cultivars.

Gabriel defended his thesis before examining committee members: Joffre Mercier, chair; Sara Spayd, North Carolina State University, external examiner; Tony Shaw, internal examiner; Helen Fisher and Douglas Bruce, committee members and Andrew Reynolds, supervisor.

Gabriel is now working at a winery in Oregon.

Two new MScs present theses



From left to right: Andrew Reynolds, David Ledderhof and Ralph Brown

David Ledderhof, a graduate of the Biological Sciences masters program, defended his thesis on April 6.

His dissertation "Using GPS, GIS and remote sensing to understand Niagara terroir: Pinot noir in the Four Mile Creek and St. David's Bench sub-appellations" investigates how precision viticulture techniques can be used to understand variability in vineyards in terms of vine

water status, soil texture and vine size.

David defended his thesis before examining committee members: Joffre Mercier, chair; Jessica Cortell, consulting viticulturist, external examiner; Wendy McFadden-Smith and John Middleton, committee members; Dr. Andrew Reynolds and Dr. Ralph Brown, supervisors. David is working at Quail's Gate Estate Winery in Okanagan, BC.



From left to right: Ralph Brown, Matthieu Marciniaik and Andrew Reynolds

A graduate of the Biological Sciences Masters program at Brock University, Matthieu Marciniaik, defended his thesis on April 11.

His dissertation "Using GPS, GIS and remote sensing to understand Niagara terroir" helps to determine using composition airborne imaging and remote-sensing how soil texture and composition variables are related to vine water status, yield

components and grape composition.

Matthieu defended his thesis before Examining Committee members: Joffre Mercier, chair; Robert Brown, external examiner, University of Guelph; Helen Fisher and Michael Bidochka, committee members and Andrew Reynolds and Ralph Brown, supervisors.

Matthieu is now working at Domain du Ridge Vignoble in Quebec.

Riesling lovers get together for an Experience

Experts and aficionados were in Niagara June 9-10 for the 2011 Riesling Experience, two days of presentations, discussions, tastings and tours that let participants share and learn more about the beauty and versatility of Riesling.

Day 1 opened with renowned producer Pierre Trimbach, of the Alsace region of France. He held tastings and led discussions on Riesling in the Alsation market as well as in a global context. The day also had a panel discussion about the industry in the Great Lakes region, featuring winemakers Lee Lutes of Black Star Farms in Michigan; Nick Ferrante of



Taste test at Riesling Experience 2011

Ferrante Wine Farm in Geneva, Ohio; Peter Bell of Fox Run Vineyards in the

Finger Lakes region of New York; and Angelo Pavan of Cave Spring Cellars in Jordan, Ont.

Day 2 took delegates on a bus tour of Riesling growing sites in Niagara, including Bill Myers Vineyards, Thirty Bench Vineyards, Angels Gate, Cave Spring Vineyard and Hidden Bench Vineyards.

Pavan, who was also Chair of this year's event, said the global popularity of Riesling presents a good opportunity for winemakers in Ontario. "We are pleased to once again host the Riesling Experience," he said. "Niagara is one of the very few places in the world where Riesling excels."

CCOVI Briefs

VITICULTURE

- J. Willwerth presented a VineAlert training session at the Grape Growers of Ontario AGM on April 6 at Club Roma in St. Catharines.
- D. Inglis, J. Willwerth and G. Kotseridis presented and met with the grape and wine industry in Brome-Missisquoi in Quebec on April 11 and 12.

WINE BUSINESS

- Mantonakis, Antonia and Bryan Galiffi (2011, June), "Does the Fluency of a Winery Name affect Taste Perception?" Academy of Wine Business Research International Conference, Bordeaux, France.



OEVI 0N06 WSET Level 2: Intermediate Certificate in Wines & Spirits

For beverage industry employees or anyone wishing to broaden their knowledge of wine and spirits in a structured way. **Wednesdays at 6 p.m. starting Oct. 12 (nine weeks).** For more information, contact Barb Tatarnic at 905-688-5550 x4652 or ccovi@brocku.ca. For a complete list of courses or to register online go to brocku.ca/ccovi and click "Continuing Education".

Events and Seminars



What: Triggs International Premium Vinifera Lecture Series

Schedule for Ontario:

Wednesday, Aug. 24: vineyard visits/technical workshop
Thursday, Aug. 25: public lecture

Schedule for British Columbia:

Tuesday, Aug. 30: vineyard visits/technical workshop
Thursday, Aug. 31: public lecture

Cost: Admission is free

Created through an endowment by industry leaders Donald and Elaine Triggs, the series brings a leading international speaker discussing key issues relating to premium vinifera during hands-on vineyard visits and a public lecture.

This year's speaker, Glen Creasy from Lincoln University in New Zealand, brings a wealth of knowledge in viticulture and will discuss *Vine balance: ways to accelerate fruit maturity*. For more information, visit brocku.ca/ccovi

Wine seminars at Grape & Wine Festival

When: Two weekends - Sept. 17-18 and Sept. 24-25, 2011

Where: Roy T. Adams Bandshell, Montebello Park, St. Catharines

Cost: 1 token if you have a glass — or 2 tokens and we'll give you the glass