

Acadia University - Office of Industry & Community Engagement (ICE)

Story 1:

Mitigating the impact of COVID-19

[Phytonix Corporation \(Px\)](#) is a North Carolina start-up with a research and development arm in Halifax that is developing processes that produce sustainable chemicals directly from carbon dioxide and the sun.

One of the company's patented process employs cyanobacteria to produce butanol in a commercially viable and sustainable manner. During the process the cyanobacteria use carbon dioxide to produce the butanol, an industrial chemical which has many applications such as a solvent, paint, as biofuel or for products in the pharmaceutical industry to name a few. While still in the development and scale-up stage this process has the potential to utilize carbon dioxide emissions and thereby reduce carbon dioxide released to the atmosphere.

When COVID-19 hit, Phytonix found themselves without a research lab during a very critical phase of their research. Their research space abruptly closed, was unavailable.

Through their Nova Scotia connections, Michael Weedon, President and Director of Phytonix, was connected with the Atlantic Canada Opportunities Agency (ACOA), who connected them with [Acadia's Laboratory for Agri-Food and Beverages \(ALAB\)](#).

ALAB is an analytical lab at Acadia University that provides state of the art research and analytical services to the wine, craft beverage and food industries. Deemed an essential service, ALAB has remained open throughout the pandemic and therefore was able to quickly develop a work plan with Phytonix and support their critical research with space, equipment and additional technical expertise. The project has been very successful and both parties are looking to continue the work beyond the original plan.

"We are most grateful for ALAB and the research team for their professional, prompt and responsive support to Phytonix at a critical time, enabling us to conduct essential research during the COVID outbreak. We felt we were up a creek without a paddle. And thank you ACOA for the introduction in our time of need." Michael Weedon

Story 2:

The global pandemic has led to a severe shortage of hand sanitizers which has been an important element in preventing the spread of COVID-19. This shortage led to the search for alternative products, including both old, expired supplies and products developed by local producers that pivoted from making spirits to hand sanitizers. In support of the COVID-19 Nova Scotia Task Force, the [Acadia Laboratory for Agri-Food and Beverages \(ALAB\)](#) has been testing the efficacy of hand sanitizers to determine if the ethanol content meets the WHO and Canadian specifications for ethanol concentration.

Story 3:

Acadia faculty research during the COVID-19 crisis

The COVID-19 Pandemic has disrupted societies across the globe. Facing a historic health crisis, Acadia's faculty recognized the pressing need for research into the transmission and prevention of the virus as well as its impact on the wider community. One of the strategic directions of the University has been active and passionate community engagement, and the diversity of faculty research into COVID-19 reflects this ongoing commitment. The faculty response to Acadia's recent competitive Call for Proposals spanned departments across all 4 Faculties and has fostered collaborations and research clusters that bring together diverse research expertise and perspectives. Following are summaries of the funded projects:

The Enemy Within? Understanding Predictors of Intimate Partner Violence During the COVID-19 Pandemic

In the Psychology Department, Kathryn Bell and Diane Holmberg are working to understand the effect of social distancing practices on intimate partner violence (IPV) rates in both Canada and the United States. How do pandemics affect psychological functioning and how do deviations to this functioning impact the risk of IPV? Not only will this research help us understand how psychological and relational factors contribute to IPV risk during periods of isolation but will help public health and allied professionals mitigate the effects of social isolation on couples.

Assessing the Strength and Challenges of the Localized Food System in Response to the COVID-19 Crisis

Food security has also been an ongoing concern during this crisis. Edith Callaghan of the Manning School of Business and Liesel Carlsson from Nutrition and Dietetics are collaborating on a project that explores the challenges of the localized Food System; specifically, investigating how the local small/medium food producers and distribution networks throughout the Annapolis Valley have pivoted to meet local food needs. They want to identify systems that work well, and those that show fragility and need to be re-designed, so that we are prepared to meet a similar situation in the future.

Understanding Workers' Experiences During COVID-19: A Case Study of Three Groups of Workers

Sociologists Claudine Bonner, Jesse Carlson, Rebecca Casey, Lesley Frank, Elisabeth Rondinelli and Sarah Rudrum have teamed up with Education's Jennifer Tinkham and Politics' Rachel Brickner to examine how working conditions have changed during the pandemic for food service workers, long-term care workers, and teachers. It is critical that we understand how the physical and mental health of these three groups of workers have been impacted by COVID-19 and identify policies that have worked and those that need improvement.

Practicum in a Pandemic: A Study of Alternative Teaching Approaches

In the Education Department, Janet Dymont and Jennifer Tinkham are examining the experiences of pre-service teachers who were forced to shift gears to support 'at home learning' in Nova Scotia. What are the implications of this shift and how do pre-service teachers meet the needs of K-12 students and families during a time of great societal upheaval?

Isolated Bodies, United Voices: The Pedagogical, Musicianship, and Community-Building Prospects of Virtual Choirs in the age of COVID-19

Over at the School of Music, Dr Michelle Boyd is focused on the pedagogical, musicianship, and community-building prospects of virtual choirs in the age of COVID-19. Unable to sing together in person due to social distancing, choirs around the globe have begun making virtual videos as a means of continuing to perform and connect with one another. Boyd will chart the Acadia University Singers' foray into the virtual realm and examine the musical and pedagogical implications of singing in a virtual choir and the efficacy of this performative methodology.

God's Rhetoric: The rhetoric of preaching on Sunday 29 March 2020.

Finally, co-funded with the Acadia Divinity College, Stuart Blythe is investigating the theological questions for faith communities during the pandemic, with a focus on the rhetoric of preaching in five Baptist congregations across Atlantic Canada on Sunday, 29th March 2020. Besides social and economic concerns, the pandemic has raised theological questions for people seeking reassurance and answers to the meaning of life. This rhetorical analysis will explore the ways that preachers faced the pandemic with positive social and religious messages.

These exciting research projects demonstrate some of the ways in which Acadia is responding to and learning from the COVID-19 crisis.