

we spark HEALTH INSTITUTE

IMPACT REPORT

2022-23

TABLE OF CONTENTS

Reaching New Heights 3

Year in Review 4

Message from the Board of Trustees 6

About the Institute 7

Our Team 8

Our Research Community 10

Research Activity of Core Principal Members 11

2022 Grant Competition Results 12

Igniting Discovery Grant Recipients 13

WE-SPARK Grants Program 14

Research Drives Discoveries & Provides Solutions 16

Research Supports Health & Wellness 20

Research Trains the Next Generation 22

Research Improves Health Outcomes & Saves Lives 24

Looking Forward 26

Priorities for 2023 - 2024 27



Reaching New Heights

WE-SPARK Health Institute is supported by an innovative research partnership between Hôtel-Dieu Grace Healthcare, St. Clair College, Windsor Regional Hospital, Erie Shores Healthcare, and the University of Windsor. WE-SPARK brings together health research strengths, expertise, and infrastructure from across the Windsor-Essex region. Since our formal launch in March 2020, we have grown to over 1000 members. We accelerate and strengthen collaborations and provide tools and resources needed for local health research and training to excel.

WE-SPARK Health Institute is physically located on land and surrounded by water honoured by the Wampum Treaty; agreements between the Anishinaabe, Haudenosaunee, Lenni, Lenape and allied Nations to peacefully share and care for the resources around the Great Lakes.

We acknowledge the presence of the People of the Three Fires Confederacy (Ojibwe, Odawa, Potawatomi and Huron/Wendat) and the importance of reconciliation. Health research, care and training benefit from a deep appreciation of the past and present healing practises of Indigenous people. WE-SPARK recognizes the urgency for all areas of health to meet the needs of the Indigenous communities across Canada. As such, we are dedicated to meaningful consultation, building respectful relationships and the continued learning and education required for positive action toward reconciliation.

We are committed to providing equity, diversity, inclusivity, and support – all components of an environment that enhances excellence, innovation and creativity. We aim to develop and support policies and practices that strengthen the research community, as well as the quality, social relevance, and impacts of our research.

Igniting discovery, reaching new heights, living better.

Year in Review

WE-SPARK began our 4th year on May 1, 2022 with 860 members. Since then, we have grown our membership by 25%. We continued to host events virtually and added many in-person networking opportunities, including our first ever Health Research Conference. In total, we engaged over 1,000 participants. We were thrilled to end the year with Cheers to Hope which focused on raising funds for our local grants program and celebrate the successes of the health research community.



$17,530,000
Total External Funding*
*Funding reflects the grant activity of the 34 Core Principal Members

15
WE-SPARK Grants Awarded ($310,000)

134
Clinical Research Projects
(including 26 clinical trials)

4,230
Patients/Participants Involved in Research**
**Only includes fresh tissue, clinical trials & REDCap participants

1,078
Members

8
Staff

We used new strategies to connect with our community through social media and shared our members' successes through mainstream media engagement and newsletters. We launched our WE-SPARK app to help researchers communicate and collaborate more easily and continue to look for ways to connect researchers. Our WE-SPARK office saw some new staff members and took on 10 interns. We hosted our 5th WE-SPARK grants competition and awarded over $310,000 to local research projects. Our Core Principal membership grew to 34 researchers and increased total external research funding by 18% this year. Since WE-SPARK began, external research funding has increased 180%! We are reaching new heights, together, in growing health research excellence and will continue to focus on the positive impact that research has on our local community - research changes lives.



Social Media
2,400
Followers

14,450
Engagements
1.2 million
Reach

94
Times in Mainstream News

10,500
Newsletter Engagements

56,000
Unique Website Visits

27
Events Hosted

1,028
Participants

10
Interns

33
Active Student Network members

21
Clinical Professorships Facilitated

3
Professors of Practice facilitated

Message from the Board of Trustees

Three years ago, our institutions joined forces to elevate health research excellence across Windsor-Essex using an innovative, one-of-a-kind model.

Since WE-SPARK Health Institute's official launch, our region has established a strong governance model for increasing and enhancing health research.

Local health researchers have attracted almost $40M in external funding to the region; tracked the participation of more than 9,000 people in local clinical trials and research projects; engaged in almost 700 collaborations; and provided valuable experience and training opportunities for more than 1,850 St. Clair College and University of Windsor students.

Through the WE-SPARK grants program, 67 local grants have been awarded totaling more than $1.1M, which has subsequently rolled into $4.5M of national or international funding for our region. These grants move innovative ideas forward and have employed over 140 highly qualified personnel (HQP).

In November, we celebrated Erie Shores HealthCare joining as an official partner of WE-SPARK Health Institute. This strong, progressive community hospital is committed to the values of collaboration, quality, reliability, and kindness, making them a perfect addition to WE-SPARK.

Our synergy led to these achievements, and working together, we will continue to build capacity and connections.

It is important to note that strong partnerships leading to demonstrated success are not unique in our region. The original inhabitants of these lands had it right many decades ago -- the Three Fires Confederacy of the First Nations brought together different nations of Indigenous peoples. It is important to WE-SPARK that as we grow, we do it together, and with our broader community. This will be essential for long-term success. As we move forward, we will follow the lead of the Three Fires Confederacy by embracing each other's differences and working toward a stronger, better future that supports health and healthcare for everyone in our region and beyond.

We continue to be excited for what we will accomplish together.



About the Institute

Since inception in 2019 and formal launch on March 7, 2020, WE-SPARK Health Institute has worked to bring together health research strengths across our region. Together we are pursuing a vision of a thriving and engaged community driving advancements in health.

What We Do

Enhance the health, well-being, and care of people through transformative research and knowledge translation. We accomplish this by:

- **Accelerating research activities and facilitating connections.**
- **Building a critical mass of health researchers.**
- **Providing local research funding opportunities.**
- **Offering research workshops, services, and consultations.**
- **Engaging student volunteers.**
- **Hosting events to engage community members in research.**
- **Establishing infrastructure capacity.**

Quarterly reports highlighting our metrics can be found at: **www.wesparkhealth.com/our-impact**

Why Local Research Matters

Research outcomes have a global benefit, but there are additional impacts felt when research is funded locally. Local research:

- **Keeps our health professionals and educators current.**
- **Attracts and retains the brightest students and professionals.**
- **Brings cutting-edge infrastructure, diagnostics, and treatments to our region.**
- **Increases access to clinical trials in Windsor-Essex.**
- **Reduces the number of patients that must travel out-of-town for care.**
- **Improves health outcomes for our community. Research saves lives.**

Budget & Funding

WE-SPARK is funded by contributions from five Institutions totaling $550,000 (Expenses: salaries, internships, operating costs, and grants program). The WE-SPARK Grants Program is also supported by donations from organizations and individual community members.



Patti France
St. Clair College
President



Robert Gordon
University of Windsor
President & Vice-Chancellor



Bill Marra
Hôtel Dieu Grace Healthcare
President & CEO



David Musyj
Windsor Regional Hospital
President & CEO



Kristin Kennedy
Erie Shores HealthCare
President & CEO

Our Team

Our team is comprised of dedicated and passionate people who are committed to working together to enhance the health, well-being, and care of people in our community.

Leadership

Executive Committee

Lisa Porter
WE-SPARK – Director

Nicole Sbrocca (Chair until Jan. 2022)
Windsor Regional Hospital

Peter Wawrow (Chair as of Jan. 2022)
St. Clair College

Alison Murray
Hôtel Dieu Grace Healthcare

Jennifer Voth
Hôtel Dieu Grace Healthcare

Caroline Hamm
Windsor Regional Hospital

Heather Pratt
University of Windsor

Chad Sutherland
University of Windsor

Karen Metcalfe
WE-SPARK

Jonathan Foster
Windsor Regional Hospital

Neelu Sehgal
Erie Shores Health Care

Staff

Karen Metcalfe
Assistant Director

Niklas Pizzolitto
Administrative Assistant (beginning January 2023)

Linda Hudson-Chapman
Administrative Assistant

Kyle Lago
Translational Research Associate

Cathy Mombourquette
Special Projects – Media Relations

Devinder Moudgil
Medical Student Research Associate

Christopher Ng-Fletcher
Innovation Research Associate

Ryan Palazzolo
Student Network Coordinator

Interns/Studentships

Amy Llancari
Migrant Work Health – Special Project
Knowledge Translation Research Assistant

Aya El-Hashemi
Vaccine Hesitancy – Special Project

Eddie Grimmett
Cancer Education & RIOT Lead

Emma Mineau
Knowledge Translation Research Assistant

Fatima Kadri
Outreach Lead

Kim Morin
Data Management Lead

Mackenzie Burnett
Fundraising Lead

Megan Throne
Research Conference Lead

Rhonda Abdel-Nabi
RIOT Lead

Waffa Bakheet
Social Media Lead

Committees

Governance

Lisa Porter (Chair)
WE-SPARK

Alison Murray
Hôtel Dieu Grace Healthcare

Heather Pratt
University of Windsor

Nicole Sbrocca
Windsor Regional Hospital

Monica Staley Liang
St. Clair College

Karen Metcalfe
WE-SPARK

Neelu Sehgal
Erie Shores Health Care

Research Development

Caroline Hamm (Co-Chair)
Windsor Regional Hospital

Jennifer Voth (Co-Chair)
DJ Macneil
Hôtel Dieu Grace Healthcare

Ingrid Qemo
Chris Abeare
Jessica Bennett
Balraj Jhawar
Jody Ralph
Simon Rondeau-Gagne
University of Windsor

Peter Wawrow
Kyle Jackson
St. Clair College

Lisa Porter
Karen Metcalfe
WE-SPARK

Nucleus

Lisa Porter
Kyle Lago
Christopher Ng-Fletcher
WE-SPARK

Renee Biss
Arezoo Emadi
Jackie Fong
Phil Karpowicz
Ken Ng
Michelle Nevett
Jody Ralph
Chad Sutherland
University of Windsor

Peter Wawrow
Wendy Foote
St. Clair College

Krista Naccarato
Ming Pan
Windsor Regional Hospital

Community Engagement

Chad Sutherland (Chair)
Dora Cavallo-Medved
University of Windsor

Allison Johnson
Windsor Regional Hospital

Karen Metcalfe
WE-SPARK

Maciah Telfer
Hôtel Dieu Grace Healthcare

Stephanie DeFranceschi
St. Clair College

Knowledge Translation

Peter Wawrow (Co-Chair)
St. Clair College

Dora Cavallo-Medved (Co-Chair)
Dave Andrews
Martin Crozier
Jody Ralph/Noeman Mirza
University of Windsor

Linda DiRosa
Hôtel Dieu Grace Healthcare

Indryas Woldie
Windsor Regional Hospital

Lisa Porter
Karen Metcalfe
WE-SPARK

Allison Brooks
Mason Leschyna
Erie Shores Healthcare

Our Research Community

Everyone in our community has a role to play in health research. WE-SPARK members are a network of people dedicated to improving the health and wellness of our region. Our research activities are driven by our Core Members, people who work in the research field and are actively engaged on a daily basis. However, essential to our progress are those working behind the scenes to elevate research activities including healthcare providers, educators, students, volunteers and supporters.

1,078 Members:

34 **Core Principal***
are funded by provincial or national health projects, or lead a clinical trial

182 **Core Associate***
are actively engaged in research but do not yet hold provincially or nationally funded projects or are leading clinical trials.

***Researchers** who have a formal affiliation with one of our 5 partner instituations

279 **Affiliate Researcher**
are associated with health research or healthcare locally or beyond; including administrative support

476 **Affiliate Students**
post-secondary students in any discipline with an interest in health research

105 **Community Members / Ambassadors**
individuals or organizations interested in the health landscape in Windsor-Essex

CORE PRINCIPAL MEMBERS

Biomedical Sciences
Dora Cavallo-Medved
Phillip Karpowicz
Lisa Porter
Munir Rahim
Jeffrey Dason

Chemistry & Biochemistry
Drew Marquardt
Kenneth Ng
Simon Rondeau-Gagné
Yufeng Tong
John Trant
Otis Vacratsis

Computer Science
Luis Rueda

Education
Lindsey Jaber

Electrical & Computer Engineering
Arezoo Emadi

Kinesiology
Francesco Biondi
Sara Scharoun Benson
Paula van Wyk
Anthony Bain

Mechanical, Automotive & Materials Engineering
Jalal Ahamed
Jill Urbanic

Nursing
Noeman Mirza
Kathy Pfaff
Edward Cruz

Cancer Program
Caroline Hamm
Ming Pan

Psychology
Jessica Kichler
Dana Menard
Lance Rappaport
Charlene Senn
Kendall Soucie

Social Work
Adrian Guta
Jayashree Mohanty

St. Clair College
Beckie Berlasty
Kyle Jackson

Research Activity of Core Principal Members

$17,530,000
External Grant Funding
238%

25
277%
Awards/ Recognitions

170
607%
Talks/ Presentations Given

34
179%
Core Principal Members
The successes here reflect those of our 34 Core Principal members who hold national/provincial funding or lead an investigator-initiated clinical trial

539
245%
Students Trained

112
184%
Peer Reviewed Publications, Books and Chapters

4,230
41%
Patients/Participants Involved*
*Only includes fresh tissue, clinical trials & REDCap participants

466
143%
Active Collaborations

Indicates percentage change from Year 1.

2022 Grant Competition Results

$310,000
Funding Disbursed

100+
Researchers and Trainees Involved

15
WE-SPARK Grants Awarded

14
Collaborating Institutions

Behind each Project Lead is a team of people from diverse backgrounds and experiences. WE-SPARK focuses on funding projects that bring together experts from the five supporting institutions, and collaborators across the region, province, nation and world!

WE-SPARK Grants Program

Sponsored by WE-SPARK and University of Windsor
(Office of the Vice President, Research and Innovation; Faculty of Science, Education and Arts, Humanities and Social Science)



Lisa Porter*

Role Of Cyclin-Like Proteins In Regulating The Regenerative Balance In The Liver: Implications In Fatty Liver Disease And Hepatocellular Carcincoma



Patti Fritz

Potential Impact Of Dialectical Behaviour Therapy Skills Groups On Conflict In Adolescent Mothers' Intimate Relationships: A Pilot Study

Sponsored by Windsor Cancer Foundation



Arezoo Emadi

A Novel High-Resolution Micromachined Ultrasonic Technology In Dermatology For Skin Cancer Detection



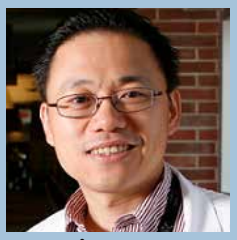
Lindsay Jaber

Women, Trauma, And Mental Health: Storied Experiences Of Hyper-Productivity In Higher Education



Anthony Bain

Effects Of Photobiomodulation On Cognitive, Physical, And Cerebral Neurovascular Function In Parkinson's Disease.



Ming Pan

Boron Concentration In Normal Organs And Tumors Of Companion Animals: A Preclinical Trial For Boron Neutron Capture Therapy



Dave Andrews

Multi-Camera Video Analysis Of Head Impacts In Youth Hockey



Jeffrey Dason

Understanding The Role Of NCS-1/ FRQ In Synaptic And Cognitive Effects Found In FXS



Yufeng Tong

Using Virus-Like Particles To Deliver Protein Therapeutics For Glioblastoma Treatment

Sponsored by we spark HEALTH INSTITUTE



Jennifer N. Bondy

Understanding The Landscape For A Shelter Health Initiative In Windsor, ON



Amy Perione*

Implementing A Data Trust To Address Affordable Housing

Sponsored by We spark Cancer Research



Abdul Naeem

Neurosurgery Endovascular Robotic Platform



Rob McKay

Develop An Early Intervention Strategy For Patient Who Are Identified In The Emergency Room And Windsor Regional Hospital The Role Of Designated Care Partners Pre And Post-Discharge.



DJ MacNeil

Identifying And Implementing Family Engagement Interventions To Enhance Participation In Mental Health Services Delivered At The RCC



Indryas Woldie

Migrant Worker's Experience Of Critical Illness In Windsor-Essex County

*recipients of WE-SPARK Incentive Grants

WE-SPARK Grants Program

The WE-SPARK Grants Program is designed to support local health researchers at all stages of their career. All grants are adjudicated by a rigorous external peer review process.

The program began in 2020 and since then 67 projects have been awarded totaling $ 1,121,599 in local grant funding. Research takes time but we are already seeing the impact of this investment. In just 3 years, these projects have leveraged the local funding into an additional $4.5 million in national grant funding.

IN 3 YEARS, LOCAL FUND

LEVERAGED INTO AN

$4.5 MIL

IN NATIONAL GRAN



$1,121,599
Local Grant Funding Awarded

3 YEARS
Research Time

67
Projects

2020
Program Launch

DING HAS BEEN
ADDITIONAL
LION
T FUNDING

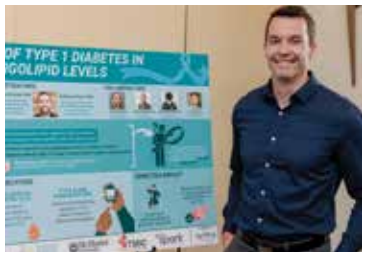
Cheers to Hope

A summary report of the 2022 grant competition was prepared by Dr. Ingrid Qemo, Health Research Coordinator, Office of Research and Innovation, University of Windsor, to ensure transparency of the decision-making process (results can be found in the Year 4, Q2 report: www.wesparkhealth.com/our-impact).

On April 20th, over 125 people came together for our annual fundraiser, Cheers to Hope, that showcases and celebrates the successes of past grant recipients and raises funds for the next grant competition.









Sponsors

Scan the QR Code to visit our website: cheerstohope.ca

Research Drives Discoveries & Provides Solutions



Spotlight on Cancer

Research is an ongoing process that builds on the discoveries of the past. Several decades of research have led to the understanding that rather than being one unique condition, cancer is a group of diseases that require different approaches for their diagnoses and treatments.

In Year 3, WE-SPARK Cancer Research Program continued to support inter- disciplinary research projects. One newly funded study is focused on better understanding immunological processes to development of novel disease biomarkers and immune-based therapies.

This research project will study the role of NKR-P1A:LLT1 interactions in the regulation of immune responses in colorectal cancer (CRC). NKR-P1A is an inhibitory receptor expressed on a number of innate and adaptive immune cell types. When engaged by its ligand lectin-like transcript 1 (LLT1) protein on tumour cells, NKR-P1A signals inhibit immune cell activity. Suppression of immune functions is commonly observed in CRC patients but the mechanisms are not fully understood. A better understanding of the immunological processes in CRC will enable development of novel disease biomarkers and immune-based therapies.

Project: NKR-P1A-Mediated Immunosurveillance In Colorectal Cancer

Funder: Windsor Cancer Centre Foundation, Seeds4Hope Program

Team lead: Dr. Munir Rahim, University of Windsor

Co-Investigators:
Dr. Caroline Hamm
Dr. Brett Howe



Photo: **Discoveries in cancer research**. / Dr. Dorota Lubanska working on a translational health project as part of a brain cancer research team in the Essex Centre of Research (CORe), University of Windsor.

WE-SPARK's Incentive Grant Program is key to moving projects to the next level. University of Windsor researcher, Dr. Lisa Porter turned $40,000 of incentive funding into $750,000 awarded by the Canadian Institutes of Health Research (CIHR) to determine how a protein changes cell biology, fat accumulation in the liver, and how this can lead to liver cancer.

Non-Alcoholic Fatty Liver Disease, the most common liver condition in the developed world, is estimated to affect nearly one quarter of the population of Canada and the United States. It is a complex metabolic disease that can be linked with obesity and an unhealthy diet.

An important complication is hepatocellular carcinoma, says Bre-Anne Fifield, research associate in the lab of Lisa Porter, the principal investigator on the grant. "HCC is one of the leading causes of cancer-related deaths worldwide, with a five-year survival rate of only 20 per cent," Dr. Fifield says. "And there are no effective treatments available for advanced stages."

"This is an exciting project, as results from this work could reveal new ways of detecting aggressive NAFLD early, and new avenues of treatment for this aggressive form of disease, potentially saving lives," adds Dr. Porter.

Project: Role of Cyclin-Like Proteins in Regulating the Regenerative Balance In the Liver; Implications In Fatty Liver Disease and Hepatocellular Carcinoma

Funder: Canadian Institutes of Health Research

Team lead: Dr. Lisa Porter, University of Windsor

Research Drives Discoveries & Provides Solutions

Pandemic Preparedness

Throughout history, research has advised public health guidelines and developed solutions for a number of life-threatening diseases, most recently, COVID-19. Locally, researchers take the lessons learned during the most recent pandemic and put their efforts into preparing for the future.

In March, the federal government announced an investment of $10 million in support of the creation of five research hubs across Canada with support from the Canada Biomedical Research Fund. The University of Windsor will be a major partner in the University of Toronto-led hub called the Canadian Hub for Health Intelligence & Innovation in Infectious Diseases (HI3).

A multidisciplinary group of UWindsor researchers will contribute by extending their research expertise and taking advantage of the unique cross-border location of the Windsor-Essex region to boost the development of pathogen surveillance technologies, knowledge translation, and highly qualified personnel training.

HI3 will link the innovation engine and infrastructure of nine Ontario universities and six research hospitals with commercialization and manufacturing partners including several with ties to the Windsor-Essex region.



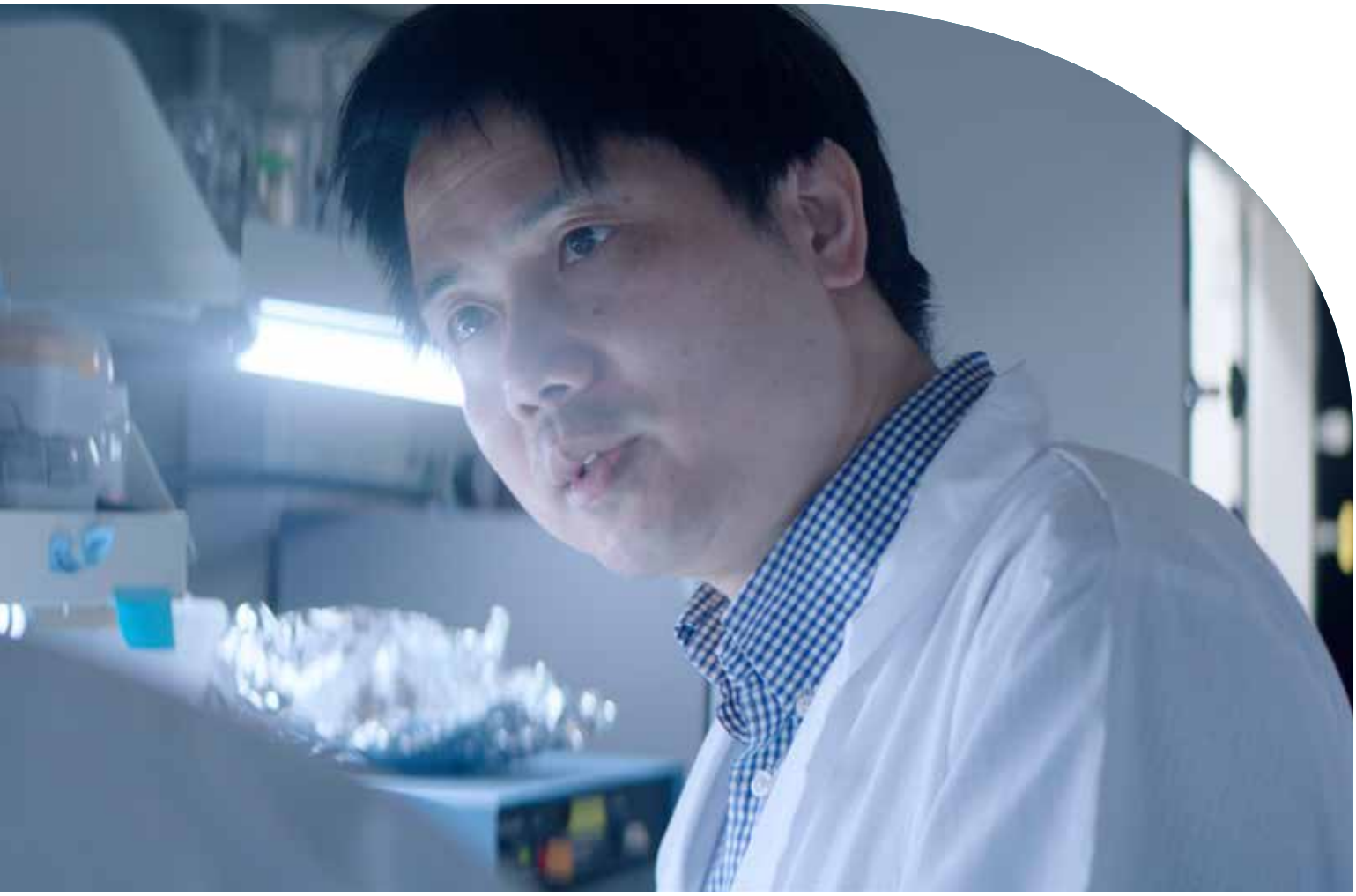
Photo: **Discoveries to provide solutions**. / Biochemistry professor Dr. Yufeng Tong is a member of a multidisciplinary group of UWindsor researchers partnering in an effort to enhance Canada's preparedness for future pandemics.

UWindsor Researchers

- Lisa Porter
- Kenneth Ng
- Yufeng Tong
- Kendall Soucie
- Pooya Moradian Zadeh
- Arezoo Emadi
- Mike McKay

Collaborators brought to the Hub

- Erie Shores Health Care
- Tenacity+ Genomic Solutions
- MolArray Research Inc.
- City of Windsor
- City of Thunder Bay
- WE-SPARK Health Institute
- TransForm Shared Service Organization
- Municipality of Leamington
- Cross-Border Institute



Physical Well-Being

Cardiac rehabilitation (CR) reduces recurrent cardiac events, and cardiovascular disease-related mortality, and increases overall quality of life among individuals with heart disease. Some participants experience recurrent cardiac events and require re-referral to CR. **The purpose of the study, conducted by the research team at Hotel-Dieu Grace Healthcare, was to describe CR re-referral and subsequent re-enrolment rates and determine factors associated with re-enrolment within five years of initial encounter**. Findings suggest that individuals who participate in CR the first time have a low rate of re-enrolment. However, CR program site may play a role in recurrent events and re-enrolment.

Project:

Risk for Re-Enrolment to Cardiac Rehabilitation

Research Team:

Leslee Ward
Cayla Wood
Dr. Melvyn Rubenfire
Dr. Kevin Milne
Dr. Jennifer Voth
Dr. Clinton A. Brawner
Dr. Neville Suskin
Dr. Cheri McGowan



Research Supports Health & Wellness



Youth Homelessness

To understand the impact that social determinants can have on health, a number of our researchers focus on screening, nutrition, activity, and stress management. Often, some of the best solutions arise through longitudinal studies carried out by collaborative teams.

Youth homelessness is being tackled through a $360,000 grant awarded to St. Clair College by the Natural Sciences and Engineering Research Council of Canada.

Partnering with Family Services Windsor-Essex (FSWE), lead researcher, Dr. Kyle Jackson, Professor at St. Clair College explains that the research will develop better methods to make contact with this hard-to-reach population and conduct in-depth interviews with youth experiencing homelessness in hopes of better understanding their lived experiences. "Ultimately, this will enable us to develop unique programming aimed at the prevention of homelessness before it begins in the first place," said Jackson.

SCC faculty and student researchers are utilizing a new sampling method and interviews to gather data on youth experiencing homelessness, to be used in assisting FSWE in improving and developing local preventative programing that will have a real impact in our community. The agency says that providing evidence-based research is critical in ensuring their agency offers impactful programming.

Project: Youth Homelessness Prevention Strategies Through Respondent-Driven Sampling And Intersectionality

Funder: Natural Sciences and Engineering Research Council of Canada (NSERC)

Team lead: Beckie Berlasty
St. Clair College, Windsor

Co-Investigators:
Dr. Kyle Jackson
Elizabeth Strutt-MacLeod
Colleen Mitchell



Focus on Resiliency

A team of local researchers who were previously awarded an Igniting Discovery Grant, built off the interviews and results of that project and received a $406,000 grant from the Canadian Institutes of Health Research to develop a 10-week training program for senior nursing students. It will first be offered at the UWindsor, then rolled out at the University of Ottawa and Queen's University.

The pandemic has decimated the nursing profession, said psychology professor Dana Ménard, the lead researcher on the project. Their previous research showed nurses leaving the profession in droves after suffering depression, burnout, anxiety, trauma, alcohol and substance abuse, and overall distress. Their next step is to provide solutions which led them to create The STRONG program — short for Simulated Training to improve Resiliency Of Nursing Groups, launched as a pilot project to give input into the program's development and delivery.

"The pandemic has shown us that new nurses, who are overwhelmingly female and young, may be at increased risk of negative health consequences due to work stress," Ménard said.

The program will improve not only the well-being of new nurses, but the health-care system overall.

Project: Laying The Groundwork For Improved Psychological Preparedness And Adaptation Of Canadian Nurses Working During Healthcare Crises: Simulated Training To Improve Resiliency Of Nursing Groups

Funder: Canadian Institutes of Health Research

Team lead: Dr. Dana Menard, University of Windsor

Co-Investigators

University of Windsor

Dr. Kendall Soucie
Dr. Jody Ralph
Dr. Laurie Freeman
Dr. Debbie Rickeard
Amanda McEwen

Queen's University Dr. Marian Luctkar-Flude

University of Ottawa Dr. Jane Tyerman

Collaborators

University of Windsor

Dr. Erika Kustra
Nick Baker

Research Trains the Next Generation



In Windsor-Essex, our multi-disciplinary health training landscape spans from clinical and postdoctoral fellows to medical students and graduate and undergraduate students.

Student Network Successes

Our unique local partnership offers multiple opportunities for students to develop their interests, create connections, and improve career prospects while making a difference. We closed Year 4 with over 475 affiliate students, including 50 volunteers who are available to our research community to support their projects. **In the past year, a total of 4,500 hours were logged by our student network.**

Medical Student Training

The Schulich - UWindsor Opportunities for Research Excellence Program (SWORP) is a unique grant opportunity for our local medical students to conduct research under the supervision of a University of Windsor faculty member. **In Year 4, $50,000 in student SWORP grants were awarded.**

Unique Training Opportunities

WE-SPARK brings together our partners who provide healthcare with our local educational institutions to create unique research training opportunities and experiences that have demonstrated impact on the community.

As a recent graduate of St. Clair College's Bachelor of Applied Arts in Social Justice and Legal Studies degree program, Caitlyn Massad was one of the first students to participate in an NSERC funded College and Community Social Innovation Fund, awarded to St. Clair College. The project focused on childhood literacy with a primary focus on addressing literacy concerns in Windsor-Essex, especially amongst low-income families.

Learn more about the project here:



Presenting her research at the WE-SPARK Health Conference, Caitlyn won a WE-SPARK Student Research Award as well as a 2023 Senior Women Academic Administrators of Canada (SWAAC) Student Leadership Award. Read more: http://www.swaac.ca/2023-winner.html

Caitlyn was a volunteer with WE-SPARK and believes concentrating on community health and social science really opens the doors to a lot of investigation into the social determinants of health. Caitlyn's experience has not only demonstrated the benefits of such grants to students, but also displays immense value for the broader community as a whole. **She is planning to attend Law School at the University of Windsor in the fall, and is confident that her experience with St. Clair College's Research and Innovation Department is what took her application to the next level.**

The first cohort of students graduated this year from the **Master of Science in Translational Health Science** (**MSTHS**) program. In the year-long course-based program, each student is offered three terms of experiential learning placements where real-world clinical research projects were submitted by local clinicians and UWindsor researchers.

"All of the projects, with their real patient data, are addressing healthcare needs in our region. This isn't just a program physically located in Windsor-Essex, it is a program that benefits our local community," says Dr. Martin Crozier, MSTHS program co-ordinator.

The 22 recent graduates of the program have embarked on diverse career pathways, contributing to the betterment of healthcare in various domains and playing crucial roles in improving patient outcomes.

Research Improves Health Outcomes & Saves Lives

Research is the vehicle that informs best practices, supports evidence-based decision-making, and improves health outcomes. Embedding research in clinical care, supporting clinician-led projects, and building multi-disciplinary, cross institutional research teams offers considerable hope for patients who are treated at our local hospitals every year.



Protecting Migrant Workers

One in five migrant workers in Canada's agricultural sector are hosted in Windsor-Essex. Poor access to healthcare for migrant workers is one of the greatest tragedies of the Canadian healthcare system. Migrant workers face language barriers, cultural barriers, dependence on domestic employers, and precarious access to healthcare.

An initial study focused on migrant workers diagnosed with a critical illness presenting to Windsor Regional Hospital revealed that 100% accessed care through the emergency department due to lack of access to primary care, 50% experienced a language barrier, and 35% were repatriated to their home country resulting in loss of continuity and quality of care.

This project is critical to understanding health care challenges and/or experiences of migrant workers in Windsor-Essex and to inform future advocacy efforts.

Primary Investigator

Dr. Indryas Woldie
Windsor Regional Hospital

Co-investigators

Windsor Regional Hospital

Dr. Caroline Hamm
Corrin Primeau

Schulich School of Medicine & Dentistry

Alex Zhou
Abdelhady Osman
Dhuvaraha Srikrishnaraj
Kanza Mirza
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Igniting Discovery GRANT



Photo: **Cheers to Hope**. / Masters of Science in Translational Health Science students showcasing the results of the Migrant Workers Research Project at Cheers to Hope.

Canada-wide approach to Pediatric Diabetes

Diabetes in one of the most common lifelong childhood disorders that affects ~40,000 children and youth in Canada. **Research shows that even with new technology and drugs, children and youth living with diabetes are still not meeting recommended treatment targets.** For example, their blood sugar control is poor, and they are more likely to have lower quality of life and develop other health problems such as heart or kidney disease. This is in part due to poor access to diabetes healthcare, which is worse in disadvantaged populations across Canada. Dr. Jessica Kichler (Associate Professor, Department of Psychology, University of Windsor), co-investigator, will be part of a team developing strategies to address these gaps. The CAnadian PediAtric diabetes Consortlum (CAPACIty) is a network of 10 childhood diabetes centres from across Canada, and their doctors and researchers who specialize in childhood diabetes, partnering with patients/families and health care professionals to jointly design a Canada-wide childhood diabetes registry that will support improvements in clinical care, advance research, and inspire action by policymakers like improving coverage of diabetes technology and expanding support for diabetes in school.

Dr. Kichler acknowledges the Principal Investigators and key collaborators from McGill University and the University of Manitoba.

Principal investigators

Shazhan Amed
Julia Von Oettingen
Meranda Nakhla
Ian Zenlea

To read more and see the list of collaborators:

Looking Forward

In our first four years we established a strong common vision, united our strengths, accelerated our research activities and created an environment that allows health research to grow within the partner organizations and as a collective. We have a more collaborative and connected research ecosystem, making diversity and inclusion a priority and supported researchers at all stages of their career. We leveraged technology to bring together a multidisciplinary and diverse health research network and ended our year by hosting a celebratory event that reminded our community of the impact of health research and what can be accomplished when we have a common vision.

As we look forward to Year 5, we will continue to elevate research excellence and success. With our new strategic plan guiding us towards 2030, we embrace the upcoming opportunities that our partners and the community identified: focusing and investing in areas of strength, advocating and communicating clearly the impact of health research and securing commitment for a sustainable future. With the new hospital system moving forward and a joint commitment to a health innovation hub, WE-SPARK is focused on creating an environment that is attractive to the brightest minds and demonstrating the importance of health research for the economic development of our region. I look forward to:

Igniting Discovery, Driving Results, Living Better

Lisa A. Porter, PhD, Director
Distinguished Professor, University of Windsor



Priorities for 2023-2024

Organizational Effectiveness

Continue quarterly reporting and tracking that leads to the yearly impact report

Monitor and adapt budget reporting Implement a fundraising plan

Develop MOUs between WE-SPARK institutions, as needed

Review current terms, policies and reporting mechanisms to identify and respond to changing needs

Complete the next strategic planning cycle, including a plan for long-term sustainability

Create research ecosystem maps to facilitate clear reporting and communication pathways for WE-SPARK members, staff and committees

Research Excellence

Continue to host events that build collaboration, grow teams and support professional development that moves local research excellence forward

Continue to host the WE-SPARK Grant competitions that supports local researchers to elevate grant success at the national level. Collect metrics and assess outcomes to better understand the impact of research on our local community

Profile and track successes of Core Members to elevate the academic profile of Windsor- Essex

Provide opportunities for research mentorship Consult and grow WE-SPARK programs

Provide a central hub for research processes and system navigation

Provide support for external peer review Initiate and continue to evolve the Equity, Diversity and Inclusion (EDI) action plan

Develop and implement a plan that advocates for change in areas of interest to our partners

Community Engagement

Create workshops, series and/or events that engage the community and build the profile of WE-SPARK

Showcase research facilities and projects happening in the community Maintain social media presence and engagement, while continuing to refine messaging to target audiences

Broaden community understanding of WE-SPARK through media relations, our newsletter and speaking engagements, locally, regionally and provincially

Continue to evolve our website capabilities and reach

Continue to develop the purpose and plan for the WE-SPARK Engage Program to invite the community to join our research efforts

Knowledge Translation

Clearly define and formally integrate the student research network with existing student programs and services at St. Clair College and the University of Windsor

Promote, update and streamline management of our Health Research Resource Hub Update and promote the Knowledge Translation Toolkit, including tools for commercialization, and increase awareness to our research community

Support and profile student experiential learning, novel training opportunities and professional development in health research

Develop and implement a plan for increasing engagement with industry and community partners

Build Capacity

Support and expand use of data sharing platforms for our researchers

Facilitate joint funding plan for large infrastructure grants by creating multi-institutional, multi-disciplinary teams in preparation for large, infrastructure grant competitions

Explore and evolve infrastructure planning and a capital plan, including a research infrastructure map of Southwestern Ontario

Implement the Nucleus plan, including collecting key core facility metrics and developing promotional content to inform our members and the community about research infrastructure (existing and future needs)



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Statistics reflect the WE-SPARK 2022/23 fiscal year ending on April 30, 2023.

All still photos unless otherwise indicated are sourced from the “Thank You For Your Support” or “Frame the Future” Video (WE-SPARK Health Institute).”

Original Graphic Design: Megan Pidgeon, Marketing & Media Intern, St. Clair College.