

we spark HEALTH INSTITUTE

IMPACT REPORT

2023-24

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WINDSOR REGIONAL HOSPITAL
OUTSTANDING CARE—NO EXCEPTIONS!

University of Windsor

HDGH EST2 1888

ST. CLAIR COLLEGE

Erie Shores HealthCare
Care Happens Here

Driving Results

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 1,000 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 practices 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, driving results, living better.

Year in Review

WE-SPARK began our 5th year on May 1, 2023 with 1,000 members. Since then, we have grown our membership by 20%. We continued to host events, including our annual Health Research Conference. In total, we engaged over 3,500 participants. We used new strategies to connect with our community through social media and shared our members' successes through mainstream media engagement and newsletters. Our WE-SPARK office saw some new staff members and took on 8 interns.



$30,147,403
Total External Funding*
*Funding reflects the grant activity of the 36 Core Principal Members

18
WE-SPARK Grants Awarded ($345,000)
* includes Incentive Grants

166
Clinical Research Projects

11,154
Patients/Participants Involved in Research**
**Only includes fresh tissue & REDCap participants

1,200
Members

9
Staff

We hosted our 6th WE-SPARK grants competition and awarded $345,000 to local research projects. Our 36 Core Principal members increased total external research funding by 71% this year. Since WE-SPARK began, external research funding has increased five fold. We are driving results, together, 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

3,500

Followers

9,000

Engagements

150,000

Reach

75

Times in Mainstream News

7,000

Newsletter Engagements

70,000

Unique Website Visits

42

Events***

*** Hosted and outreach

3,525

Participants

8

Interns

68

Student Volunteers

6

Clinical Professorships Facilitated

2

Professors of Practice Facilitated

Message from the Board of Trustees

Since 2019, WE-SPARK Health Institute has been dedicated to advancing research, education, and community engagement in Windsor-Essex. In just five years, we've achieved significant milestones thanks to the collective efforts of our members, partners, and supporters.

Thanks to the commitment of WE-SPARK members and a successful grants program that has awarded more than $1 million in seed and bridge grants, we have fostered substantial growth in health research in our region. Our events and student programs have been crucial in aligning with health research advancements.

We are proud to see the tangible impact of WE-SPARK on national health research funding, with our region's funding tripling since our inception. This focus has elevated the region's profile and positively impacted local health and vitality.

Our local health researchers have secured nearly $78 million in external funding and fostered 1,685 active collaborations. Additionally, 2,068 students across Windsor-Essex have gained valuable experience and training opportunities. Our Core Principal Members have contributed over 516 peer-reviewed journal articles, including 20 in the top 30 highest-ranking journals.

Through our grants program, we have awarded 85 local grants totaling over $1.4 million, generating an additional $4.8 million in national or international funding. These grants have propelled innovative ideas forward and supported over 455 highly qualified personnel (HCP).

These achievements reflect the exceptional work of WE-SPARK staff, the dedication of our community champions, and the creativity and passion of our researchers, experts, and students.

As we look to the future, we are excited to implement our new strategic plan, developed through extensive community consultation, guiding us through the next five years.

Thank you for your continued support. We look forward to working together towards our vision of a thriving and engaged research community driving advancements in health.



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

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.**

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 $600,000 (Expenses: salaries, internships, operating costs, and grants program). The WE-SPARK Grants Program is also supported by donations from organizations and individual community members.

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

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
Until Feb., 2024

Dora Cavallo-Medved
WE-SPARK Interim Director
Beginning Feb., 2024

Karen Metcalfe
WE-SPARK Assistant Director

Peter Wawrow (Chair)
until Dec. 2023
St. Clair College

Nicole Sbrocca (Chair)
Until March, 2024
Windsor Regional Hospital

Karmie Dhillon
St. Clair College

Jonathan Foster
Windsor Regional Hospital

Caroline Hamm
Windsor Regional Hospital

Alison Murray
Hôtel Dieu Grace Healthcare

Heather Pratt
University of Windsor

Neelu Sehgal
Erie Shores Health Care

Chad Sutherland
University of Windsor

Jennifer Voth
Hôtel Dieu Grace Healthcare

Staff

Karen Metcalfe
Assistant Director

Kristin Bradshaw
Administrative Assistant

Jillian Calandra
Translational Research Associate

Mohamed Farjalla
Research Associate

Genesis Flores
Knowledge Translation Research Associate

Danielle Gyemi
Research Associate – NUCLEUS & Innovation

Kyle Lago
Translational Research Associate Until Dec. 2023

Cathy Mombourquette
Special Projects – Media Relations

Pallavi Prashast
Research Associate

Interns/Studentships

Ali Baranbo
NUCLEUS

Eddie Grimmett
Cancer Education & RIOT Lead

Isabelle Hinch
Cancer Education & RIOT Lead

Brendan Levesque
Let's Talk Cancer Content Developer

Kim Morin
Data Management Lead

Zainab Taleb
Health Research Advocacy

Norah Tracey
Social Media Content Developer

Serena Zhang
Noise Induced Hearing Campaign

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

Community Engagement

Chad Sutherland (Chair)
University of Windsor

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

Dora Cavallo-Medved (Co-Chair)
University of Windsor

Peter Wawrow (Co-Chair)
St. Clair College

Indryas Woldie
Windsor Regional Hospital

Lisa Porter

Karen Metcalfe
WE-SPARK

Allison Brooks
Mason Leschyna
Erie Shores Healthcare

Dave Andrews
Martin Crozier
Noeman Mirza
University of Windsor

Nucleus

Danielle Gyemi
WE-SPARK

Dora Cavallo-Medved
Tricia Carmichael
Dan Mennill
Lisa Porter
Nick Vukotic
Chris Weisener
University of Windsor

Research Development

Caroline Hamm (Co-Chair)
Windsor Regional Hospital

Jennifer Voth (Co-Chair)
Hôtel Dieu Grace Healthcare

Gina Bulcke
Windsor Regional Hospital

DJ Macneil
Hôtel Dieu Grace Healthcare

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

Peter Wawrow
Kyle Jackson
St. Clair College

Lisa Porter
Karen Metcalfe
WE-SPARK

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.

1,200 Members:

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

185 **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 institutions.

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

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

137 **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
Nick Vukotic

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
Kristoffer Romero
Charlene Senn
Kendall Soucie

Social Work
Adrian Guta
Jayashree Mohanty

St. Clair College
Beckie Berlasty
Kyle Jackson

Research Activity of Core Principal Members

$30,147,403
External Grant Funding
483%

20
222%
Awards/ Recognitions

185
661%
Talks/ Presentations Given

36
189%
Core Principal Members
The successes here reflect those of our 36 Core Principal members who hold national/provincial funding or lead an investigator-initiated clinical trial

575
261%
Students Trained

176
289%
Peer Reviewed Publications, Books and Chapters

11,154
643%
Patients/Participants Involved*
*Only includes fresh tissue & REDCap participants

551
170%
Active Collaborations

Indicates percentage change from Year 1.

2023 Grant Competition Results

$345,000
Funding Disbursed

120+
Researchers and Trainees Involved

18
WE-SPARK Grants Awarded

12 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!

Windsor Regional Hospital – Outstanding Care – No Exceptions!
St. Clair College
University of Windsor
Hôtel-Dieu Grace Healthcare
Erie Shores HealthCare
Marshall University
RCSI University of Medicine and Health Sciences
Wayne State University
Université de Montréal
CancerCare Manitoba – ActionCancerManitoba
Thunder Bay Regional Health Sciences Centre
Schulich Medicine & Dentistry

Sponsored by University of Windsor Research & Innovation | we spark Health Institute | St. Nicholas



Dana Menard
Sexual Resilience and Wellbeing in Women with PCOS

Sponsored by we spark Health Institute | Engineering University of Windsor



Jill Urbanic
Design, Fabrication, and Testing of 3D Printed Micro-Fluidic Devices for Exploring the Culture of Human Tumour Based Organoids, and to Alter the Tumour Microenvironment

Sponsored by we spark Health Institute | Science University of Windsor



John Trant
pHerapeutics: Modulating the Tumour Microenvironment Restores Immunosurveillance, Eliminates Cancer's "Home-Field" Advantage, and Potentiates Therapies***

WE-SPARK Grants Program

Sponsored by The Tayfour and Emara Research Grant



Amit Bagga

Evaluating the Accurary of Continuous Glucose Sensors in Hemodialysis Patients with Diabetes
*Planning Grant



Telford Yeung

Reducing Contamination in Umbilical Cord Blood Culture in the Diagnosis of Early Onset Neonatal Sepsis at Windsor Regional Hospital

Sponsored by we spark HEALTH INSTITUTE



Caroline Hamm

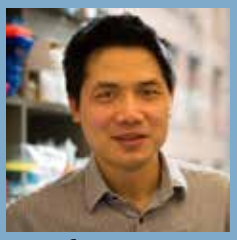
Support System for Canadians with Cancer Searching for Cross-Provincial Border Clinical Trials Opportunities

Sponsored by University of Windsor | Research & Innovation | Faculty of Science



Vijendra Sharma

Identification of Cell-Type-Specific Dysregulated mRNA Translation in Alzheimer's Disease



Yufeng Tong

Shed Lights on SUN1 for Cancer Treatment



Mason Leschyna

Nalozone Distribution to Support Decreased Readmissions
*Planning Grant

Sponsored by University of Windsor | Research & Innovation | Faculty of Human Kinetics



Paula van Wyk

Isometric Handgrip Training Study: Answering the Urgent Call for Black Populations

Sponsored by Katelyn Bedard Bone Marrow Association



Brian DeVeale

Phasic Gene Expression in Genomic Stability



Emma Mineau

The Evaluation and Implementation of Increased Mental Health Resources, with Minimized Barriers, for Patients of a Local Community Hospital

Sponsored by Windsor Cancer Centre Foundation



Syed Naqvi

Automated Detection of Brain Metastases using Machine Learning



Joanne Tay

Exploring the Process of Receiving Pediatric Cancer Care in Windsor Essex



Melissa Pare

Implementing rTMS Programming at Hotel-Dieu Grace Healthcare



Nick Vukotic

Improving Outcomes in Glioblastoma Treatment: Implantable Therapeutic Polymer Composites for Targeted Drug Delivery



Indryas Woldie

Establishing Multiple Myeloma Drug Screening Platform to Predict Patient Response to Therapy
*Extension Grant



Kyle Shafer

Cancer Care Closer to Home
*Planning Grant

***recipient of WE-SPARK Incentive Grant

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 85 projects have been awarded totaling $1.4M in local grant funding. Research takes time but we are already seeing the impact of this investment. In just 4 years, these projects have leveraged our local funding investment into an additional $4.8 million in national grant funding.

IN 4 YEARS, OUR LOCAL I

BEEN LEVERAGED INTO A

$4.8 MIL

IN NATIONAL GRAN



$1,426,600
Local Grant Funding Awarded

4 YEARS
Research Time

85
Projects

2020
Program Launch

NVESTMENT HAS
AN ADDITIONAL
LION
T FUNDING



Our annual fundraiser, Cheers to Hope, showcases and celebrates the success of past grant recipients and raises funds for the next grant competition. Save the date for our next Cheers to Hope on November 7, 2024.



A summary report of the 2023 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 5, Q2 report: www.wesparkhealth.com/our-impact).

Thank you to our 2023 grant 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. It takes multi-disciplinary teams to find new discoveries and solutions.

Our community is a key member of our team, supporting research through fundraising, awareness and advocacy.

Boosting clinical trial participation among Canadian cancer patients

A Windsor-based research team is leading a program to connect cancer patients with clinical trials nationwide. Despite potential benefits, only seven percent of Canadian cancer patients enroll in clinical trials. The program, supported by grants from the Cancer Research Collaboration Fund, WE-SPARK Health Institute, TD Bank, MITACS, and CIHR, aims to increase awareness and accessibility to improve treatment outcomes and offer new hope to patients across Canada.

Research Lead: **Dr. Caroline Hamm**
Medical Oncologist
Windsor Regional Hospital

Cancer survivors support work towards a cure

A grant from the Breast Cancer Society of Canada funded a study to discover new treatments for patients with poor outcomes from the latest chemotherapy. The study will inform best practices for consent in clinical trials and develop new diagnostic tools and personalized treatment plans. A donation from the WonderBroads of Windsor furthered this research. The team is also working with the WonderBroads, patients, and caregivers to improve patient materials and procedures, aiming to serve as a model of equity and informed consent for other clinical trials.

Research Lead: **Dr. Lisa Porter**
Distinguished Professor
Biomedical Sciences
University of Windsor



Exploring causes of blood cancers

A WE-SPARK Igniting Discovery Grant, funded by the Katelyn Bedard Bone Marrow Association, supports developing a technique to measure cell division times in the bloodstream. This could reveal cancer mechanisms and have broader applications, such as understanding hematopoietic stem cell division for regenerative medicine and optimizing donor expansion for transplants. This research holds potential for significant advancements in cancer treatment and regenerative medicine.

Research Lead: **Dr. Brian DeVeale**
Assistant Professor
Biomedical Sciences
University of Windsor

Improving cancer care for the LGBTQ2+ community

The LGBTQ2+ community faces a disproportionate cancer burden, often with lower screening rates and social support. A new collaboration among the Windsor Essex Compassionate Care Community, Windsor Regional Cancer Centre, and Trans Wellness Ontario, funded by the Windsor Cancer Centre Foundation, is piloting a social intervention to enhance the quality of life for LGBTQ2+ cancer patients.

Research Lead: **Dr. Kathy Pfaff**
Associate Professor
Nursing
University of Windsor

Research Drives Discoveries & Provides Solutions

Throughout history, research has developed solutions for health challenges often providing new evidence-based options for making our communities safer and healthier. Working collaboratively to solve problems is a strength of our local research ecosystem.



Photo: **Knowledge translation in action** / Sarah Julius, a St. Clair College student, presenting at the 2023 Health Research Conference.

Addressing Food Insecurity

A team of researchers at St. Clair College is co-developing and evaluating the impact of a universal school nutrition program in target neighbourhoods, as part of a bigger initiative happening across the province that promotes health and a universal program across Canada. The federal government launched consultations on a pan-Canadian school food policy, and researchers on this project hope to have an opportunity to showcase the model, as a part of this multi-sectoral collaboration. The College received a Natural Sciences and Engineering Research Council of Canada (NSERC) Social Innovation Fund Grant to support this initiative.

Collaboration enhances creativity and problem solving

In November, over 300 participants gathered at WE-SPARKS's Health Research Conference to connect, showcase current projects, and explore the latest advancements in health research. The event brought together researchers, health care professionals, administrators, and trainees, offering a platform to learn from both local and international experts.

The second annual conference showcased over 100 research posters and featured more than 50 oral presentations across diverse health areas. This



exchange of ideas fostered collaboration and deepened knowledge across the field.

A highlight of the conference was the introduction of WE-SPARK's new "Lived Experience Accelerating Research kNowledge" (LEARN) program. This initiative aims to enhance engagement between individuals with lived experience and research partners, promoting meaningful collaborations. A panel discussion on integrating individuals with lived experience into research teams underscored this effort.

Tackling Distracted Driving

Dr. Francesco Biondi, a researcher in the Faculty of Human Kinetics, University of Windsor is working with Windsor Police Service to tackle an issue that could help make our local streets safer. This project, supported by a grant from the Social Sciences and Humanities Research Council of Canada (SSHRC), is focused on measuring the prevalence of distracted driving and understanding how factors like school zone signs and traffic volumes affect driver distraction. By examining these elements in selected study locations, the project aims to identify areas that may benefit from targeted safety campaigns or increased police presence, and to highlight the consequences of distracted driving on local roadways.

Research Supports Health & Wellness



Research conducted locally has the potential to impact health and wellness around the world. Some of the best solutions arise when our researchers collaborate globally.

Reducing Sexual Assaults

Researchers launch clinical trial of an online program to curb incidents of sexual assault among young women.

The Enhanced Assess, Acknowledge, Act (EAAA) sexual assault prevention program developed by Charlene Senn, a professor of psychology and women's and gender studies at the University of Windsor, is the only intervention proven to significantly reduce sexual assaults experienced by female university students. The in-person format of the program has yielded positive outcomes. Equipping universities with required staff resources for the implementation of the program is challenging.

Dr. Senn and her colleague Sarah Peitzmeier, an assistant professor at the University of Michigan's School of Nursing, drew on the expertise of UWindsor's Office of Open Learning to adapt the EAAA program for online synchronous delivery, where they are exploring whether a novel online iteration of the program, known as Internet Delivered EAAA (IDEA3), holds comparable efficacy in curbing incidents of sexual assault among young women.

Spearheaded by a $2.5 million grant from the CIHR, the team launched a clinical trial of IDEA3 across four North American universities.

Research team:
Dr. Charlene Senn, University of Windsor
Dr. Paula Barata, University of Guelph
Dr. Katie Edwards, University of Nebraska-Lincoln
Misha Eliasziw, Tufts University
Sarah Peitzmeier, University of Michigan



Targeting hypertension – a global approach

People of African descent have higher rates of hypertension, with Uganda and other countries in Sub-Saharan Africa having the highest instances of uncontrolled hypertension in the world. A collaborative team with representation from three countries aims to improve the health of villagers in Uganda and the Black community in Windsor-Essex by investigating the effectiveness of isometric handgrip training (IHT) to lower blood pressure. The study is being carried out through the Allan Stone Community Clinic in Kyabirwa, Uganda, where hypertension is the leading condition treated. Researchers from the University of Windsor's Faculty of Human Kinetics are running a similar study for Black residents of Windsor and Essex County. The local initiative is being supported by a WE-SPARK Igniting Discovery Grant funded by the Vice President Research and Innovation and the Faculty of Human Kinetics, University of Windsor.

Research Team:

University of Windsor	**Dr. Paula van Wyk** **Dr. Kevin Milne** **Dr. Cheri McGowan**
Uganda clinic founder	**Dr. Jessie Stone**
Uganda clinic	**Dr. Charles Kalumuna**
Cardiologist	**Dr. Stella Nabiyre**
Ugandan researcher	**Dr. Geofrey Msinguzi**
Wayne State researcher	**Dr. Phillip Levy**
Canadian biostatistician	**Katia Charland**
Assistant commissioner in charge of the non-communicable disease program at the Ugandan Ministry of Health	**Dr. Gerald Mutungi**

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 5 with over 560 affiliate student members and developed a new partnership with Let's Talk Science to streamline student involvement in our community outreach initiatives. **In the past year, a total of 4,100 hours were logged by our student volunteers.**

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 full time faculty member or clinical professors. **In Year 5, $50,000 in student SWORP grants were awarded.**

Unique Training Opportunities

WE-SPARK collaborates with our healthcare partners and local educational institutions to create unique research training opportunities and experiences that impact our community.

The **Master of Science in Translational Health Science** (**MSTHS**) program equips students with the education and skills necessary for various career paths in translational health sciences. Graduates gain the expertise needed for careers in clinical trials across industry, clinical, and academic settings. Additionally, they are well-prepared for roles in government agencies and community organizations focused on disease prevention and health promotion.

St. Clair College students have **unique research opportunities to better the health and overall well-being of citizens.** By focusing on reducing disparities through community partnerships, discovery, innovation, advocacy, and curriculum, St Clair College student and project collaborator Sarah Julius was awarded Top Presenter at WE-SPARK's 2023 Health Research Conference Rapid Fire session for her outstanding presentation: **Collaboratively Addressing Food Insecurity: Co-developing a sustainable and equitable school nutrition.**



Photo: **Training the future** / Dr. Elizabeth Fidalgo da Silva training two Porter Lab students in the Essex Centre of Research (CORe), University of Windsor.

Internship Opportunities

Students and recent graduates of St. Clair College and the University of Windsor gain hands-on experience in the health and research fields, working alongside leading experts and WE-SPARK staff.

"I have been involved with WE-SPARK Health Institute since 2018. Organizing WE-SPARK events has provided exceptional learning and networking opportunities, connecting me with like-minded individuals from various backgrounds. Whether providing knowledge capture for Think Tanks, volunteering at student events, attending the WE-SPARK Health Conference, or participating in Cheers to Hope, every experience has been invaluable. I am proud to have contributed to WE-SPARK's mission and look forward to continuing my support even after graduating as I embark on my professional career. "

~ Omayma Al Jabiry
WE-SPARK Intern

"WE-SPARK Health Institute offers students an opportunity to engage with community members and gain insights into the research enterprise in Windsor-Essex. My work with WE-SPARK, through the IGNITE Work Study Program, has allowed me the privilege of connecting with the community, learning about their personal health stories and challenges, and observing firsthand how research has positively influenced their lives, instilling hope and driving progress. My continued involvement with WE-SPARK has greatly enriched my undergraduate experience, and I hope to stay involved in the organization going forward!"

~ Vanessa Riolo
WE-SPARK Intern

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.

Embedding research in local care

Local team working to address no-shows and cancellations in therapy services

Providers at the Regional Children's Centre (RCC) have documented an increasing trend of no-shows and cancellations, with rates of up to 15% among families seeking counselling and therapy. Research suggests that this is a common issue, with 20% to 80% of families seeking treatment dropping out prematurely or receiving less than half of the intervention as prescribed. The implications of poor or inconsistent treatment participation are clear: treatment benefits are reduced, and no-shows and cancellations are costly to service providers and agencies.

This issue is being addressed by a local team who have identified strategies that are being implemented using Plan-Do-Study-Act (PDSA) cycles with families receiving counselling and therapy services at the RCC. The next phase of data collection will commence in the fall of 2024.

HDGH Research Team: Leslee Ward, Giselle Helou, Kara Hayes, DJ MacNeil, Clarke McConnell, Stacey Slobodnick, Tammy Calic, and Dr. Jennifer Voth.



Photo: **Dr. Caroline Hamm preparing surgical room for research study**.

New Academic Office for Research at Erie Shores HealthCare

Within one year of joining WE-SPARK Health Institute, Erie Shores HealthCare (ESHC) has launched their Academic Office for Research. This marks a significant milestone, making ESHC one of the few small hospitals in the province to establish a dedicated research department. This initiative underscores the collaborative spirit within our local research community. By leveraging shared resources and expertise, they are poised to make meaningful contributions to the health of our community.



Improving lives for patients with diabetes

A team of researchers is studying the effectiveness of Flash Glucose Monitors (FGM) to help patients receiving hemodialysis improve diabetes control. Diabetes medications and insulin are metabolized at least partially by the kidneys, and with failing kidneys, the medications circulate in the bloodstream longer, making patients with End Stage Renal Disease at greater risk of dangerous lows in blood glucose. Poorly controlled diabetes in patients on dialysis significantly shortens their lifespan. This study could revolutionize diabetes management for hemodialysis patients, significantly improving their quality of life and extending their lifespan. The findings could lead to the implementation of FGMs as a standard of care for hemodialysis patients not only at Windsor Regional Hospital but across Canada. This project was made possible by a WE-SPARK Igniting Discovery Grant funded by the Tayfour-Emara Excellence in Research & Education Fund.

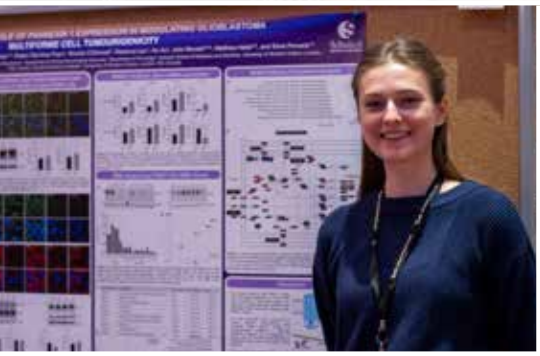
Research Team:

Windsor Regional Hospital	**Dr. Amit Bagga** **Dr. Monica Bagga** **Dr. Caroline Hamm**
University of Windsor	**Pranita Celisala** **Dr. Devinder Moudgil**
Schulich School of Medicine & Dentistry	**Andrew Nguyen**

YEAR IN REVIEW







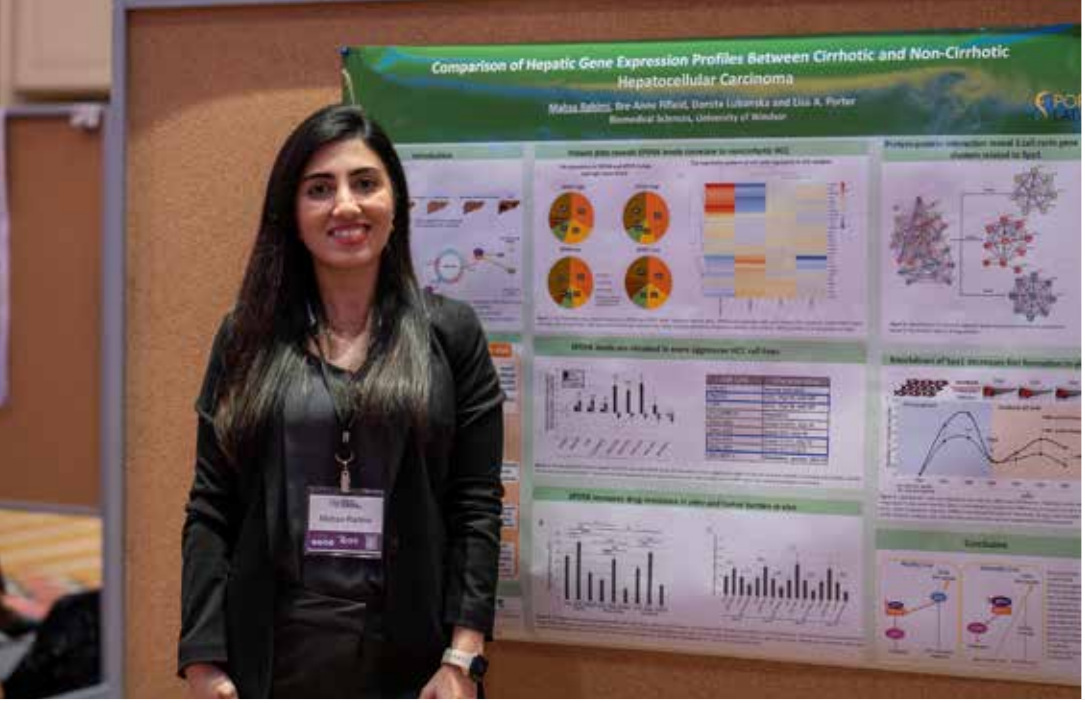











Comparison of Hepatic Gene Expression Profiles Between Cirrhotic and Non-Cirrhotic Hepatocellular Carcinoma

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