



MCMaster EDUCATION RESEARCH, INNOVATION & THEORY

# 2021 Annual Report





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## MESSAGE FROM THE ASSISTANT DEAN



**Jonathan Sherbino**

2021 has been a year of growth for MERIT. We continue to experience the challenges of a global pandemic and institutional and societal issues of inequity and injustice. However, vaccination strategies and public health policies, social change and institutional initiatives seek to bring us closer together, including a plan to return to campus in 2022.

Our cadre of scientists have grown. Dr. Renate Kahlke started as a MERIT scientist with a faculty position in the Division of Education and Innovation, Department of Medicine. Dr. Elif Bilgic has been recruited as a MERIT scientist with an appointment in the Department of Pediatrics. Drs. Chan and Sibbald have moved from adjunct scientist to scientist positions. Dr. Monteiro was recruited as a full-time MERIT scientist with a faculty position in the Division of Education and Innovation, Department of Medicine. Our community continues to grow with more than 75 staff, members, scholars and scientists. We celebrate (in a bittersweet fashion) the retirement of Anita Riddell as MERIT program coordinator, after 35 years of service to McMaster University.

**At MERIT, we produce evidence to develop health professional expertise. We do this by advancing:**

### RESEARCH

Research on education in clinical, digital and simulated learning environments.

### INNOVATION

Innovative education designs and policies.

### THEORY

Theories of social, professional, and cognitive skill development for high quality healthcare.



**MERIT's Mission:**  
*Growing a community of  
clinicians and scientists to  
advance health professions  
education through research  
and applied science.*

This annual report is only a superficial snapshot, capturing the rich and diverse scholarship and work of the MERIT community. We celebrate the recognition MERIT scientists have received, including:

- **Teresa Chan** – University Scholar, McMaster University,
- **Sandra Monteiro** – Meridith Marks New Educator Award, Canadian Association of Medical Educators,
- **Matt Sibbald** – President's Award for Outstanding Contribution to Teaching and Learning, McMaster University, and
- **Lara Varpio** – Karolinska Institute PRIME Fellowship.

MERIT continues to support the educational work of schools and departments. MERIT collaborates with the AFC Clinician Educator program, Centre for Simulation-based Learning, Health Sciences Education graduate program, Insight U, MacPherson Institute, and the Program for Faculty Development.

You can discover more about us at our **website**: <https://merit.mcmaster.ca>

Follow us on **Twitter**: [@MERIT\\_McMaster](https://twitter.com/MERIT_McMaster)

Browse our **Rounds** archive on YouTube: <https://bit.ly/MERITYT>

Sign up for our **newsletter** at: [merit@mcmaster.ca](mailto:merit@mcmaster.ca)

Discover a **network of faculty** engaged in education research at: <https://meritmaps.ca>

Take an on-line, **introductory course** in education research at: <https://macpfd.ca/hper-curriculum>

Browse our **library** of recommended papers and resources at: <https://hpeworld.com>

If you haven't already, connect with us in 2022.

Best Wishes,



# SCIENTISTS

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**Teresa Chan, MD**  
Associate Professor, Medicine

Teresa Chan has been appointed as a MERIT Clinician Scientist as of July 2021. Her primary appointment is as an associate professor within the Department of Medicine's Division of Emergency Medicine and she is also cross appointed the new Division of Education & Innovation. She received her Masters of Health Professions Education from the University of Illinois at Chicago (UIC). Currently, she is the Associate Dean, Continuing Professional Development. She previously was the Assistant Dean, Program for Faculty Development in the Faculty of Health Sciences at McMaster from 2019-2021. She is also completing her term as the Director of the RCPSC Clinician Educator Area of Focused Competency Diploma program, having held this position from 2016-2021. Dr. Chan serves on the editorial boards of several important health professions education journals including: Academic Medicine, Journal of Graduate Medical Education, and Perspectives on Medical Education.

Dr. Chan is well known for her education research and innovation. She is a principal investigator in the METRIQ Study Group. She is exceedingly proud of this virtual research group, which has just published their 29th paper in a program of research that started only six years ago. For her innovations and education research, Dr. Chan has been awarded two top awards this year:

- 1) She has been named a McMaster University Scholar for a 4-year term beginning in July 2021, signifying that she is considered a top scientist across the multiple disciplines here at our University;
- 2) She has been awarded the 2021 Royal College's Early Career Award for Leadership in Medical Education and Continuing Professional Development.

Dr. Chan's current programs of research include: contextualized clinical decision making; improving knowledge translation using education theory and innovation. Along with colleagues in other areas, Teresa has been working on a number of qualitative projects about how physicians are using social media and incorporating it into their academic lives. With the support of the PSI Graham Farquharson Knowledge Translation Fellowship, Teresa is excited that her team in this area has had several papers now accepted and published on this topic.

Dr. Chan continues to work with MERIT Postdoctoral Fellow Dr. Yusuf Yilmaz and HSED Masters Thesis student Victoria Tran to build curricular content for helping others to improve knowledge translation in the age of social media. This year, she will welcome a new member to her team – Dr. Ari Mazzeo, who will be jointly completing a postdoctoral fellowship within MERIT and the CPD office.

This past year she is proud to announce that she led a very successful team of scholars to win several key eCampus Ontario grants to create open-access online education resources – most notably will be an e-textbook that focused on Health Professions Education Research, an extension of our successful HPER Curriculum (<https://www.macpfd.ca/hper-curriculum>) initiative (jointly sponsored by MacPFD, HSED Masters Program, and MERIT).

# SCIENTISTS

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**Lawrence Grierson, PhD**  
Associate Professor, Family Medicine

Dr. Lawrence Grierson is Associate Professor with the Department of Family Medicine at McMaster University and an Education Scientist with the McMaster Faculty of Health Sciences' Program for Educational Research, Innovation, and Theory (MERIT) at McMaster University; appointments through which he leads a variety of research pertaining to Health Professions Education. He obtained his PhD in Kinesiology at McMaster University before completing concurrent postdoctoral fellowships with the Toronto Rehabilitation Institute, Sick Kids Learning Institute, Lawrence S. Bloomberg School of Nursing, and The Department of Occupational Therapy and Occupational Science at the University of Toronto. Lawrence serves as Assistant Dean of McMaster's Health Science Education Graduate Program and on the CFPC's Program Evaluation Advisory Group for the Triple-C Curriculum.

Among Lawrence's most relevant scholarship involves establishing the foundation for big education data platforms for the longitudinal appraisal of medical education metrics collated across physicians' learning trajectory; from medical school into practice. This work began with examinations of the factors that influence the policy intervention of matriculating International Medical Graduates (physicians trained abroad) into Canadian residency programs with the ultimate goal of improving physician distribution in Canada, and continues with provincial collaborative work aimed at determining the admissions and training factors associated with trainee performance on the national licensure examinations. Lawrence has secured Social Sciences and Humanities Research Council (SSHRC) Insight Development funding, which will be used to mobilize pan-Ontario research pertaining to the relationship between medical school admissions and assessment metrics and performance on the Medical Council of Canada qualifying examinations. He has also secured SSHRC Connection funding to bring together a pan-Canadian working group of representatives from undergraduate and post-graduate training institutions, data stewards, regulatory authorities, and student and resident organizations towards the development of a consensus statement for the ethical conduct of inter-institutional data-driven medical education research in Canada. Dr. Grierson's partners in this work include the Postgraduate, Undergraduate, and Medical Admissions Councils of the Ontario Faculties of Medicine; Association of Faculties of Medicine in Canada; Medical Council of Canada; College of Family Physicians of Canada; Royal College of Physicians and Surgeons of Canada; and the Ontario Physician Human Resource Data Centre.

As a member of the Department of Family Medicine, Dr. Grierson is also active in research that considers the way in which medical training and credentialing influences the delivery of continuous, comprehensive, and community-adaptive care across the country. Upon completing a CFPC-sponsored multiple-case study of the impact that the Certificates of Added Competence program is having on the delivery of family medicine in Canada, Lawrence is now embarking on new research aimed at determining the relationships between family physicians' geographic disposition before medical school, during training, and when in independent practice. This research uses regression modeling techniques alongside qualitative methodology to determine the degree to which regional selection policies and distributed training practices influence physician practice choices. Portions of this work are supported through funding from the Academic Family Medicine Associates and the Faculty of Health Sciences Education Scholarship Fund.

When time permits, Lawrence still enjoys research on the acquisition of precision skills. Over the last year, he published new findings concerning impulse control, which supports a multiple process model of sensory-motor information processing. This work extends Lawrence's early career research on the underpinnings of expert precision performance and the acquisition of clinical technical skills.

## SCIENTISTS

### **Renate Kahlke, PhD** Assistant Professor, Medicine



Dr. Renate Kahlke is a researcher, qualitative methodologist, theorist, and educator. After working in curriculum design and faculty development for interprofessional education and simulation at the University of Alberta, she earned a PhD in Educational Policy Studies there in 2016. She then completed a postdoctoral fellowship at the Centre for Health Education Scholarship at the University of British Columbia in 2018. She led program evaluation and research as a Research Associate at the Royal College of Physicians and Surgeons of Canada until May 2021 and is now excited to join the Department of Medicine and MERIT as Assistant Professor and Scientist. She continues to hold an appointment as Adjunct Professor in the Department of Innovation in Medical Education at the University of Ottawa.

Currently, Renate is developing a program of research that uses a range of qualitative methods to explore how social and systemic pressures influence health professionals' and trainees' decisions, and how these factors may prevent them from doing what they think is best. This research is currently focused on two spaces in which these issues often occur. First, she examines moments when trainees' sense of agency is compromised in their clinical learning and work. She was recently funded by the Social Sciences and Humanities Research Council (SSHRC) to lead a longitudinal study across four institutions (McMaster University, University of British Columbia, University of Ottawa, and Western University) to identify social and systemic factors that impact racialized trainees' sense of agency when they encounter interpersonal or systemic racism. This study uses constructivist grounded theory, and will generate data through solicited diaries and interviews with racialized trainees as they progress through two years of their education.

Second, Renate's research looks at moments when practicing health professionals struggle to make change based on their learning in clinical settings. She is co-PI on a study with Dr. Meghan McConnell that examines learning among physicians when they conduct workplace-based assessments for trainees, funded by the Royal College of Physicians and Surgeons of Canada. This study is part of a larger investigation of the micro-learning that might occur in daily practice, and the features of clinical environments and interactions that facilitate or inhibit learning and practice change. This study also uses Constructivist Grounded Theory and a combination of interviews and observations to generate rich data on under-explored aspects of learning in clinical practice.

Influences on decision-making are often subtle and difficult for research participants to identify or articulate, particularly when their decisions are not aligned with what they feel is best. To support investigation of these difficult-to-articulate issues, a branch of Renate's work focusses on advancing methodological innovation, theory development, and meta-research. As an example, she is currently leading a large-scale integrative review focused on innovative interview elicitation techniques – or the use of artefacts such as drawings, photography, diaries, or maps to prompt participants to think and talk about a topic in new ways. The review compiles techniques from a broad range of disciplines – from anthropology to psychology – with the goal of improving participant engagement and data quality in qualitative interviews.



## SCIENTISTS

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**Sandra Monteiro, PhD**  
Associate Professor, Medicine

Dr. Sandra Monteiro is a Faculty of Health Sciences MERIT Scientist appointed to the Department of Medicine. Sandra has a second appointment to the Centre for Simulation Based Learning as the Director of Scholarship. Sandra received her PhD in Psychology from McMaster University in 2013 and currently manages a successful international collaboration investigating theoretical models of cognitive processes behind clinical reasoning with application for education and assessment. In 2020, Sandra received the Excellence in Graduate Student Supervision Award from the Faculty of Health Science. In 2021, she received the Meridith Marks New Educator Award.

In addition to her primary research program on clinical reasoning, Sandra has expertise in competence assessment and best practices for education strategies. Sandra's contribution to these programs is mainly as a content expert on theories of learning, cognition more broadly, data analysis and research design. Within her main research focus on clinical reasoning, she is part of an internationally recognized research collaboration with Geoff Norman, Matthew Sibbald and Jonathan Sherbino. This research collaboration extends to research partners including Jonathan Ilgen from the University of Washington and Henk Schmidt and Laura Zwaan from Erasmus University. Recently, we evaluated the utility of electronic diagnostic support systems in improving and assessing diagnostic reasoning skills.

Sandra is currently working on two projects which will contribute to the understanding of expert medical diagnosis and the potential for new learning techniques in medical education to reduce diagnostic errors. In the first project, trainees and faculty will view images of ECGs and x-rays for very brief moments of time (less than a second). The images will include exemplars of certain medical diagnoses as well as normal exemplars. The study participants will then be assessed, allowing us to determine if their visual diagnostic skills have improved as a result of this intervention.

The second project investigates the influence of individual variation in the capacity for spatial processing and right-left discrimination. Right-left discrimination is a complex neuropsychologic process that utilizes several higher functions, including visuospatial processing, memory, language and integration of sensory information. It is possible that errors of right-left discrimination occur more commonly in health care than is reported. This study will utilize the Bergen Left-Right Discrimination (BLRD) test to measure participants' ability to rapidly perform spatial processing and whether their ability can improve with time and practice.

## SCIENTISTS

**Geoffrey Norman, PhD**  
Professor Emeritus, Health Research Methods,  
Evidence and Impact



Dr. Geoffrey Norman is Professor Emeritus of the Department of Health Research Methods, Evidence and Impact (formerly the Department of Clinical Epidemiology and Biostatistics). He has been involved with MERIT since 1971, first as a research associate (1971-1976) and then as a professor/scientist (1977-present). Geoff received a BSc in physics from the University of Manitoba in 1965, a PhD in nuclear physics from McMaster University in 1971, and a Masters in educational psychology from Michigan State University in 1977. Geoff has held an appointment at the Ontario Institute for Studies in Education since 1992 and has been an associate member of McMaster's Department of Psychology, Neurosciences and Behaviour since 1994.

Dr. Norman has received many honours and awards over the course of his career, including an Induction into Community of Excellence (McMaster, 2017), the President's Award for Excellence in Graduate Supervision (McMaster, 2013), the John Ready Award for Innovation (Association of Faculties of Medicine of Canada, 2012), Querido Visiting Professorship from Erasmus University, Rotterdam (2012), an honorary degree from Erasmus University (2010), the Karolinska Award for Research in Medical Education (2008), and the Award for Outstanding Contribution to Assessment of Clinical Competence (Medical Council of Canada, 2001). In addition, he also held a Canada Research Chair from 2001 to 2014.

Geoff's long-standing interest is in cognitive psychology, particularly as it applies to clinical reasoning, learning, and decision-making. Geoff has particular expertise in statistics and measurement and has authored several popular books in this area with David Streiner. He has taught these subjects for many years at the undergraduate and postgraduate level and has published more than 300 journal articles on these topics. Recent investigations have expanded into two areas: 1) the role of computerized decision support systems; and 2) visual diagnosis at extremely brief times in radiology and electrocardiography. Another recent area of interest is the role of simulation in learning and assessment in areas ranging from anatomy learning to critical care decision making.

Since 2017, McMaster's Faculty of Health Sciences has organized the Norman Education Research Day. This yearly event, named after Dr. Norman, is dedicated to celebrating the rich history and future of Health Professions Education research and scholarship across the Faculty of Health Sciences and McMaster University.

# SCIENTISTS

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**Jonathan Sherbino, MD**  
Professor, Medicine

Dr. Sherbino is the assistant dean of MERIT. An emergency and trauma physician, he is a professor in the Department of Medicine. Jonathan is the past chair of the Royal College Emergency Medicine Specialty Committee, the co-editor of CanMEDS 2015 Framework, and co-founder of the Royal College Area of Focused Competence – Clinician Educator program. He is the co-host of the Key Literature in Medical Education (KeyLIME) podcast, which has an audience in 80 countries around the world. Jonathan is an award-winning teacher and educator, including recognition from the Society for Teaching & Learning in Higher Education as a 3M Fellow and via fellowship in the Academy of Medical Educators (United Kingdom). As an education scholar Dr. Sherbino has more than 170 publications and greater than 11,000 citations. Jonathan has presented his work more than 250 times, including a number of plenaries at international conferences.

The collaborative research program in clinical reasoning (with Sandra Monteiro, Matt Sibbald, Geoff Norman) continues with several successful projects. A Royal College Medical Education Research Grant funded a randomized trial that investigated the influence of crowdsourcing to improve diagnosis. Analysis is ongoing to determine if a group of peers improves diagnostic accuracy compared to an individual clinician alone or does group dynamics impair clinical reasoning. A study conducted in partnership with the Medical Council of Canada examines whether decision support software (e.g., artificial intelligence) influences on-line testing of clinical reasoning. This study builds on our previous work that shows artificial intelligence can help clinicians more accurately diagnose patient presentations.

A multi-centre randomized trial with colleagues from Rush University, University of Southern California, Geisinger Medical Centre and The Ohio State University Medical Centre, examined the impact of driving on learning via podcasts. Building on previous work from this group about how podcasts are supplementing traditional learning platforms, this study did not find any negative impact on using a podcast when driving a familiar route (e.g. commuting to work.). Future research is planned, once COVID restrictions are lifted, to evaluate the impact of podcasts on safe driving using a fully immersive driving simulator.

Finally, a pan-Canadian study of education and academic opinion leaders revealed considerable diversity in the philosophies and rationales supporting competency-based medical education (CBME). This study suggests that scholars and leaders are incorrectly assuming common starting positions when describing and debating the design and structure of CBME. The study suggests that leaders, teachers, and scholars need to define and explicitly articulate their starting positions to improve dialogue within the education community.

## SCIENTISTS

**Matthew Sibbald, MD**  
Associate Professor, Medicine



Dr. Matt Sibbald is a scientist with the McMaster Education Research, Innovation and Theory program with interests in simulation-based education, competency-based education, and clinical reasoning. He is an Associate Professor of Medicine, McMaster University and Interventional cardiologist at Hamilton Health Sciences and Niagara Health System. Matt graduated from the University of Toronto with an MD in 2004, completing residencies in internal medicine (2008), cardiology (2011) and a fellowship in Interventional Cardiology (2013). Matt received a Master's in Health Professions Education in 2011 and a PhD in 2013 – both from Maastricht University, Netherlands. He is currently the Associate Dean of Undergraduate Medical Education, Cardiology Residency Program Director, and Chair of the AFC Committee for Intervention Cardiology at the Royal College of Physicians and Surgeons of Canada.

One of Matt's research areas is how technology assists in the diagnostic process. Matt is leading two projects which use the electronic diagnostic support platform called "Isabel" (<https://www.isabelhealthcare.com/>). In collaboration with the Medical Council of Canada, one project examines whether having access to Isabel during a summative examination improves or detracts from the exam's ability to discriminate candidates. The second project examines how to optimize the use of Isabel within the triage system and workflow of an emergency department. Both projects build on work previously funded by the Physician Services Incorporation which examined the effectiveness of electronic diagnostic support in reducing diagnostic error across a spectrum of clinician expertise, from novice medical student to expert clinical practitioner. A paper on these findings was published in BMJ Quality and Safety this year.

Another focus of research focuses on simulation support for health professions training programs. Matt received funding from the Royal College to interview educators who have published on the use of standardized patient programs to deliver curriculum addressing equity, diversity and inclusivity (EDI) mandates for health professions trainees. This study builds on a scoping review that Matt and co-authors published in Academic Medicine reviewing the use of standardized patient programs to enhance EDI. Matt is also engaged in how simulation can be used to support interprofessional education. He is currently supervising multiple funded projects to generate online interprofessional simulation content, as well as studying how virtual platforms can be used to strengthen interprofessional education.

## ADJUNCT SCIENTISTS

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**Ranil Sonnadara, PhD**  
Associate Professor, Surgery



As Director of the Office of Education Science for the Department of Surgery, Dr. Sonnadara's mandate is to integrate recent advances and best practices in education science into surgical curricula whilst training the next generation of surgical educators. This includes overseeing the transition to the new Competence By Design Curriculum for all surgical programs. Ranil is also a Faculty Affiliate with the Vector Institute for Artificial Intelligence, a member of the Schools of Computational Science and Engineering and Biomedical Engineering, and is an Adjunct Scientist with MERIT. Ranil also serves as the Creative Director for McMaster's LIVELab, and is currently appointed as the President, Chief Research Officer and CEO for Compute Ontario.

Musculoskeletal medicine in undergraduate medical education:

Musculoskeletal conditions are extremely common in the general population and are frequently seen by physicians in their day-to-day practice. Despite the relevance of musculoskeletal education for medical practice, ongoing research suggests that medical students are not receiving the training they need to manage musculoskeletal conditions after they graduate. To better understand the current gaps and design sustainable solutions, we assessed the musculoskeletal curriculum at the DeGroot School of Medicine. Based on the strengths and weaknesses of the curriculum identified, an online learning tool was developed for students to use during their clinical rotation in orthopedic surgery through a survey and MSK knowledge assessments. The results of the evaluation demonstrate that the learning tool holds promise in helping students to learn about musculoskeletal medicine.

## ADJUNCT SCIENTISTS

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**Meredith Vanstone, PhD**  
Associate Professor, Family Medicine

Dr. Meredith Vanstone is an Associate Professor in the Department of Family Medicine, and an adjunct scientist in MERIT and the Centre for Health Economics and Policy Analysis. Her training includes a PhD in Health Professions Education (Western University, 2012) and postdoctoral training in Health Policy (McMaster, 2013). Her research program examines patient experiences of socially and ethically complex aspects of healthcare, with an eye to improving those experiences through policy and educational intervention.

“As PI, I am leading a CIHR funded grant on the topic of decision-making about cannabis use during pregnancy and lactation, from the perspective of pregnant people and prenatal clinicians. With a team of multi-disciplinary collaborators in Canada and the United States, we have conducted two systematic reviews and have collected primary qualitative data from 52 pregnant and breastfeeding people who made a decision about cannabis use. The first of our primary qualitative studies has been accepted for publication in CMAJ, with additional analyses to follow. The next phase of this study will involve data collection from clinicians who counsel about cannabis use in pregnancy and lactation.

As Co-PI with Dr. Julia Abelson (Department of Health Research Methods, Evidence & Impact), I lead a CIHR-funded project grant on the topic of patient engagement within health systems decision-making. With a team of co-investigators spanning coast-to-coast, this McMaster-led initiative will examine the health human resource of patient partners and advisors within health systems. In 2021, we completed a systematic review with over 500 included studies, helping to provide a characterization of the profuse literature surrounding this new health system role. We also conducted a nationwide survey of patient partners and have submitted two manuscripts for publication, with more analyses planned. The next step of this project involves qualitative data collection from patient partners and organizational staff who work with patient partners.

As Co-PI with Dr. Melissa Kimber (Department of Psychiatry, Neuroscience & Behaviour) and Dr. Donna Stewart (University of Toronto), I am leading a Public Health Agency of Canada-funded evaluation and implementation of education materials designed to assist health and social service providers to recognize and respond to those who have experienced family violence. We have completed an Environmental Scan of existing training resources and conducted interviews with over 100 physicians, social workers, and trainees about their educational needs. This project has prompted additional funding from the Royal College of Physicians and Surgeons of Canada and from the Centre of Excellence on PTSD to run trials of this education material with clinicians serving particular patient populations.

My graduate students and postdoctoral trainees bring a wealth of enthusiasm, expertise, and curiosity. Working with them is truly the best part of my job. Accordingly, my most-anticipated 2022 projects are all trainee-led, including an investigation of social values to inform the implementation of lung cancer screening (M. Pahwa), an exploration of moral distress in primary care providers (M. Molinaro), examination of ethical and organizational issues relevant to the diffusion of pharmacogenomic technology in primary care (A. Cernat), and an examination of what and how physicians learn to recognize and respond to people who have experienced intimate partner violence (A. Cavanagh).”

## ADJUNCT SCIENTISTS

**Lara Varpio, PhD**  
Adjunct Assistant Clinical Professor, Medicine



Dr. Lara Varpio is Professor of Medicine, and Associate Director of Research for the Center for Health Professions Education at the Uniformed Services University of the Health Sciences (USUHS). Dr. Varpio spent the first 6 years of her career at the University of Ottawa, Canada before moving to Washington DC, USA to join USUHS.

Dr. Varpio's research uses qualitative methodologies and methods, integrated with theories from the Social Sciences and Humanities, to investigate questions relating to how individuals (e.g. clinicians, patients, researchers, etc.) collaborate and perform in teams and organizations. Her most recent work is related to: (i) collaboration principles of military interprofessional healthcare teams; and (ii) health professions education scholarship units and scholars (e.g. the factors affecting the success of units in Canada, the US, Australia, and New Zealand; the careers of early career medical educators). Dr. Varpio also works extensively with individual health professions educators from several specialties (e.g. surgery, internal medicine, nursing, social work, etc.) and in a wide range of topics. Dr. Varpio is internationally recognized for her expertise in qualitative research methods and methodologies (e.g. from grounded theory to autoethnography, and from visual rhetorical discourse analysis to think-aloud interviews) and in theory (e.g., Actor Network Theory, New Institutionalism, Dialectics, etc.).

Dr. Varpio has secured over \$5.5 million USD in research grants (nearly \$3 million as Principal Investigator), has given +120 peer-reviewed conference presentations, disseminated +140 peer-reviewed publications, and given keynote talks at many international conferences in medical education. She has led invited sessions at the annual conferences for the Association for Medical Education in Europe (AMEE), the Association of American Medical Colleges (AAMC), and the International Conference on Residency Education (ICRE). She has given invited talks at hospitals and medical schools across America and around the world (e.g., Australia, Canada, and Taiwan).

Dr. Varpio has won many awards over her career. Most recently, she was selected by the Fulbright Scholarship committee to mentor and host a Fulbright Scholar award winner from Australia—an honor she gladly accepted. In 2019, she was selected as one of twelve inaugural Karolinska Fellows. She was also selected as the Early Career Medical Educator's of Canada's 2020 award winner for their mentorship award. Other awards recognize individual manuscripts including, for instance, having two different 2017 publications be among the 20 top downloaded articles in their respective journals (i.e., *Medical Education* and *Perspectives on Medical Education*).

Dr. Varpio is an Associate Editor for *Perspectives on Medical Education* and *Advances in Health Sciences Education*. She has been an invited editor for special issues of *Academic Medicine* and *Perspectives on Medical Education*, and two special manuscript series in the *Journal of Graduate Medical Education*. She has served on the Association of American Medical Colleges' (AAMC) national Medical Education Meeting planning committee since 2013 (and will be Chair for 2019-2021). She is past-Chair of the Association for Medical Education in Europe's (AMEE) grant committee and sits on the Royal College of Physicians and Surgeons of Canada's (RCPSC) grant committee. In 2017, Dr. Varpio joined the RCPSC's Key Literature in Medical Education (KeyLIME) podcast (with followers in +80 countries and +120,000 downloads annually).

## SCHOLARS

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**Anita Acai, PhD**  
Assistant Professor,  
Psychiatry and Behavioural  
Neurosciences

Dr. Anita Acai is an assistant professor and education scientist in the Department of Psychiatry and Behavioural Neurosciences at McMaster University. She holds a MSc in health sciences education and a PhD in psychology and health professions education. Dr. Acai is an interdisciplinary researcher whose work combines qualitative and quantitative methods to understand and address issues related to equity and wellbeing in the health professions. She also conducts research in the areas of assessment, learner engagement in classroom-based teaching sessions, and the scholarship of teaching and learning. Dr. Acai is currently the interim coordinator of the Researching the Impact of Service-provider Education (RISE) Project (<https://riseproject.mcmaster.ca>), a national, multi-year study funded by the Public Health Agency of Canada to better understand health and social service providers' needs and preferences related to family violence education. To learn more about Dr. Acai, please visit her website at <https://anitaacai.com>.

**Ellen Amster, PhD**  
Associate Professor,  
Family Medicine & Religious  
Studies



Dr. Ellen Amster is the Jason A. Hannah Chair in the History of Medicine at McMaster University and appointed to the Departments of Family Medicine and Religious Studies. Her research engages transnational medical histories and public health, focusing especially on global health, traditional healing, women's histories, and imperialism. From her 2013 book, *Medicine and the Saints: Science, Islam, and the Colonial Encounter in Morocco, 1877-1956* (Austin: University of Texas Press), she developed a global health and Arabic study abroad program for McMaster students in Morocco. She founded the Morocco-Canada network in maternal and infant health with support from a 2017 CIHR global health population health grant and her 2020-2025 SSHRC IG project is entitled, "The Other is Me: Transvestism, Hybridity, and Cosmopolitan Identities in Colonial and Post-Colonial Morocco." At McMaster, Dr. Amster provides a regular speaker series open to the campus in the history of medicine. Her teaching includes history of public health for the MPH and MD programs, research electives and professional competencies for MD students in the Michael DeGroote School of Medicine, and Islamic and gender studies in the Department of Religious Studies. Dr. Amster developed the AMS-funded history of medicine and medical humanities research portal, with hundreds of libraries, archives, museums, digital collections, and grants for research projects and the medical community.





**Emily Block, MSc**  
 CPD Curriculum Developer & Education  
 Research Lead  
 Continuing Professional Development Office

Emily Block completed her MSc of Health Science Education from McMaster University and a BSc in Medical Sciences from Brock University. At McMaster University, she works as a curriculum developer and education research lead in Continuing Professional Development. Contributions to medical education include: clinical environment's impact on clinical learning and teaching; needs assessment methods; data-driven learning; patient voice in curriculum design; design thinking in medical education.



**Daniel Brandt Vegas, MD**  
 Associate Professor,  
 General Internal Medicine

Dr. Daniel Brandt Vegas is a Clinician Educator in the Department of Medicine at McMaster University. He received his MHPE from the University of Illinois at Chicago, and is currently focused on developing a novel program evaluation strategy for post-graduate medical education programs to increase the amount and quality of data gathered and enable advanced analyses to inform goal focused, achievable program specific strategic plans. He is the deputy program director for the Clinician Educator AFC diploma program at McMaster University.

His other interests are systems improvement, end of life care, and clinical reasoning. Daniel is mainly focused on the interface between clinical practice and medical education scholarship, and the tension that exists between the pressing urgency of the clinical world and the growing body of science in different areas of medical education. Daniel's role as a Clinician Educator, and world view in general, are largely informed by his erratic background in life, making his way from his native Venezuela, eventually zig-zagging up to McMaster. Daniel strongly believes in language, in a broad sense. This is often the source of arguments, but also many interesting conversations.



**Deepak Dath, MD**  
 Professor, Surgery

Dr Deepak Dath is a professor of surgery at McMaster University. His current educational projects include research on validating a simple tool to measure the quality of educational materials and understanding how medical students decide to choose a career in general surgery. His main focus is in leadership in education. Dr. Dath is co-founder of the TISLEP leadership summit and the sanokondou (<https://www.sanokondou.com>) group of educators who aim to make leadership education accessible to physician trainees and training programs worldwide. He is a faculty of the CLIME (Canadian Leadership in Medical Education) course and the co-chair of developing CLIME II. Dr. Dath is working to develop value based or character based leadership training.

# SCHOLARS

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**Leslie Martin, MD**  
Assistant Professor,  
General Internal Medicine

Dr. Leslie Martin is an Assistant Professor with the Department of Medicine, within the Division of General Internal Medicine. She completed a Masters in Health Professions Education at Maastricht University. Dr. Martin is currently the Program Director for the Internal Medicine Residency Program. She remains involved in the McMaster University Clinical Educator Program, and recently stepped down as the Assessment Unit Lead. Her research interests include applying qualitative methodology to explore coaching, feedback and learning in postgraduate medical education during the era of competency based medical education (CBME). She has been involved in the design, implementation and now evaluation of the CBME for the Division of General Internal Medicine at McMaster University. Lastly, she has a clinical and research interest in addictions medicine, and is co-chair of the Inpatient Addictions Medicine Service at St. Joseph's Healthcare Hamilton and Hamilton General Hospital.



**Monica Molinaro, PhD**  
Postdoctoral Fellow,  
Family Medicine

Dr. Monica Molinaro is a Banting Postdoctoral Fellow in the Department of Family Medicine exploring patient and health care provider experiences of health inequity in primary care. Monica completed her PhD in Health and Rehabilitation Sciences from Western University, her Master of Science in Kinesiology from Wilfrid Laurier University, and her Honours Bachelor of Science in Life Sciences from McMaster University. Her research interests include using qualitative methodologies to explore patient, health care provider, and caregiver experiences of providing and receiving care. Her specific expertise, developed during her PhD, lies in using critical narrative methodologies, as well as moral distress as an analytic lens, to explore health care providers' experiences of caregiving.



**Som Mukherjee, MD**  
Associate Professor,  
Oncology

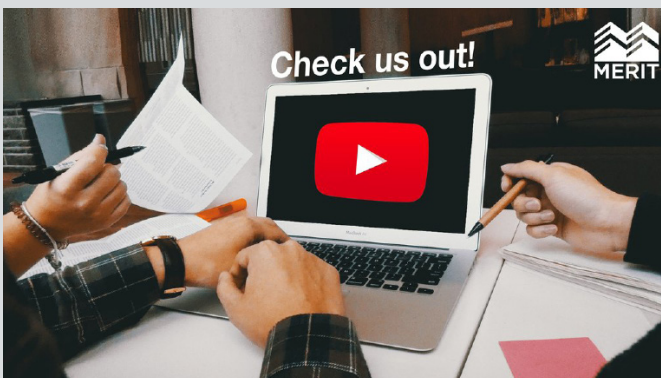
Dr. Som Mukherjee is an Associate Professor in the Department of Oncology, Division of Medical Oncology at McMaster University. He completed a two year oncology research fellowship combined with a Masters in Health Research Methodology at McMaster University. He recently completed a 9+ year term as program director for the McMaster medical oncology residency training program and a 2 year term as national program director subcommittee chair for the Royal College of Physicians and Surgeons Medical Oncology Specialty Committee. His research interests in education include evaluation of resident wellness programs, assessment of teaching using electronic modules for resident education, integration of entrustable professional activity (EPA) assessments within objective structure clinical skills examination (OSCE) and evaluating various aspects of new competency based medical education (CBME) programs within existing residency training programs. His clinical areas of interest include the management of patients with breast and genitourinary malignancies.

**Mohammad Zubairi, MD**  
Assistant Professor, Pediatrics



Dr. Zubairi is a Developmental Pediatrician at Ron Joyce Children’s Health Centre & Associate Professor in the Department of Pediatrics at McMaster University. He is the Division of Developmental Pediatrics Educational Resource Person (ERP), and also lead for training and education with the McMaster Autism Research Team (MacART). He is co-leading the development of the Equity Advocate and Allyship Program through Faculty Affairs and the Equity, Diversity and Inclusion Advisory Committee (EDIAC). He is a member of the Creativity and Humanism team with the Program for Faculty Development. As a MERIT Scholar, Dr. Zubairi is leading several studies in health professions education including an understanding of the knowledge-to-practice continuum in the emergency room care of children and youth with autism spectrum disorder, and how to enhance reflection on culture among undergraduate and graduate health professions students. He has also been the Department of Pediatrics lead on a project looking at pandemic adaptations in education, and the impact on trainees and faculty in collaboration with MERIT Scientists.

## MERIT is on YouTube!



The MERIT YouTube channel houses the Rounds archives, scientist profiles, recorded plenary presentations and more.

Big thank you to MERIT Multimedia Assistant, Aljeena Qureshi, for her hard work filming and editing content for the channel!



# MEMBERS

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**Bashayer Abdulla**, MSc Health Research Methodology Program

**Tala Abu-Hijleh**, Medicine

**Ali Al Maawali**, AFC Clinician Educator Program

**Arden Azim**, Medicine

**Bojana Babic**, Pediatrics

**Alison Baker**, Family Medicine

**Ereny Bassilious**, Pediatrics

**Amanda Bell**, Family Medicine

**Emilie Beyls**, MSc Health Science Education Program

**Joanne Britto**, Medicine

**Kat Butler**, Medicine (University of Toronto)

**Kyla Caners**, Emergency Medicine (Queen's University)

**Alice Cavanagh**, Medicine & Health Policy

**Alexander Chorley**, Pediatrics & Emergency Medicine

**Shivani Dadwal**, Medicine

**Victoria David**, AFC Clinician Educator Program

**Alise de Bie**, MacPherson Institute

**Chante de Freitas**, MSc Health Science Education Program alum

**Anahita Dehmoobad Sharifabadi**, Radiology

**Crystal Fong**, Radiology

**Michelle Howard**, Family Medicine

**Andrea Hunter**, Pediatrics

**Bronte Johnston**, Midwifery & Medicine

**Sarrah Lal**, Medicine

**Marissa Laureano**, Medicine

**Claire Lee**, General Internal Medicine

**James Leung**, Pediatrics

**Marie Leung**, General Internal Medicine

**Robin Mackin**, Pediatrics

**Arianna Mazzeo**, Medicine

**Zahra Merali**, General Internal Medicine (Western University)

**Siraj Mithoowani**, Medicine

**Shawn Mondoux**, Emergency Medicine

**Trishana Nayiager**, PhD Health Research Methodology Program

**Quang Ngo**, Pediatrics

**Simon Overduin**, General Internal Medicine

**Maurine Parzen**, Nursing

**Jose Pereira**, Family Medicine

**Dilshan Pieris**, Medicine (University of Toronto)

**Maria Pratt**, School of Nursing

**Jason Profetto**, Family Medicine

**Inge Schabert**, Family Medicine

**Natasha Snelgrove**, Psychiatry

**Danielle Soucy**, Family Medicine

**X. Catherine Tong**, Family Medicine

**Hugh Traquair**, General Internal Medicine

**Yuding Wang**, Pediatric Urology (Children's Hospital of Los Angeles)

**Heather Waters**, Family Medicine

**Erin Williams**, MSc Health Science Education Program

**Jason Woodfine**, General Internal Medicine

**Marco Zaccagnini**, School of Physical and Occupational Therapy (McGill University)

"In just a few short months, MERIT has already helped me build my network of collaborators in education scholarship. It is now my home-base to learn about new research developments in education and to get feedback on my own innovation or research ideas. NERD has been a great venue to showcase my work and to learn about what's new and exciting in education across the Faculty of Health Sciences."

**Dr. Siraj Mithoowani**,  
Member

## POST-DOCTORAL FELLOWS

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**Shera Hosseini, PhD**  
Post-Doctoral Fellow, Department of Family  
Medicine, MERIT & McMaster Institute for  
Research on Aging (MIRA)

Dr. Shera Hosseini received her Ph.D. from the University of Waterloo in Public Health and Gerontology and her master's in clinical Neuroscience from McMaster University. Her postdoctoral work at the Department of Family Medicine is a collaboration between McMaster Institute for Research on Aging and MERIT which employs research and program evaluation to examine important issues related to health professions education and its impact on geriatric health and care of older adults. Her work is published in peer-reviewed journals and presented at scientific venues.

**Yusuf Yilmaz, PhD**  
Post-Doctoral Fellow, MERIT & Continuing  
Professional Development Office (CPD)



Dr. Yusuf Yilmaz is a postdoctoral fellow at MERIT and CPD Office, and a researcher-lecturer in the Department of Medical Education at Ege University, Izmir, Turkey. He earned his BSc and MSc in computer education and instructional technology from Dokuz Eylul University, and PhD in computer education and instructional technology from Middle East Technical University. During his masters, he visited the University of Edinburgh for three months with funding from the Council of Higher Education of Turkey in order to examine the state of mobile learning in the UK in regard to his thesis. He studied blended learning in faculty development during his PhD dissertation.

Dr. Yilmaz is an interdisciplinary researcher who uses quantitative and qualitative approaches to examine instructional technology in medical education for faculty and students. His research focuses on faculty development, instructional design, and program development and evaluation with a focus on educational technology and artificial intelligence. Previously, he has collaborated with researchers in several other disciplines of education, and medicine, particularly instructional design and methods at online learning environments. He has worked in several institutional and national projects about instructional technology.

# MERIT STAFF

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**Samantha Applewhaite**  
Administrative Assistant



**Mark Lee**  
Research Assistant



**Betty Howey**  
Research Assistant



**Aljeena Qureshi**  
Multimedia Assistant



**Amy Keuhl**  
Project Officer



**Anita Riddell**  
Program Coordinator



**Heba Khan**  
Research Assistant



**Mary Lou Schmuck**  
Research Assistant

# MERIT MEMBERSHIP

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The MERIT program is dedicated to building a community of practice around health professions education. There are two levels of membership for application:

## **Member and Scholar**



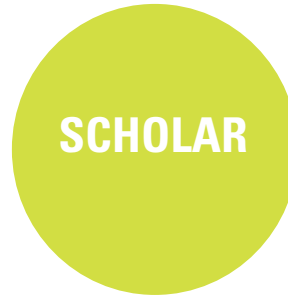
**MEMBER**

### **Benefits:**

- MERIT affiliation
- Profile in MERIT communications
- Opportunity for project consultation with one of our scholars or scientists

### **Responsibilities:**

- Regular attendance at our monthly MERIT Rounds
- Presentation at MERIT rounds



**SCHOLAR**

### **Benefits:**

- Profile in MERIT communications
- Opportunity for project consultation with one of our scholars or scientists
- Internal competition for pilot research funding
- Access to office space and research assistant support (limited)
- Access to internal peer review of applications, publications and academic mentorship

### **Responsibilities:**

- Peer consultations with Scientists
- Scholarly paper review
- Regular attendance at our monthly MERIT Rounds
- Presentation at MERIT Rounds

# AWARDS AND HONOURS



**Teresa Chan**

Continuing Professional Development, FHS  
Appointed to Associate Dean

Early Career Medical Educators  
Champion Award

McMaster University  
University Scholar

Royal College  
Award for Early-Career  
Leadership in Medical Education



**Sandra Monteiro**

Canadian Association  
for Medical Education  
(CAME)

Meridith Marks New  
Educator Award



**Jonathan Sherbino**

Society for Teaching and  
Learning in Higher Education  
3M National Teaching  
Fellowship

McMaster University  
William Walsh Award for  
Educational Excellence



**Matthew Sibbald**

Undergraduate Medical  
Education Program,  
McMaster University  
Appointed to Associate Dean

CAME  
Certificate of Merit Award

McMaster University  
President's Award for  
Outstanding Contributions  
to Teaching and Learning;  
Postgraduate Medical  
Education Award



**Ranil Sonnadara**

Compute Ontario  
Appointed to President,  
Chief Executive Officer  
and Chief Research  
Officer



**Meredith Vanstone**

Health Science Education  
Graduate Program, Faculty  
of Health Sciences  
Appointed to Interim  
Assistant Dean



# ACTIVE GRANTS



## Academic Family Medicine Associates Research Grant Competition

*Undergraduate medical education policies that influence the choice of Family Physician practice location: A mixed methods study of geographic disposition during training and in practice*

## CAEP Emergency Medicine Advancement Fund

- *A qualitative study aimed at identifying barriers and facilitators to EPA acquisition in emergency medicine*
- *Harnessing machine learning in the age of competency-based medical education*
- *Using Natural Language Processing and Machine Learning to rate narrative assessment comments in Competency Based Medical Education*

## Canadian Institutes of Health Research

*Examining patient partner and advisor roles in the Canadian health system: A mixed-methods policy analysis*

## Centre of Excellence on Post-Traumatic Stress Disorder Funding

*Evaluating an educational intervention for improving provider recognition and response to IPV experienced by veterans and their families: A mixed method pilot randomized trial*

## College of Medicine Research Award (CoMRAD)

*Enhancing competency-based medical education assessment with machine learning, natural language processing, and other advanced analytic techniques*

## Compute Ontario Grant

*Ethics, equity, and effectiveness in big data research*

## Dr. Parveen Wasi Resident Research Grant in Medical Education

*Connecting Interprofessional Competencies to CanMEDS: Towards a Blueprint of IPE in PGME*

## Education Scholarship Fund

*Retrospective observational analyses of the associations between the geographical disposition of McMaster-graduated physicians before medical school, in training, and eventual practice*

## eCampus Ontario Virtual Learning Strategy

- *CanadiEM Junior Learner Primer*
- *McMaster health professions education research: A digital primer*
- *Preparing health professional learners for clinical workplaces: a digital, interprofessional course*
- *Problem-Based Learning 2.0: Outcomes-based core educator and leader training for the health professions*
- *Theory Made Practical: An open-access faculty development resource for clinician educators*

## Family Medicine Associates Fund

*Overflowing Inbox: Resident and educator perceptions on the educational importance of indirect patient care activities*

## Fonds de recherche du Québec - Société et culture (FRQSC)

*Assessment within competency-based education programs: monitoring quality and considering consequences*

## Fulbright Scholarship

*Continuing professional development: Are medical professionals getting what they need?*

## Institute of Health Sciences Education, Innovation, and Research Seed Grant

*When it all doesn't go according to plan: A hermeneutic phenomenology study of unmatched CaRMS applicants*

## MacPherson Institute Priority Areas for Learning and Teaching Grant

*Pursuing excellence and innovation in applied qualitative health research at McMaster University*

## McMaster Faculty of Health Science PGME Medical Education Research Grant

- *EEG Point of Care Learning Resource*
- *Managing disorienting dilemmas on the route towards professionalization: a qualitative study of a Canadian adult cardiology residency training program*
- *Virtual Interprofessional Simulation for Junior Learners*

## McMaster Surgical Associates Education Grant

*A Self-Directed Learning Tool for Orthopedics in Undergraduate Medical Education*

### **Medical Council of Canada Education Research Grant**

- *Examining the Role and Practical Implications of Philosophical Positions in Assessment*
- *Differential Diagnostic Support (DSS) Tools*

### **Physicians' Services Incorporated Research Grant**

- *Diagnostic Error and Decision Support Systems*
- *Enhancing metacognition in simulation: Evaluating the impact of eye-tracking augmented debriefing*
- *Improving physician preparation to respond to patients who have experienced sexual violence*

### **Program Objective Memorandum (POM) Funding, US Department of Defense**

*Implicit and risky - exploring translational activities in developing assessment program for competency based medical education*

### **Public Health Agency of Canada**

*Preparing Providers to Recognize and Respond to Family Violence*

### **Royal College of Physicians and Surgeons of Canada - Associated Medical Services CanMEDS Research Grant**

*Canvassing for CanMEDS: How are the Intrinsic CanMEDS Roles integrated into EPAs?*

### **Royal College of Physicians and Surgeons of Canada - Associated Medical Services Phoenix Call-to-Caring Funding**

*Connecting Interprofessional Competencies to CanMEDS: Towards a Blueprint of IPE in PGME*

### **Royal College of Physicians and Surgeons of Canada - Intramural Grant**

*Reframing learning and assessing: How do assessors learn in the context of workplace-based assessment?*

### **Royal College of Physicians and Surgeons of Canada - Strategic Initiatives Grant**

*Framework for Simulation Based Equity, Diversity and Inclusion: Exploring the validity of simulated diversity*

### **Society of Directors of Research in Medical Education**

*Interview Elicitation Techniques in Health Professions Education: An Integrative Review*

### **Royal College of Physicians and Surgeons of Canada - Medical Education Research Grant**

- *Consultation or Crowd Sourcing?: Exploring the diagnostic accuracy of individual and group diagnosis*
- *Evaluating an educational intervention for improving residents' recognition and response to child maltreatment – a mixed method acceptability and feasibility study with a pilot randomized trial*
- *Evaluating rapid exemplar processing to improve diagnostic expertise*
- *When are we done? Exploring the longevity of CBME implementation*

### **Social Sciences and Humanities Research Council (SSHRC) Connection Grant**

*Research data management capacity building initiative: health professions education*

### **Social Sciences and Humanities Research Council (SSHRC) Insight Development Grant**

- *From synthesis to consensus: Characteristics of successful research teams in an interprofessional and interdisciplinary field*
- *Links in the chain: A data-driven approach to understanding the relationship between professional education and its outcomes*
- *Racial equity in medical education: Exploring sociocultural factors that help and hinder agency among racialized learners*

### **Université de Sherbrooke Fonds de développement pédagogique**

*Développement du raisonnement Clinique dans un curriculum predoctoral: quels sont les marqueurs du développement du raisonnement clinique et quelles activités pédagogiques y contribuent, à quel moment*

### **University of Calgary Health Science and Medical Education Research and Innovation Funding Competition**

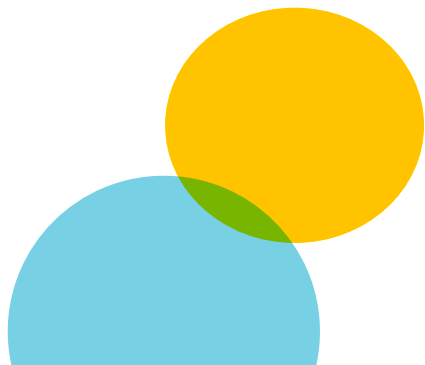
*Exploring the normalization of Competency-based Medical Education across Canada*

### **University of Ottawa Medical Education Research Grant**

*Elicitation Techniques to Enrich Qualitative Interview Data: An Integrative Review*

### **University of Ottawa Medical Education Research Grant**

- *Elicitation Techniques to Enrich Qualitative Interview Data: An Integrative Review*
- *The First Canadian Adult Cardiology Bootcamp: Impact on 1st year Cardiology Trainees' Knowledge, Self-Perceptions and CBD Stage*



# PRESENTATIONS AT CONFERENCES & INVITED PRESENTATIONS AT MEETINGS

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14th Annual Day in Faculty Development, McMaster Faculty of Health Sciences\*

American Educational Research Association (AERA) Conference\*

Association for Academic Psychiatry Annual General Meeting.\*

Association of Medical Educators of Europe (AMEE)\*

Australia and New Zealand College of Anaesthetists (ANZCA) \*

Australian and New Zealand Association for Health Professional Educators (ANZAHPE) Conference

Best Practices in Education Rounds, University of Toronto \*

Bradley Tabletop Games Symposium, Bradley University \*

CAEP Medical Student Forum\*

Calgary Health Humanities Conference\*

Canadian Association for University Continuing Education \*

Canadian Association of Emergency Physicians Conference\*

Canadian Association of Midwives Education Symposium \*

Canadian Conference on Medical Education\*

Canadian Pediatric Society Conference\*

Center for Health Professions Education and Scholarship (CHES) Island Medical Programs\*

Children's Hospital of Pennsylvania (CHOP) Medical Education Research Rounds

Competency-Based Medical Education Program Evaluation Summit\*

Continuing Professional Development Rounds, Division of Emergency Medicine, McMaster University\*

Continuously Connecting Canadian Regulators 2021\*

Council on Residency Directors of Emergency Medicine, Academic Assembly\*

CPD Research Symposium\*

EdTech 2021, Monash University\*

European Board of Medical Assessors\*

Family Medicine Forum\*

Global International Leadership Association: Reimagining Leadership Together\*

Grand Rounds, Department of Pediatrics, McMaster University\*

Grand Rounds, Division of Physical Medicine Rehabilitation, Department of Medicine, Western University\*

Harvard Macy Institute Virtual EdTech Course\*

Harvard Medical School, Continuing Medical Education Conference\*

Imperial College School of Medicine, London, UK and Lee Kong Chian School of Medicine, Singapore \*

International Association of Medical Science Educators (IAMSE)\*

International Conference of Residency Education \*

International Faculty Development Conference\*

Medical Education Forum 2021. Co-hosted by Polish Institute for Evidence Based Medicine, McMaster University Department of Medicine, and Jagiellonian University Medical College, Kraków, Poland\*

North York General Hospital Teaching & Learning Week\*

\* indicates virtual event

# PRESENTATIONS AT CONFERENCES & INVITED PRESENTATIONS AT MEETINGS

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Ontario Student Medical Education Research Conference\*  
Physical Medicine & Rehabilitation Division Rounds, McMaster University\*  
President's Retreat on Excellence in Inclusive Teaching, McMaster University\*  
Programmatic Assessment in CBME workshop. Postgraduate Medical Education Office, McMaster University\*  
Rogano Conference \*  
Society for Academic Continuing Medical Education (SACME) Annual Meeting\*  
Society for Academic Emergency Medicine 2021 Virtual Meeting\*  
Society of Critical Care Medicine Conference\*  
Sunnybrook Health Sciences Education Research Rounds\*  
The Generalists Meeting\*  
The Irish Network of Healthcare Educators (INHE)\*  
Trainees in the Association for the Study of Medical Education (TASME)\*  
UBC Technology in Emergency Care Conference 2021\*  
UHNBC ER Faculty Development Session\*  
Virtual Simulation 101: Faculty Development Workshop\*  
Virtually Unstoppable CORD Academic Assembly 2021\*  
Zucker School of Medicine at Hofstra / Northwell. Medical Education Research Rounds

## WHAT'S IN A NAME?

The MERIT logo is meant to evoke a number of themes.

Evokes the image of a mountain, a reference to our city and the Niagara escarpment



Suggests progress, ascending the scholarly work of others to achieve new understanding

Incorporates books, a reference to the scholarship and rich tradition that support our programs of research

Incorporates the letter 'M', a reference to our university

# MERIT SOCIAL MEDIA BY THE NUMBERS



YOUTUBE

## OUR VIEWERS



54.7K

IMPRESSIONS

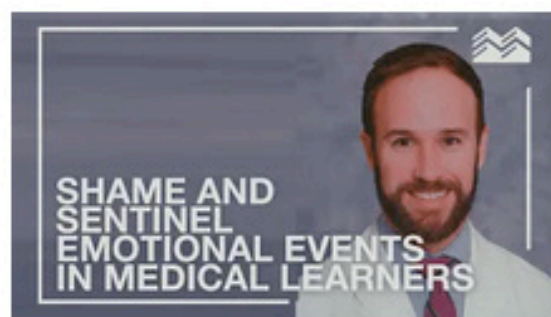
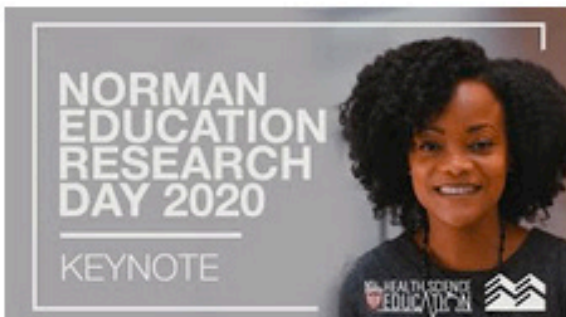
4.5K

VIEWS

419

HOURS OF WATCHTIME

## MOST VIEWED





## TWITTER

**306.2K**

IMPRESSIONS

**14.6K**


PROFILE VISITS

**1175**

FOLLOWERS

## TOP TWEET OF 2021

**MERIT** @MERIT\_McMaster

 Introducing... THE LIBRARY: Essential Papers & Resources for Health Professional Education. Explore the curated list of resources for your research, or even your next journal club!

<http://hpeworld.com> Watch the promo video here:

<https://youtu.be/JsZ2WJuaOdw> cc' @sherbino

**22.5K**

IMPRESSIONS



## MERIT ROUNDS

The Rounds profile emerging topics of interest and controversy in health professions education. Using a facilitated, interactive format, local and international presenters share ideas for discussion and debate.

### 2021 Rounds Event Listing

**Dr. Lara Varpio, Uniformed Services University/McMaster University & Dr. Meredith Young, McGill University**

Failure in Health Professions Education & Scholarship

**Dr. Adam Szulewski, Queen's University**

Moving the needle in simulation: Building on educational theory and clinical practice

**Dr. Marcia Anderson, University of Manitoba**

Anti-Racism in Health Professional Education  
*(in conjunction with John C. Sibley Awards Ceremony & Lecture)*

**Dr. Dan Schumacher, Cincinnati Children's Hospital Medical Center**

Defining the Future of Patient-Focused Assessment: Resident Sensitive Quality Measures and EPAs

**Dr. Pim Teunissen, Maastricht University**

Workplace curriculum design; connecting theory to practice  
*(in conjunction with Norman Education Research Day)*

**Sarrah Lal, McMaster University**

Measuring the acquisition of health innovation and entrepreneurial competencies in higher education

**Dr. Renate Kahlke, McMaster University**

When it's hard to do what's right: Mapping the influence of sociocultural factors on decision-making in clinical contexts

**Dr. Deena Hamza, University of Alberta**

Evaluating for Longevity: Exploring the Ecology of Change

**Rounds presentations can be found here:**

<https://bit.ly/3ltgrFx>



## MERIT THINKTANK

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MERIT *thinkTank* is an education research consultation service. Education scholars working on a project or research design can request a consult. MERIT Scientists and Scholars attend, bringing diverse perspectives that include: cognitive psychology, social sciences, kinesiology, qualitative and quantitative methodologies, psychometrics, and more.

Each consultation is 45 minutes long. A 15-minute presentation by the principle investigator is followed by a 30-minute facilitated discussion between the MERIT team and the PI.

### Previous *thinkTank* sessions include:

**Dr. Jamiu Busari & Dr. Deepak Dath**

Achieving the Aspirations of Competency by Design in PGME: The Role of Peer-assisted Teaching in Residents' Management and Leadership Development

**Satyam Choudhuri, Hassaan Abdel Khalik & Dr. Jason Profetto**

Revisiting Canadian Medical School Efforts to Increase Class Diversity: A Statistical Analysis

**Dr. Arden Azim & Dr. Matthew Sibbald**

Building a Theoretical Framework for Virtual Interprofessional Education

**Ajay Shah & Dr. Alessandra Palombo**

Evaluating the Family Medicine Experience (FME) Program: Does it increase student interest in family medicine?





## LUNCH & A LAB MEETING

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Introduced in 2020, MERIT is offering an opportunity to network, discover and discuss topics in health professions education. The featured guest will give an in-depth look into a topic in HPE and a presentation of their current work. This will also give individuals the chance to get their questions addressed related to their work and expertise.

### 2021 Lunch & a Lab Meeting Sessions

**Dr. Lawrence Grierson**

Practices and policies of medical school admissions: Developing evidence and balancing values to support selection decisions

**Dr. Sandra Monteiro**

Is clinical reasoning a process or a product?

**Dr. Monica Molinaro**

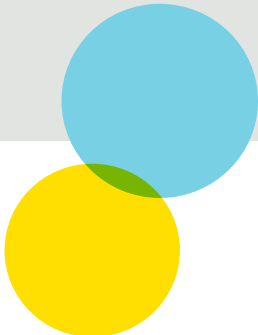
Using critical narrative methodologies to explore moral distress in health care providers

**Dr. Anita Acai**

Understanding Gender-based Analysis Plus (GBA+) for Research

"MERIT provides the Department of Medicine with both expert consultation on educational matters and with our only real access to pedagogical innovation. Having MERIT at McMaster both contributes strongly to the academic mission and expands our ability to do research into areas that we would otherwise be unable to reach."

**Dr. Mark Crowther, Chair  
Department of Medicine**



**Number of Attendees:**  
**140**



## **NORMAN EDUCATION RESEARCH DAY**

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Norman Education Research Day (NERD) is dedicated to celebrating the rich history and future of Health Professions Education research and scholarship across the Faculty of Health Sciences and McMaster University and is named after one of McMaster's longstanding faculty, **Dr. Geoff Norman**. Dr. Norman is a Professor Emeritus, a Scientist at MERIT, and a member of the Department of Health Research Methods, Evidence, and Impact.

Information about the day can be found at the NERD website:  
<https://www.normanresearchday.ca/>

### **Keynote Speaker**

#### **Dr. Pim Teunissen**

Pim Teunissen combines his work as the scientific director of the School of Health Professions Education (SHE), at the Faculty of Health Medicine and Life Sciences of Maastricht University with working as a gynecologist specialized in maternal fetal medicine at Maastricht University Medical Center, in the Netherlands. He is a professor of workplace learning in healthcare and uses his clinical experience to inform his research and vice versa. In his research, he focuses on how education supports learning from work. He does this by connecting concepts and methodologies from different scientific disciplines to pertinent issues within healthcare education. His research activities span the continuum from medical students to new consultants in a variety of specialties and he has published more than 100 scientific articles and book chapters related to workplace learning in healthcare.

### **Workplace Curriculum Design: Connecting Theory to Practice**

Full presentation can be found here: <https://bit.ly/37xe01M>

# PSI VISITING SCHOLARS EVENT

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This two-day conference allowed participants to engage with world-famous speakers discussing **mentorship in the health professions** with a specific lens on **equity, diversity and inclusion**. Topics included: the evidence for 'what works' with mentorship, mentorship & power, mentoring trainees, and health systems & mentorship.

The conference is part of the Visiting Scholars program sponsored by Physicians' Services Incorporated.

## Plenary Speakers



**Dr. Bridget O'Brien**  
University of California  
San Francisco



**Dr. Lisa Richardson**  
University of Toronto



**Dr. Sharon Straus**  
University of Toronto



**Dr. Sarita Verma**  
Northern Ontario  
School of Medicine

## Winning Research Proposals on Academic Mentorship

### **Dr. Robin Mackin & Dr. Teresa Chan**

Department of Pediatrics & Department of Medicine

**Project Proposal:** COACH (Clinical Observation and Change Handbook): A Novel Faculty Development Initiative

The introduction of competency based medical education (CBME) highlights the need for faculty to be versed in coaching. The translation of principles of coaching from other domains into medicine is a relatively new concept. Recognizing that most faculty do not have firsthand experience being coached within medicine highlights it as an important faculty development skill set. In order to facilitate successful implementation of CBME, we created a structured peer observation coaching program that allows faculty members to experience these new paradigms for themselves.

### **Dr. Sheila Boamah**

School of Nursing

**Project Proposal:** Exploring Female Faculty Perspectives on Worklife and Strategies for Academic Mentorship

Strong nursing faculty is paramount to promote disciplinary leadership and to prepare future nurses for practice. Our understanding of the factors associated with or predictive of nurse faculty retention and/or turnover is lacking. The aim of this review is to identify and synthesize the existing literature on factors contributing to nurse faculty shortage in Canada and implications on nursing practice.



## PANDEMIC EDUCATION ADAPTATIONS RESEARCH (PEAR)

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The COVID-19 crisis impacted the education of health professional students across all disciplines. It was important for each program to understand the impact of the education adaptations they made. In collaboration with various health professional programs across the Faculty of Health Sciences (FHS), MERIT has developed a 4-Stage education quality improvement project to evaluate the impacts of health professions education adaptations implemented throughout the Faculty in response to the COVID-19 pandemic. This project was completed in April 2021. More information about the project and the education adaptations can be found at <https://bit.ly/3n82RpR>

### Principles

- To operationalize a modular research project that can be adapted by all health professional programs within FHS who wish to participate.
  - This will provide support to each program to examine the impacts on their students from a QI perspective.
  - This will facilitate cross-program comparisons.
- To conduct all research remotely, via videoconference interviews or easily acquired education data.
- To minimize the commitment from practicing health professionals whose time is required elsewhere.

### Research Objectives

1. To describe the adaptation to typical education practices in each program, including the activities halted, adapted, postponed, and the accommodations put in place.
2. To measure the impacts of adaptations on key learning activities and outcomes.
3. To understand the perceptions of health professional trainees and educators experiencing these adaptations.

### PEAR Team (alphabetical order):

Dr. Lawrence Grierson, Mark Lee, Dr. Meredith Vanstone

# HEALTH PROFESSIONS EDUCATION RESEARCH (HPER) COURSE

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This open-access course introduces key ideas and processes in education scholarship. As academic health professionals, we are committed to advancing our field. If you are new to the health professions or new to education scholarship, this course provides a systematic, structured approach for you to consider before turning your big idea into scholarship.

The course is work at your own pace with a variety of publications, videos and podcast episodes.



Visit the HPER website here: <https://www.macpfd.ca/hper-curriculum>

# UNDERGRADUATE MEDICAL EDUCATION RESEARCH ELECTIVE

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Health professions education (HPE) research attempts to understand how health professionals learn and practice. This 5-week elective (typically held in the Winter term) introduced Faculty of Health Sciences students to education scholarship within the context of HPE. Students are exposed to a variety of HPE-related literature with the aim of broadening their knowledge of the domains of HPE (e.g., simulation, assessment, clinical teaching, etc.), and expanding their exposure to research design.

Each week, students came prepared to engage in discussion and inquiry on a specific HPE-related topic, facilitated by a MERIT scientist with expertise in that area of study.

## Speakers

Dr. Teresa Chan  
Dr. Geoff Norman  
Dr. Jonathan Sherbino  
Dr. Matthew Sibbald  
Dr. Meredith Vanstone

## Course Coordinator

Mark Lee



Exploring Education  
Scholarship in  
Health Professions  
Education  
Jan 14 - Feb 11  
2021

# MERIT MAPS

MERIT Maps helps find McMaster faculty members publishing in the health professions education literature. MERIT Maps is a program that visualizes author networks based on their publications. This app uses PubMed Central's databases to search McMaster University Faculty of Health Sciences affiliated researchers.

**MERIT Maps can be accessed at:** <https://meritmaps.ca/>

The screenshot shows the MERIT Maps website interface. At the top, there is a navigation menu with links: Home, UGME, PGME, Assessment, Teaching, Simulation, CBME, Leadership, Program Evaluation, Admissions, e-learning, Feedback, About, and Disclaimer. The MERIT logo is prominently displayed, with the text 'MCMASTER EDUCATION RESEARCH, INNOVATION & THEORY' below it. Below the logo, a brief description states: 'MERIT Maps helps find McMaster faculty members publishing in the health professions education literature. Customize a search. Use a live updated common search. Discover new collaborators. Grow your network.'

A search bar contains the text 'Competency-Based Medical Education' and a 'Build' button. Below the search bar, a network visualization shows a central node for 'Jonathan Sherbino' connected to several other authors, including: Ranil R. Sonnadara, Michelle Zeller, Anita Acai, Bandar Baw, Mark McRae, Christine Fallon, Donald Arnold, Victoria E. McKinnon, Matthew Leonard, Nicole Caccione, Alireza Mansouri, Andrew K. Hall, Elaine van Melle, Alexander Cholley, S. Lockett-Gatopoulos, Sandra Monteiro, Teresa Chan, and Brian Chan. A sidebar on the left shows 'MERIT Maps' with a close button, 'Study: 37', and 'Authors: 46'. A tooltip for 'Jonathan Sherbino' is visible, with the text 'Visit McMaster Experts page to see author details.' and a 'Show Author Details' button.

## THE LIBRARY ESSENTIAL PAPERS AND RESOURCES FOR HEALTH PROFESSIONAL EDUCATION

This open-access reading list is designed for clinicians, students and scholars who are interested to learn about the world of health professions education. The website has been curated into various topics related to HPE, including simulation, program evaluation, education leadership and more. All publications have been given a seal of approval from content experts in the field. Publications can be up-voted right on the website by visitors who think the article deserves a read.

**The Library can be accessed at:** <https://hpeworld.com/>

## SIBLEY AWARD

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The John C. Sibley Award for Excellence in Education for Part-Time Faculty is presented annually to a part-time faculty member who has made outstanding contributions to the education of health professionals. It is named for a former associate dean of the Faculty of Health Sciences who was known for his interdisciplinary approach to community health. This award is presented at the Sibley Lecture/MERIT Rounds.

### 2021 Sibley Award Recipient

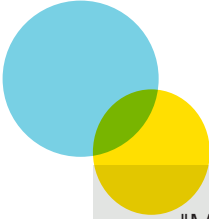
**Dr. Dorothy Bakker**

Associate Clinical Professor, Department of Family Medicine

Dorothy Bakker graduated from McMaster Medical School in 1990 and completed her Family Medicine Residency at the North Hamilton Community Health Centre in 1992. She has practiced in a variety of settings including rural family practice, university student health and immigration medical examination.



She is an Associate Clinical Professor in the Department of Family Medicine and has held various leadership roles at the Michael G. DeGroote School of Medicine including Director of Student Affairs at the Waterloo Regional Campus, Assistant Dean of McMaster Community & Rural Education (Mac-CARE) and the Chair of Professionalism Education. She is a tutor, examiner, and student advisor. Her research has focused on student wellness and distributed medical education. She has received Mentorship and Teaching Awards from the Waterloo Regional Campus and was the recipient of the OCFP Regional Family Physician of the Year Award for Region 3 in 2015.



"MERIT is instrumental for the School of Rehabilitation Science. MERIT provides excellent resources, support and most of all, community of practice, for our numerous faculty members that are engaged in rehabilitations education scholarship. We are also so grateful for the funding opportunities through MERIT!"

**Dr. Dina Brooks, Vice-Dean, FHS and Executive Director, School of Rehabilitation Science**

## SIBLEY LECTURE

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The Sibley Lecture is a special MERIT Rounds, and a component of the John C. Sibley Award for Excellence in Education for Part-Time Faculty.

### 2021 Sibley Lecture Speaker

#### **Dr. Marcia Anderson**

Dr. Marcia Anderson is Cree-Anishinaabe and grew up in the North End of Winnipeg. Her family roots go to Peguis First Nation and Norway House Cree Nation in Manitoba. She practices both Internal Medicine and Public Health as a Medical Officer of Health with Indigenous Services Canada- Manitoba Region. She is the Vice-Dean, Indigenous Health and the Executive Director of Indigenous Academic Affairs in the Ongomiizwin Indigenous Institute of Health and Healing, Rady Faculty of Health Sciences, University of Manitoba. She serves as the Chair of the Indigenous Health Network of the Association of Faculties of Medicine of Canada and the Chair of the National Consortium for Indigenous Medical Education. She is a Past President of the Indigenous Physicians Association of Canada and Past Chair of the Pacific Region Indigenous Doctors Congress. She was recognized for her contributions to Indigenous peoples health with a National Aboriginal Achievement Award in March 2011. In 2018 she was named one of the 100 most powerful women in Canada by the Women's Executive Network. Throughout the course of the COVID-19 pandemic, Dr. Anderson has been honored to serve First Nations communities as one of the leads of the Manitoba First Nation Pandemic Response and Coordination Team.



### Anti Racism in Health Professional Education

In order to address the pervasive anti-Black and anti-Indigenous racism in health care, anti-racist health professional education is a necessary step. This includes ensuring a learning environment that is safe for Black and Indigenous learners, a hidden curriculum that does not undermine formal curriculum elements, consideration of the workforce, and appropriate accountability mechanisms. Anti-racism efforts have to be at least as pervasive as the expressions of multi-level racism in health care and health professional education.

Full presentation can be found here: <https://bit.ly/3ppoiFg>



# HEALTH PROFESSIONS EDUCATOR AWARD

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The award is designed to encourage and reward the continued excellence of health professions education and scholarship within McMaster University. Nominees will be senior faculty and leaders in their respective educational schools that have made substantial contributions to education in the Faculty of Health Sciences including teaching, mentorship, educational scholarship, or research, throughout their careers. Supported by MSc Health Science Education Masters program and MERIT.

## 2021 Health Professions Educator Award Recipient

### **Dr. Azim Gangji**

Professor, Department of Medicine

Dr. Azim Gangji is a Professor of Medicine at McMaster University and a leader in education. He is the inaugural Vice President of Education at SJH Hamilton. He has held leadership positions in UGME and PGME at McMaster including the inaugural Clerkship Director of Medical Specialties Selectives, Program Director of Nephrology, Fellowship Director of 4 fellowships including AFC Director of Solid Organ Transplantation. In these roles, he has been recognized nationally for innovation in education. Dr. Gangji has also been pivotal in redesigning how education in Medical Specialties is organized and delivered.



At a national level, Dr. Gangji is the Chair, Canadian Society of Transplant in Education and hold numerous leadership positions at the Royal College with a special interest in the area of AFCs.

Internationally, Dr. Gangji is also involved in the promotion and delivery of education in global health settings and has been instrumental in the development of clinical programs in Guyana in the provision of kidney care and in promoting medical training in Canada.

## EDUCATION SCHOLARSHIP FUND

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The Faculty of Health Science Education Scholarship Fund is to encourage and provide support for the development and/or evaluation of novel and innovative approaches to health sciences education in the Faculty of Health Sciences. Supported by Education Services.

### 2021 Education Innovation Fund Recipients

#### **Dr. Oren Levine**

Assistant Professor, Department of Oncology

**Project Proposal:** Virtual strategies for teaching communication skills to residents for difficult conversations in oncology



The overall goal of the proposed study is to establish an effective communication skills curriculum for oncology trainees that addresses difficult conversations with cancer patients. We aim to develop sustainable educational resources that can be administered remotely. The pilot work in this feasibility study will support a future larger randomized control trial (RCT) evaluating the relative impact of different training experiences. Specific objectives for this project include: 1) Develop a curriculum for critical conversations in oncology using ELMs and virtual SP encounters; 2) Explore the feasibility of randomizing learners to ELMs and virtual SPs vs ELMs alone; and 3) Develop a virtual OSCE including scenarios and rating scales and explore the feasibility of multisite participation for oncology residency training programs in Ontario.

#### **Dr. Leslie Martin**

Assistant Professor, Department of Medicine

**Project Proposal:** How trainees use entrustable professional activities for learning: A cross-center comparison



In this study, we will seek to understand if, when and how postgraduate medical education trainees use EPAs as a mechanism to facilitate learning in the workplace, across different sociocultural environments. Specifically, we will explore whether EPAs have an impact on trainees' recognition and use of learning cues. Using a socio-constructivist lens, we will take advantage of cultural differences between programs and disciplines to understand if these learning cues are contextually bound or broadly shared when engaging with EPAs.

# MERIT SCHOLAR RESEARCH GRANT

The MERIT Scholar Research Pilot Grant supports health professions education pilot projects (innovation or research). The grant is offered on an annual basis and open to Scholars of the program. Supported by MERIT.

## 2021 Scholar Grant Recipients

### Dr. Anita Acai

Assistant Professor, Department of Psychiatry and Behavioural Neurosciences

**Project Proposal:** Evaluating the Implementation of Competence by Design in Psychiatry



The Royal College of Physicians and Surgeons of Canada (RCPSC) mandated a phased transition to a CBME curriculum known as Competence by Design (CBD), beginning in 2017. The Psychiatry Residency Training Program at McMaster University underwent a pilot phase of this transition in 2019 and has now fully rolled out the curriculum for all new residents entering the program. While the program has engaged in local quality improvement efforts to understand experiences more generally around curriculum deployment, there has not yet been a formal and scholarly evaluation of the transition experience of residents, faculty, and program leaders. The present study will explore the following research question(s): 1) What have been the experiences of residents, faculty, and program leaders in psychiatry in transitioning to a new CBD curriculum? 2) What are some of the strengths and challenges being faced by the program in implementing different elements of CBD into practice?

### Dr. Monica Molinaro

Post-Doctoral Fellow, Department of Family Medicine

**Project Proposal:** Improving health professions education to support primary care providers as they navigate the entwinement of health and social needs



My research bridges the health and social sciences to investigate the entwinement of social and medical need amongst persons who experience health inequities. My postdoctoral program of research engages with these conversations to investigate two central aims. First, I will critically analyze primary care providers' (PCPs) stories of moral distress in caring for patients experiencing health needs related to social inequities. Second, I will elucidate patients' narratives of experiencing social inequities and seeking primary care. This knowledge can be used to improve health professions education and better prepare providers to serve this patient population. The research questions are: 1) How do primary care physicians describe their experiences of providing care to patients affected by health needs related to social inequities? 2) How do individuals with identified health needs relating to social inequity narrate their experiences of navigating health care and/or primary care?

# MERIT - HSED FELLOWSHIP

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The fellowship seeks to: 1) promote health sciences education research; 2) facilitate MERIT scientists' supervision of MSc Health Science Education (HSED) thesis students; and 3) integrate HSED students into the MERIT community.



The fellowship provides a two-year financial stipend to one full-time thesis-stream HSED student. For the duration of the fellowship, the MERIT-HSED fellow will be considered a MERIT Scholar, with commensurate benefits and responsibilities.

## 2021-2022 Fellow

**Farah Hasan**

**Supervisor:** Dr. Ranil Sonnadara, PhD (Associate Professor, Surgery)

Farah completed her undergraduate thesis in the Goldreich Tactile Perception Lab at McMaster University. Prior to beginning graduate studies in the HSED program, she worked as a Recruitment Officer, travelling across Ontario to talk about McMaster with prospective high school students. For her graduate thesis, she is conducting research on the efficacy of virtual reality for anatomy education with Dr. Ranil Sonnadara and Dr. Bruce Wainman. In the community, Farah is a speaker with Project Sleep's Rising Voices of Narcolepsy program, where she works to improve public understanding of sleep disorders, and shares insights from her own experience as a patient and advocate.



"In just one semester, I've been exposed to countless new ideas and theories that have me questioning everything I thought I knew about teaching and learning. I'm told that the existential crisis I had when we discussed criticisms of PBL in class means that I'm right on track for a grad student in education research! It's an honour to be the first fellow and I'm excited to tackle challenging questions with the support of this incredible community."

# PAPERS & PUBLICATIONS

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\* Names of MERIT Scientists & Scholars bolded

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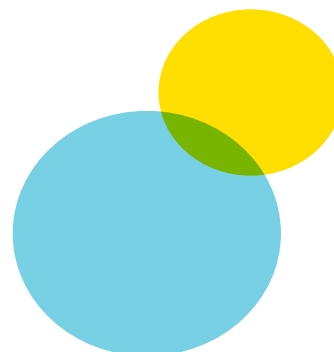
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