

## Table of Contents

Dr. Venkat Bhat.....	4
Clinical Researcher .....	4
Dr. Yvonne Bombard.....	4
Clinical Researcher .....	4
Dr. Justine Cohen-Silver .....	4
Clinical researcher.....	4
Dr. Katherine Dunlop .....	5
Clinical researcher.....	5
Dr. Rick Glazier .....	5
Community Health Researcher .....	5
Dr. Neeru Gupta.....	6
Clinical and Laboratory Researcher .....	6
Dr. Charles Kassardjian .....	6
Clinical researcher.....	6
Dr. Michael Kutryk .....	7
Laboratory Researcher.....	7
Dr. Howard Leong-Poi.....	8
Clinical and Laboratory Researcher .....	8
Dr. Jonathan Maguire .....	8
Clinical Researcher .....	8
Dr. Tom Marotta .....	8
Clinical Researcher .....	8
Dr. Seema Marwaha .....	8
Community Health Researcher .....	8
Dr. Flora Matheson .....	9
Community Health Researcher .....	9
Dr. Vitor Mendes Pereira .....	10
Clinical Researcher .....	10
Dr. Gaspard Montandon .....	10

Laboratory Researcher.....	10
Dr. Rajeev Muni .....	10
Clinical Researcher .....	10
Dr. Aaron Orkin .....	11
Clinical and Community Health Researcher.....	11
Dr. Janet Parsons .....	11
Community Health Researcher.....	11
Dr. Andrew Pinto.....	11
Community Health Researcher .....	11
Dr. Dalia Rotstein .....	12
Clinical Researcher .....	12
Dr. Sean Rourke .....	12
Community Health .....	12
Dr. Rola Saleeb .....	13
Clinical Researcher .....	13
Dr. Raphael Schneider.....	13
Clinical and Laboratory Researcher .....	13
Dr. Michelle Sholzberg .....	13
Clinical and Laboratory Researcher .....	13
Dr. Carolyn Snider .....	13
Clinical and Community Health Researcher.....	13
Dr. Julian Spears.....	14
Clinical Researcher .....	14
Dr. Anne Stephenson .....	14
Clinical Researcher .....	14
Dr. Shazeen Suleman .....	15
Community Health Researcher.....	15
Dr. Manav Vyas .....	15
Clinical and Community Health Researcher.....	15
Dr. Catherine Yu.....	15
Community Health Researcher.....	15

Dr. Yeni Yücel .....	16
Clinical and Laboratory Researcher .....	16
Dr. Darren Yuen .....	16
Clinical and Laboratory Researcher .....	16

## Dr. Venkat Bhat

*Clinical Researcher*

[Venkat Bhat | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](http://stmichaelshospitalresearch.ca)

### **Current Project and your role within it (subject to change):**

- Systematic reviews/data analysis on the following for mental health within the Interventional Psychiatry Program:
  - A. Emerging pharmacological treatments
  - B) Novel neurostimulation treatments
  - C) Digital Interventions
- The students will work within the Interventional Psychiatry Program at St. Michael's Hospital. Students will have the opportunity to work within a multidisciplinary environment with choice of projects within the 3 program pillars, program details are below: <http://stmichaelshospitalresearch.ca/research-programs/interventional-psychiatry/>
- You would participate in:
  - Systematic review/meta-analysis- Based on the specific project/pillar within the program, supervision will be provided by an experienced team with expertise in this domain.
  - Data analysis: Students interested in data analysis have the opportunity to work on a focused project using existing databases with active supervision by an multidisciplinary team.

## Dr. Yvonne Bombard

*Clinical Researcher*

[Yvonne Bombard | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](http://stmichaelshospitalresearch.ca)

### **Current Project and your role within it (subject to change):**

- Genetics Navigator
- Developing a patient platform for genetics
- You would participate in:
  - Qualitative interview analysis and overseeing stakeholder meetings

## Dr. Justine Cohen-Silver

*Clinical researcher*

[Justine Cohen-Silver | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](http://stmichaelshospitalresearch.ca)

### **Current Project and your role within it (subject to change):**

- Intersectoral early years support: engaging the Parkdale and St. Jamestown communities to improve access to resources and social determinants
- This is an opportunity to engage in various stages of the research process from literature review, to conducting community-based participatory research and asset mapping within a community.
- Your responsibilities would include:
  - organizing community meetings
  - obtaining consent
  - attending the meetings
  - helping the research team to manage the data
  - attending team meetings

## Dr. Katherine Dunlop

*Clinical researcher*

[Katharine Dunlop | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](#)

### **Current Projects and your role within them (subject to change):**

- There are 3 potential projects:
  - 1) Impact of SES on neural and molecular markers of anhedonia in MDD
    - Uses existing data from CAN-BIND-1 to look at the relationship of SES, inflammatory markers and reward processing.
    - You would clean dataset and run the analysis.
  - 2) Association of irritability & suicide risk in MDD
    - This study (currently under REB review) uses two fMRI tasks to look at the relationship between irritability & suicide risk.
    - You would code behavioural tasks, and pilot them outside of the MRI
  - 3) Relationship of psychosocial stress and anhedonia in MDD
    - Uses existing data to look at the relationship between stress markers (cortisol), and fMRI markers related to stress
    - You would clean dataset and run the analysis.

## Dr. Rick Glazier

*Community Health Researcher*

[Rick Glazier | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](#)

### **Current Project and your role within it (subject to change):**

- How does exercise impact persons living with HIV?
- People with HIV are living longer with the health-related consequences of HIV. This review will build on previous evidence that shows that performing aerobic exercise or a combination of aerobic and resistive exercise at least three times per week for at least six weeks is safe and can lead to improvements in specific outcomes.
- You would learn about and participate in the following:
  - How a good systematic review is conducted
  - The use of specialized software to conduct systematic reviews
  - Literature reviews and decision-making on included studies
  - How to establish if a study might have “bias” and types of study designs or other elements that can lead to bias
  - Data analysis
  - Contribution to the manuscript
- Our approach is collaborative in nature.
- We include students fully in the research process, introduce them to other experts in the field and strongly encourage cross-disciplinary enquiry and networking.
- Our students are considered integral members of the team during their time working with us. We often rely on our students – once initial training is complete – to lead the reviews and report back to us at intervals throughout the project.

## Dr. Neeru Gupta

*Clinical and Laboratory Researcher*

[Neeru Gupta | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](http://stmichaelshospitalresearch.ca)

### **Current Project and your role within it (subject to change):**

- Imaging a New ALS Biomarker in the Eye.
- We have recently discovered the presence of axon spheroids in the retinas of ALS patients, and believe that the eye may be an important window into ALS axon injury through the detection and monitoring of these retinal spheroids.
- The primary goal of this project is to develop a method to reliably image retinal spheroids for clinical use in ALS patients to support and advance their care with attention to quality-of-life considerations through a multidisciplinary approach.
- The widely available clinical eye imaging devices such as scanning laser ophthalmoscopy and optical coherence tomography will be used to define a surrogate retinal marker of spheroids. These will be validated neuropathologically using molecular markers for spheroids to ensure that the optical signature obtained matches the profile of interest before proceeding to train, test and validate the imaging signature of spheroids using machine learning techniques.
- The students on this project will help the graduate student with staining, imaging of human eye sections, analyzing image data with R and MATLAB.

## Dr. Charles Kassardjian

*Clinical researcher*

[Charles Kassardjian | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](http://stmichaelshospitalresearch.ca)

### **Current Project and your role within it (subject to change):**

- Development of a comprehensive database of Myopathy patients at St. Michael's Hospital
- Myopathies are a large group of disorders affecting skeletal muscle primarily.
- Because of the rarity of these diseases, information on complications, comorbidities, treatments, hospital utilization, and overall outcomes are not well-established.
- In addition, the overall management needs of patients with myopathy is not characterized in Canada (which allied health resources are most useful, what investigations should be conducted while being mindful of wasteful or over-testing).
- The primary aim of this project is to create a database of myopathy patients seen at St. Michael's Hospital, including collection of key parameters.
- This database and these data will spur further research and quality improvement initiatives including detailed analysis on short-term outcomes, resource utilization, and treatment modalities used in a real world setting, including analysis by age and sex to look for variations.
- These data will also be used to create expedited investigation pathways, identifying gaps in care, and identify patients in whom critical screening and safety interventions have not been performed (a major quality improvement gap).
- You would be responsible for:
  - Chart abstraction using a well-developed data abstraction form.
  - Interacting with the project team, including Neurologists and Rheumatologists.
  - Regular touch-points and meetings with the research team, including PIs (Primary Investigators).
  - Help with summarizing data, data abstraction and statistical analysis.
  - The goal is to present findings at conferences and to write one or more manuscripts.

- To help link our database with the few established international databases available.

## Dr. Michael Kutryk

Laboratory Researcher

[Michael Kutryk | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](http://stmichaelshospitalresearch.ca)

### Current Project and your role within it (subject to change):

- Project 1: CD34 antibody coating of endovascular devices made of polyurethane to capture circulating endothelial progenitor cells for enhanced endothelialization
  - Polyurethane, an organic polymer material, is widely used in cardiovascular applications such as valve structures, pacemaker leads and ventricular assist devices.
  - However, polyurethane calcification and associated thrombosis remain major obstacles hindering its medical applications.
  - Antibody immobilization to capture circulating endothelial progenitor cells for enhanced surface endothelialization appears a promising solution to prevent thrombosis on implanted cardiovascular devices.
  - This study is designed to coat polyurethane materials using CD34 antibodies to combat the pro-thrombotic property of polyurethane. We have developed a novel antibody coating method applicable to various materials, which will be used for the current project.
  - Under the supervision of a senior lab staff, you would be carrying out the following tasks:
    - coating polyurethane materials with CD34 antibody using the method developed in the lab
    - examination of the coated surface with scanning electron microscope (SEM)
    - cell binding testing of the coated surface (tissue culture techniques required)
    - SEM and immunostaining analysis of explanted polyurethane devices from pigs.
- Project 2: ENG deficiency results in interleukin-8 dysregulation in primary human endothelial cells
  - Hereditary hemorrhagic telangiectasia (HHT) is a rare, autosomal dominant genetic disease characterized by vascular malformations.
  - Mutations in endoglin gene (ENG) cause type 1 HHT (HHT1) that accounts for the majority of diagnosed HHT cases.
  - ENG, primarily expressed in endothelial cells (ECs), regulates various aspects of EC function, such as cell proliferation, migration and tube-like structure formation.
  - To date, the mechanism of ENG mutations contributing to EC dysfunction, and ultimately abnormal vessel formation remains elusive.
  - Using ENG deficient primary human EC models, we have shown that lack of ENG results in aberrant VEGF signaling, leading to cell dysfunction (Transl Res. 2021;235:129-143).
  - Recently, we observed interleukin-8 dysregulation in ENG knockdown ECs with RT-qPCR.
  - IL-8 is an angiogenic cytokine, and we are interested in further examining how IL-8 alteration affects EC function.
  - Under the supervision of a senior lab staff, the summer student will be carrying out the following tasks:
    - EC culture and transfection
    - examination of gene expression using RT-qPCR and Western blotting
    - cell proliferation, migration and tube-like structure assays
    - data summarizing and statistical analysis.

## Dr. Howard Leong-Poi

*Clinical and Laboratory Researcher*

[Howard Leong-Poi | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](#)

### **Current Project and your role within it (subject to change):**

- Exploring the role of S100A6 in cardiovascular biology
- Mostly in vitro work studying mechanisms of action of S100A6 in myocardial biology and angiogenesis.
- With instruction and supervision from graduate students, technicians, and lab managers, you would be performing:
  - Cell cultures
  - PCR
  - Matrigel angiogenesis assays

## Dr. Jonathan Maguire

*Clinical Researcher*

[Jonathon Maguire | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](#)

### **Current Project and your role within it (subject to change):**

- TARGet Kids!
- TARGet Kids! is a large children's cohort study which aims to understand the early determinants of lifelong health.
- You would be assisting with:
  - Subject recruitment
  - Data entry
  - Working collaboratively with graduate students and study staff

## Dr. Tom Marotta

*Clinical Researcher*

[Tom Marotta | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](#)

### **Current Project and your role within it (subject to change):**

- Assessment of intracranial aneurysms using augmented reality
- This project aims to improve peri-operative assessment of intracranial aneurysms using a 3D mixed-reality environment.
- Using a Hololens headset and advanced 3D aneurysm software, endovascular neurosurgeons will be able to make faster, better, improved aneurysm assessments during surgery leading to improved working projections for surgery and selection of treatment devices, thus improving efficacy of treatment and patient outcomes.
- You would be responsible for helping run a study comparing assessment and measurements of aneurysms using a conventional 3D workstation and the augmented reality headset.
- You would collect and analyze the data from specific tasks performed by 15 neuroradiologists, neurosurgeons and radiographers using both methods.

## Dr. Seema Marwaha

*Community Health Researcher*

[Seema Marwaha | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](#)

**Current Project and your role within it (subject to change):**

- Experiences of publishing bias in both academic and non-academic medical literature
- It is well documented that Black and Indigenous expert voices are underrepresented in both academic and non-academic health publications.
- Whether it's research articles, opinion editorials or reported journalism, this is problematic because it can perpetuate the lack of representation of Black and Indigenous voices in the generation of future research questions, in knowledge translation, and in care delivery.
- We train physicians to be advocates and speak for those who don't have a voice, but we also should be committed to ensuring Black and Indigenous peoples voices are heard directly.
- This project has two aims:
  - To understand what the experience has been of Black and Indigenous experts when seeking to speak to the media or be published.
  - To develop a set of best practices for publications to operate in a culturally safe and anti-racist manner and pilot this with the digital publication HealthyDebate.ca
- You would assist with data collection, literature review and preliminary analysis.

**Dr. Flora Matheson**

*Community Health Researcher*

[Flora Matheson | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](http://stmichaelshospitalresearch.ca)

**Current Project and your role within it (subject to change):**

- Breaking the Cycle of Incarceration
- Most people released from custody have bail, probation, or parole conditions that they must follow for a specific period of time, such as orders to abstain from substance use, attend treatment, and find employment.
- Release conditions are often difficult to meet in the context of re-entry challenges and other complex needs, like Traumatic Brain Injury (TBI).
- Research shows that about 80% of people incarcerated have experienced a head injury which negatively affects brain function, causing problems with memory, learning, abstract thinking, emotional regulation and social interactions.
- Violating release conditions can result in a return to custody or bail revocation. The primary objectives of this project are to examine:
  - How individuals with a history of TBI experience and manage supervision conditions
  - How control agents in the criminal justice system apply, monitor, and enforce conditions in practice
  - How interactions between control agents and persons subject to conditions shape violation trajectories.
- You would work closely with all members of the team and have an opportunity to learn about the criminal justice system.
- You would be trained to perform literature searches, assist with participant recruitment, and conduct data collection. The project's community-based focus will also allow our diverse team of trainees to build community engagement skills.

## Dr. Vitor Mendes Pereira

*Clinical Researcher*

[Vitor Mendes Pereira | Department of Surgery \(utoronto.ca\)](#)

### **Current Project and your role within it (subject to change):**

- Using advanced angiographic imaging and model simulation to study pulsatile tinnitus sound production in venous restrictive diseases of the head and neck
- Pulsatile tinnitus is a debilitating sound which can be produced by transverse sinus stenosis in the brain. To date, understanding of how the sound is produced is still unknown.
- This project will aim to recreate the sound in vascular silicone models, record the sound using advanced microphones, and capture flow instabilities using advanced digital subtraction angiographic imaging in our lab.
- You would:
  - Help run a series of experiments using our 3D printed vascular model set-up
  - Perform an analysis of the results
  - Help with the drafting of a manuscript.
- The models will be connected to a continuous pulsatile flow system and contrast particle tracking using high temporal resolution digital subtraction angiography will be used to assess flow instabilities. A microphone will also be used to try to detect pulsatile sound production in vitro.

## Dr. Gaspard Montandon

*Laboratory Researcher*

[Gaspard Montandon | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](#)

### **Current Project and your role within it (subject to change):**

- Identification of new therapies to prevent opioid overdose
- You would test new drugs using our drug discovery platform in larval zebrafish, and use our behavioral assays to test a series of drug libraries to determine their toxicity, liability, and ability to prevent opioid overdose.
- Your job would include:
  - Performing experiments in larval zebrafish
  - Preparing a report to present data in front of colleagues
  - Learning several techniques used in the lab.

## Dr. Rajeev Muni

*Clinical Researcher*

[Vice-Chair Clinical Research | Department of Ophthalmology \(utoronto.ca\)](#)

### **Current Project and your role within it (subject to change):**

- Imaging in Retinal Diseases
- We have a number of projects related to multimodal imaging in Vitreoretinal diseases. You would be working with an established clinical research team to investigate the association of imaging biomarkers with various clinical outcomes.
- Your job would include:
  - Working collaboratively in a large group
  - Grading images
  - Collecting data from electronic medical records

- Attending weekly research meetings
- You may have the opportunity to work with datasets and prepare manuscripts/abstracts.

## Dr. Aaron Orkin

*Clinical and Community Health Researcher*

[Aaron Orkin | Department of Family & Community Medicine \(utoronto.ca\)](#)

### **Current Project and your role within it (subject to change):**

- Friendly 42 Project: Improving compassionate care for people with mental health crises in the emergency department
- Retrospective chart review on emergency mental health problems in the St Joe's ED.
- Your job would consist of chart review and data entry

## Dr. Janet Parsons

*Community Health Researcher*

[Janet Parsons | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](#)

### **Current Project and your role within it (subject to change):**

- COVID-19 vaccination decision-making: Perspectives from equity seeking groups
- This project entails interviews and focus groups with community members from 3 equity seeking groups in Ontario:
  - Seasonal agricultural workers
  - Persons newly immigrated to the province
  - Black/African/Caribbean communities
- The project entails working with 3 community-based organizations providing services to each of the groups.
- Your job would include:
  - Helping with participant recruitment
  - Scheduling interviews
  - Supporting qualitative data collection and analysis
  - Assisting with assembling literature
  - Manuscript preparation.

## Dr. Andrew Pinto

*Community Health Researcher*

[Andrew Pinto | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](#)

### **Current Project and your role within it (subject to change):**

- Setting the stage for coordinated anti-racism interventions across Departments of Family Medicine, Emergency Medicine and in-patient General Internal Medicine at St. Michael's Hospital of Unity Health Toronto
- Racism is a persistent problem in Canadian healthcare, with discrimination contributing to poor outcomes and distrust in health authorities.
- During COVID-19, racial inequities were apparent and distrust impacted vaccine uptake.
- Through a recent scoping review, we identified key strategies for effective organizational interventions to address racism:

- Leadership buy-in
- Dedicated resources
- Training
- Transparency
- Partnership with marginalized communities.
- Building on those findings, this project aims to advance coordinated anti-racism interventions across primary care, emergency medicine and in-patient care by addressing the following questions:
  - What are the perspectives of patients and health providers working in primary care, emergency care and in-patient settings on ways to address systemic racism in healthcare?
  - Is it acceptable and feasible to engage patients and health providers in joint work to co-design locally implemented anti-racism interventions?
- In this project, you would be supporting the following tasks:
  - Development of the interview and survey protocol, including pilot testing
  - Participant recruitment
  - Survey administration
  - Conducting interviews
  - Focus group preparation
  - Reporting of preliminary findings to inform the co-design session & dissemination to funders and stakeholders

## Dr. Dalia Rotstein

*Clinical Researcher*

[Dalia Rotstein | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](http://stmichaelshospitalresearch.ca)

### **Current Project and your role within it (subject to change):**

- Clinical and demographic characteristics of people with NMOSD (neuromyelitis optica spectrum disorder) and MOGAD (MOG antibody disease) in Canada: a national, cross-sectional analysis
- NMOSD and MOGAD are rare inflammatory disorders of the Central Nervous System.
- Dr. Rotstein, launched the first prospective cohort study of adults with NMOSD and MOGAD in Canada in 2021. This will be a first, cross-sectional analysis of clinical and demographic features in these two populations.
- Your job would include:
  - Analyzing and summarizing data
  - Writing manuscripts
  - Data entry in REDCap database for CANOPTICS study

## Dr. Sean Rourke

*Community Health*

[Sean B. Rourke | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](http://stmichaelshospitalresearch.ca)

### **Current Project and your role within it (subject to change):**

- I'm Ready to Know Research Program
- This is an implementation science program to provide low barrier access to HIV self-testing to reach the undiagnosed with HIV and to support them for care and prevention services
- You would be working on literature searches, social media development for recruitment, and data analysis support

## Dr. Rola Saleeb

*Clinical Researcher*

[Rola Saleeb | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](http://stmichaelshospitalresearch.ca)

### **Current Project and your role within it (subject to change):**

- Molecular testing in Cancer
- The project will study different tools and methods that makes molecular/genetic testing in Cancer feasible and accessible
- You would create tissue microarrays from formalin fixed paraffin embedded cancer tissue.
- We have optimized the protocol in our lab. That method allows for a more rapid and affordable approach to testing biomarkers in cancer tissue

## Dr. Raphael Schneider

*Clinical and Laboratory Researcher*

[Raphael Schneider | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](http://stmichaelshospitalresearch.ca)

### **Current Project and your role within it (subject to change):**

- Extracellular vesicles as biomarkers in multiple sclerosis
- You would isolate extracellular vesicles from blood plasma of people with MS, then use Western blot and flow cytometry to detect protein biomarkers associated with extracellular vesicles.

## Dr. Michelle Sholzberg

*Clinical and Laboratory Researcher*

[Michelle Sholzberg | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](http://stmichaelshospitalresearch.ca)

### **Current Project and your role within it (subject to change):**

- IRON MOM and Take Control Period
- IRON MOM is a patient centric mobile application and website aimed to raise awareness of iron deficiency anemia during pregnancy. Take Control Period (TCP) is a website aimed to raise awareness regarding heavy menstrual bleeding.
- With support of the study team, you would work on the redevelopment and redesign of the IRON MOM and Take Control Period to improve knowledge translation and exchange.
- Specific tasks include:
  - Liaison between service provider and study team
  - Drafting lay language for the IRON MOM and TCP tools
  - Assisting in patient interviews to improve the tools
  - Support research ethics board submissions.

## Dr. Carolyn Snider

*Clinical and Community Health Researcher*

[Carolyn Snider – MAP Centre for Urban Health Solutions \(maphealth.ca\)](http://maphealth.ca)

### **Current Project and your role within it (subject to change):**

- Connections: Evaluation of the ED Outreach Worker Program

- The ED Outreach Worker Program connects people experiencing homelessness with an outreach worker in the ED who then works with the individual during their stay and in the weeks after to connect or re-connect with community programs that help address basic needs.
- You would participate in the process evaluation.
- You would use de-identified data to analyze various outcomes of the program such as participant numbers, numbers connected to health providers (including family MDs, specialty care, including addictions and mental health care) shelter, income support, food support etc.
- This information will be used to prepare a larger evaluation grant to be submitted in the Fall of 2022.
- You would participate in the grant writing process as well.

## Dr. Julian Spears

*Clinical Researcher*

[Julian Spears | Department of Surgery \(utoronto.ca\)](#)

### **Current Project and your role within it (subject to change):**

- Assessment of intracranial aneurysms using augmented reality
- This project aims to improve peri-operative assessment of intracranial aneurysms using a 3D mixed-reality environment.
- Using a HoloLens headset and advanced 3D aneurysm software, endovascular neurosurgeons will be able to make faster, better, improved aneurysm assessments during surgery leading to improved working projections for surgery and selection of treatment devices, thus improving efficacy of treatment and patient outcomes.
- You would be responsible for helping run a study comparing assessment and measurements of aneurysms using a conventional 3D workstation and the augmented reality headset.
- You would collect and analyze the data from specific tasks performed by 15 neuroradiologists, neurosurgeons and radiographers using both methods.

## Dr. Anne Stephenson

*Clinical Researcher*

[Anne Stephenson | Institute of Health Policy, Management and Evaluation \(utoronto.ca\)](#)

### **Current Project and your role within it (subject to change):**

- The clinical epidemiology of adults living with cystic fibrosis.
- The adult cystic fibrosis clinic at SMH is the largest in North America.
- We have several ongoing projects that you would have the opportunity to be involved in, including bone disease in CF, impact of new medications used to treat CF, examining pregnancy in CF as well as writing and uploading content for our adult CF website.
- You would be involved in a variety of activities including:
  - Data collection
  - Research ethics board submissions
  - Journal club and critical appraisal
  - Honing presentation skills
  - Gaining exposure to a variety of areas within medicine.
- Our research team will provide a supportive and safe environment where students can learn from other summer students and respirology staff by sharing research projects and interacting and learning from people living with cystic fibrosis and other respiratory diseases.

- You would also learn about the various allied health disciplines that work closely with Respiriologists.
- In addition to all this, you can expect to have fun!

## Dr. Shazeen Suleman

*Community Health Researcher*

[Shazeen Suleman – CFD \(centreforfacdev.ca\)](http://centreforfacdev.ca)

### **Current Project and your role within it (subject to change):**

- Caring for our most marginalized: a cross-country comparison of community health centre (CHC) models for pediatric care in Canada and the USA
- Multi-phased approach using the Donabedian model as a conceptual framework to examine structure, processes and outcomes:
  - Integrative review of the published and gray literature
  - Key stakeholder interviews working in and with CHCs in Canada and the US
- You would be assisting with an integrative review using a health policy framework, and conducting stakeholder interviews.

## Dr. Manav Vyas

*Clinical and Community Health Researcher*

[Manav Vyas | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](http://stmichaelshospitalresearch.ca)

### **Current Project and your role within it (subject to change):**

- Loneliness and medication use in older adults
- One in seven Canadian older adults report loneliness and the latter is associated with poor health outcomes. We will evaluate the association between loneliness in older adults and the risk of polypharmacy or use of psychotropic medications using data from the Canadian Longitudinal Study of Aging.
- You would assist with:
  - Data cleaning and handling.
  - Data analyses - knowledge of SAS/SPSS/R-studio is a must.
  - Abstract preparation and manuscript writing.

## Dr. Catherine Yu

*Community Health Researcher*

[Catherine Yu | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](http://stmichaelshospitalresearch.ca)

### **Current Project and your role within it (subject to change):**

- Department of Medicine
- Creation and validation of faculty mentorship database
- You would assist with:
  - Identifying mentor-mentee dyads based on central documentation and elicitation from leadership
  - Confirming mentor mentee dyads
  - Entering this information into the database

**Dr. Yeni Yücel**

*Clinical and Laboratory Researcher*

[Yeni Yücel | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](https://stmichaelshospitalresearch.ca)

**Current Project and your role within it (subject to change):**

- Disturbed Fluid Drainage Around Eye: An Important Missing Piece in the Puzzle of Vision Loss in Astronauts?
- The classic hindlimb unloading (HU) mouse model will be used to simulate spaceflight.
- Experimental mice will be monitored weekly for intraocular pressure, body weight and retinal changes with SPECTRALIS in vivo imaging platform.
- At the endpoint, photoacoustic non-invasive imaging will be performed to quantify fluid drainage from the brain to the eye with a lab-developed dual-labeled tracer.
- To validate in vivo findings, mouse tissues will be processed for sectioning, staining and imaging with hyperspectral microscopy. The imaging data will be processed with R and MATLAB for advanced statistical analysis.
- You would help the graduate student with the weekly mouse monitoring, postmortem tissue collection, sectioning, staining, imaging as well as data analysis.

**Dr. Darren Yuen**

*Clinical and Laboratory Researcher*

[Darren Yuen | Research at St. Michael's Hospital \(stmichaelshospitalresearch.ca\)](https://stmichaelshospitalresearch.ca)

**Current Project and your role within it (subject to change):**

- Developing new diagnostics and treatments for fibrosis
- You would work with a senior lab member to characterize organ fibrosis in animal models and possibly human tissue. This characterization will be done primarily with histologic (and possibly molecular) techniques.