Unprecedented Times and Extraordinary People

In early March 2020, as information was starting to circulate about the transmission of COVID-19, we were deep into a busy, yet productive academic term in the VDL. Lab members were collecting and analyzing data, undergraduate projects were entering their final phase, conference travel was planned, and we were developing projects for the summer and fall 2020 terms. Then with rapid pace, our world changed, and we were asked to change with it. The VDL team has responded to the challenges with remarkable collaboration, and collaboration and LOTS of ZOOM meetings!
Welcome!

Introduction from Dr. MacDonald

I am sending my greetings for this newsletter from my new home office (aka my son Hayden’s bedroom). As for many of you, the transition to remote work for me was rapid and frantic and was initially dominated by crisis management and concerns for safety and security. Many of you will know that I split my time between my academic appointment in Kinesiology and an administrative role as Dean of Science. Looking back, my involvement in McMaster Universities senior leadership crisis management team was exhausting yet certainly helped to inform the shutdown of the VDL.

It has now been over 100 days since I have been in my office on campus and while we are making tentative plans for the resumption of human participant research, McMaster will be delivering all academic programming remotely in the fall. The members of the VDL have continued to advance their research and to support each other in this new environment. In fact, we have found some new ways to connect, conduct research, communicate and celebrate achievements. Despite the challenges of the pandemic, I believe the most transformative and lasting impacts on our lab have been the recent events that have challenged us to evaluate how we are engaging with issues of racism, equity, diversity and inclusion. The Faculty of Science at McMaster participated in #SHUTDOWNSTEM on June 10, 2020. We have since dedicated several lab meetings to talk about how we can do better in the VDL to implement inclusive and equitable policies and shift our culture and conduct to reduce and eliminate barriers for underrepresented minority groups. There is much work for us to do and we look forward to sharing our action plan with you in upcoming newsletters. I recognize that we are part of a global community of academics and I invite you to reach out and let me know if there are any ways in which we can support you and your research groups during these times of disruption.
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We are thankful to be able to connect remotely during this time.

Todd Prior
Lab Manager
Dr. Emily Dunford
Postdoctoral Fellow
Dam Nguyen
Computer Specialist

Nicole Proudfoot
PhD
Jem Cheng
PhD Candidate
Jennifer Williams
PhD Candidate
Sydney Valentino
PhD Student
Connor Droog
MSc Student

Joshua Cherubini
Thesis Student
Zaryan Masood
Thesis Student
Meg Rathod
Thesis Student
Christina Pizzola
Placement Student

Joshua Turner
Placement Student
Dani Joshi
Volunteer
Andrea Borges
Volunteer
Rachael Moorhouse
Volunteer

Current VDL Members
How do you stay active during a pandemic? Getting enough exercise is challenging enough without the barriers we are currently facing like limited to no access to facilities, parks, and trails; and I knew that if I was struggling, chances are my friends were too. For a couple of years now, I’ve been teaching fitness classes every week at McMaster’s university gym (The Pulse), so when everything shut down it didn’t take long for me to miss this aspect of my weekly routine. After being inspired by a friend’s Zoom workout class, I started hosting Workout Wednesdays @ 5pm in my apartment bedroom surrounded by 20 other pals on Zoom – mostly fellow McMaster kin grads and alumni. The 60-min workouts are typically whole-body cardio and strength HIIT-style with “equipment” that can be thrown together with things most people have at home. We’re officially on week 11 and going strong. The class has transitioned to be offered under the Pulse again and is now open to anyone in the McMaster/Hamilton community and beyond who wants to join. As a close-knit group, it’s been difficult spending time apart from my friends and fellow kin graduate students. These Zoom workouts have been awesome for continuing to connect with each other while catching up over burpees and plank jacks!
In the month of May, the Human Performance and Health Research Laboratory led by Dr. Jamie Burr at the University of Guelph put out a call to exercise science research teams and labs in Canada and around the world to compete in a lab vs. lab exercise challenge to decide who as a collective was the fittest of them all. Eager to prove ourselves, the VDL stepped up to the plate and recruited some honorary members, including our MacStroke Canada (Dr. Ada Tang’s lab) pals, Billy Bostad (Dr. Marty Gibala’s lab), Dr. Trevor King, Dr. Baraa Al-Khazraji, and Kristen Parise. There were 4 events in total: (1) 1K time trial, (2) most pushups in one go, (3) most pullups in one go, and (4) most popular exercise or fitness-inspired TikTok video. The competition was fierce with 7 other strong, athletic teams, some of which had members with Olympic experience to show for it! We were definitely intimidated, but our strategy was to remain focused on our training and stay optimistic. This strategy paid off because in an unexpected twist, our team tied for 3rd place with the Sheel Lab at the University of British Columbia!! Our best performance was in the TikTok music video to the tune of She Blinded Me With Science, which involved contributions from the entire team and landed us the silver, putting us well in position for the podium. Solid performances all around for the remaining events just sealed the deal! Participating in this Exercise Science Fitness Challenge was such a fun way to change up our regularly scheduled “work from home” programming. We’re looking forward to owning the bragging rights till the next challenge comes around!

Massive congratulations to the Burr lab for bagging the gold overall! And thanks to their group for bringing us all together for this challenge.
Project Updates

Hormonal contraceptives and Early Risk Indicators (HER) Study – Update from Jennifer Williams

The HER Study is researching the short- and long-term effects of hormonal contraceptives on vascular function, structure, and cardiorespiratory outcomes in premenopausal women. We are actively recruiting women who are taking various forms of hormonal contraceptives (ex. oral contraceptives, non-oral contraceptives like the ring, patch, and IUD) and those that are naturally cycling to look at phasic differences in vascular assessments across their cycles. Building on prior research from our lab group in 2018, led by Dr. Ninette Shenouda (PhD graduate) and Stacey Priest (MSc graduate), we are expanding our investigation to look at vascular function and structure in both upper and lower limbs, and in response to several vascular stimuli, including exercise. We will also be looking at underlying mechanisms, specifically at cellular expression of key receptors and regulatory enzymes.
Project Updates

As a collaborative project, we are working with valuable insight from the Human Performance Lab, led by Dr. Martin Gibala, collaborating with his PhD student William Bostad. One of our undergraduate thesis students, Zaryan Masood, worked in this collaboration to complete an extension to this project, examining the influence of hormonal contraceptives on changes in substrate oxidation at rest, and exercising at both 40% VO₂peak and 65%VO₂peak.

The overall aim of the project is to examine if vascular function, structure, and cardiorespiratory measures are impacted by phasic differences in hormonal cycles, in hopes of further clarifying the need to control for hormonal cycling in human testing, and ultimately increase integration of female participants into physiology research studies. While the project has paused its recruitment during the COVID-19 pandemic, we were excited to analyze data from a preliminary pilot group and are looking forward to continuing recruitment and data collection in the hopeful next school year.

Special thank you this semester to Jem Cheng (PhD candidate), Zaryan Masood (UG Thesis student), Dani Joshi (Placement student), Christina Pizzola (Placement student), Rachael Moorhouse (Volunteer), Andrea Borges (Volunteer), and the rest of the VDL for their outstanding contributions and support to the project!
Photos taken by Sohrab Moaven, Impulse Journal
SLEEP Study – Update from Joshua Cherubini

Chronic sleep loss beckons a myriad of adverse health outcomes, ranging from simple daytime fatigue to compromised cardiovascular health. But does just one occasional night of limited sleep have an effect on cardiovascular function? Moreover, can fitness preserve cardiovascular health after sleep deprivation?

The SLEEP project is investigating the impact of one night of partial sleep deprivation on endothelial function, measured by brachial artery flow-mediated dilation, in a cohort of young and healthy men and women. We are also measuring the effects of partial sleep deprivation on central arterial stiffness, autonomic balance, and the capacity for different levels of fitness to modulate those responses. This project will add to an existing literature base that shows reductions in arterial function after both total sleep deprivation where no sleep is experienced, and also after chronic bouts of partial sleep deprivation lasting three nights or more. Our results will also elucidate the capacity for higher fitness levels to resist changes in arterial structure and function, and preserve cardiovascular health after acute sleep loss. Last, the project may underscore a need to standardize the duration of sleep before FMD tests, just as food and beverage intake and activity levels are standardized prior to FMD testing.

Like many other projects, our progress has been briefly halted by the coronavirus outbreak. In the meantime, however, we have collected and analyzed data from over half of our participants, and we are very eager to return to the laboratory and continue testing as soon as it becomes safe to do so!
Project Updates

Examining the relationships between established risk factors and emerging cardiovascular risk markers in aging Canadians, using data from the Canadian Longitudinal Study on Aging (CLSA) – Update from Dr. Emily Dunford

The primary focus of this CIHR funded project is to evaluate the impact of carotid arterial stiffness as an early-stage CVD risk marker, using data from the Canadian Longitudinal Study on Aging (CLSA). The CLSA is a large, national, long-term study of more than 50,000 individuals who were between the ages of 45 and 85 when recruited. These participants will be followed until 2033 or death. The aim of the CLSA is to find ways to help Canadians live long and well and understand why some people age in healthy fashion while others do not. Through analysis of carotid artery ultrasound images and blood pressure data, Emily and Joshua will be calculating carotid artery stiffness for each of the ~20,000 participants who visit the collection sites on a yearly basis. Once complete, this carotid artery stiffness data will be added to the CLSA data set for future analysis. Dr. MacDonald and Dr. Dunford were successful in receiving a CIHR Catalyst Grant for this work. Congratulations!

Dr. Emily Dunford

Joshua Turner
Stroke Rehabilitation Research Team: MacStroke Canada
By: Kevin Moncion, Elise Wiley, Kenny Noguchi and Dr. Ada Tang

MacStroke Canada has been working remotely over the last few months but are excited to share some updates from our group.

In January, Dr. Mike Pryzbek defended his Ph.D. thesis based on research from the Physical Activity Centre of Excellence, working closely with Dr. MacDonald and PACE program coordinator Angelica McQuarrie. His thesis highlighted the importance of long-term cardiac rehabilitation on cardiopulmonary fitness and muscle strength in men and women with cardiovascular disease. This work establishes how this long-standing exercise program helps to improve health and fitness for members of the Hamilton community. Dr. Pryzbek is now a Research Coordinator for a multi-centred trial with the School of Nursing.

In February, MSc student Elise Wiley had the amazing opportunity to attend the Libin Cardiovascular Symposium: Research is Better with Sex and Gender in beautiful Banff, Alberta. Through this opportunity, she was able to build a strong network while also gaining knowledge from leading experts in the field.
Project Updates

In April, PT-PhD student Kevin Moncion, had his article “Barriers and Facilitators to Aerobic Exercise Implementation in Stroke Rehabilitation: A Scoping Review” accepted to the Journal of Neurologic Physical Therapy. Stay tuned for his video abstract and article publication in July 2020. Kevin is currently finishing up his comprehensive examinations in June and will be transitioning into the M.Sc. Physiotherapy program starting in Fall 2020.

M.Sc. students Kenny Noguchi and Elise Wiley have both been busy writing their M.Sc. theses and plan to defend this summer. They will both continue their studies in the Fall term, as they have been accepted into the Ph.D. program in Rehabilitation Science. Elise recently had her article titled “Examining the Effects of Virtual Reality Therapy on Cognition Post-Stroke: A Systematic Review and Meta-Analysis” published in Disability and Rehabilitation: Assistive Technology.

In May, Dr Ada Tang was featured in a podcast with People Behind the Science, where she talks about her science journey, successes, challenges, and the people who have inspired her along the way. The episode is available for streaming on your favourite podcast platform.

MacStroke Canada would like to thank the Vascular Dynamics Lab for their collaboration and continued support in our research! We are excited to continue moving forward with these studies in the upcoming months!

Follow us on our social media to stay up to date with our work!
Twitter: @MacstrokeCan
Instagram: @macstrokecan
Facebook: @macstrokecan
Nicole Proudfoot’s PhD Defense

Nicole Proudfoot successfully defended her PhD on January 23, 2020. She has since accepted a post-doctoral fellowship at Dalhousie University. Congratulations Nicole!

Nicole visited the Phoenix on campus to enjoy the ceremonial chalice (*above*) following the successful defense of her thesis entitled “Physical activity and cardiovascular health indicators during early childhood” (*left*).

Nicole and her thesis defense committee. Nicole’s oral defense was chaired by Dr. Jan Willem Gorter, and Dr. Ali McManus served as an external examiner. *From left to right: Dr. Jan Willem Gorter, Dr. Katherine Morrison, Dr. Brian Timmons, Dr. Nicole Proudfoot, Dr. Maureen MacDonald, and Dr. Ali McManus.*
Undergraduate Student Thesis Presentations

Zaryan Masood

My project was on the impact of hormonal contraceptives on substrate oxidation during rest and submaximal aerobic exercise in premenopausal women. From this, we found that during supine rest as well as at 65% of VO2peak, there were no differences in RER between the two groups (naturally cycling and second generation oral contraceptive pill) and within phases (active versus placebo phase). However, during rest on an exercise bike and at submaximal exercise at 40% VO2peak there was a divergence in RER between the groups as well as a significantly higher RER in the naturally cycling group in the active phase.

VDL Experience

In my experience in the VDL, I have gained an appreciation for research and the lessons I learned have made me a more confident scientist. All members of the VDL were extremely helpful, patient and supportive. I really enjoyed lab bootcamps where we were taught new techniques and reflected on research papers. With my study, all members of the VDL were ready to assist me with any step of the research process in which I felt underconfident in. I greatly appreciate their continuing mentorship and guidance.

### SUMMARY

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<th>Activity</th>
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<tr>
<td>Supine rest (RS)</td>
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<tr>
<td>Resting on exercise bike (RB)</td>
<td>↓ Low to High Hormone  ↓ Low to High Hormone</td>
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<tr>
<td>Exercise at 40% of VO2peak</td>
<td>↓ NAT - Higher RER in High Hormone phase compared to OCP2 in High Hormone phase</td>
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<tr>
<td>Exercise at 65% of VO2peak</td>
<td>↓ NAT - with higher RER than OCP2 during High Hormone</td>
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Abbreviations: OCP2, second generation oral contraceptive pill; NAT, naturally cycling
Undergraduate Student Thesis Presentations

Joshua Cherubini

I had the opportunity to complete a fourth-year thesis project in the VDL. We investigated the effect of sleep deprivation on endothelial function and the corresponding influence of fitness on those variables. Briefly, we found no effect of one night of partial sleep deprivation on endothelial function, measured by brachial artery flow-mediated dilation, in an unpowered cohort of seven participants. Fitness did not explain the variance between participants’ endothelial function after normal sleep and sleep-deprivation. We eagerly look forward to the possibility of completing the study in a fully-powered cohort as soon as we are permitted to safely do so!

VDL Experience

The VDL fostered the development of skills through a research-intensive environment that emphasized teamwork, collegiality, and collaboration. It was through discussions during journal club (and also some conversations at the OEP conference) that I became aware of using heart-rate variability as a method to estimate autonomic balance – which we thereafter decided to include as an outcome in the project! Indeed, the collaborative nature of the VDL and the willingness of all of the laboratory members to offer their help and advice wherever it was needed facilitated a unique and valuable experience, of which I am grateful to have. Many thanks to the VDL for your guidance, support, and a great experience.
Undergraduate Student Thesis Presentations

Megh Rathod

For my thesis, I explored the “The Effects of 7 Days of Single Leg Immobilization on Peripheral and Central Artery Stiffness in Healthy Older Women”. In my data collection, I was grateful to have been able to work with human participants, especially with a population of older women (who are so understudied!). Some really interesting explorations came out of it, with trends suggesting a potential increase in peripheral arterial stiffness in the immobilized leg compared to the control leg, with a potential delayed response in both legs. As well, potentially differential recovery responses based on an individual’s fitness and activity levels.

As a takeaway, this project stressed the importance of being physically active at all ages, and I made sure to inform the older women in my life.

VDL Experience

Overall an amazing time in the VDL. I was able to learn so much not only from my own project, but also from the interesting things going in the lab with the help of such supportive labmates. I have furthered my understanding of integrative physiology, and have a newfound appreciation and fascination of arteries. Presenting at OEP was definitely a highlight as well! Thanks so much VDL.
Christina Pizzola

Throughout my time as a practicum student, I fulfilled many of my goals including leading a journal club, running a VO$_{2}$max test, critically reviewing articles for my final paper, and presenting my 3-minute thesis (3MT) to the lab members. In thinking of a 3MT topic, I wanted to choose a concept that would be interesting to the general population, as well as myself. As a coffee drinker and someone who is interested in cardiovascular health, I decided to look at the effects of coffee on endothelial function. I am looking forward to coming back in September to start my thesis with Jem!
Placement Student 3-Minute Thesis Presentations

Joshua Turner

Over the past semester, I have been working in the Vascular Dynamics Lab with Ph.D. candidate Jem Cheng and 4th-year thesis student Joshua Cherubini. I have been involved with data collection sessions for Jem’s heat stress study and Josh’s sleep deprivation study. In these sessions, I helped record data and assisted with general tasks. I have also had the opportunity to practice tonometry for pulse wave velocity analysis. Another role of mine for these studies has been in data analysis where I have stacked ultrasound images to prepare them for later analysis. Part of my role in this involved spending time working out some details for a new computer program designed to make this process faster. Outside of these studies, I have been able to attend lab meetings and journal clubs and even led a journal club discussion. This experience has given me much to think about in terms of my future career. While my main career goal has been physiotherapy, I came into this course considering academia as a possible option as well. While I have thoroughly enjoyed my experience in the Vascular Dynamics Lab, I have realized that my passion is in the clinical application of knowledge more so than research. This experience has been very beneficial for me to better implement evidence-based practice into my future career in the rehabilitation field. The VDL is a highly esteemed lab full of very intelligent and friendly people and I am glad I had the opportunity to spend the last few months with them.
Ontario Exercise Physiology Conference 2020

This year, Ontario Exercise Physiology Annual Winter Conference was held in Barrie, ON, hosted by an organizing committee: Dr. Jenna Gillen and Dan Moore (alumni of McMaster University), representing University of Toronto and Dr. Tom Hazell, from Laurier University. With a couple notable changes to the conference layout, many of the attendees enjoyed posters in the morning/symposium in the afternoon, a sold-out social event, and late start time (8am!).

Keeping on brand with previous years, McMaster University represented the highest proportion of attendees from all Ontario universities in the field of exercise physiology. The Vascular Dynamics Lab made sure cardiovascular physiology was top of mind for OEP 2020 with 6 presentations over February 21-23rd, 2020. Tied with the Moore Lab for the third most abstract submissions at the conference from one lab (first place: Dr. Tom Hawke at 10 abstracts, second place: Dr. Val Fajardo at 9 abstracts). If you were wondering, where these stats are coming from, Dr. Hazell presented a few graphs to start off the conference because what researcher doesn’t like numbers and a little competition!
For half of our group, this conference was a first! This **Question and Answer** will focus on the VDL’s Master’s student, **Connor Droog**, and his perspective of this provincial conference experience.

**Q: Can you give a summary of the research you presented? Were there any unexpected aspects to presenting your research at OEP 2020?**

**A:** Presenting at OEP 2020 was an awesome first conference experience, and I truly didn’t know what to expect. My thesis is focused on the effects of an acute episode of hyperglycemia on endothelial function in adults with Type 1 Diabetes, and whether or not cardiovascular fitness level modulates these effects – so the first challenge was finding was “Topic” my research fit in, because it is quite a collaborative project. With many people before me explaining the methods of flow-mediated dilation, all the hard work was done for me. I felt my presentation was well-attended and I was well prepared to answer questions on my methods and my expected findings. As my first conference presentation, I was both nervous and excited to present and receive feedback in front of such a large audience. However, for my standards, it was the best first academic conference experience. I wouldn’t say anything was unexpected, however, I do feel that presenting my research in front of a large group of colleagues and well-established researchers in the field is extremely humbling and I am a better presenter today because of this experience.

**Q: What presentations did you find were most memorable?**

**A:** Without a doubt, it was extremely valuable to hear the stories of Dr. Chris Perry of York University and Dr. Rebecca MacPherson of Brock University. The Established Investigator Keynote, Chris, gave advice about how to figure out your “why” and to follow your “gut instinct” – a truly entertaining presentation. His reminder to celebrate the “good science days” is something that has definitely stuck with me since, and is a nice reminder to celebrate even the smallest of victories. The Young Investigator Keynote, Rebecca, shared her academic journey to developing her current research program in her post-doctoral research, which has now led her to being quite a successful young investigator. Their stories were quite different, both in their content and delivery, and I felt they offered some wonderful insight for a young and inexperienced graduate student like myself.
Q: Can you share one fun story about your experience at OEP?
A: While there are plenty to choose from, the story of the travelling textbook that my officemate and fellow graduate student, Billy Bostad, won certainly stands out. Billy delivered a fantastic presentation and was the runner-up for the CSEP Presentation award. Part of his award was a textbook on body composition assessment, and he had nowhere to store this prize but within his own two hands. The textbook made it into the hands of plenty of McMaster students over the course of the social, and he somehow ended up retrieving it by the end of the night. The infamous textbook now resides in our office, proudly displayed to all visitors.

With many conference experiences being cancelled or postponed, I hope you are reminded of your favourite moments of conferences throughout your academic career. There will always be an aspect of in-person meetings that cannot be replaced with online events. We are already looking forward to the next OEP conference with University of Waterloo’s newest professors, Dr’s Jason Au, Micaela Devries-Aboud, and Paolo Dominelli as the organizing committee.
On April 30th, 2020, PhD candidate Jennifer Williams and UG Thesis student Zaryan Masood presented at the Women’s Health Research Trainee Presentation Series. The Women’s Health Research Cluster is an initiative based out of the University of British Columbia, which brings together researchers, clinicians, community members and trainees who are interested in women’s health research. With the focus of the HER study being on women’s vascular and cardiorespiratory function, Zaryan and Jennifer presented short 5-minute presentations on the study and its preliminary results to an audience of Faculty, community members, and other trainees over Zoom.

For more information about the Women’s Health Research Cluster, see here: https://womenshealthresearch.ubc.ca/about-us
In this episode, Jonathan Kirk (Loyola University Chicago) and Lisandra de Castro Bras (East Carolina University) talk with Ninette Shenouda, an ambitious and savvy researcher at the University of Delaware. While finishing her PhD at McMaster University, Ninette co-authored two papers investigating the influence of sex hormones on flow-mediated dilation. While conducting her experiments, Ninette mastered the deceptively complex technique of measuring FMD and navigated some unpredictable situations with study participants. It was an APS Connect job posting that led Ninette to her current post-doc position, in which she has expanded her skill set by studying pulsatile load and connections between heart and brain function in kidney disease. Ninette speaks with refreshing honesty and wisdom about a pivotal moment early in her PhD when she wondered if she could trust her data, and the choice she faced to either stay discouraged or “find a way to get better.” Clearly Ninette chose the latter. This podcast will resonate with every trainee. We cover the importance of becoming affiliated with a professional society in your area of research, thinking two steps ahead of your current position, and perhaps the most valuable take-away: developing expertise which round out your skill portfolio to make you uniquely marketable. Oh, and #ScienceRomance is a thing.”
The CSEP Podcast: Exploring Mentorship

Season 2, Episode 7: Dr. Maureen MacDonald & Dr. Stuart Phillips

“Host Lauren Jenkinson sits down with McMaster power couple Dr. Maureen MacDonald (Dean of the Faculty of Science at McMaster University) and Dr. Stuart Phillips (Director of the Physical Activity Centre of Excellence, Director of the McMaster Centre for Nutrition, Exercise and Health Research) to discuss their journey through academia, mentorship, and how they landed in their present day positions. Both previous recipients of the CSEP Mentorship Award in Honour of Enzo Cafarelli, Dr. MacDonald and Dr. Phillips explain the lessons they have learned, the importance of "letting your mistakes be apart of the journey" and teamwork.”

Listen here.

Description can be found here.
Amplify Women in Research Podcast

Episode 5: Dr. Maureen MacDonald

“Dr. MacDonald is the Dean of Science at McMaster University, and a successful cardiovascular exercise physiology researcher. Listen in on this video to hear about her decision to take on administrative roles, and how those roles can be balanced with continued research success. Check out Dr. MacDonald's Ted-X talk on 'Why You Shouldn't Crowdsource Your Career and Your Life' here.”

Description can be found here.
Pancakes Ultrasound Image Stacking Software

Don’t want to stack anymore? Introducing Pancakes.exe!

Are you looking to save hours of FMD analysis time? Maybe change up tasks for research placement students? How about giving your windows+z key some much needed rest? Well we have the program for you! We are introducing a new program for the lab: Pancakes.exe! Pancakes was designed to solve a decade-old problem in the lab: splitting up an ultrasound video file into a selection of images based on the R-spike of the ECG, a manual process lovingly called ‘stacking’ by the lab trainees. This new stacking program has the potential to save days of research time by automating the process to stack a whole study in a matter of hours. Pancakes was designed specifically for the VDL, and even better, it’s free! If you are interested in acquiring Pancakes for your own research lab or have questions about how the program works, please contact Jason Au at jason.au@uwaterloo.ca. Jason will be happy to help you set up Pancakes in your lab and troubleshoot program issues based on your particular ultrasound needs.

Happy stacking!
Recent Publications


Lab Member Achievements

Congratulations to VDL MSc trainee Connor Droog on receiving CGS-M NSERC funding for his graduate studies.

We are excited to have PhD trainee Sydney Valentino elected as the McMaster Graduate Student Association Vice-President External from May 2020 to May 2021. She has also been hired as the role of the McMaster University Athletics and Recreation Fitness Instructor Team Lead at *The Pulse for Fall 2020*. Congratulations to Sydney on these new roles within McMaster University.

Congratulations to PhD trainee Jennifer Williams, who recently accepted a fellowship (Educational Development Fellowship) with the MacPherson Institute at McMaster, which centers around supporting Faculty/Staff in transitioning courses online for the coming year. We are excited for Jennifer and her new position!
Alumni News

Congrats to past VDL PhD trainee Jason Au, who recently started as an Assistant Professor at the University of Waterloo in May 2020! Jason will be establishing a new lab in the Department of Kinesiology to better understand how and why vascular disease is accelerated by complex blood flow (i.e., recirculation) and abnormal vascular wall properties. The lab is highlighted by next-generation ultrasound imaging to study arterial bifurcations in human physiology and to explore how exercise and sedentary behaviour impact vessel health. Jason is actively recruiting graduate students for the lab, and interested students can contact him directly at jason.au@uwaterloo.ca for more information.

Congratulations to former VDL PhD trainee Dr. Cheri McGowan, who was recently promoted to full professor at the University of Windsor.
Alumni News

Congratulations to former VDL undergraduate student Jaime Gardner on receiving offers to the University of Toronto and Western University for speech and language pathology!

Congratulations to former VDL undergraduate student Chris Gupta on receiving offers to the McMaster University and the University of Ottawa medical schools!

Congratulations to former VDL undergraduate thesis student Zaryan Masood, who recently began his Master’s degree in the department of Kinesiology under the supervision of Dr. Dylan Kobsar.

Congratulations to former VDL PhD trainee Nicole Proudfoot, who recently accepted a post-doctoral fellowship at Dalhousie University following her successful PhD defense in February.
CALL FOR VDL ALUMNI UPDATES!

We would love to hear from VDL alumni! Please inform us if you have any news that you would like to share with us so that we can include it in future VDL newsletters to update other readers. We are looking forward to hearing from and learning all the exciting endeavours of VDL alumni.

Please contact vdl@mcmaster.ca with any updates, comments, or inquiries.

Thank you for reading!