

U o f T



# MOPhDeets



JUNE 2023

# MESSAGE FROM THE DIRECTOR

Physician scientists who are dually trained in medicine and science are uniquely positioned to improve health through discovery and implementation of these innovations. Indeed, the COVID-19 pandemic exemplified the value of physician scientists to benefit human health. Training the next generation of physician scientists continues to be a major focus for the Temerty Faculty of Medicine. As Director of the MD/PhD program, I aim to develop innovative approaches to better prepare physician scientist trainees for an ever evolving and complex career. The creation of a community of MD/PhD trainees who provide peer mentoring and support, with the common goal of improving health through integration of clinical and research training, contributes to the success of our MD/PhD program.



As you read through this Newsletter, I hope you will be inspired by the community that is the Temerty Faculty of Medicine MD/PhD program.

Nicola L. Jones, MD, FRCPC, PhD

Director, Integrated  
Physician Scientist Program.

## Newsletter Team & Credits

Senior Editor: Erica Wennberg  
Junior Editor: Safa Majeed  
Newsletter Committee: Andrew Mazzanti,  
Angela Zhou, Camilla Giovino, Gemma  
Postill, Ryan Karimi  
Cover and Template Design: Amanda Mac

## Contact

[mdphdeets@gmail.com](mailto:mdphdeets@gmail.com)

# PROGRAM UPDATES

Welcome to the first issue of MDPHDeets! Join us as we look back on the past year and ahead to the next.

Congratulations to our 2023 MD/PhD Graduates and MPs!

## Graduates

Brian Tsang  
Irene Harmsen  
Michael Atkins  
Paymon Azizi  
Sachin Kumar  
Sara Mirali  
Sydney McQueen  
Tim Rappon

## MPs

Andrew Mazzanti  
Camilla Giovino  
Hillary Lia  
Jennifer Kao  
Mitch de Snoo  
Pamela Psarianos  
Bill Shi

We look forward to celebrating all of you on June 1st at the MD/PhD program's first in-person graduation ceremonies!

Congratulations to the 2023 recipient of the Norman Rosenblum Award for Excellence in Mentorship in the MD/PhD program, Dr. Andres Lozano! See below for a reflection from Dr. Lozano on mentorship.

It is a great honor to receive the Norman Rosenblum Award for Excellence in Mentorship in the MD/PhD program. There is an urgent need for more clinician-scientists. We are counting on these individuals to push the frontiers of medicine through their discovery of new diagnostics and treatments. In the course of my tenure at the University of Toronto, I have been very fortunate to train a number of PhD students and postdoctoral fellows who have come from all over the world. These bright individuals have been the engines and inspiration of our laboratory and scientific work. Their inquisitiveness and determination have been nothing short of remarkable. It is often said that the teacher derives more than the student in these interactions and this I feel indeed holds true. Students drive the mentor to re-examine their thinking, initiating new directions and projects by questioning the status quo and challenging established dogma. This enriches the learning environment, and this revisiting of ideas and concepts constitutes what is perhaps one of the most important advantages of being surrounded by trainees. In addition, one of the often overlooked advantages of having several students is seeing their spontaneous interactions and their synergy of ideas, which make for a rich and dynamic learning environment. Providing learning opportunities for mentees and guiding their future careers has been one of the most rewarding aspects of my career, and seeing past mentees taking on positions of leadership throughout the world is extremely satisfying. 🐦

# WHERE ARE THEY NOW?

SAFA MAJEED, ERICA WENNBERG

With the graduation and MP ceremonies happening this month, June has us thinking about the future. While the MD/PhD road might still be long for some of us, have you ever looked ahead to residency and wondered how your career outlook, research involvement, and interests might change? Safa checked in with last year's graduating class to hear their takes.

*Has residency changed your viewpoint on your career or research?*

Yes it has. I was primarily interested in basic science research while in the MD/PhD program. After graduation, I am getting into more translational research. Primarily focusing on methods to identify clinically efficacious basic science innovations.

*Are you still participating in research, and if so, to what extent?*

It has been difficult in first year residency. I am in the process of starting a project. My project looks at quantifying extracellular vesicles in patients with cognitive impairment. We hope that extracellular vesicles can be used as a biomarker to predict mild cognitive impairment.

*Have your interests (both medical and research) changed since graduation?*

Towards the end of medical school I became interested in geriatric medicine and longevity research. I continue to have these interests during residency.



**Ayesh Seneviratne MD, PhD**  
University of Western Ontario,  
Internal Medicine (PGY1)



**Nicholas Light Msc, MD, PhD**  
University of Toronto,  
Internal Medicine (PGY1)

*How has residency changed your viewpoint on your career or research?*

Near the end of PGY1 in IM, residency thus far has confirmed my passion for clinical medicine. The days (and nights) are long, with high patient volumes, but I find the time I spend with patients is almost invariably rewarding and I look forward to a career which blends longitudinal patient care with my research interests in computational biology and cancer genomics.

*Are you still participating in research, and if so, to what extent?*

Yes, at the beginning of residency I was finishing up revisions for papers relating to projects I had initiated during my PhD. I have recently started working on a research project with the pancreatic cancer group at OICR, supervised by Dr. Rob Grant. Finding time during PGY1 to work on research has been challenging, but I am looking forward to dedicated research blocks next year.

*Have your interests (both medical and research) changed since graduation?*

Overall, since graduation my interests in internal medicine and medical oncology remain unchanged. I have developed a more specific research interest in pancreatic cancer, which I look forward to exploring further. The greatest change for me occurred during clerkship where I realized my interest for adult medicine and medical oncology (my PhD research was in pediatric oncology).

*How has residency changed your viewpoint on your career or research?*

Residency has further focused my views on my career and research. It's incredibly empowering to be able to recognize a symptom, order and interpret investigations, then pick from a selection of therapies to relieve the symptom. All of this is built on two centuries of biomedical research. I learn these basics of patient care now. And yet, there are still patients who I don't understand, and neither does my attending, nor the consultants. There's so much space left to organize odd symptoms into new syndromes, develop more accurate diagnostics, and develop more precise therapies. More than ever, I feel a drive to go back into research, now with a better intuition of what's possible and what's missing on the wards to focus my attention on.

*Are you still participating in research, and if so, to what extent?*

I'm participating in clinical research to build my intuition of how clinical conclusions and hypotheses are generated. My retrospective chart review projects are focused around immunotherapies for cancer - trying to draw associations between clinical signs and their adverse events and efficacies.



**Ben Ouyang MD, PhD**  
Harvard University,  
Internal Medicine (PGY1)

*Have your interests (both medical and research) changed since graduation?*

My interests are still similarly pointed towards oncology. More specifically, I'm interested in how the immune system drives cancer and how it can be refashioned as a cancer therapeutic.

*(pictured from left to right)*

Ayesh Seneviratne MD, PhD  
University of Western Ontario, Internal Medicine

Ben Ouyang MD, PhD  
Harvard University, Internal Medicine

Tina Binesh Marvasti MSc, MD, PhD  
University of Toronto, Internal Medicine

Siraj Zahr MD, PhD  
University of Toronto, Anesthesia

Nicholas Light MSc, MD, PhD  
University of Toronto, Internal Medicine

Alainna Jamal MD, PhD  
University of Toronto, Internal Medicine

*(not pictured)*

Carlyn Figueiredo MD, PhD  
University of Toronto, Family Medicine

Hoyee Wan MD, PhD  
University of Toronto, Plastic Surgery



**MD/PhD graduates, Class of 2022**

# EXIT INTERVIEW WITH SACHIN KUMAR

**CAMILLA GIOVINO AND RYAN KARIMI**

*After 8 years in the MD/PhD program and 15 years at U of T, Sachin is heading off to Harvard Boston Children's for Pediatrics. Camilla and Ryan spoke to him about his reflections on his MD/PhD journey.*

Camilla Giovino: Can you please summarize your educational background and path leading to the MD/PhD program?

Sachin Kumar: I'm a U of T lifer. I attended the University of Toronto for my undergraduate degree in Biology, followed by my Master's degree in Molecular Genetics, and then I stayed on at U of T for the MD/PhD. All together, it's been about 15 years at U of T. My PhD was in the lab of Dr. Michael Taylor in the Department of Laboratory Medicine and Pathobiology. I worked on a lot of cancer genomics and cancer metabolism for two pediatric brain tumors, medulloblastoma and ependymoma.

CG: What are the most important lessons that you've learned throughout the eight years of the program?

SK: I think first and foremost, one of the biggest lessons that every MD/PhD trainee should take into account is to spend some significant time in your first year cultivating what you want your philosophy of training to be. Whatever it is for you, I think it's so important for MD/PhD trainees to really try to figure out what their philosophy is going to be for the training. What is crucial is to really to understand what research that is and then to approach their PhD training in particular with that narrative in mind. Second lesson is to really try to engage with



the program in all of the different aspects. Medical school is temporary, PhD student life is temporary, but a physician-scientist experience is something that will carry with you from a characteristic and quality standpoint for the rest of your life. And so, whether that's getting involved in the MD/PhD Student Council or seminars and making sure you make time to attend and to go out for dinners and socialize and create that community, attending CITAC conferences at the national level, or even going to international conferences, really trying to throw yourself into the plethora of resources available to learn what it means to be a physician-scientist. Some of my favourite ideas that I have in my own projects came from attending MD/PhD seminars, where I saw how somebody was doing this experiment, or they were looking at this cool thing that didn't even blip on my radar, and I would read about the technique, or I would ask them, "Hey, do you think you could apply that to my field of interest?" And

that's how science comes to be, so I would say, don't sell yourself short by being consumed by the ME that you have to write that week, you'll always make excuses if you don't prioritize it. So, I would really say prioritize engaging with the MD/PhD community as lesson two.

Lesson three: in the long training path that is [the] MD/PhD, be kind to yourself. There's a lot of failure in MD/PhD training. I think so many people forget, even if they've never done before or if they did a Master's degree even beforehand, that it's possible that you'll work on an experiment for six months and it can fail and you'll just have nothing to show for it. Or you'll do an experiment and you'll have expected this result and you'll get a curveball, and it takes a lot of mental fortitude to kind of pick yourself up and go, "Okay, that wasn't what I was expecting, but where do we go from here?" And I don't think you get to that level until you can tell yourself that it's okay when things don't work.

CG: Branching off of that, you mentioned a lot of the inevitable low lows in the program, and there are lots of those hard times when you wonder, "Why am I doing this?" You lose sight of the big picture. In some of those moments brought on by different challenges, who or what did you lean on to get past those challenges?

SK: Yeah, I mean, it's unfortunately something that isn't talked about enough, but I certainly think that more acknowledgment from the general physician-scientist community, general research community needs to happen on these low parts, these bad parts. You know, I'm grateful there's so many wonderful mentors and colleagues that I have that weren't afraid to speak up when they were having those bad times. I think it takes a lot of courage to speak up that you're struggling or you're having a tough time and that you need help. I think creating a community that fosters an environment for people to talk about those difficult times and to make sure that they know they can reach out is the first step of that. And the other aspect I would say is your

supervisor should be someone that you reach out to, that you talk to in tough times. It's hard, I think, to do that. There's a bit of a power dynamic. People feel like, well, they're going to think less of me if I'm asking for help or if I'm struggling. But built into that contract of the supervisor-student relationship is letting them know that you're at your wit's end or you're having a hard time and you need more support or more guidance or more time and energy and emphasis from them. And, you know, it can be hard and sometimes they aren't the easiest or best with it, but I think that that's always a good place to start. Most of them, even the ones that people were very scared of, tend to go, "Okay, what can I do to assist you to help you in a meaningful way?"

Ryan Karimi: Using as many or as few details as you'd like, could you tell us about a time where you had a low in the training process?

SK: One [time] that kind of hits me was in my 7th year. I was in my first year of clerkship. I was in the midst of the last part of my family medicine rotation [going into] my obstetrics and gynecology rotation. And most people would say, "Hey, things have been going well [for you]." And then my father got diagnosed with cancer and it was peak COVID, everything was closed. He needed to go in and have surgery and ended up having a surgery at St. Mike's, and I would go to the hospital and spend time with him in the early hours of the morning by his bedside and then leave to go to the labor delivery floor, go to do OB work, and then in between our cases, instead of taking a lunch, I would go back to spend time with him and then go back because no one else was really allowed to visit him because I was working at St. Mike's. I could at least make sure I could check up on him and see how things were going. It was like an absolute burnout recipe, as you can imagine. And I mean thankfully everything kind of worked out. He is doing well.

But in that moment for me, I realized that there was something that wasn't on the radar, wasn't

in my control, and life happens. Life happens to everyone. And I think what I was grateful for is those same strategies that I cultivated and that's why I think it's so important to have a philosophy of being reflective and working on yourself and growing as a person and figuring out who you want to be throughout these fundamental training years, because I then started to ask for time off or time to go in, join my father to see him during those OR days. And everybody was super supportive and accepting, but I had to let them know what was going on and indicate what I needed. And then I also recognized how much the clinical team would want what's best for me. They would be like, "Listen, you don't have to come do this, you don't have to do that. Do what's best for you." And I think, you know, you learn how to balance it all. And you learn that, like, it's a community that's very special, both in the medical community and the research community. You're always there to kind of help each other. If there are times in the future where I knew someone was sick, where they had to attend an appointment and we were on the ward, I would always offer to stay late or do whatever I had to do to make sure they had the time off when they needed it. And I think you realize that you're not alone and that you do have support with you, and you just have to kind of open up. So, I think that that was an example of a low period where I was able to really kind of rely on the people around me for the help and support that I needed. And it's important to know when you need help.

CG: What are some of the notable skills that you've gained from PhD?

SK: There are three skills every PhD student learns by the end of their PhD. One is problem solving. You will be exceptional at dealing with challenges and having to adjust. Two is perseverance. And three is the ability to consume and critically think about new information. I hope as you read those three things, you realize that those are not necessarily PhD skills as much as they are life skills. When you go back into clinical practice, your ability to problem solve, persevere, and

consume information and be critical about it are huge. Your ability to persevere through the hard days is so important. And your ability to problem solve is such an important skill. Half of clinical medicine has nothing to do with the actual diagnosis. It's, "Hey, this medication is not available, can we get a hold of something else?" So, I think that those are the things that you learn in your PhD. They matter a lot more than how you can pipette or perform a certain experiment. Any technique can be learned because you can consume information, because you can problem solve your way through it, and because you can persevere. It is important to realize that those are the fundamental characteristics behind every technique that you learn.

RK: What has been your favourite moment in your MD/PhD training path?

SK: Favourite moments? Well, I'm in a very unique position now. I'm done, I'm graduating, giving this interview, right? Like I've finished everything, classes are done. I wrote my MCCQ licensing exam. And so for me, they're all very special, but they're all special in a very specific way. I am very fond of my pre-clerkship years because of the joy. There's a lot of pressure to getting into medicine, and there's a lot of stress that is connected with that. And then you get in, and it is so different than undergrad; they actually want you to learn and they want to support you and it is such a nurturing environment. That part of it really allowed me to flourish and spend time making lifelong friends and to just soak in the experience that I was having. The PhD was a mental battle. I'm not much of a runner and I've never done a marathon, but you know I've always heard people refer to the PhD as a marathon and I remember thinking to myself like, "Why would people subject themselves to that?" One of the other MD/PhDs in the program is a big marathon runner and tells me that there are immense highs and immense lows and you get to 32 kilometers and your body is ready to quit on you. The truth is that is very indicative of what life is like in the PhD. You've got these really great success points and these



really bad points where nothing is working, and you can't help but ask yourself at some point too, "Why am I doing this?" But the sense of accomplishment at the end of it to just say I have done it is amazing; it might not have been the way you wanted it to be, but at the end of it you have accomplished something and very few things, not even your medical degree, will give you that degree of satisfaction. I committed to something, and I just stuck with it over and over and over again despite every challenge I was faced with. I contributed to discovering a piece of knowledge that no one else in the world knows. And for a small moment in time, I was at the forefront of that. There was a beauty to that, like I said, most people will not be able to resonate with, but I think that speaks to one of the best parts of that experience. And then clerkship, it's like that dream come true. You watch your *Grey's Anatomy*, and you're like, "I really wanted to do the medicine." Pre-clerkship doesn't give you that. Your PhD doesn't give you that. And then clerkship comes along, and you're there. And the first time you deliver a baby or the first time you have to pronounce a death, you realize

how beautiful human life is, how sacred it is. You realize how being able to care for people and make a difference for somebody you interact with when they're at their absolute worst, is an absolute privilege. Those are the moments that stand out to me.

RK: Well, you've been here 15 years at U of T. So what are you going to miss the most moving away for the first time?

SK: People. People, people. Yeah, we have a lot of friends, a lot of amazing colleagues. There's a comfort to Toronto, I feel like this place is home. It's a big change to have to give that up. So I'm equal parts sad, but also equal parts excited for something new, something different. How many times in your life do you get to just entirely uproot and move to a different country and a different place and just say, "Yeah, let's see how this works out." But I think that again, because of the training we've had here, which is exceptional, I take comfort in knowing that I will persevere. I will problem solve it. I will figure out how to do it. 🐦



*Sachin (third from right) with fellow members of the 2023 graduating class at Med Prom:*

# THE HOMETOWN TOURIST: 4 WAYS TO EXPLORE TORONTO THIS SUMMER

**ANDREW MAZZANTI**

Recently, I had a friend visiting me from out of town. As we were planning some fun things to do, he said something that shook me to my core: "Don't overplan, let's just do what you would normally do!" This forced me to think... what do I normally do? This line of thinking thrust me into a tailspin. Am I boring? Have I really lived in Toronto for 6 years? Why can I not think of something that is typically Toronto?

This brush with complete ego death forced me to sift through my memories for some of the most fun days I have had in Toronto. I've tried to collect a few pre-planned days that you should keep in your back pocket for use sometime this summer. No more must you fear assembling an itinerary for you, your friends, or your loved ones: it's all here! Feel free to pick and choose, and let me know if you complete any of these activities!

## **EXERCISE AND EATS:**

Pizza. Everybody loves pizza. I happen to think that one of the best pizza places in the city is a restaurant called "Pizzeria Oro di Napoli" at 2312 Lake Shore Boulevard West in Mimico (shoutout to my fellow Etobians). Oro di Napoli means "Gold of Naples", and it lives up to the name. While it's a far shot and not the most accessible by transit, it is a destination worth visiting, especially in the summer when you can enjoy your pizza out on the patio with a cold Italian beer. The other benefit is that it is very bikeable. Find details below on how you can even rent a free bike to get there:

**When:** A warm summer evening, during the week to reduce bike lane traffic. Check the forecast to ensure a rain-free ride. Also, be sure to have made a reservation at Oro di Napoli, especially if you want to sit outside.

**How:** Bikechain is a non-profit bike shop located at College and Huron. You can rent a bike from them FOR FREE for up to 2 weeks! Just bring your UofT ID, and visit the shop Monday-Wed/

Friday from 10-5pm, or Thursday 12-8pm. Bring at least \$200 cash to leave a deposit for a bike and a lock. You will need your own helmet!

If you already have a bike, or if you've secured your free rental, you'll want to bike down to the lakeshore, and simply follow the bike path westward all the way to Humber Bay Park. Then, a brief stretch on Lake Shore West. It should take about 45mins to an hour.

If you plan things well, on your sluggish ride home from dinner, you should stop at Trillium Park and watch as the setting sun lights up the entire downtown core orange!

**Why:** The only way to make pizza taste more amazing is to complete a 45-minute bike ride just before eating it! I promise this will become one of your new favourite pizza places.

**Pros:** Free bike rental, can be done on a weekday, other than pizza their food is

generally really delicious (MUST try the grilled calamari “calamari alla griglia”!)

**Skip if:** To the best of my knowledge and Googling, they don’t have gluten-free pizzas.

**Protip:** Try to go in a group so you can share and sample many different pizza flavours. Or just go back multiple times!



*The eponymous “oro” pizza at Oro di Napoli (photo from my last visit there)*

## CLOTHING, CAFFEINE, AND COCKTAILS:

If you’ve never been vintage shopping in Kensington, you’re missing out! Vintage clothes are a great way to find sustainable clothing options that tend to be more unique than most fast-fashion stores. But even if you don’t end up buying anything, the experience of pushing past people, looking at hundreds of items of clothing, and trying on the most ridiculous pieces for fun is an experience in and of itself. Finish off your day with a signature iced latte at Fika, and if you still have energy, grab a cocktail in Kensington!

**When:** Weekend afternoon, starting about 1:00pm/2:00pm

**Where:** Kensington Market; start at the corner of Baldwin and Kensington (you can check out Seven Lives, Gus Tacos, or Dirty Bird if you feel like having lunch beforehand). Walk south on Kensington and stop in at all the vintage shops you can; this includes the Kensington Flea Bazaar, Usato, Lost Boys, Space, Bubblegum, Uncle Vintage, and Courage my Love. Finish up at Fika Café for their signature Fika Iced Latté (it has cardamom... you will love it) or anything else from their menu! If you’re feeling cheeky, head over to Pamemar for a cocktail, tea, or coffee, especially if you can get a space in their hidden back patio. If that’s all full, Supermarket or Kensington Brewing Company are nearby and also great!

**How:** Abandon all embarrassment and go digging through all the vintage racks! Going with friends is always fun; let them judge your fashion decisions.

**Why:** Kensington is one of few neighbourhoods in Toronto that has been somewhat resistant to gentrification. It’s a pedestrian paradise with countless shops, cafés, and restaurants that must be tried!

**Pros:** Fun, sustainable clothing!

**Skip if:** You hate crowds, you don’t wear vintage. But still stop by Fika sometime!

**Protip:** Wear sunscreen; bring a reusable bag; ask about student discounts.

**When:** Tuesdays in June at 1:00pm: June 6, 13, 20, and 27

**Where:** St. James Cathedral Church, 106 King Street East

**How:** Walk, bike, or take transit to make it to the church for 1:00pm. The concert is only 40 minutes long. Then, I highly recommend a short walk around Old Toronto, and a visit to Fahrenheit Coffee. They (and I) recommend the cortado. Then you can head back to work, or continue on with your Tuesday!

**Why:** If you've never heard organ music live, it's something that is so fun to experience. Toronto has some fantastic organs, so take advantage of free opportunities to hear them in action! Plus, odds are you will see me at one of them :3

**Pros:** Short time commitment, great coffee shops nearby, experience a new type of music.

**Skip if:** You are an organ-hater 🙄

**Protip:** Bring some change if you want to make a donation to the church! Donations are not required.



*Courage My Love in Kensington*  
Photo: Siobhan O'Flynn, [heritage-matters.ca](http://heritage-matters.ca)

## OLD TORONTO ORGAN CONCERT:

Taking an extended lunch is something that everybody should do from time to time. Might I suggest you do it on a Tuesday in June, when you can enjoy free organ concerts at St. James Cathedral Church in Old Toronto? Located at 106 King Street East, it's close enough to hospitals that you can quickly scoot over (on a bike, a streetcar from King or St. Andrew station, or a nice walk). On Tuesdays at 1:00pm, they offer a free organ concert. Now I know what you're thinking - organ is that creepy, old-timey instrument reserved for churches. And you know what? You're absolutely right! That said, the organ is a really cool instrument because each organ is very unique (the one at St. James was built and refurbished by two highly reputed Canadian organ makers). And more interestingly, the organ is an instrument that is best FELT rather than heard. With about 5,000 pipes, some measuring over 20-feet tall, the sound waves produced by an organ can be physically felt as much as they are heard. It's something you have to experience live, and you can do it for free (or for a small donation, if you want). Head over on a Tuesday, and you'll be smack-dab in the middle of Old Toronto, near some fantastic coffee shops for your afternoon caffeine fix. Details below!



*Cathedral Church of St. James*

## PRIDE PARADE, PROTEST, AND PARTY:

The Pride Parade is great; but often overlooked and equally important is the Trans Pride March. This type of march is much more similar to what the original pride parades of decades past were: protests, community-led, and without corporate sponsors or influence. You will learn a lot at this event, and importantly, it's a way for you to show up for the trans community! Pride Toronto also claims that this is the largest Trans Pride March in the world. Allies are totally welcome, but here is a note from the event site: "During the march, we honour and center the experiences and struggles of Trans folks, reaffirming that their existence is valid, necessary, and deserving of respect and dignity. While allies are welcome to join, we ask that they respect the importance of this space and leave room for Trans folks to celebrate at the front of the march."

Beyond the marches and parades, Pride is also a celebration! If you want to attend a Pride party, I'll highlight some fun things below that you might consider:

**When:** Pride Month is all of June! Check [pridetoronto.com](http://pridetoronto.com) for a full list of events, but here are some key ones:

- ◇ Trans Pride March: June 23rd, ~7pm
- ◇ Green Space Festival: June 21st-25th, outdoor dance party (~5pm-midnight)
- ◇ Pride Parade: June 25th, 2pm-late



2016 Trans Pride March  
Photo: [blogto.com](http://blogto.com)

### Where:

- ◇ Trans Pride March: Church and Hayden
- ◇ Green Space Festival: Barbara Hall Park, 519 Church Street
- ◇ Pride Parade: From Church and Bloor, to Bloor and Yonge, and down Yonge to Dundas

### How:

- ◇ For the Trans Pride March: You may want to consider getting dinner in the Church/Wellesley area before the event starts, and then lining the parade route or joining the march itself once it gets moving (which will happen after the 7pm rally).
- ◇ For the Green Space Festival: Go with friends! And pick a night where you think you'll enjoy the music most.
- ◇ For the Pride Parade: Wear lots of sunscreen! Pick a side street on Yonge that is not quite as busy to get a better viewing spot (Wellesley and Dundas are generally highly crowded). It's usually a hot day, so wear something light!

**In general:** if you want to participate in Pride as an ally, it's always a good idea to reach out to a friend in the 2SLGBTQ+ community to join them in some of their plans, or to get their advice. We're nice, I promise!

**Why:** Toronto has a world-class Pride scene. The month of June sees countless Pride events that support the nation's largest queer community. It's a cultural feature of Toronto that is not to be missed! Even if you are not a member of the 2SLGBTQ+ community, you can still participate in parties and events and show your support.

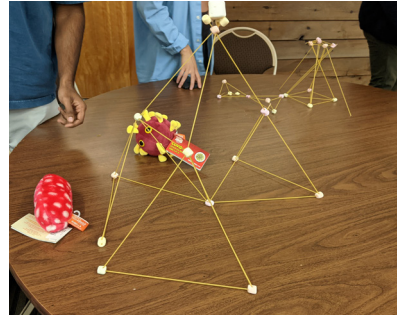
**Pros:** Infinite

**Cons:** None! 🐦

*If you complete any of Andrew's summer activities, let us know how it goes and send us pictures (with a chance to be featured in our next issue)! You can reach us at [mdphdeets@gmail.com](mailto:mdphdeets@gmail.com).*

# SOCIAL UPDATES

From building spaghetti marshmallow towers at the 2022 retreat to walking down the runway in our ugly holiday sweaters at the holiday party, we have shared some wonderful moments over the past year. Flip through the next couple pages for a look back!



At Harbord House in July and YMCA Cedar Glen for the Fall 2022 retreat (thank you Bill for the incredible drone photo!).



Andrew, Gemma, Robert and Safa took off to the Netherlands in July 2022 for the Eureka International Summer Course on Translational Medicine. We look forward to hearing the experiences of this year's attendees!





Winter had us showing off our sweaters at the Holiday Party in December, skating in January, and baking in February (congratulations to Anglin, this year's baking competition winner!)



At the 2023 CIP conference in Toronto and the 2023 ICAM conference in Quebec City!

# STUDENT SEMINAR SPOTLIGHTS

## ANGELA ZHOU

*Student seminars are a highlight of the UofT MD/PhD program; not just for the amazing dinners, but for the advice shared by upper year students. Read on for highlights from two of our student seminar presenters this year, Robert Lao and Ethan Malkin.*

## ROBERT LAO

### Tidbit of Advice:

“Don't assume that everyone you work with, especially your supervisors, know that you need help or what you need help with. Identify who can help, and then tell them exactly how they can help you.”



### Scientific Update

Children born with congenital heart disease are highly vulnerable, many of whom will require complex cardiovascular surgery (CVS) to survive. A dominant factor determining their CVS outcomes is how long the heart must be stopped during repair. Myocardial protection during pediatric CVS has not been well studied. Currently, protection is achieved through infusions of 'cardioplegia', however variability in these guidelines used across the world suggests a lack of consensus on best practice. Additionally, there are no large animal models described that accurately reflect current pediatric CVS protocols, and thus little is known about the mechanisms determining poor outcomes. So far in my PhD, I have developed a new pre-clinical pediatric pig model of CVS to (1) characterize the pathways involved in heart damage over those long periods that the heart must be stopped during surgery to enable repair and (2) leverage this new model to translate potential myocardial protection therapies to mitigate heart damage.



## ETHAN MALKIN

### Advice:

- ◇ Don't take rejection or "failure" personally - try and try again!
- ◇ Seeing your MD class graduate is hard - lean on your fellow MD/PhDs for support!
- ◇ Venting is key - build a strong and diverse support system!
- ◇ Start thinking about your thesis early - know the requirements and expectations so you don't get caught in red tape.
- ◇ The most important thing is you - focus on your own personal goals, which might not always align with those of your supervisor, committee, collaborators, etc.



### Scientific Update

Cells can release their DNA into the extracellular space and circulation by active mechanisms or as a product of cell death. In oncology, this cell-free DNA (cfDNA) has emerged as a promising source of cancer biomarkers because it contains actionable information about a patient's disease and can be readily obtained via a simple blood draw. In addition to its use in biomarker applications, cfDNA may also function as a mediator of pro-inflammatory signaling in the tumour microenvironment. Despite its mounting importance both clinically and physiologically, the biological features of cfDNA remain poorly understood. In particular, the structural relationship between cfDNA and other biological macromolecules - its topology - has not been thoroughly investigated. In my doctoral work, I comprehensively characterized cfDNA topology in pre-clinical and clinical cancer models and found that a particular subset of mitochondrial-derived cfDNA showed diagnostic and prognostic potential as a clinical cancer biomarker. I also demonstrated that this same cfDNA subset, when derived from specific cell death pathways, was particularly adept at inducing macrophage pro-inflammatory signaling via DNA sensor activation. Altogether, the knowledge gained from these studies contributes to a refined model of cfDNA biology and structure, which can be leveraged both for cancer liquid biopsy applications and to bolster our overall understanding of tumour-immune interactions as they relate to patient responses to immunotherapy.

# NOT YOUR EVERYDAY INTEREST GROUP: A CONVERSATION WITH JENNIFER KAO

## ANDREW MAZZANTI

*Jenn Kao is the queen of frog memes. I learned this about her very soon after we first met, and we've exchanged the occasional frog meme since (see right). But when I heard about her new Reptile and Amphibian Interest Group, I realized her love for ectotherms extended beyond the humble frog. I got Jenn on a call to talk about this exciting new group and the importance of indulging your interests outside of work.*

Andrew Mazzanti: Hi Jenn! Could you tell the program about the Reptiles and Amphibians Interest Group?

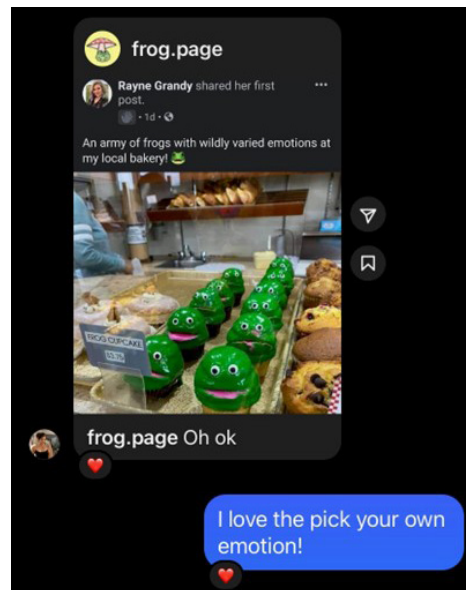
Jennifer Kao: It really was born out of a whim. I don't think it's any massive secret that I really like reptiles and amphibians, and I was just joking around with Mathepan, saying that there should be more interest, you know? There's got to be interest in a 1000 student class, it can't just be me! So we decided to just post about it, and, I thought about it - because I'm on MedSoc - do I need to get this group ratified, do I need all these things. Turns out that truthfully, you don't! You just need an interest, and you can post about it, and people can just join!

AM: What is your favourite reptile?

JK: That's really difficult because there's different reptiles for different needs.

AM: *\*laughing\** Okay! Tell me more!

JK: Like, pet reptile? I really like a bearded dragon.



They're really friendly, they're really cuddly. Reptile in the wild, that I wouldn't be able to own? Probably a Komodo dragon, because they're HUGE. They just look like enlarged lizards, and they have the wildest biting style.

*\*Andrew laughs nervously\**

And they just look so prehistoric! The more prehistoric the animal looks, the more I love it.

AM: Your interest in reptiles and amphibians is indeed pretty well known, and I love learning these things about people - the nonMD/PhD interests they have. So what is the importance of sustaining those interests that perhaps exist outside your MD/PhD life?

JK: I think it's super important! I try to be

careful not to get in my own head about MD/PhD things, and not to focus solely on the career. I know that sounds ridiculous - us in an 8 year program - but you just need a break sometimes, and you need to focus on something else and remind yourself that there are other things in life that exist that make it meaningful to you. You know? If it's lizards, then it's lizards! If it's skiing, or whatever... hobbies are what make life enjoyable, and I don't think you should give up on these things just because you're in a serious career. I think the exact opposite; you should hold on to these things dearly. I also feel like I am more loud about my hobbies, which is a distinct choice, because I didn't like how some people had preconceived notions about what an MD/PhD student should be like. Does that make sense?

AM: It does! And I always think that because we are MD/PhD students, whatever we do becomes the new expectation of what an MD/PhD student is. So if that's starting a reptile interest group, then that IS what an MD/PhD student does! So I love that!

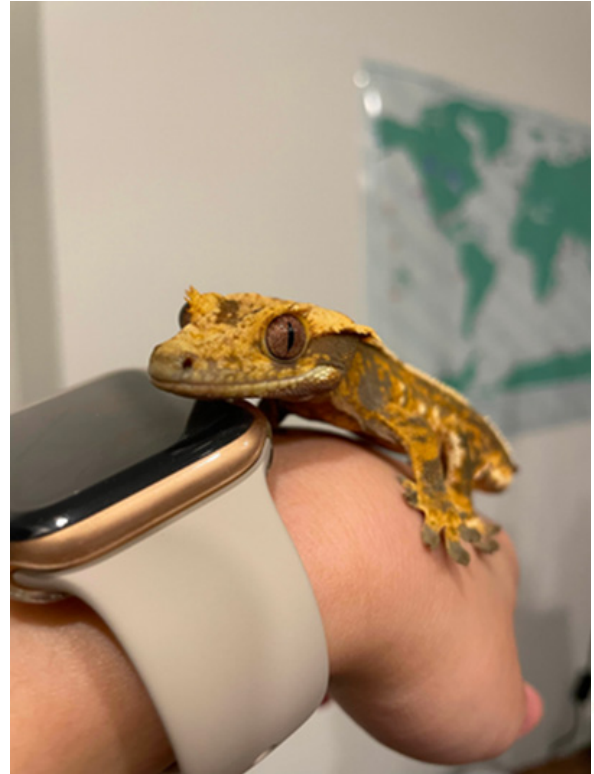
JK: Yeah, and I don't want everyone to think we're just to the lab, back home, to the lab, back home - which is a lot of what we do. But we are also nuanced people with lots of niche interests.

AM: I love that answer! I think that's going to play well with our audience. \*both laugh\* So here's another question - any great reptile or amphibian stories from your recent travels?

JK: So there's reptiles everywhere in southeast Asia, like tiny little lizards that climb all over the walls. But I saw this MASSIVE one inside of the place we were staying. I was just lying there, staring for a good 15 minutes, watching it track a moth that was stuck in the house. That's a little bit morbid... Then I pulled out my phone and started filming it, as one does.

But I heard it snap its jaws! And it was so loud, like a bottle cap opening. So that was my closest encounter with a lizard in the wild. AM: That's exciting! I'm sure lots of people will be asking to see that video in the weeks ahead.

JK: I doubt it! I was by myself at the time, but I was travelling with 10 other people, and when I asked if anyone wanted to hear it, they all said "Later". And I know that means no!



*Members of the Reptile and Amphibian Interest Group participate in a group chat where members can vote on pet names; this striking crested gecko was named "Nigel" by popular vote. Photo courtesy of Nigel's human, Michelle Lim.*

AM: Have you had any funny reactions when people find out you've started a reptile and amphibian interest group at UofT medical school?

JK: Personally I haven't, but Mathepan has.

Friends of mine will message him and ask, "What is this?" They won't ask me, and I have no idea what that's supposed to mean, and they'll ask, "This is a joke, right?" And he says, "No, not really". No one asks me, but they ask Mathepan if it's legit. From there, people have actually joined and just added other friends with lizards. And then I got to thinking, since I'm going to get a lizard, this is like a lizard babysitting service. If you had a dog, everyone would want to help sit your dog or your cat, and help take care of them. But no one says, let me sit your frog, let me hang on to your turtle. But this group is our babysitting group. Anyway. I just thought about that!



Frog.

AM: So if somebody's interesting in joining the group, what kind of events can they expect?

*\*both laugh\**

JK: I gotta tell you Andrew, it's extremely low-key. And by that I mean, currently on the programming, we have a Facebook group where we all send pictures of reptiles to each other. And that's about it. And sometimes we ask about what we should name our pets.

AM: If somebody wanted to join, what should they do?

JK: Just message me, Mathepan, or anybody else who is in the group. This is a very chill, very inclusive group. There's no essay you need to write about how much you love lizards to get in.

AM: So everybody is welcome! Okay, my last question- do you have a name picked out for your pet bearded dragon?

JK: So it would have been Stanley if the Leafs had wone the cup, which is absolutely devastating for me right now. So now I have to change it, because it can't be Stanley. But it will probably be a human name, I love a good human name...like Richard.

AM: That's always fun! Okay, that's all my questions.

JK: Cool!

AM: Thanks Jenn! 🐸



Group members communicate via a Facebook Messenger chat titled "frogtors". Pictured: artist's rendition of a "frogtor".

# PAWS AND STYLE

## UNLEASHING THE MD/PHD BEST DRESSED PETS!

SAFA MAJEED

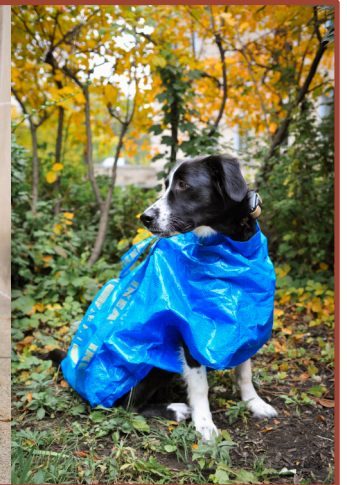


Meet **Margo Malkin**, with the most enchanting "pretty please" face. Her eyes are like pools of liquid charm, drawing you in with their deep, soulful gaze, making it impossible to resist her charm.

Get ready to be enchanted by our furry fashionistas; from dapper dogs to chic cats and everything in between, the UofT MD/PhD program has it all.

Fashion is not just for humans; it extends to our furry companions who exude charm, personality, and a touch of paw-some style. Whether they're sporting adorable costumes, stylish accessories, or simply showing off their natural fur, our pets have an uncanny ability to turn heads and warm hearts with their impeccable taste.

Join us in celebrating the delightful fashion sense of our beloved four-legged friends, as we showcase the most stylish pets around. And don't forget to vote for this edition's winner...



Prepare to be amazed by the high-fashion heiress **Nala Florescu** as she rocks the most unexpected yet stunning ensemble—a designer IKEA bag!



Our next purr-fectly stylish feline friend is the epitome of charm and coziness – meet the cat in the sweater, **Blair Lia!**



This four-legged fashion icon, **Max Majeed**, perfectly blends style and a hint of canine skepticism. Here, he is sporting a very trendy Patagucci R2 sweater, an excellent choice for glamping!



Double trouble: feline fashionistas, the Dhaliwal twins (fraternal, of course), **Professor Higgins** (right) and **Kayley** (left) Dhaliwal! With a nod to their nine lives, these fashion-savvy cats know how to dress to the nines, proving that cats can give dogs a run for their money when it comes to style.



To top it all off, our final furry contestant! Welcome this very special guest, Dr. Jones' grandchild, the one-of-a-kind **Bentley Simpson**! This masterpiece is captioned: It's all fun and games until someone steals your pumpkin spice latte.

And that's a wrap on our delightful journey through the world of best dressed pets! From the enchanting Margo with the "pretty please" face to the fearless fashion choices of Nala and the Dhaliwal twins, we've celebrated the incredible style and irresistible charm of our furry companions. Whether they're donning cozy sweaters or unexpected ensembles, these pets have shown us that fashion knows no bounds when it comes to expressing their unique personalities. Stay tuned for more fabulous features as we continue to celebrate the fashion-forward world of our beloved pets! 🌟🐾

Submit a photo of your pet to be featured in the next edition of MD PhDeets by emailing us at [mdphdeets@gmail.com](mailto:mdphdeets@gmail.com)

Vote here for your fan favourite:



The background features a complex, organic pattern of glowing blue and red lines and shapes, resembling a microscopic view of cells or a network of fibers. The overall color palette is dark, with deep blues and blacks, accented by bright reds and oranges. Numerous small, white, star-like specks are scattered throughout the scene, giving it a cosmic or digital feel. The word "GAMES" is centered in a bold, white, sans-serif font.

**GAMES**

# MATCH THE PUBLICATION TO THE AUTHOR

1. KDM6 demethylases integrate DNA repair gene regulation and loss of KDM6A sensitizes human acute myeloid leukemia to PARP and BCL2 inhibition
2. Screening for Psychological Distress in the Palliative Care Setting
3. Cell-free DNA topology depends on its subcellular and cellular origins in cancer
4. Prolonged Circulating Lipid Nanoparticles Enabled by High-Density Gd-DTPA-Bis (stearylamine) for Long-Lasting Enhanced Tumor Magnetic Resonance Imaging.
5. PtdIns(3,4)P2, Lamellipodin, and VASP coordinate actin dynamics during phagocytosis in macrophages
6. Genotyping SARS-CoV-2 Variants Using Ratiometric Nucleic Acid Barcode Panels
7. Protease-Activatable Porphyrin Molecular Beacon for Osteoarthritis Management
8. Heath policy guiding the identification, analysis and management of secondary findings for individuals undergoing genomic sequencing: a systematic review protocol
9. Association of brain metastases with survival in patients with limited or stable extracranial disease: a systematic review and meta-analysis
10. Sex-Based Differences in Severe Outcomes, Including Cardiovascular Hospitalization, in Adults With COVID-19 in Ontario, Canada
11. Intradural-extramedullary Spinal Cavernoma: A Case Report and Review of the Literature
12. Amniotic fluid stem cell administration can prevent epithelial injury from necrotizing enterocolitis
13. Teaching old tools new tricks—preparing emergency medicine for the impact of machine learning-based risk prediction models
14. Absolute scaling of single-cell transcriptomes identifies pervasive hypertranscription in adult stem and progenitor cells
15. Roadside screening tests for cannabis use: A systematic review.
16. Clarifying rural urban disparities in alcohol related emergency department visits and hospitalizations in Ontario, Canada: A spatial analysis.

*Alexander Dhaliwal*

*Yun-Kyo Kim*

*Anders W. Erickson*

*Vinyas Harish*

*Andy G.X. Zeng*

*Hannah N. Kozlowski*

*Sydney Amelia McQueen*

*Bahar Behrouzi*

*Steven R. Botts*

*Ethan Z. Malkin*

*Bryan Gascon*

*Glenn F.W Walpole*

*Safa Majeed*

*Erica Wennberg*

*Erik Loewen Friesen*

*Maneesha A. Rajora*





**Depressed Grad Student:** *I want to enjoy the beautiful, sunny weather outside as I'm finally coming out of SAD, but I have a bunch of experiments I need to get done before I start writing up my manuscript in the fall. Any tips on how to get the best of both worlds?*

**askGPT:** Finding a balance between enjoying the outdoors and completing your experiments can be challenging but certainly achievable. Here are some tips:

1. Plan your schedule: Create a detailed schedule that includes dedicated time for experiments AND time for outdoor activities.
2. Maximize productivity during work hours: Minimize distractions, stay organized, and prioritize your tasks when you're in the lab.
3. Take advantage of flexible hours: Try to adjust your schedule to take advantage of the best weather conditions. You could start your experiments earlier in the morning or work later in the evening to have more time during the sunniest parts of the day.
4. Breaks in nature: Take short breaks outside in nature. Find a nearby park or green space, get some fresh air, and enjoy the sunlight. Even a 15-30 minute break can refresh your mind.
5. Prioritize self-care: It's crucial to take care of yourself, both physically and mentally. Adequate sleep, exercise, and a balanced diet can enhance your overall well-being and productivity. Incorporate outdoor exercise (ex. jogging, biking, or walking) into your routine to enjoy the weather while staying active.
6. Involve others: Collaborate with colleagues to share the workload. By working together, you may be able to divide tasks, allowing each person to have more time for outdoor activities.

Remember, finding balance is essential, but it may require some compromises and adjustments. By effectively managing your time, staying focused, and incorporating outdoor activities into your routine, you can make progress on your experiments while enjoying the beautiful weather.

*Need advice? Have some answered questions? Send us your woes ([mdphdeets@gmail.com](mailto:mdphdeets@gmail.com)), we'll solicit advice from chatGPT and feature their answers in our fall edition.*

Doc Doc!

Who's there?

SSHRC.

SSHRC who?

SSHRC-who-terie?  
Say no more!

Doc Doc!

Who's there?

CIHR

CIHR who?

CIHR of jam on that  
charcuterie board?

Doc Doc!

Who's there?

OGS

OGS who?

Oh Gee, Is  
there any cheese?

Doc Doc!

Who's there?

Eureka!

Eureka who?

You reek a' salami!

## DOC DOC? WHO'S THERE?

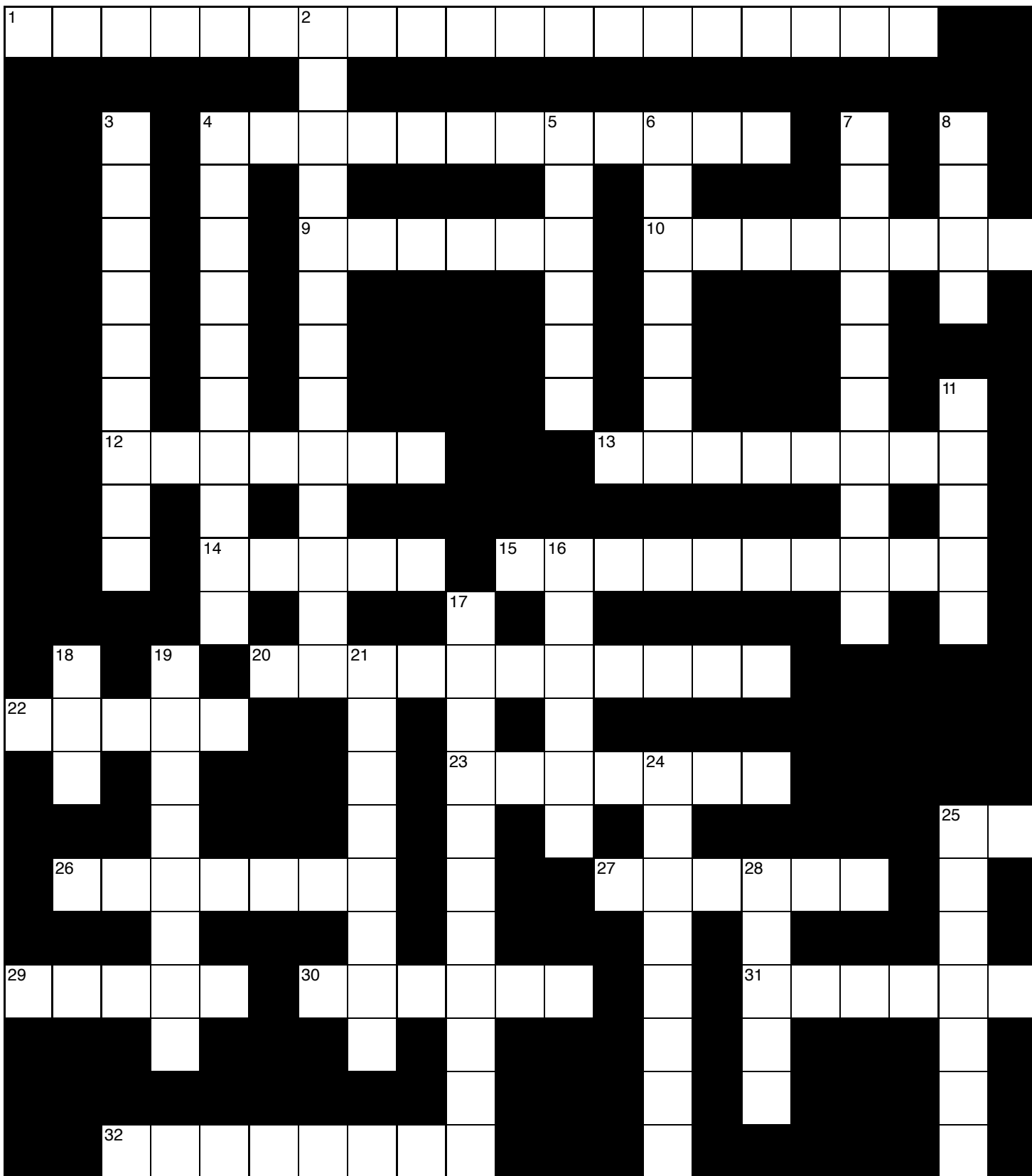
**ERICA WENBERG, SAFA MAJEED, ANDREW MAZZANTI, RYAN KARIMI**

Connaught stop laughing? NSERC your jokes here: Send your best DocDoc jokes to the MD/PhD newsletter committee ([mdphdeets@gmail.com](mailto:mdphdeets@gmail.com)) to be featured in our fall edition.

# MD PHDEETS CROSSWORD

SAFA MAJEED, ERICA WENBERG, ANDREW MAZZANTI, RYAN KARIMI, CAMILLA GIOVINO, GEMMA POSTILL & ANGELA ZHOU

Follow this QR code to access the interactive crossword with solutions



## CLUES

### ACROSS

- 1 Where Dr. Jones attended medical school
- 4 This plot describes torsion angles in a polypeptide chain
- 9 Canadian snack that shares its name with a gene-editing technology posited to take over the world
- 10 Undifferentiated functional unit in an organism
- 12 They disappear in the morning and reappear in the night | They cause a ruckus, even when they're out of sight | They creep and they crawl without even a sound | They can only be banished when a steaming iron or specialist is around | They took over our lives during the September that just passed | But we fought them off and didn't finish last
- 13 Many laureates of this Canadian award go on to win a Nobel
- 14 Organization representing a group of future physicians who are also focused on research (acronym)
- 15 Name given to a region of DNA that can move and migrate to a different part of the genome
- 20 Neural network architecture that enables advice column, also a popular children's cartoon from the '80s (when pluralized)
- 22 A common breakfast food eaten with cream cheese (as seen in Everything Everywhere All At Once) AND an algorithm for accurate classification of gene essentiality from short hairpin RNA and CRISPR/Cas9 genome-wide genetic screens
- 23 Small, circular, double-stranded DNA in an organism that is separate from any chromosome
- 25 Political figure AND designation given to MD/PhD students halfway through their studies
- 26 Oak tree genus AND UofT learning platform
- 27 Winner of the 2023 MD/PhD bake off, this person talks science while melting their way to your heart
- 29 First woman to win a Nobel prize
- 30 Winner of the 2023 Norman Rosenblum Award for Excellence in Mentorship in the MD/PhD Program
- 31 Puts the G in PGCRL
- 32 Autumn wrote; Andrew waved; Julian bowed
- 6 Famous protein structure prediction Software AND famous stone used to decipher ancient Egyptian hieroglyphs
- 7 Doctors who practise medicine at night
- 8 Prefix with peptide & amory
- 11 Machine enlisted to assist in a class picture at our last MD/PhD retreat
- 16 Injection given to pregnant women to prevent Rh disease in children
- 17 Another name for propan-2-ol
- 18 Tool used in epidemiology, statistics & bioinformatics to visually represent assumed relationships between variables (acronym)
- 19 Type of dome built for the 1967 World's Fair in Montreal; can be confused with the shortest path between two points on a surface
- 21 Lurking in the walls of MSB
- 24 Name of a citation software that always seems to cause your computer to crash
- 25 Disease caused by parasite that lives in blood and liver cells originally thought to be due to "bad air"
- 28 Is both a wave and particle in quantum physics

### DOWN

- 2 Type of material that is extremely important to modern computing; basis of transistors
- 3 First protein to have its structure determined; stores oxygen in muscle cells
- 4 Plastic figure that can help debug code (or, in its feathered state, lawns)
- 5 First name of the previous MD/PhD program director

