VIEW to the U transcribed
Season 7: Without Further Ado; Episode #3
Senior Research Associates
Kathryn Harris-Howard, Elizabeth Parke, Dmitry Pichugin, Vera Velasco
Office of the Vice-Principal, Research
U of T Mississauga

[intro music fades in and out]

Vera Velasco (VV): I'm a Senior Research Associate

Dmitry Pichugin (DP): I'm a Senior Research Associate

Katie Harris-Howard (KHH): I'm a Senior Research Associate

Elizabeth Parke (EP): This group here, we've talked a lot about how we can talk about the space of the lab, and what the lab means, and how to create these spaces that are about equity, diversity, and inclusion, and how the humanities, social sciences can learn with the sciences and think through what are our equipment, what are our hardware, what are our software, and how do we learn from each other?

[theme music fades in]

Carla DeMarco (CD): Research convergence and cohesion at UTM

Hello and welcome to *VIEW to the U*: An eye on UTM research.

I'm Carla DeMarco at U of T Mississauga. *VIEW to the U* is a monthly podcast that features UTM researchers from a range of disciplines who will illuminate some of the inner workings of the science labs and enlighten the social sciences and humanities hubs at UTM.

On this episode of *VIEW to the U*, my guests are Drs. **Katie Harris-Howard**, **Elizabeth Parke**, **Dmitry Pichugin**, and **Vera Velasco** from the Office of the Vice-Principal, Research at UofT Mississauga.

On the new season, called "Without further ado," I will introduce you to some of the new people from UTM's vibrant and ever-growing research community.

And so, what is a Senior Research Associate?

At their core, they are educators and academics in their own right, with established programs of research and expertise in their respective disciplines – in this case, cellular neurobiology, visual culture, biophysics, and plant physiology.

In addition to that, UTM's Senior Research Associates, also known as SRAs, oversee what we call our Core Facilities, which includes the Imaging Facility in the Davis Building, the Collaborative Digital Research Space (or CDRS) in Maanjiwe nendamowinan, the Nuclear Magnetic Resonance (NMR) Facility in the Davis Building, as well as the Growth Facilities that are located in Davis and in the greenhouse on Outer Circle Road.

Over the course of today's interview, Katie, Elizabeth, Dmitry, and Vera talk about their respective research paths, how they consolidate, collaborate, and help the research community at UTM and beyond, and what they hope to accomplish in their roles as SRAs now and in the future of research and relationship building across the disciplines.

[theme music fades out]

Katie Harris-Howard completed her PhD in the Department of Cell and Systems Biology at UofT, before taking on a postdoctoral position at Massachusetts Institute of Technology, and working as a Research Associate in the lab of UTM Biology Professor Bryan Stewart. She started her SRA position at UTM in 2020.

Elizabeth Parke completed a PhD at UofT in the Department of East Asian Studies, before taking on postdoctoral positions at the Jackman Humanities Institute at UofT and then McGill. She started her SRA position at UTM in 2019.

Dmitry Pichugin worked as an NMR instrument technician and then completed a PhD in biophysics under the supervision of UTM Chemical & Physical Sciences Professor Scott Prosser. He started his SRA position at UTM in 2020.

Vera Velasco completed a PhD at McMaster University, where she also worked as a teaching assistant, before taking on a postdoctoral position at UTM and a Visiting Research Scientist position at the University of Connecticut. She started her SRA position at UTM in 2019.

Before launching into the episode, a couple of UofT or UTM acronyms get thrown into the chat:

- So, there are the SRAs, which, as I mentioned, are Senior Research Associates.
- CPS is short for the Chemical & Physical Sciences Department at UTM.
- RGASC is the Robert Gillespie Academic Skills Centre on campus.
- And ISI or I-S-I, is short for Institutional Strategic Initiatives at UofT.

And on to our first SRA; take it away, Katie…

KHH: My name is Katie Harris Howard, and I'm a senior research associate for imaging. I'm a cellular neurobiologist. So what that means is that I study the nervous system at the level of neurons. So I'm interested in figuring out molecular mechanisms that allow neurons to function and also to communicate with each other by building appropriate synaptic connections. So to do this, I use the fruit fly, drosophila melanogaster, as a model, and I study a really specific synaptic connection that's called the neuromuscular junction. So this where a motor neuron that comes from the brain makes a connection to a muscle out in the body, firing the synapse drives

movement. And this synapse in the fly is very easy for us to access. So we can take really beautiful images of it. And we can also perform a bunch of different manipulations to it using genetic tools, using physiological tools and this lets us test how that synapse responds.

KHH: And it lets us start to understand this molecular machinery that allows the synapse to function properly as the flight develops. And a lot of this machinery is highly conserved in humans as well. So this work is also relevant to human neurobiology. So I've been playing with flies for research since I was a PhD student here on St. George campus, but I started working on this particular synapse, the neuromuscular junction during my post doctoral work. So I worked in the lab of Troy Littleton. Who's in the department of biology at MIT, and I was able to continue to work on these research questions here at UTM. When I came here as a research associate with Brian Stewart, who's in the biology department. And now in my current role as an SRA, I continue to study these questions in collaboration with Brian Stewart in his lab.

EP: My name is Elizabeth Park, and I am a researcher who looks at the art and visual culture of contemporary China. And in particular, my doctoral work looked at the way in which artists based in Beijing examine and produce artworks in response to, in critique of, and in dialogue with the changes in the urban fabric of the city of Beijing. So the dates I look at are from 1978, until of 2012, this is based on archival and field work that I've conducted in the city.

And I had the opportunity to expand that work as a postdoctoral fellow at McGill, where I started to work on a second project around luxury cars in the sinosphere, which means the kind of greater China. So, the Chinese diasporas, Singapore, Taiwan, Hong Kong, and Beijing. And I also include our campus in that the way that the cars move through our campus as a site of research of this project, and UTM is part of the facility at the core research facilities. I run the collaborative digital research space, which we have shortened to CDRS as an homage to the really beautiful forest that the building looks out on. And in this space, I foster and curate research workshops, roundtables, symposia, keynotes, and ongoing writing groups is a way to support researchers who are engaged in humanistic and social science inquiries.

DP: My name is Dmitry Pichugin. I am a senior research associate at UTM and I take care of our nuclear magnetic resonance facility. My research and my doctoral studies were surrounded about studying how certain receptors on the cell surface get activated. And so, we're trying to understand mechanics of that. In particular, and that's maybe very fun to know, the system I work on actually gets activated by caffeine. So, if you drink coffee, you feel more alert. This is something that I'm trying to start and figure out how that actually happens. So, the energy, landscape involved and sort of the cascade mechanisms that leads to the activation. But I started off my undergraduate studies as an organic chemist, and I was always interested in small molecules and how to make them, what you can do with them. But then I discovered magnetic resonance as a field, and I thought, "Hey, this can do so many different things."

DP: And NMR is typically used for studying materials, molecules, dynamics, and system interactions, a full source. So, I really fell in love with that idea. So that's how I joined UTM for my doctoral studies studies with actually Scott Prosser here on campus. And I continued ever since trying to figure out what are the biological relevant molecules do, how to activate GPCR in this particular case, which govern everything from blood pressure to cell death and a lot of

other process. And we try to collaborate with cancer development and few other things here and there and push the field forward.

CD: I know GPCR, you know what it is, but it's gene protein coupled receptors, right?

DP: GPCR stands for the G-protein coupled receptors. It is broad family of receptors, one of the biggest families in our genome, and we have something like 400 different receptors in our body, but depending where in our body they are, they can serve functions from seeing light, smelling things, again, controlling the blood pressure, immune response, inflammation, and basically almost every other function that they're involved in. And part of this research should try to figure out why is it that same particular receptor that found in the brain, in the heart, and the blood vessels does actually different roles, depending which tissue it is in.

CD: And anytime anyone mentions coffee related to their research, you had me at coffee.

DP: That's how I start my talks and connects to real people.

CD: That's very smart.

VV: I'm Vera Marjorie Alaria Velasco, just call me Vera and I'm a senior research associate for the research greenhouse and other growth facilities at UTM. I'm a plant physiologist. And my expertise is in plant responses to antibiotic stressors, such as nutrient deficiency, heat, and droughts. So as in climate change, I use techniques in plant biology and molecular biology, biochemistry, computational biology and statistics, in answering my biological questions. My current work is understanding how Douglas Fir trees, a popular Christmas tree and wood source here in Canada would respond to future climate. I am looking at gas exchange as in photosynthesis, light use, and also gene expression using long read RNA sequencing. I got to biology because my parents' ambition for me is to become a medical doctor. And I think this goes for many biologists. I took biology in undergrad and slowly fell in love in plant science. And so there crushed my parents' dreams and I did my undergraduate masters and doctoral thesis in plant stuff.

CD: Nice, but I see that there could be some overlap, cause I know you're saying you're mainly focused on the biology aspect, but of course we've got researchers in geography who do plant based research, right?

VV: Yeah. So, plant science related research in geography. Yes.

CD: And so I know that a couple of you touched on this already, but if you could perhaps expand a little bit on the facilities that you see, but also the services that you offer to the UTM research community.

KHH: The Core Facility that I oversee is the Imaging Facility. And so, this is the suite of microscopes on campus. And so we provide support as well as the equipment for researchers who are performing microscopy as a part of their experiments. So we have three beautiful

confocal microscopes, and these are each specialized in particular ways for different applications. And so whenever a new researcher comes through the facility, we can provide some consultation on say how to design a good imaging experiments, how to choose the best instrument to use, and then hands on training on actually using that microscope to collect data. And the researchers that come through study a huge range of different topics from how neural circuits form in the brain to how flowers produce essential oils and how nanoparticles can be developed for therapeutics. And so really my favorite part of this whole job is just getting to participate in investigating such a huge diversity of research questions.

CD: And Katie, you primarily work with faculty members in biology or does it vary?

KHH: Most of our researchers are from biology. We also have some labs from psychology from CPS anthropology and have some folks that come from downtown campus and a few external researchers as well who come in to use the instruments

CD: And Elizabeth?

EP: Yeah. So, the CDRS, the collaborative digital research space, functions as a way for people to get together if they have offices in MN. So, in Maanjiwe nendamowinan but because of my background, which is transdisciplinary and rooted in visual studies, we've been building the space to support research broadly conceived around collaborations. And we work with the Blackwood gallery sometimes we work with the RGASC to support early career researchers, graduate students, and post-doctoral fellows, which I'm so grateful for the support of the other SRAs. Our cohort of four senior research associates has been active in supporting postdoctoral fellows as researchers at UTM, which is a growing part of our campus. And I also work closely with people like you, Carla, in the Office of VP research to do grant support. So, over the past summer, we ran our first ever shirk summer cohort where people got together in sort of mini teams to help each other commit to and hit milestones, to get ready, to prepare, to submit for the shirk deadlines, which come up fast in October.

But we also have recently launched the first book manuscript workshop, which supports first and second year tenure track faculty in preparing their book for submission to presses for publication. We work with the Dean's office, with the newly launched fund for black indigenous and racialized faculty members, which launched in the spring. And I'm always asking and looking for ways to collaborate. So from housing VR headsets, from a faculty member in DVS, at the department of visual studies to having team meetings around books, new science lab, these are all things that we've done in CDRS.

EP: And we have been doing most stuff as virtual, and we will continue to have both virtual and in person and hybrid options going forward. We've seen such a great uptake in people participating across different disciplines and different campuses. In fact, we have people from UTSC who come regularly to our writing group. So really trying to knit those communities together through the space and through my position is how I support through the facility.

CD: Yeah, and I think it's so important because prior to you coming, I know it was always sort of a challenge to help to support our humanities faculty members. So I think you've really done

a great job with finding ways to support, not just the humanities people, also the social sciences, but there's a lot of great initiatives coming out of CDRS.

EP: Hey, thanks. I feel very lucky because especially everybody here in this conversation today and also more broadly with colleagues, I always feel like I have these ideas and I bring them back and people are always willing to bounce ideas off of, so I'm always happy when people say, "Oh yeah, that sounds like a good idea."

CD: Yeah, that's great. And Dmitry, if you could talk a little bit about how you support our research community with your core facilities.

DP: Sure thing. I would first like to take a small step back because what I do is actually surprisingly obscure. And unless you're an organic chemist, you may never have heard of NMR and what it does, but it's surprisingly expensive, I would like to point out. Magnetic resonance, everybody knows it from MRI for example, if you tear a ligament you go to a hospital, there's a big machine, they put you in, makes lots of noises. And then you have a 3D scan of your tissues. What we work here is also magnetic resonance, but instead of looking at the tissues and their densities, I can go down to molecular level and look at exactly what molecules and parts of the molecules do. This is so more people can understand this.

CD: And I appreciate the explanation because I've seen pictures of the NMR machine, and to me it just looks like a water heater.

DP: It honestly does not look too different from your local brewery. It really doesn't, but these are surprisingly powerful spectrometers, and the core of it is a super powerful magnet. It's 20 to 40,000 times stronger than the earth as a magnet. And once we put the samples inside, we can see what molecules do. And the beautiful thing about it, we can look at the molecules in their sort of native environment, could be protein, small molecules, some of the materials. And our department, which is the chemical physical sciences, we have pretty diverse range of researchers that look at biological molecules and trying to study diseases, and what is particular mutant in a particular receptor? Why does everything break when that happens to cancer research, looking at new perspective drugs and how they interact with their target molecules, start proteins. And we have some inorganic material chemists that developed new catalysts, various polymers and nanoparticles, be it for MRI applications or catalysis applications.

DP: And we can look at them. We can tell students and researchers, whether they've done, what the thing they've done, if it works the way they think it works. And we can hone in down to again, which parts of the molecules are exactly what you expect or don't expect. And we also provide service for actually our local industry, as a large number of small organic molecule making companies in Mississauga and Oakville. And we help them to get their spectrum, characterize whatever they're making, because these are very expensive and very difficult to maintain spectrometers. So it's actually useful to be able to help industry around us. And that's where part of our graduates is going to go anyways. So we're like, we might as well train them here and then they will go out and say, "Hey, we can do all these things."

CD: And does the industry reach out to you specifically? Or do you just have longstanding sort of partnerships with some of the surrounding organizations?

DP: That's actually very good question. So, it's both, we have some of the clients that we have had for, well over a decade and we've been helping them, but there are new companies show up and then they will reach out to us and be like, "Hey, we have this, would you be able to help?" And if they had chemists on staff, they will know that there are some facilities around us. And we always look for what we can do since this is the first year that my position exists in university. I'm hoping to expand our reach into biology departments as well, to see what we can do there because NMR can do typical organic things and organic chemists will know what it can do, but we can also work with people, study plants, cells, and look at the various metabolites that plants can produce, cells can produce. We can do things like even looking at what is in your honey or what is in your sports beverage.

CD: And Vera has her hand raised.

VV: I don't want to, but I am excited with what you said, Dmitry, because I remember when I was early in my grad school years, we tried to measure phosphorus, organic phosphorus using PNMR and that project did not pan out, but there's a whole different ways we can use NMR in plant biology.

DP: Maybe we can rejuvenate that project. I can tell you this much. In my previous position, I used to work in a similar facility downtown on the Saint George campus. One of the projects we worked on, it was at looking at lignin composition from trees, and it's something that NMR was super useful in as well.

VV: Cool.

CD: You might have just made a new collaboration right here on the podcast.

DP: You heard it here for the first time.

CD: And then Vera, if you could talk a little bit about how you support the faculty members with your core facilities, that'd be great.

VV: Yeah. So, I oversee the growth facilities and it is a collection of controlled environments with sophisticated sensors and controls in lighting, humidity, temperature, and carbon dioxide. So, we have five glass houses at the research greenhouse, which you will find next to the library. And then we have several growth chambers and also freezers with four minus 20 and minus 80 degrees Celsius. So, these controlled environments are essential, not only for plant biology, but also for many other sub-disciplines of biology, including plants and animals. We have also many scientific instruments for climate and soil diagnostics available at the growth facilities for researchers. So the growth facility staff, including me, support researchers by ensuring that these equipment are available and are in working order for the researchers' experiments. We also provide training on our instruments. As a plant scientist, I also offer my expertise when needed, for example, in developing experimental design and writing instrument grants. So there's many growth facility staff. We have Zing Zhou, Jon Lee, Brenda Peton, who are excellent at supporting the researchers. And we also have some work study students and volunteer students who help us run the facility.

CD: That's great. Thank you so much. And so then, the last question I had was just, what do you envision to be sort of the long term goals for each of you for the core facilities at UTM? We'll start with Katie again.

KHH: One of my major goals is to grow the imaging facility, not just as a room where the fancy microscopes are, but as a center that really emphasizes high quality training and support for using those microscopes. So I would say quite a few researchers who end up doing an imaging experiment may have had very little formal hands on training in microscopy. And on top of that, this is a field that's very rapidly evolving in technology. So I am constantly expanding my own knowledge and thinking about how best to provide resources to our researchers. So I started offering workshops that address common training needs. And my goal is to continue to expand those offers. In the future I'd love to design formal courses, maybe in collaboration with faculty partners. So through all of this, the goal is for the imaging facility to be a center that really values training, education, support, in addition to the instruments that we provide.

CD: Thank you. I just have one quick follow up question. So I don't know very much about imaging or microscopy, but I'm just wondering, I know that those are also very expensive pieces of equipment. Is it also something that is constantly changing? Is a microscope, after five years, are they sort of out of date or is it something that you have a microscope and it does the work that you want it to do for like 10 years?

KHH: It's somewhere in the range of seven to 10 years where we would start to look at maybe upgrading, trading in, replacing. You can certainly keep these microscopes going for a really long time. And of course, you need to keep up with the needs of the researchers and the data that currently needs to be collected. So, that's sort of the timescale.

CD: Okay. Thank you so much. And Elizabeth, your long term goals for CDRS.

EP: Since we're in the audio format, you can't see me nodding when Katie's talking, but I am nodding along because so much of what she just articulated for future plans are very similar to what I'm hopeful for CRDS training and workshops. So that could be things like collaborating with the black research network, the critical digital humanities initiative, which are ISI funded, UTM based projects that are tri-campus in nature. So providing opportunities for students working on digital humanities projects to learn data visualization best practices and ways of working with data in an ethical and open way. For instance, thinking through issues around research data management, which have been, and continue to be such a big part of many of our disciplines, but the ways in which we handle data or even define data in the humanities is something that I find really fascinating. And so having those conversations about the methods and approaches we can take and how much we can learn from things like, Katie and I have had a conversation about how to present illustrations in published work.

And what does it mean to take a good image when working with the microscopes as an art historian, and a visual culture person that is endlessly fascinating to me and Vera and I had a great conversation about how can you describe color in a particular way? The other thing I look forward to growing this space is creating places where we can foster those big research teams.

And I mean, big, maybe that's three people, maybe it's 10 people, but that CDRS is a bustling hub of places where you have that kind of academic serendipity. So you have a conversation over coffee that leads to a longer term collaboration. So these kind of communities of practice that I'm hoping to foster. So it could be, there's a lot of work happening across linguistics, psychology, I mean, computational sciences. So fostering that is something that I want to do in a variety of different ways, whether that's having small conferences, whether it's having reading groups, working with our colleagues in the TLC, the teaching and learning communities, working with people who are engaged in community research.

So, I'm thinking of people that might want to use the space as an outward facing. So engaging with communities from Mrs. Saga of the credit, for instance, having those strengths come through CDRS and be fostered by CDRS, always with an eye towards an inclusion. This group here, we've talked a lot about how we can talk about the space of the lab and what the lab means and how to create these kinds of spaces that are about equity, diversity, and inclusion, and how the humanities, social sciences can learn with the sciences and think through what are our equipment, what are our hardware, what are our software and how do we learn from each other? So yes, to much, much more training and engagement and trying to think about what it means to be actively trying to grow these networks in a way that encourages them to flourish.

CD: That's great. And I think definitely I see this commonality with all of the work that you here all do, but I know it did come up with, I think it was the research excellence prize event that we held last year, that one of the things that they mentioned was how much technology has factored into their work over the time that they've been researchers. And I definitely see that happening in all of your areas. And I was thinking about you in particular too, Elizabeth, just that digital humanities, it seems like there's always something new coming up or like you mentioned VR and things like that. There's all these really neat and interesting new ways that people are incorporating that technology into their humanities work, which is endlessly fascinating, I think.

EP: And trying to think of ways in which we might share unexpected opportunities. I'm thinking about how there's interest in VR experiences in bio labs, for instance. So maybe the headsets live at CDRS, but they get used by my colleagues in bio and CPS. So yeah, the technology piece is really exciting because it's a shared space of... the hardware is the same, but what we do with it might be slightly different.

CD: That's right. Yeah. The discovery. Very cool. And then Dmitri, if you could talk a little bit about what you foresee as some of the long term goals for your facility, the NMR

DP: It's kind of funny is that I work on a very different type of equipment from Elizabeth or Katie, but the goal is exactly the same it's to A: form room of instrument into actually a research center where somebody can come up with a problem and we're like, "Hey, we can solve your problem and take the load off your PhD students and researchers."

I am trying to form our little room of instruments into a research center that just runs, helps to get the data, helps people to make sense of their data because half of our spectrums we make are just lines in one direction and dots in the other direction, like, well, what does it mean? So that's exactly what I'm trying to do and promote it between our researchers who may not be

aware of... they can just come and be like, "Hey, I have this problem." And NMR can do it for them, promoting it again between the industry and find more industrial connections so that when our graduates finish up things here, we can direct them to some companies and go, "Hey, you can at least talk to them, see what you want to do with your career."

We don't do career services in the NMR directly. We just do it with all our SRAs, but just try to grow it in organized manner and support anyone who is in the department and may have any sort of an issue.

CD: That sounds great, very supportive of just various disciplines and that you're wanting to work with whoever needs help in that regard.

DP: Yeah, I find a very, because everything that Katie said and everything that Elizabeth said, just put it on a different spectrometer, that's what I'm trying to achieve here as well.

CD: That's great. And then Vera, if you want to talk a little bit about your long-term goals with the growth facilities.

VV: So, my goal, we hope to develop the growth facilities into a phenotyping hub. In fact, we are slowly acquiring state-of-the-art and high throughput equipment for plant phenotyping so that our researchers can remain at the forefront of science. In fact, this week we will receive 18 sensor micro-pams from Walz in Germany. And if you are wondering how much of the sunlight or grow light is used by your plants, instruments like a micro-pam is what you need as it measures light energy efficiency plants. Next month, we will have portable data levers for soil so we can measure plant response and soil status simultaneously, remotely and high throughput, but it is very exciting.

KHH: That's great. That's one thing I wanted to add. It sort of draws on what we were just talking about, but I think it's really cool that these SRA positions exist here at UTM. And this is not just because I have a job that I really love, but it's because it represents an investment from the university and having leadership positions in these core facility areas, these type of positions for senior researchers don't exist everywhere. And I do think there's a huge value in having these roles. We can each bring all of our expertise that we've gathered our whole careers to continue to do research and support research. And because we have this awesome cross-disciplinary cohort, the four of us, we can have that broader view of supporting research across the university. And it's just been a real pleasure to work with the other SRAs.

CD: That's great. It was under Bryan [Stewart]'s leadership that he put in for the senior research associates also having you all in place helped us to weather the pandemic. The research office was in a much better place to handle all of the challenges that came up for our research community over the course of the lockdown and the research labs being affected and everything. So I think it was an amazing foresight for Brian to have created the positions.

DP: I actually wanted to add of one quick thing it's to expand on what Katie said. And everyone says that one of the things that I think is amazing about my position is that I can help to provide research continuity to the faculty that I work with because in the past and in a lot of universities across North America or anywhere else have these issues that labs are general led

by the postdocs, senior PhD students and faculty members themselves, and whoever can afford to have a research technician in their own lab.

But then post-docs leave PhD students graduate and some projects just get lost in that way. So, our positions or what I think we can provide is help to jumpstart incoming students research. We can jumpstart new post docs, we can take a lot of the load off their plate to figure out how to calibrate a spectrometer, how to fix it if something goes wrong, and just really speed up that process. And in my case, I took over some of the spectrometers were owned by the faculty members and sometimes faculty members being as busy as you can imagine, they are, they just don't have time to deal with some of this basic maintenance. So, that's what I think this initiative is also providing.

CD: Absolutely, I think it's so true to have a sort of point person as the expert in the core facilities is so key for our research community, as you say, to not only help our faculty members, but also the postdocs and the grad students and all the other or people who are working through these different research areas.

VV: I just want to also add that before the pandemic. I really appreciated CDRS because it is so open that you can just go there and allows for inter-institutional totally different fields where you can just go and meet these people, otherwise you won't, right?

CD: Absolutely.

KHH: Yeah. Great. That's what we're aiming for.

CD: I know that when I did drop in CDRS to see Elizabeth or Wong, or if there was an event there, you'd often see people just using the space to get some work done and do some writing or something. And I think it provides that space that, a little bit different than having the library. Cause it's just this designated area where you can go in a little bit more quiet space there.

EP: And thanks to you Carla, for putting this episode together and for the podcast in general.

CD: Thank you all so much. I am very appreciative that you were able to meet with me today. Even if it's virtually, I'm looking forward to seeing you all in person one day soon, but I am so grateful for you all for being here and for telling me more about your work. And like I say, I've been meaning to do this for a long time. It was just great to have a chance to chat with you all. Thank you.

[theme music fades in]

CD: I would like to thank everyone for listening to today’s show.

I would especially like to thank my guests, UTM's Senior Research Associates Drs. Katie Harris-Howard, Elizabeth Parke, Dmitry Pichugin, and Vera Velasco. Although we all work in the Office of the Vice-Principal, Research at UTM, I do not get the opportunity to chat with them nearly enough!

If you are a new researcher at UTM, please get in touch with me! I would love to meet as many people from our campus's research community as possible.

Also, if you can take the time to rate the podcast in iTunes, it helps others find the show and hear more from our great UTM researchers.

And this year marks the 5-year anniversary for VIEW to the U! With roughly 50 tracks, over 21,000 downloads, and everyone's support, it feels very celebratory. I am eternally grateful to the researchers who participated and those who have supported me – you know who you are! – along the way. A heartfelt thank you.

Bryan Stewart, who also got a shout-out on this show, is one of the people who helped to make it happen, so thank you to him!

Lastly, and as always, thank you to Timmy Terrific for his tracks, tunes, support, and everything!

Thank you!

[theme music fades out]