

BMCAA newsletter

vol. 27 number 2 / Winter 2013 issue

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Interview: Pina Kingman (OT9) on Working Abroad

Salt Lake City: Exclusive on this year's AMI Conference

IT5: Introducing the New Crop of BMC Students

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2013 BMCAA Executive Committee Members

Co-Presidents: **Andreea Margineanu** 1T2 / **Merry Wang** 1T2

Secretary: **Minyan Wang** 1T2

Treasurer: **Andrea Gauthier** 1T2

Newsletter Editor: **Takami Fossat** OT9

Fundraising Coordinator: **Natalia Burachynsky** 1T2

Web Development: **Michael Corrin** OT6

BMC Student Representatives: **Olivia Yonsoo Shim** 1T3 / **Inessa Stanishevskaya** 1T3

On the Cover

Twelve-spotted Skimmer on 1/2 oz fine silver coin

Royal Canadian Mint www.mint.ca/

by **Celia Godkin** (former Associate Professor) in 2013

“As we move forward, it is important to us not only to bring our BMCAA family closer together, but to also provide opportunities to expand beyond our professional boundaries.”



Presidents' Message

Dear Alumni,

What an eventful few months since our last newsletter!

This year's 68th Annual AMI Conference was held in Salt Lake City, Utah. It was such a breathtaking environment in which to reconnect and spend time with fellow students and alumni. Please be sure to take a look through some special AMI coverage in this newsletter.

We held a fantastic BMCAA Fall Social Night where we got to meet and catch up with many of our students and alumni. Having said that, we want to extend a very warm welcome to the BMC Class of 1T5. Welcome to the BMC family, we hope you've had an amazing first term and hope to get to know all of you well in the near future!

As we move forward, it is important to us not only to

bring our BMCAA family closer together, but to also provide opportunities to expand beyond our professional boundaries. We got the ball rolling by participating in events organized by ACM SIGGRAPH Toronto, and will continue to connect you to many other industry events. We are particularly looking forward to this year's UnCon, featuring presentations from many of our alumni and other professionals working in the realm of science and visualization. We hope to see you all there!

We can't say enough good things about our Newsletter Editor, **Takami Fossat**, who has dedicated countless hours on putting together and editing our Newsletters. Unfortunately, this will be her last newsletter, but we want to extend a huge thank you for all her work, enthusiasm, and true commitment in

keeping the BMCAA connected.

On behalf of the executive team, we would like to take a moment to honour the late Nancy Grahame Joy. Please take some time as we celebrate and reminisce about the Former Chair of Art as Applied to Medicine in this issue.

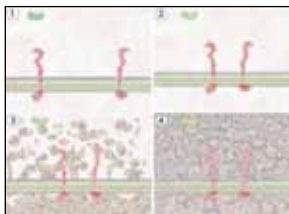
Before we sign off, please like our facebook group to keep up to date with our BMCAA news, event pictures, and shared goodies that may be of interest to you. As always, please send suggestions or any comments you have on BMCAA at bmcaa_exec@utoronto.ca.

Have a terrific winter and we'll see you soon!

Best Regards,
- **Andreea** and **Merry**
BMCAA Co-Presidents

BMC at a Glance

A Rapid Look at Some of This Year's BMC Happenings



Jodie Jenkinson wins the SSHRC Insight Award

The prestigious award goes to her research study on enhancing the visualization of complex molecules. See full article in the BMC archives [here](#).



In Memoriam: Nancy Grahame Joy

We celebrate the legacy that Nancy Joy left for our department and for our profession. [Jump to page 13](#) to read the full article.



BMC grad nabs second IMMPress Magazine cover

Another of **Inessa Stanishevskaya's (1T3)** illustrations is selected for the magazine's Spring 2013 issue. See full article in the BMC archives [here](#).

AMI Conference Salt Lake City

BMC takes the 67th annual conference by storm! [Jump to page 9](#) to read the full article.

Gordon Research Conferences on Visualization in Science and Education

BMC alumni head to Rhode Island to get a taste of cutting edge technology and local New England delicacies. [Jump to page 7](#) to read the full article.

'Art of Body'

Applied Arts Magazine features an article on our program on their website. Click [here](#) for more info.

May

June

July

Canada's Great Bear Kate Campbell (1T2)'s MRP

is showcased by WWF-Canada's program, The Great Bear Interactive 'Canada's Great Bear: One Place Three Stories'. Click [here](#) for details.

BScAAM 8T5 alum chosen to create War of 1812 monument

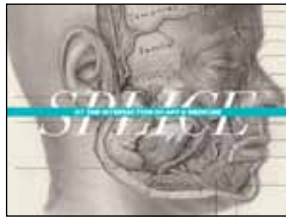
Click [here](#) to find out more about Adrienne Alison, the monument and her work.



**Toronto Unity
Developers Meetup
group is founded**

[Jump to page 6](#) to read how Meetup.com could be an interesting avenue towards getting people together on a local scale.

August



Splice in NYC

Stellar examples of our work are exhibited at the Pratt Manhattan Gallery. See full article in the BMC archives [here](#).

September



What's up Toronto!

Check out this interesting article published in the Toronto Star on how our profession is doing in TO. Click [here](#) for more info.

October

InsTED Talk

Laura Greenlee (1T3)

presents to the people what medical visualization is all about at 85 King East, a coworking space for small business owners.

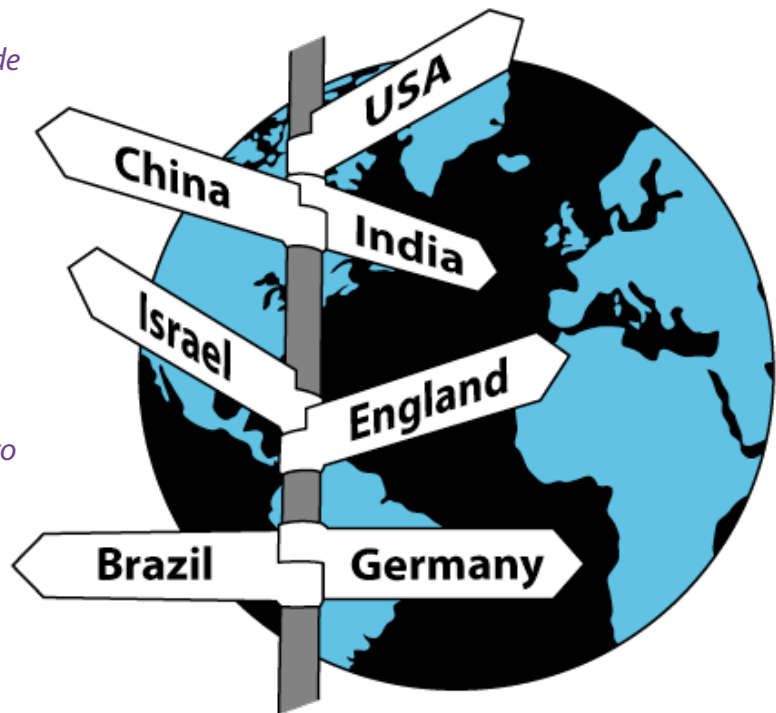
Click [here](#) for details.

Interview

Pina Kingman (OT9) on Working Abroad

Since 2010, **Pina Kingman** has worked outside of Canada. That's pretty much her entire medical illustrating career since graduating from the BMC program in 2009. Her first stop was Colorado where she worked for Visible Productions (they do the medical animation clips for the popular Dr. Oz show). While maintaining a freelance business with Canadian companies, her second stop was Kentucky where she worked for Medmovie. This year Pina will travel across the Atlantic to Norway to work for the University of Bergen. So what keeps this world travelling medical illustrator going? Our exclusive interview uncovers what's in it for her and what might be in it for us.

- Interview by **Takami Fossat (OT9)**



Q: What made you decide you wanted to work abroad?

A: At first, I worked abroad out of necessity. The job market was saturated in Toronto and non-existent in Vancouver. After several months of unsuccessful interviews in Canada, stressed out and desperate, I started applying for jobs in the US. One day, **Erin Duff (OT9)** emailed about a job offer at Visible Productions. They hired me and I moved to Colorado right after the Vancouver winter Olympics. At the time, I felt like I had no choice but to move or stay unemployed and broke, but now I am so thankful for the way things turned out. Moving to new cities has been an amazing adventure, filled with wonderful people who I would not have met otherwise. So, when the job offer in Kentucky and then Norway were presented, I happily accepted.

Q: Have you noticed any differences in our profession between Canada and the US?

A: The American programs just don't teach 3D animation to the same extent as UofT. We

graduate with a big advantage. Many American medical animation companies work with Cinema 4D simply because that's the 3D animation program taught in the American programs. But don't let that discourage you, if you know Maya you can easily learn Cinema 4D on the job.

Q: What has been the most interesting thing you've experienced during your transition from living in Canada to living in the US?

A: The culture shock. Canada and the US are actually really different, but in a strange subtle way that's really hard to explain. So, I was a bit blindsided by the culture shock I experienced during my transition to the US. Plus, every city in the US is so different, so there was definitely some culture shock when I moved to Kentucky too. But it was all worth it for the country ham and cheese grits!

What is your favourite part of working abroad?

A: Meeting new people, especially other people in our field. It is so important to have a support

system, especially a support system that understands the nuances of your chosen career. Meeting with other biomedical illustrators/animators not only gives you that support system, but you can also learn a lot about the industry, new techniques, what it's like to freelance, ext. I could not have gotten where I am without my biomedical illustration/animation friends.

Q: What is your least favourite part of working abroad?

A: The extra paperwork that comes with work visa applications and having to do taxes in multiple countries. The stress that comes with the looming possibility of deportation if the visa application is not accepted. Also, moving is really

expensive, so always negotiate moving expenses.

Q: How has working abroad changed you as a medical illustrator?

A: Working abroad has allowed me to learn from some amazing, talented people, and I think that's made me a better medical illustrator/ animator.

Q: Would you recommend working abroad to your peers?

A: Absolutely. There are so many great opportunities out there.

- Pina Kingman (OT9)

Meetup.com

Making it Easier to Come Together Locally

Lesley Predy's (OT8) post on the BMC LinkedIn page this past September about the Toronto Unity Developers meetup inspired me to do a little research on Meetup.com, the online social networking portal through which the group was formed. I also did a search for other local meetup groups that might be of interest to medical illustrators (see the list on the right).

Meetup.com boasts over 15 million members and over 140,000 groups. This apparently makes it the largest of its kind. It works by allowing people with a common interest to form a group via the Meetup.com website and for that group to meet offline in various localities all over the world. I myself joined a Stepmom's support group last year and I found it to be a powerful source of peer-support through my encounter with other stepmoms.

So if you prefer meeting other people with similar interests on a smaller, more laid back scale then join a meetup group.

- Takami Fossat (OT9)

- Toronto Unity Developers
- Med Apps Developers
- (UXD/UX) User Experience Design Toronto
- Social Media, Mobile Apps, E-Commerce and Marketing
- HTML5 Toronto Web Developers
- The Toronto Flash Meetup Group
- gsummitX - Gamification in Toronto
- Data+Visualization Toronto



GRC 2013

Meeting at the Frontier of Visualization Research

GRC Gordon Research Conferences
frontiers of science



Left: BMCers Michael Corrin (0T6), Melanie Burger (1T3) and Bonnie Scott (1T2) enjoy some social time in between sessions. Top right: A mouthwatering example of local New England cuisine. Bottom right: A hands-on experience at one of the workshops.

Where can you hear about the making of E.O. Wilson's "Life on Earth" e-textbook, learn how children communicate through gesturing, try out both Google Glass and Oculus Rift, and wear a bib with your academic colleagues while feasting on lobster? At the Gordon Conference on Visualization in Science and Education, that's where! These were just some of the highlights from this year's Gordon Conference (July 21-26), the second one I've had the privilege to attend. I was joined by BMC alums **Andrea Gauthier**

(1T2), Melanie Burger (1T3) and faculty **Nick Woolridge, Michael Corrin,** and **Jodie Jenkinson.**

Little known outside of academic circles, the Gordon Research Conferences – of which there are almost 850 – are prestigious international scientific meetings and seminars attended by a small number of experts that present and discuss the frontier of research in various areas of biology, chemistry, physics, and science education.

The one that is highly relevant to biomedical communications

is called the Gordon Conference on Visualization in Science and Education (formerly called New Visualization Technologies for Science Education). The meeting has been held about every two years since 1994 and brings together diverse communities engaged in the production, study, and application of visualizations to enhance and promote scientific understanding.

The GRC ethos is open and free discussion, so nothing is recorded or shared beyond the meeting. This allows attendees



Top left and top right: Nick Woolridge and Michael Corrin try out Google Glass. Bottom left and bottom right: More cutting edge examples from the hands-on workshops.

to get access to other experts' cutting edge, unpublished research and share ideas "off-the-record."

The theme for this year's conference was The Evolving Role of Visualization in Science and Education. It drew 121 attendees to the remote campus of Bryant University in Smithfield, Rhode Island. We all lived on campus for five days, starting on Sunday evening and leaving Friday morning. This was intentional on the part of the GRC organizers who feel this encourages an informal community atmosphere. The isolation and full schedule of talks and posters make GRCs

a very unique experience. And we did form a tight-knit community. Each evening finished with people gathered in the poster room, drinking beer and wine, discussing the latest and greatest ideas in the field of science visualization until 1am.

To add to this already intense experience, some attendees like Andrea Gauthier and Melanie Burger participated in two-day pre-conference workshops at the Rhode Island School of Design to get hands-on experience in specific areas such as HTML5/Canvas technologies and qualitative research approaches.

Some exceptional talks at

this year's meeting were from Gaël McGill (Harvard Medical School and Digizyme), John Maeda (Rhode Island School of Design), Susan Goldin-Meadow (University of Chicago), Adam Jones (University of Southern California), John Bailey (University of Alaska, Fairbanks), and John Jungck (University of Delaware). To see the titles of their talks and others who presented, the conference schedule is freely available [here](#). If you're interested in the frontier of visualization research in science and education, the 2015 conference is one not to be missed!

- **Bonnie Scott (1T2)**

Salt Lake City

Our Exclusive Story on This Year's AMI Conference

Shortly after completing our last semester of work at BMC, my classmates and I travelled to Salt Lake City for the highly anticipated 2013 Association of Medical Illustrators conference. The AMI is always a time to celebrate the techniques and traditions of our field, learn about cutting edge technologies, renew our inspiration, and of course socialize and reconnect with each other. For our graduating class, it was a way to celebrate what we had accomplished together.

There were plenty of inspiring speakers, presentations and workshops to choose from. The meeting's special topics were BioScience, Professional Business Practices and Mobile Media. Andrew Hessel, a genetics scientist working at Autodesk, wowed us with current research in "the programming language of living things", and all of the exciting visualization opportunities awaiting us there. We were encouraged to refine our marketing and business strategies by Peleg Top, business mentor. He proposed that we "be authentic" in our marketing yet also "be bold" and confident...this certainly gave the room of self-proclaimed introverts food for thought. On the tech side, Chris Converse gave a rundown on current practices in web animation, with a particular focus on Adobe Edge Animate.



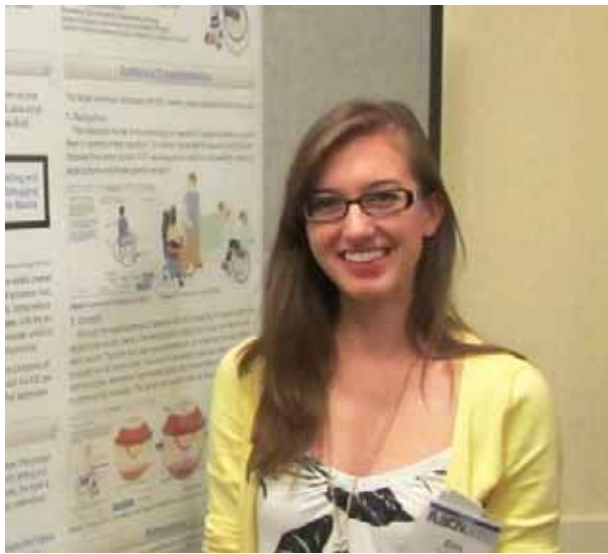
The focus on these relevant topics was exactly what I hope to see at the AMI. Some particularly enjoyable parts of the program were the technique explanations, including Carlos Machado's impressive traditional painting techniques after the style of Netter, and Don Seegmiller's presentation about his Corel Painter/ Adobe Photoshop workflow. This is only a taste of the many great presentations offered this year.

Many of us arrived early to explore Salt Lake City and the surrounding natural beauty. Highlights of the city itself were the beautiful architecture of The City Library and City Creek Centre, Temple Square, and of course the free downtown transit which enabled us to see the sights easily. One of the best experiences outside of the conference was a four-hour tour of the surrounding country taken by some of the BMC students and alumni. We saw breathtaking views, mountains and waterfalls. That mountain air is some of the cleanest and freshest you can imagine!

Toronto was strongly represented at the meeting with nine Vesalius Trust Scholar Awards, and poster presentations by the majority of the graduating BMC class. In the student salon, four BMC students won awards, including **Andrea Zariwny (1T3)**, **Melissa Cory(1T3)**, and **Karyn Ho(1T4)**, with the Student Best of Show in the Still Media category awarded to **Michael Soong (1T3)**. True to form, AXS Studio won three salon awards and INVIVO Communications took away two. BMC alumni **Ian Suk (9T3)** won an Award of Merit. In addition, **Linda Wilson-Pauwels** and **Stephen Mader** deservedly received the AMI's Outstanding Service award. BMC's fundraising Team Canada, co-captained by **Jodie Jenkinson**, **Dave Mazierski** and **Cheryl Song (1T4)**, showed their enthusiasm and contributed \$3,080 to the Vesalius Trust.

All those who helped organize the conference must be acknowledged. Their work was very impressive particularly as many were organizing the conference remotely. Thank you to everyone who helped to make this experience possible. The 2013 AMI conference was a great way to catch up with our friends and get inspired and invigorated for the coming year.

- **Laura Greenlee (1T3)**



Top: BMC Class of 2013 stand together at the awards ceremony gala dinner. Middle left: Recent BMC grad Erin Warkentin (1T3) with her Vesalius Trust MRP poster. Middle right: Fellow graduate Laura Greenlee (1T3) standing with her poster. Bottom: Students receive their Vesalius Trust Awards.



Students and alum pose in front of the beautiful scenery of Salt Lake City, Utah.

AMI Salon Winners

List of This Year's Award Recipients from the BMC

Outstanding Service Award

Linda Wilson-Pauwels and **Stephen Mader**

Professional Categories

Didactic/Instructional: Non-Commercial

Ian Suk (9T3) - Award of Merit for "Skullbase Reconstruction Following Paranasal Sinus Tumor Resection"

Illustrated Textbook

AXS Biomedical Animation Studio - Award of Merit for "Understanding Brain Injury: Acute Hospitalization"

Animation: Didactic/Instructional - Commercial

INVIVO Communications - Award of Excellence for "Millennium 8237 Animation"

AXS Biomedical Animation Studio - Award of Merit for "Microbiology lab: ELISA and PCR"

Animation: Advertising and Marketing/Promotional

AXS Biomedical Animation Studio - Award of Excellence for "Biotrue ONEday 'Deep Dive'"

Interactive Media: Didactic/Instructional - Commercial

INVIVO Communications - Award of Excellence for "Novartis Real-Time PCR Application"

Student Categories

Orville Parkes Award for Student Best of Show

Michael Soong (1T3) for "Osteoporosis"

Didactic/Instructional: Anatomical/Pathological

Michael Soong (1T3) - Award of Excellence for "Osteoporosis"

Melissa Cory (1T3) - Award of Merit for "High Altitude Pulmonary Edema"

Editorial

Karyn Ho (1T4) - Award of Excellence for "Sea Anemone's Swim Response Inspires a Cancer Cure"

Interactive

Andrea Zariwny (1T3) - Award of Excellence for "Visuo-Haptic Learning of the Cochlea"

Nancy Grahame Joy

Honouring Art as Applied to Medicine's Former Chair



In July 2013, we lost perhaps one of the most influential medical illustrators of all time. She was a leader, a teacher, a mentor. She worked closely with Dr. Michael Grant for over thirty years and was one of the few female department chairpersons at UofT in the 1960s. Nancy Joy has certainly left a legacy in our profession. The AMI honoured her passing at this year's annual meeting in Salt Lake City. The following is the memorium written by Professor Shelley Wall.
- Takami Fossat (OT9)



Nancy Jean Hannah Grahame Joy, Chair of the University of Toronto's Department of Art as Applied to Medicine (AAM) (now Biomedical Communications) from 1962 to 1985, passed away on July 27, 2013, in Toronto. As a medical illustrator, she is best known for her contributions to J.C.B. Grant's Method of Anatomy and Atlas of Anatomy; she worked with Dr. Grant for over thirty years, and was influenced by his views on the importance of illustration as a tool for teaching and research. As a professor, she was an influential leader in shaping medical illustration as an academic discipline. Prof. Joy was one of a few female Chairs of a department at the University of Toronto in the '60s. Under her guidance AAM was elevated from a diploma program to a three-year Bachelor of Science in 1967.

Daughter of an artist and a lawyer, and grand-daughter of a surgeon, anatomist, and

Dean of the UofT Faculty of Medicine, Dr. Alexander Primrose, Joy combined art and medicine throughout her life. In 1939 she enrolled in a four-year diploma at the Ontario College of Art; she later attended classes in anatomy, histology, embryology, and

*Medical artists should be "born teachers, artists by vocation and scientists by nature."
- Nancy Joy, 1974*

neuroanatomy with UofT's medical students, and, from 1944-1946, studied and worked with Tom Jones in the Department of Medical and Dental Illustration at the University of Illinois at Chicago. Upon her return to Toronto in 1946, she enrolled as a special student in the AAM program and worked as a freelance illustrator for Dr. Grant.

Prof. Joy was an accomplished pen and ink and half-tone

watercolour practitioner, and she was a forward thinker: as early as 1982 she introduced a course in the design of computer-aided learning for medical education within the AAM program. She was also an active advocate for artists' rights.

Prof. Joy was an Honorary Fellow of the Ontario College of Art (1984) and a member of the Association of Medical Illustrators. The AMI honoured Nancy Joy and another of Grant's artists, Dorothy Foster Chubb, at their annual meeting in 1998 in Toronto, when the publisher of Grant's Atlas presented the original artwork used in the book to Biomedical Communications and the Department of Anatomy. Her legacy as an artist, educator, and advocate continues to flourish in the BMC program and through her medical illustrations in Grant's Atlas, now in its thirteenth edition.

- Professor Shelley Wall

Donations in honour and in memory of Prof. Nancy Grahame Joy can be made to the Biomedical Communications Program Fund. You can donate online at <http://donate.utoronto.ca/biomed>. To ensure your donation is correctly allocated, please indicate "BMC-Joy" at the end of the online form, under Additional Information. Please use BMC address below for online requests for cards; they will be collected by BMC for the family.

Alternatively, you can donate by cheque payable to the 'University of Toronto'. To

ensure your donation is correctly allocated, please indicate "BMC-Joy" on your cheque and mail to:

Donations
Biomedical Communications
Room 308, Terrence Donnelly Health Sciences Complex
University of Toronto Mississauga
3359 Mississauga Road North
Mississauga, Ontario L5L 1C6
Tax receipts will be issued by the University of Toronto and sent to the address you provide.

Class of 1T5

Introducing 2013's BMC Rookies



Kristen Browne

Born and raised on the west coast of beautiful British Columbia, I started my undergrad in the Biochemistry department at the University of Victoria. Four years later I had a BSc and some co-op work experience but, like many, was very unsure of where to go next. During a particularly frosty winter co-op term in Winnipeg, I took a portrait drawing class to fill my evenings and have since churned out piles of charcoal drawings. While an artistic career wasn't on my radar, my instructor encouraged me to move into what became one of my most beloved hobbies: figure drawing. Ultimately, I decided that I would extend my co-op research experience and do an MSc in the Zoology department at the University of British Columbia. I enjoyed research, particularly the troubleshooting aspect, but was found that I looked most forward to generating figures and brainstorming experiments with my colleagues. It was during this time that I stumbled across the MScBMC program. I started to envision this beautiful career where I could collaborate with fellow scientists to generate graphics and animations. Having no formal art training I was hesitant to apply, but I took a deep breath and submitted some pages from my sketch book for preview. I received wonderful encouragement and advice that set me on track to apply. After my MSc I took a lab management/research position and slowly went about developing my portfolio (and paying my student loans). This time was invaluable, as it allowed me to develop my traditional and digital design skills, form collaborations with fellow researchers, mentor students, and author my first research article. Since I worked largely in the field of cellular/molecular biology and protein biochemistry, I loved the idea of creating visualizations of complex molecular processes. I also worked in developmental biology, a field which is particularly challenging to learn and convey without high quality graphics and animations. I could see how the training I'd receive in the MScBMC program would permit me to directly address the inherent difficulties associated with conveying scientific concepts. With a better framework as to why I was applying and what I wanted to do with my degree, I at last submitted my application and portfolio. Next thing I knew I had traded misty mountains for the CN tower, an anatomy lab, and a bright and exciting future.



Cassandra Cetlin

I first discovered my passion for communicating science through art in high school Biology, when I made a Protein Synthesis Kit learning tool as an assignment. Using lego, velcro, and foam cut-outs, I designed DNA strands, proteins, ribosomes, and an instruction manual. While completing my undergraduate degree in Health Sciences at McMaster University, I became aware that I could pursue this passion as a career path after taking a course in Biomedical Communications taught by MScBMC alumni. I began to build my portfolio through freelance projects and videography; for example, I have illustrated for the McMaster Pathophysiology Review and the McMaster Medical Journal. Importantly, my largest project to date (over two years) was creating a series of educational anatomy and surgical videos for the McMaster Education Program in Anatomy, targeted towards Medical and Health Sciences students, where my role was to script, storyboard, film, and edit the videos. I am eager to continue learning through the Biomedical Communications program.



Qingyang Chen

For as long as I can remember, art has been a major part of my life. It feels like I expressed myself through drawing long before I could even read or write. After grade nine, I applied and was accepted into Canterbury, one of Canada's leading arts high schools. While attending Canterbury's visual arts program, I was pushed to expand the limits of my creativity and artistic skills. I credit much of my growth as a person and artist to this wonderful experience. However, as much as I enjoyed visual arts, the concept of being a 'struggling artist' made me hesitant to pursue art as a career. Luckily, I received some terrific guidance from the faculty at Canterbury who introduced me to the BMC program. After learning more about the program, I realized that I could combine both my passion for science and art and I decided to pursue a profession in medical illustration.

I completed my B. Sc. (Hons) in Life Sciences at Queen's University. I actively sought opportunities to conduct scientific illustration during my undergraduate degree to both see if I would enjoy the profession and to satisfy my artist side. I had the honour of working with two fantastic professors, Dr. Leslie Mackenzie and Dr. Ron Easteal. With their guidance and my perspective as a student, I created new illustrations and diagrams for anatomy coursework and textbooks. I also worked as an illustrator for several children's scientific workbooks at Chalkboard Publishing. Both experiences were extremely rewarding; thus in my graduating year, with fingers crossed, I successfully applied to BMC and I am thrilled to be a part of this family. I'm excited about the next two years as I learn skills to enter the dynamic and innovative field as a medical illustrator.



Natalie Cormier

I recently completed an undergraduate degree in Chemical Engineering at the University of New Brunswick in Fredericton, through which I specialized in biomedical engineering and thus discover my passion within the field of medicine. I was fortunate to have the opportunity to take several courses relevant to health sciences, which in turn sparked my fascination for the intricate functionality of the human body. I also have a lifelong passion for visual arts; a skillset that I had deemed would forever remain a hobby upon selecting engineering as a field of study. However, as I progressed throughout my degree, I quickly realized that industry would leave me unsatisfied, and craved a more art-based outlet. Upon discovery of the BMC program, I was able to consider the notion of using art as a tool to visually communicate, teach and depict the scientific

and medical concepts with which I have become so enthralled. I am excited to now be a part of BMC, and to have the opportunity and guidance to further develop my skills as well as the space to share with others my passion for art and scientific visualization.



Naveen Devasagayam

My undergraduate degree in Biomedical sciences at the University of Guelph was a great learning experience and I enjoyed many of the courses I have taken, but when it came to deciding on a career option I was just as confused as when I had entered university. At the back of my mind I kept wondering if I had made the right choice in choosing an education in science over art. This thinking was further enforced by the fact that I was constantly involved in art projects including fundraising posters, school calendar/t-shirt designs, photography club, and volunteering at Humber River Hospital as an arts and crafts coordinator. At a crossroads, I acquired a summer research position to obtain practical experience in the scientific field. During this time, I worked in a neuroscience lab doing drug reinstatement experiments with rats on a behavioural and immunohistochemical basis.

I soon began to realize that lab research was not for me and this led me to apply for a Masters in Biomedical Communications. I found the BMC program to be the perfect amalgamation of science and art, allowing an interdisciplinary learning experience that does not require me to compromise one or the other. I was also attracted to the adaptable nature of the medical illustrating field, allowing branching into a variety to interesting topics and media. I look forward to gaining valuable skills throughout this program, growing among like-minded individuals, and to one day have an impact on the field of science through education, inspiration, and innovation.



Lauren DiVito

As a child, my fondest memories were of family trips to the Ontario Science Centre and I still have just as much fun, if not more, going there now as an adult. This passion for both the arts and sciences and the symbiotic relationship they share is something that has followed me throughout my life. I grew up revering artistic Masters like Da Vinci, a Renaissance Man who truly understood the great importance of scientific study, the creation of beautiful artwork, and the strong connection between them. I was so inspired by him, that for a high school art project I created a journal of detailed dissections of flowers and insects paired with basic scientific explanations of processes such as photosynthesis and flight. As I continued on with my education, I knew I wouldn't be happy unless I kept both art and science in my life. I was the first to graduate from the

University of Windsor with a B.Sc. honours in chemistry and visual arts. During this time I worked on the designing of a dinosaur dig at my city's science centre, curated Exposure to Science, a group art exhibit that brought together two communities on campus that didn't often interact, and in my last year I completed my thesis on Raman spectroscopic analysis of pigments used in works of art. For the longest time, I struggled with trying to find a career path that combined all of my interests. When I discovered the MScBMC program, I realized I could stop searching. It was only a short while ago that I was reading the biographies of previous MScBMC students, and it is an amazing feeling to now be a part of a community who share this same devotion to scientific communication.



Christy Groves

I was born and raised in Forteau Bay, which is a small fishing community on the south coast of Labrador. Here, I was constantly immersed in traditional art. My grandfather, a traditional cast net weaver and snowshoe maker, and my dad, a musician, both had a very prominent influence in my artistic development as a child. I began my own art business when I was 12 years old, selling paintings in handmade frames to tourists. My artistic endeavors continued as I began to win several poster contests, and receive awards and recognition for my artwork. I still keep up a portrait drawing business that I started in high school. Although my interest in fine arts was always very strong, I also had a great fascination with science- particularly in the fields of biology and medicine. I took my undergraduate degree in Biology at Dalhousie University in Halifax, Nova Scotia,

where my first year laboratory instructor informed me about the Biomedical Communications program in my first year. I then completely directed my focus towards gaining entry into program, as I recognized a career in medical illustration as a perfectly fitting profession for me. I have greatly relied on medical imaging and technical design to improve my own scientific understanding, and thus strongly believe in the importance of visual learning as a means of scientific communication. From the Biomedical Communications program, I wish to attain the necessary skills that will allow me to professionally express scientific knowledge through art. Being surrounded by other students with the same enthusiasm and love for science and art truly makes me excited to see what the next two years will have in store!



Ashley Hui

Throughout high school, I was immersed in Sciences as well as Fine Arts. In 2008, discovering the MScBMC program was a pivotal moment in my life. Re-evaluating my undergraduate degree, I realized that I needed to prepare myself for a career that I enjoy and that was impossible without art. With the loving support of my family, I geared my education towards this unique combination of two seemingly immiscible fields of study. Vancouver was a cornerstone in realizing my true passions: I graduated from the University of British Columbia with a Bachelor of Science (Life Science, Mathematics) and a Minor in Visual Arts. Not only were my years on the West Coast vital for my preparation for postgraduate studies, but also monumental in shaping my passions and transforming me into whom I am today. Being part of BMC is a dream come true. I am truly honoured

and excited to have the opportunity to work alongside and learn from such talented peers and faculty.



Stacey Krumholtz

I have always had a passion for both creating art and studying science. At every turn in my academic career, I felt as though I was faced with a choice - art or science, but never both. After completing my Honours Bachelor of Science from Western University (specialization in cell and developmental biology), I knew I wanted to pursue my studies at the graduate or professional level. I completed a year of non-degree studies at the University of Toronto, with the intention of applying to dental school. While completing the application process, I couldn't help but feel that I was somehow shutting the door on any future artistic pursuits. I changed course and decided to immerse myself in a search for a career that embodied my love of biology, the pursuit of knowledge, and allowed me to make use of my artistic ability. During the next year, while away from

academic study, I began tutoring high school students in senior level biology and chemistry. This experience revealed to me a love for education, and the incredible sense of satisfaction that comes with teaching someone something new. I wanted to find innovative ways to communicate challenging and complex ideas. In my search for a prospective program that encompassed these ideals, I found myself at Sheridan College in Oakville. It is here that I met former medical illustrator, John Parker and first learned about the Biomedical Communications program. I promptly enrolled in the Art Fundamentals program at Sheridan to assist in the completion of my portfolio and to hone my artistic skills in preparation for the challenging work ahead. I could not be more grateful to have been accepted to a program that finally feels like home. I am incredibly excited to be a part of such a diverse and truly talented group of people, who share my passion for both art and science. I look forward to learning skills that will allow me to make an impact in the field of medical illustration and to build a career for myself I once never thought possible.



Robert Lancefield

The world of BMC was revealed to me when I met Maeve Doyle at Queen's University's Further Education Expo in the fall of 2011. I was entering my fourth year of biomechanical engineering at the time. Having achieved a longtime goal of touring Pixar's studio in Emeryville, California a few months prior, I was looking for a way to combine my interests in biomedical science, animation, art, storytelling, and education. Maeve explained that BMC has had engineering students in the past who had a great deal of success, and I was especially inspired by the work she showed that was done by AXS Studio (founded by MScBMC grads). A few months later, I met with Dr. Jodie Jenkinson at UTM, and was impressed by the faculty and students' work, the community they had created, and the beautiful Health Sciences Complex. After learning about the MScBMC,

I sought out education in Python and Autodesk Maya to develop a basis for 3D animation, to add to my programming and 3D modeling experience from engineering. I also had the opportunity to further my 3D modeling skills by creating a wing sail design for Queen's Autonomous Sailboat Team. As an artist with an interest in animation, I had always been interested in anatomy and human motion, and had the opportunity to study both at Queen's, eventually working on a motion-capture project studying the knee joint in my final year. To prepare for BMC, I took life drawing classes with an art club at Queen's. I encourage any future applicants to take a class in life drawing - it helps to strengthen your observational drawing skills, and provides practice in drawing human anatomy. My value of education and interest in storytelling also led me to volunteer as a reading tutor, and this teaching experience reminded me that the resources we will create in BMC should aim to serve as many areas as possible, including and reaching beyond public health, medical education, and research. After graduating from Queen's, I worked at a prosthetics office in Ottawa. My coworkers were great mentors and I owe them a debt of gratitude for the education and opportunities they provided me with. My work focused on the technical aspects of creating prosthetic arms and legs. The clients were inspirational, and I hope that some of my work as a biomedical communicator can contribute to the field of prosthetics and orthotics. I hope to become an active member of the medical education and medical illustration communities, and am looking forward to the SIGGRAPH and AMI conferences, as well as the Tri-Campus Exchange.



Chi-Chun Liu

I have been interested in science and visual arts since I was a child. After completing my bachelor's degree in microbiology and immunology at UBC, I worked in the video game industry as a designer for a year. During my time as a designer, I had the opportunity to see some of the latest design principles and technology used for the entertainment business. However, it occurred to me that many of the cutting-edge concepts and designs used in the video game industry are not broadly applied in the field of scientific education. By utilizing these concepts, I believe it is possible to create exciting scientific education material that can attract public's attention while delivering the essential information efficiently. In order to properly implement these ideas into scientific education material, it is essential to understand the basic of scientific education and

communication. For this reason, I joined the BMC program to learn more about the scientific education community and to grow further as an artist. I am looking forward to both learning from and to being inspired by the excellent staff and colleagues of this program.



Derek Ng

My deep interest in science lead me to pursue a PhD in biochemistry. Through my research, I developed the ability to master scientific concepts at an advanced level and gained intimate knowledge of how to use the scientific approach to better understand our world. More importantly, it ignited my passion for scientific communication, especially through visual means. I have published several manuscripts in scientific journals and presented my research at scientific conferences. In each of these activities, my favourite part was creating the scientific figures. The challenge of identifying and distilling the central ideas arising from my experimental data and effectively communicating these concepts through illustrations was deeply satisfying. This experience opened my eyes to a possible career in scientific and biomedical illustration where I can help others

communicate scientific principles, ideas, and data in a visually compelling manner. Obtaining further training through the MScBMC program was the next logical step in achieving this goal.



Priya Panchal

Like most of my peers here at BMC, I've always had an interest in the visual arts as well as science. I grew up drawing and doodling but also watching every David Suzuki and National Geographic nature documentary I could get my hands on. In high school I had a couple of unique art teachers that really nurtured my passion for expression via visual arts and made me realize there was an inner artist trying to get out. However, having grown up in an immigrant south Asian family, a career in art was never the desired path. I therefore pursued my interests in biology and became immersed in the field of Genomics, specifically whole-genome expression as applied to personalized medicine and mechanisms of disease. I shifted between the UK and Canada for work, completed my M.Sc. in Bioinformatics and started my own family. After my husband saw some of

my artwork, he suggested that I consider a career in Biomedical Communications. I finally decided that now was the time to try my luck at getting into such a unique program. Now that I am here, I am even more excited about learning and working with like-minded, talented artists and scientists. With the skills and networks I gain here, I hope to (among other things), help research scientists visualize and communicate their findings so that they can focus more on the science.



Kateryna Procnier

An artist at heart, I've always had a deep appreciation for beautiful images because of their ability to fascinate, to inspire, and to teach. I've photographed and painted for as long as I can remember but it somehow never occurred to me to follow art as a career. And so, quite by chance, I ended up in a biology undergrad at Ryerson University. I drew my way through presentations and lab assignments, not really sure what I would do once I graduated. But for me those four years had nurtured a love for science that has grown ever since, as well as an interest in anything on the forefront of scientific discovery be it in biology, medicine, technology, physics, you name it. A few years after my undergrad, once again quite by chance, I finally found what I was looking for. I don't think anything could be more perfect for an artist-turned-scientist than biomedical communications. I

love its challenging, creative aspect and I'm ecstatic that I will have the opportunity to work with cutting edge researchers and to turn scientific discoveries into beautiful art that will inspire others to pursue careers in science.



Vijay Shahani

Throughout my academic career, I have always had a natural curiosity about the life sciences. I completed my honours bachelors of science degree at the University of Toronto majoring in biology and chemistry. My interests during undergraduate lead to my doctoral work in medicinal chemistry, where I explored both the design and synthesis of novel drug modalities as potential cancer therapeutics. Throughout my PhD, I was very fortunate to have had many opportunities to communicate my research at national conferences and in peer-reviewed publications. I loved using my visual talents to develop figures and movies in order to make my work accessible to a larger audience. In addition, I enjoyed making creative, visual analogies of my research and was thrilled that my designs were selected as front covers for several publications. Supplementing

my interest in visualizing science is a love of teaching that grew from tutoring and lecturing experiences throughout my undergraduate and doctoral degrees. I found myself swayed away from the bench top and towards the BMC program. The BMC program sits at the interface of several disciplines, with education, science and art being a few that mirror my own passions. I look forward to learning and growing with my fellow BMC classmates over the next couple years while developing the skills needed to optimally communicate science and health topics to future generations.



Jerry Won

Drawing is something that has always felt very natural to me. I was the type of kid that always preferred to sit and draw than go outside to play sports. This simple preference eventually led me to become talented in art. Once my parents recognized my talent, they introduced me to an artist from whom I received most of my art training. I thought about eventually becoming an artist like him one day, but a part of me always felt like it wasn't enough. Artistic talent was definitely a great skill to have, but art alone did not seem to reflect what I was fully capable of. That was when I decided to turn my focus on science. I was always full of curiosities as a child, especially toward how things like the human body, animals, and insects worked. I remember spending countless hours as a child watching the discovery channel and random science clips (Bill Nye the science

guy being my favorite). Naturally, I excelled in science classes during my high school years, which led me to continue studying science at University of Calgary (BSc in Cellular, molecular, and microbial biology). However, as the last year of my undergraduate degree approached, I was once again conflicted about what I wanted as a career. Again, I was unable to see research or entering professional schools as providing the career fulfillment that I was looking for. Fortunately, I was able to find the answer that I was looking for when I came across Biomedical communications program. The more I learned about the program the more it seemed to have been tailored to suit people like me. What was especially attractive was that it was something that could synergistically utilize my scientific background with my talent in art. Also, as a visual learner, the idea of becoming involved in the improvement of visual communications in the medical/scientific community sounded extremely exciting. I believe that if I can use my talents to aid those wanting to learn or share ideas and information, there would be no other career that I could feel more passionate about.

Illustrations

Alumni Showcase



Here are Celia Godkin's 2013 designs for the Royal Canadian Mint.

Top left

'Blue Flag Iris'

Fourth coin in the Wild Flower Series

Top right

'Canadian Tiger Swallowtail'

First coin in the Butterflies of Canada Series

Bottom right

'Twelve-Spotted Skimmer'

First coin in the Dragonflies Series

Announcements

Obituary

Fred Lammerich

(former AAM Associate Professor)

On June 18, 2013, associate professor Fred Lammerich (ret.) passed away at the age of 102. Professor Lammerich taught in the program when

it was known as 'Art as Applied to Medicine'. The Biomedical Communications Program extends their sympathy to Professor Lammerich's family.

Announcements

Engagements, Weddings and Babies



Lorraine Trecroce (1T0) and Charles Connor baby

Avery Adelaide Trecroce Connor was born at 21:22 on the 23rd of August to proud parents Lorraine Trecroce (1T0) and Charles Connor. Avery is a very inquisitive little lady who loves exploring the world around her. She enjoys strolling around Toronto, and especially lunching out on the town with her baby friends (and their moms). As the first grandchild on both sides of the family, she is never without a pair of cuddly arms or a loving smile.

UnConference 2013

The BMCAA 'Unconference' is back for its seventh instalment. Join your peers on **Saturday, November 9 from 10 AM to 3 PM** for a lively UnCon. This is a participant-driven event where you, the attendees, share ideas about biomedical visualization.

Have something interesting to share? New adventures with new media? New techniques? If you think your fellow BMCAA members would be interested, send us your presentation idea to bmcaa.exec@gmail.com. Don't feel like



presenting? No problem! Come down and enjoy a day of networking and learning.

During lunch, alumni are welcome to convene for the BMCAA Annual General Meeting. The meeting will be a forum for the discussion of alumni association issues, including the election of a new BMCAA newsletter editor and two new student representatives.

We look forward to seeing you all at the UnCon this year!

- **BMC Alumni Association Executive Committee**

AMI Meeting 2014

Home to the famed Mayo Clinic, the 69th AMI Meeting will be held in Rochester, Minnesota on July 23-26, 2014. Please check back to ami.org for additional information as the meeting approaches.

Housekeeping

BMC on LinkedIn and Facebook

Follow BMC on LinkedIn and on Facebook! You can catch the latest news, see current job opportunities and contribute to popular discussions on topics related to our profession. It's easy and free! Just go to www.linkedin.com and join the group called **Biomedical Communications Alumni and Students** or visit the BMC Facebook page at www.facebook.com/MScBMC.

Please Keep in Touch!

Email: bmcaa.exec@utoronto.ca

Website: www.bmc.med.utoronto.ca/bmc/alumni

BMC wiki: www.bmc.med.utoronto.ca/bmcwiki



Alumni MIA

Can you help us find the following AAM/BMC alumni?

Send us an e-mail at bmcaa.exec@utoronto.ca if you know where they are hiding...

Frederick Kelly 4T9
Jackie Steinmann 5T1
Elizabeth Imrie 5T3
Grant Ross 5T8
Annette Porter 6T5
Valerie Harrison 6T9
Glen Reid 6T9
Judith Walker 6T9
Pat Parsons 7T0
Gary Cousins 7T1
Per Lundquist 7T1
André Beerens 7T2
Anne Marie Black 7T2

Jean MacGregor 7T2
Rick Billingham 7T3
Rasa Skudra 7T3
Lynn Goodchild (Kiryaly) 7T4
Shirley Pavlik (Reddick) 7T4
Laurie Johnston 7T5
Emilienne Lambert 7T6
Robin Hamilton 7T8
Lynn Smiledge (Waldo) 7T8
Randy Averback 7T9
Davia MacDougall 7T9
Carolyn Richardson 7T9
Bev Ross 8T1

Cathy Jeffery 8T5
Shumin Lee 8T9
Sarah Beaton 9T3
Paul Pede 9T3
Chris Yorke 9T5
Beverley Nash 9T6
Carin Cain 9T8
Nadav Kupiec 9T9
Jacquelyn Shaw 9T9
Eleanor Andrew 0T0
Christine Perchal
Carolyn Olauson
Stuart McGinniss

