



UBC MD PhD

UBC MD/PhD Program

2N6 - 2818 DETWILLER PAVILION, 2255 WESBROOK MALL, VANCOUVER BC V6T 2A1

Tel: 604-822-7198 Fax: 604-822-7917 Email: ubcmdphd@exchange.ubc.ca Website: www.med.ubc.ca/mdphd

Newsletter – Summer 2011

http://www.med.ubc.ca/education/md_ugrad/mdphd/news.htm

Michael Copley, Long Nguyen, Clara Westwell-Roper - Vanier Canada Graduate Scholarship Recipients (2011 competition)



Michael Copley



Long Nguyen



Clara Westwell-Roper

* * * Congratulations! * * *

We are delighted to announce that **Michael Copley** (Year 3), **Long Nguyen** (Year 2) and **Clara Westwell-Roper** (Year 3) are recipients of the Canadian Institutes of Health Research (CIHR) Vanier Canada Graduate Scholarship – one of the most prestigious scholarships available for doctoral studies at a Canadian university.

The mandate of the Vanier Canada Graduate Scholarship program is to attract and retain world-class doctoral students and to brand Canada as a global centre of excellence in research and higher learning. The program helps attract top doctoral students to Canadian universities by offering a significant financial award to assist successful candidates during their studies. A total of 25 Vanier Scholarships have been awarded to UBC nominees this year: 11 from CIHR, 7 from NSERC and 7 from SSHRC. We are proud that Michael, Long and Clara all had excellent results in this competition!

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Michael Copley and **Long Nguyen** are both completing their PhD research with **Dr. Connie Eaves**, Terry Fox Laboratory, BC Cancer Agency. They are hosted by the Experimental Medicine Graduate Program.

Michael Copley's research work is to investigate the role of hematopoietic stem cells, and mechanisms of their maturation in bone marrow transplants, for rescuing patients who are being treated with toxic chemotherapy for cancer. Michael has a large number of academic and research related awards and has shown excellence in academic leadership. He has a long list of credentials in this regard, including executive of the BC Cancer Research Centre graduate student and post-doctoral fellow training society. One of his larger achievements includes organization of the annual UBC Medical Undergraduate Society Research Forum in 2009 and 2010. Michael has been involved with motivating high school students to become more involved in research through talks and playing a mentorship role within the program UBC Let's Talk Science, and he also found time to volunteer at the BC Children's Hospital and care for children with cancer. As well, Michael has been a singer in a professional men's choir for a number of years.

Long Nguyen is an author on five research articles, including a first author article in FEBS Letters. His publication record and level of productivity is a remarkable achievement for a junior graduate student. Long is a studious organizer and critical thinker, and possesses remarkable initiative and passion for research. He has been working in the lab even during the heavy first year medical curriculum. Long's research project is entitled, "Functional and molecular-characterization of human breast cancer stem cells". He plans to investigate mechanisms for metastatic breast cancer, determining whether single tumor cells can indeed initiate new tumour growth, an important issue for breast cancer biology and treatment that has only recently become addressable with new technologies. Long sits on the Implementation Task Force for Curriculum Renewal (UBC MD Undergraduate Program), and also acts as Junior Section Editor for the News & Letters Section, UBC Medical Student Journal. In the community, Long has helped organize fund raising for cancer research and served as a leader in a Youth Outreach Program.

Clara Westwell-Roper is completing her PhD research with **Dr. Bruce Verchere**, Department of Pathology & Laboratory Medicine. Clara has outstanding academic achievements, research potential and leadership qualities. She won the prestigious Dolman Prize for the top GPA in her graduating class in UBC Microbiology and Immunology. She also won a large number of other academic awards, including the Hamber prize for top ranking student in the first year medical class. Clara's research project deals with the role of TLR signalling in diabetes development and beta cell homeostasis. Although she has been busy with the first two years of medical curriculum as well as graduate coursework with little time to devote to research, she has already published one second-author article in an excellent journal, and has first-author and third-author papers submitted. Clara has contributed to the community in many ways but clearly stands out in her dedication to mentoring young students at the intermediate and high school levels. She has been a volunteer at Telus Science World and has repeatedly judged high school sciences fairs. She has given lectures for students and has served on the Board of Directors of the Science Fair Foundation of BC. She received two prestigious awards for her contributions in this regard – the UBC Science Achievement Award and the HSBC Emerging Leader award. Clara is one of the founding members and senior editors of the recently established UBC Medical Student Journal. She is also a leader in organizing the UBC Medicine Geriatrics Interest Group Research Night, and the first UBC Medicina 2011 Conference.

Matt Mayer - CGSD Recipient

Our congratulations go to **Matt Mayer** (Year 4) for winning a Canadian Institutes of Health Research (CIHR) Frederick Banting and Charles Best Canada Graduate Scholarship Doctoral Research Award. This award provides special recognition and support to students who are pursuing a doctoral degree in a health-related field in Canada. Matt's PhD research supervisor is **Dr. Bob Hancock**, Department of Microbiology & Immunology. His research project is entitled, "Identification and therapeutic targeting of dysfunctional immune networks in human inflammatory diseases". Matt believes that the interplay between medicine and science lies at the very core of this type of work, which has a huge benefit to the health and well being of Canadians and people around the world.



Matt Mayer

Brennan Eadie - VCHRI Top Graduating Doctoral Student

Brennan Eadie (Year 6) was recently named a Vancouver Coastal Health Research Institute (VCHRI) Top Graduating Doctoral Student. The award was based upon individual research accomplishments, activities that contribute to the research environment (mentorship, collaboration) and scientific community, and presentation skills (as demonstrated in a 3 minutes talk describing years of research). Brennan presented his research work in a poem (see below) at the VCHRI Celebrate Research event in March 2011. His PhD thesis work has illuminated a brain region that may be particularly affected by genetic mutations that cause Autism and related disorders. He successfully defended his PhD this past summer; however, the degree will not be conferred until completion of his last two years of medical school. Brennan was our first MD/PhD student to branch out to a distributed site in the Island Medical Program during his research years. His research co-supervisors are **Drs. Brian Christie** and **Yu-Tian Wang**. Brennan is supported by a Vancouver Coastal Health-CIHR-UBC MD/PhD Studentship. Congratulations!



Brennan Eadie

Brennan Eadie - Brain plasticity in Fragile X: A problem with no clear fix

*Good morning everyone!
This presentation will be a lot of fun.*

*And, because of the limited time,
I thought I'd do mine in rhyme.*

*My PhD is on Fragile-X,
a childhood syndrome with no clear fix.*

*It appears similar to Autism,
But that's just a clinical stigmatism.*

*For Fragile-X is caused by loss of one gene,
Making its laboratory study a little more clean.*

*I studied the brains of Fragile-X mice,
To determine their neurobiological vice.*

*As the hours grew long and my patience grew short,
I wondered if I should just cut my losses and abort.*

*Then, like a miracle it occurred,
Results flowed in, for once not obscured.*

*New neurons in the brains of the Fragile-X mice,
Did not seem to develop quite so nice.*

*Progenitor cells in the brain showed decreased proliferation,
Which was compensated for by increased differentiation.*

*The branches of these brain cells, like branches of trees,
Were thinned like trees in winter in the Rockies.*

*And if synapses were leaves, then leaves were sparse,
Giving the tree an even barer look of course.*

*The structural changes now revealed,
Begged question to the physiological aberrancies still concealed.*

*With hypothesis in hand and electrodes in brain,
We studied synaptic responses to a set of pulses also known as a train.*

*The response of cell B to the activity of A,
Was decreased in the Fragile-X model okay.*

*What we had studied was long-term potentiation,
A leading model of learning, memory and consolidation.*

*But what is the change that occurs in the cells of the brain,
That renders it vulnerable to this physiological constrain?*

*To answer this question, a new technique I would learn,
One that would allow me to record from single neurons in turn.*

*Now, with hypothesis in hand and electrode in cell,
I would go onto discover the ion channel in peril.*

*Currents recorded and plotted in groups,
Revealed the NMDA receptor to be the poops.*

*These data are now published with confidence,
And we reflect and ask what's the significance.*

*A process revealed that is aberrant in Fragile-X,
Gives us a target for rational therapeutics to fix.*

*It is my hope that this research has relevance to Autism as well,
With more effort to this cause it is time that will tell.*

*Because my time is almost up,
I have to make sure that I give a wassup,*

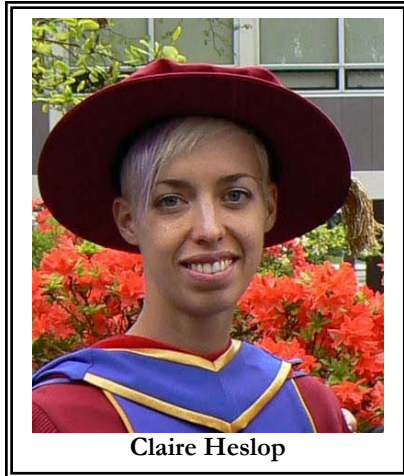
*To the lab that I'm from and the program I'm in,
Thank you so much for making it happen.*

*The lab is headed by the one and only Dr. Brian Christie,
And the program I'm in is known as MD/PhD.*

*A special thanks to VCHRI,
Your funding has kept me and my family alive.*

*And last but not least, thank you for your time,
For enduring my poem, and my lack of ability to rhyme.*

Class of 2011 - Claire Heslop, Aaron Joe and Inna Sekirov



Claire Heslop

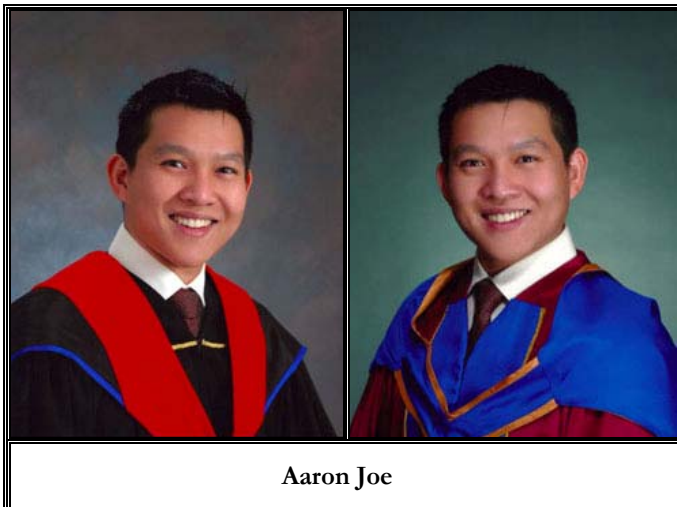
Claire Heslop: It is a miracle that curiosity survives formal education. - Albert Einstein

Einstein, for all his brilliance, was not a graduate of the MD/PhD program. It was no miracle at all that my curiosity survived these seven long years! It survived (nay, grew!) thanks to amazing opportunities for development, learning, and accomplishment offered through the program. Working with creative, and talented people in the sciences and medicine, and occasionally the arts, has taught me how to ask and answer questions, and how to bring new knowledge into the world.

I feel exceedingly privileged to have had the opportunity to pursue this training at UBC, and to continue my training through the Emergency Medicine Residency, at the University of Toronto. While we're on the subject of curiosity, emergency medicine is a specialty *rich* in sources for curiosity. For example, curiosity often prompts us to often ask our patients, "what inspired you to take such a mind-bogglingly high dose of (miscellaneous recreational drug)?", or my personal favourite "how on earth did you manage to get that (miscellaneous foreign object) so far into your (miscellaneous body part)?" I know the training I received here at UBC has prepared me for an excellent career in emergency medicine, and a fruitful future in research. Stay tuned for all the emergency medicine publications I'll no doubt be authoring, which will appear in such illustrious journals as *Darwinism Case Reports*, and *Annals of the Royal Society of Foreign Object Retrieval*.

All kidding aside, I would like to express my enormous gratitude to our Program Directors Drs. Raymond and Nielsen for their never-failing support during my education, and for advocating for our program within the university and beyond. A special thanks to Jane Lee for making everything so much easier for all of us in the program. Finally, thank you to my supervisor Dr. John Hill, and my mentors, collaborators, and family, for their guidance, encouragement, and support. Cheers!

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Aaron Joe

Aaron Joe: These have been a remarkable eight years. I entered the in 2003 and was honored to be among such a talented and dedicated group. I immediately felt like one of the family, taken under the wing of several senior students, who even now continue to provide me with advice. And it is this sense of family that continues to unite MuDPhuDs / Dr.Drs / Double Docs or whatever other names they have for us.

I completed my PhD with Fabio Rossi in four years. Although I was fortunate to have a fruitful project, it was easily the most challenging four years of my life. A basic science PhD is a marathon of intelligence, technical skill, hard work and strained relationships.
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And when you think you have it all, there is still luck to contend with. When my defense was finished, I was elated – I almost felt like I had climbed Everest. Re-entering clinical medicine tied everything together. It reminded me why I entered the program in the first place, and put a face to the nameless patients I wrote about in grant applications. I enjoyed every minute of it, but my PhD brought perspective. It wasn't enough to just follow orders blindly, and I felt it was important to ask more questions. And I wasn't ready to commit lengthy lists to memory anymore. I missed the time in the lab to discuss ideas, improvise solutions, and become an expert in the field. Perhaps the best and worst thing about clerkship is that you dabble in everything.

I have found my calling in Ophthalmology, and am lucky to be pursuing this over the next five years in Vancouver. I am excited to combine my knowledge in Stem Cells with such a fascinating clinical field, and I hope to become a pioneer in the emerging field of Regenerative Ophthalmology. I look forward to many long nights reading or practicing laser/microsurgery, and making new discoveries under the microscope.

I am fortunate to have a large and supportive group of family and friends. There are too many to thank individually, but I owe all my successes to them. However, I would like to single out my wife, Jennifer, for standing by me, whether it be proofreading my papers, pipetting into 96-well plates, euthanizing mice, driving me to the hospital, paying off our mortgage, or raising our boys. Jenn, we've done it.

Now on to the next stage!

Congratulations!

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Inna Sekirov: Some days you wake up and find it difficult to place yourself in place and time. This is how I've been feeling ever since I've realized that I in fact have completed the MD/PhD program. It feels almost unreal that this journey of eight years has come to an end, leaving me with a mix of happiness and jitters with some sense of accomplishment sprinkled in.

I am very happy to have seen both my medical training and my thesis project through to completion. Despite frequent challenges that I met along the way, I'm happy that most times when someone would ask me what on earth possessed me to get into the MD/PhD Program, I was able to find a good reason for it. I'm glad that I'm still good friends with both my colleagues (both in the research and medical worlds) and, more amazingly, my family members. And I'm ecstatic to have matched to the Medical Microbiology residency program at UBC, which would allow me to pursue and further develop my interests in this field, as well as to enjoy the beauty and excitement of the best city in the world for at least another five years.



Inna Sekirov

At the same time it's a bit unnerving that as this chapter of my life has come to its completion I stand not nearly as much wiser as I had hoped to be by now. It's both scary and exciting to be starting out in a new role of a resident in mere few weeks. And it boggles my mind to think of all the new opportunities and challenges that lie ahead.

When I think of my training as an MD/PhD student, I can't help but remember the millions of times people had asked me whether it was worth it to get into this. And I have a clear answer to this question now – for me it definitely was. And the main reason is not the research skills or analytical abilities I've developed, but rather the opportunity to better understand myself and to better realize what my goals and aspirations are. I can't wait to make the next steps of my journey, and it is because of knowing that this journey and its destination are what I really want to do.

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And of course I could never be where I am now without the support of many many people. I would like to express my sincerest thanks to Drs. Lynn Raymond, Torsten Nielsen and Anthony Chow – the MD/PhD Program Directors present and past. Your guidance and leadership were always a great inspiration. I could never say enough how much I appreciate the help and support of Jane Lee, the Program Coordinator – she is truly the glue that holds us all together. And last but not least I would like to thank my family for standing by me for all these years, providing me with shoulders to lean on, lightening my gloomy moments and celebrating with me the joyous ones. From the bottom of my heart – thank you!



Our newly grads and our Program Director
Dr. Lynn Raymond ---
graduation social on 26 May 2011

Incoming student – Daniel Woodsworth

Daniel Woodsworth is our incoming student in May 2011. Daniel is a recipient of the CIHR MD/PhD Studentship Award. Welcome!

Message from Daniel:

I am happy to be joining the MD/PhD program at UBC. Having just completed my first year of medical studies, I am looking forward to now starting my PhD research over the coming summer. My overarching research interest and goal is biological engineering at the cellular and molecular level. I plan to pursue this goal using synthetic biology and nanotechnology. Working under my supervisor, **Dr. Robert Holt**, at the BC Genome Sciences Centre, I am currently investigating the potential and feasibility of a bacterial cancer therapeutic.



Daniel Woodsworth

Born and raised in Vancouver, I completed an undergraduate Physics degree at UBC, with an honours thesis consisting of a computational and experimental study of a carbon nanotube cross as a quantum dot. Beyond science and medicine, I enjoy talking and reading about pretty much anything. Aside from academic pursuits, I love getting outside – be it skiing, mountain biking, running, anything on the water or in the mountains, or playing sports.

PhD Oral Defense - Arezoo Astanehe

Congratulations go to **Arezoo Astanehe** (Year 6) for successfully defending her thesis on 6 June 2011, "Role of Y-box binding protein-1 (YB-1) in breast cancer". Arezoo's thesis was rated "Category 1". Her research work has important clinical implications. Trastuzumab (Herceptin®), an approved treatment modality for use in women with HER2 positive breast cancers, has improved outcome for patients. Through her latest research, Arezoo has unravelled a mechanism by which cancer cells acquire resistance to trastuzumab. More importantly, her work suggests novel therapeutic targets to combat resistance to trastuzumab in the women affected. Her external examiner commented that her thesis presents a substantial contribution to knowledge and it is very likely to have a significant impact on the discipline. Congratulations!



Arezoo Astanehe

Arezoo was selected by the MD/PhD Program to participate at the Association of American Medical Colleges (AAMC) Early Career Women Faculty Professional Development Seminar (July 9-12) in Washington, DC. This seminar is an exciting training opportunity available to senior women MD/PhD trainees who are seriously considering a career in academic medicine.

Arezoo will be entering the final year of the 7-year combined program in September 2011. Arezoo's PhD research supervisor is **Dr. Sandra Dunn**, Experimental Medicine Graduate Program. We are proud to share her research with everyone. Great work!

ABSTRACT

The Y-box binding protein-1 (YB-1) is a multifunctional protein with roles in transcription, translation, DNA repair, and a recently identified function as an extracellular mitogen. YB-1 is over-expressed in various malignancies including breast carcinoma. Previous work from our laboratory has shown that YB-1 is expressed in approximately 40% of all subtypes of invasive breast carcinomas, and its expression correlates with relapse and poor survival. Further, the oncogenic potential of YB-1 has been demonstrated in breast cancer. In the studies presented in this thesis, we sought to understand the contribution of YB-1 as an oncogenic transcription factor to breast cancer. We focused our studies on the basal-like breast carcinoma (BLBC) and the human epidermal growth factor receptor 2 (HER2) over-expressing breast cancers, as patients with these subtypes suffer the worst prognosis. Using BLBC cell lines, we demonstrated that YB-1 induces expression of *MET* and *PIK3CA* to promote anchorage-independent growth and invasion respectively. These studies further identified YB-1 as a potential therapeutic target in BLBC. We then directed our focus to the HER2 over-expressing breast cancers. Although the development of trastuzumab (Herceptin®), a targeted therapy against HER2, has provided a substantial advance in the care of affected patients, resistance remains a prevailing challenge. We identified a novel mechanism by which signalling proteins, mitogen activated protein kinase interacting kinase (MNK) and p90 ribosomal S6 kinase (RSK), interact to increase phosphorylation of YB-1. In turn, phosphorylation of YB-1 promotes its nuclear translocation where it regulates transcription of genes involved in trastuzumab resistance. These results further suggest YB-1 as a therapeutic target to improve outcome for women with trastuzumab refractory disease. As a whole, the studies outlined in this thesis have contributed to our understanding of breast cancer pathogenesis and have identified novel aspects of YB-1 function in BLBC and in HER2 over-expressing breast carcinomas.

PhD Oral Defense – Kate Potter



Kate Potter

Congratulations go to **Kate Potter** (Year 6) for successfully defending her thesis on 12 July 2011, “The role of islet amyloid and CHOP in islet graft dysfunction and failure”. In her thesis, Kate explored using multiple approaches the effects of human islet amyloid polypeptide (hIAPP) and C/EBP homologous protein (CHOP) on islet viability and function in the context islet transplantation. Her PhD research supervisor is **Dr. Bruce Verchere**, Department of Pathology & Laboratory Medicine. We are proud to share Kate’s research with everyone. Great work!

Kate will be entering medicine Year 3 Clerkship in September.

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ABSTRACT

Islet transplantation has great promise as a treatment for patients with insulin-dependent diabetes but its long-term success is limited by progressive graft dysfunction. Many of the characteristics of β cell dysfunction following transplantation resemble those observed in type 2 diabetes. We focused upon two particular genes thought to be involved in β cell pathophysiology in type 2 diabetes, namely islet amyloid polypeptide (IAPP) and C/EBP homologous protein (CHOP). We hypothesized that CHOP and IAPP play important roles in the progressive dysfunction and loss of transplanted β cells.

Human islets and murine islets expressing a human IAPP transgene developed islet amyloid rapidly following transplantation. Amyloid deposition correlated with loss of glycemic control and was exacerbated by transplantation of a marginal islet mass. Further, pre-existing amyloid in human islets prior to transplantation correlated with graft dysfunction at one year following islet transplantation into human allograft recipients. We tested several strategies to protect against islet amyloid toxicity in a pre-clinical model of human islet culture. Human IAPP deposition and toxicity was abrogated by siRNA against IAPP and by peptide inhibitors of IAPP aggregation. Pig IAPP was found to have minimal amyloidogenicity, suggesting a reason why transplantation of porcine islets yields excellent long-term outcomes. We further demonstrated that heparin, used in clinical islet transplantation, potentiates amyloid deposition in human islets. In addition, it exacerbates IAPP toxicity to cultured cells and accelerates failure of human islet transplants in diabetic mouse recipients, suggesting that caution should be used in the pre-transplant treatment of islets with heparin.

CHOP is activated by prolonged endoplasmic reticulum or oxidative stress. We demonstrated that CHOP immunoreactivity is increased in marginal mass islet grafts. Transplantation of islets in which CHOP has been deleted or silenced by RNA significantly improves the rate of glycemic normalization in marginal mass grafts and reduces apoptosis of transplanted islet cells. These data suggest that CHOP contributes to islet graft dysfunction.

These studies demonstrate a role for two independent non-immune factors – IAPP and CHOP – in islet graft dysfunction. Therapeutic modulation of these two proteins may improve β cell function and survival in both islet transplantation and type 2 diabetes.

PhD Oral Defense - Fiona Young

Congratulations go to **Fiona Young** (Year 6) for successfully defending her thesis on 12 July 2011, "The biology and expression of Huntingtin interacting protein 14". Fiona's PhD thesis, based largely in genetic and molecular methodology, described the generation of a mouse model for Huntingtin Interacting Protein 14 (HIP14) and various aspects of HIP14 biology, a protein thought to play a critical role in Huntington Disease pathogenesis. Her work established the ability of human BAC clone used in studies to direct expression of human HIP14 in mice.

Fiona's research supervisor is **Dr. Michael Hayden**, Department of Medical Genetics. We are proud to share Fiona's research with everyone. Great work!

Fiona is very excited to be selected to join the Southern Medical Program (SMP) Year 3 Clerkship at Kelowna General Hospital next year.



Fiona Young

* * *

ABSTRACT

Huntingtin Interacting Protein 14 (HIP14) is a palmitoyl acyl transferase (PAT) that was first identified due to altered interaction with mutant huntingtin, the protein responsible for Huntington Disease. HIP14 palmitoylates a specific set of neuronal substrates critical at the synapse, and downregulation of HIP14 by siRNA *in vitro* results in increased cell death in neurons. Recent findings have revealed that mice lacking murine *Hip14* (*Hip14*^{-/-}) demonstrate a Huntington-Disease-like phenotype. In the current study, we have generated and characterized human *HIP14* BAC transgenic mice. We generated humanized *HIP14* transgenic mice by crossing the *HIP14* BAC mouse to the *Hip14*^{-/-} model. Rescue of the *Hip14*^{-/-} phenotype indicates that the defects seen in *Hip14*^{-/-} mice are in fact due to loss of HIP14. In addition, our findings indicate human HIP14 can compensate for the loss of the murine ortholog, and that very low levels of HIP14 are sufficient to rescue the *Hip14*^{-/-} phenotype. Finally, we assess patterns of HIP14 expression in early development and further explore the role of *Hip14* in the periphery. Our findings further our understanding of HIP14 *in vivo*, and point to several potential avenues for future studies.

UBC Medicine Research Forum and Journal Release

The UBC Medicine Research Forum and Journal Release were held on 15 March 2011, at the UBC Life Sciences Centre West Atrium. This event was co-hosted by the UBC Medical Undergraduate Society (MUS), UBC Medical Journal (UBCMJ) and the MD/PhD students. The forum features posters and presentations by medical students and residents from across Canada. This year there were 75 presenters, including 8 MD/PhD presenters.



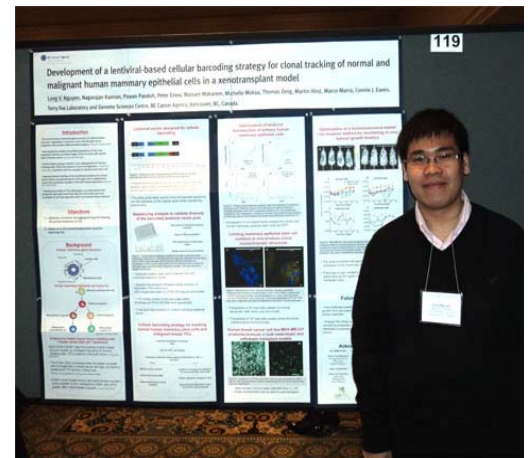
UBC Medicine Research Forum 2011

Kate Potter (Year 6) won first place in the “Basic Science, Long-term Research” category and **Will Guest** (Year 4) won honorable mention in the “Basic Science, Short-term Research” category. Congratulations!

The approved abstracts are published online in a supplement to the UBC Medical Journal and were presented as posters at the forum. The UBCMJ is an internationally recognized student-run academic journal with the goal of engaging students in a dialogue in medicine it publishes issue every March and September.

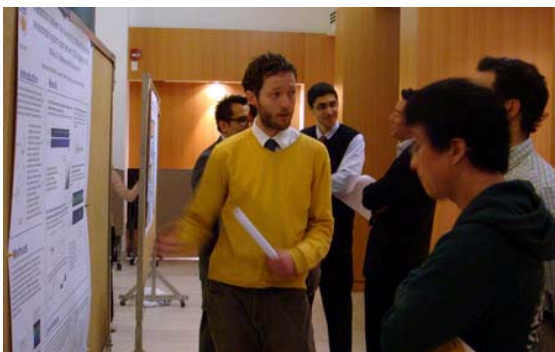
ASCI/AAP (Joint Meeting)

The Association of American Physicians and the American Society for Clinical Investigation held the ASCI/AAP 2011 Joint Meeting on 15-17 April 2011 in Chicago, Illinois. The theme of this year’s meeting is ‘The Scientific Basis of Disease and Therapy’. Two of our students won travel awards to this meeting. **Claire Heslop** (Year 7) won an APSA Travel Award. She presented her project, “Management of younger patients presenting to the emergency department in atrial fibrillation”. **Long Nguyen** (Year 2) won an ASCI/APP Travel Award. He presented his research work, “Characterization of normal and malignant human mammary epithelial cell activity by lentiviral tracking and in vivo tumor imaging in a xenotransplant model”. Congratulations!



Long Nguyen at the ASCI/APP Joint Meeting

UBC Clinical Investigator Program Research Day



David McVea at the UBC CIP Research Day

The UBC Clinical Investigator Program (CIP) 11th Annual Research Day was held on 2 June 2011 at the Paetzold Health Education Multi-Purpose Room at Vancouver General Hospital. This event was presented by the UBC CIP in collaboration with the UBC James Hogg Research Centre, the CIHR Integrated and Mentored Pulmonary and Cardiovascular Training (IMPACT) Strategic Training Program, the Centre for Health Education Scholarship (CHES), eHealth Strategy Office, and the UBC MD/PhD Program. Our MD/PhD students actively participated in this event and won prizes. **Will Guest** (Year 4) won first place in the oral presentation portion and **David McVea** (Year 4) won first place in the poster presentation portion. Congratulations!

Canadian Student Health Research Forum (CSHRF) & Canadian National Medical Student Research Symposium (CNMSRS)

Will Guest (Year 4), **Matt Mayer** (Year 4) and **Kate Potter** (Year 6) were nominated by UBC as being within the top 5% of doctoral students to showcase their outstanding research work at the 24th Canadian Student Health Research Forum (CSHRF) and the 3rd Canadian National Medical Student Research Symposium (CNMSRS). This conference was held in Winnipeg and hosted by the Faculty of Medicine, University of Manitoba, 7-9 June 2011.

The CSHRF provides a venue for health research graduate trainees from across Canada to present their work, network with peers and be recognized for the excellence of their scientific contributions. This event features research poster days, awards of excellence, sight tours and social events as well as a symposium on a cross-disciplinary scientific theme. This year the theme is on Epigenetics, Neuroscience and Mental Health.

The CNMSRS is a research event for medical students, started and organized by medical students. It is also competitive with students giving oral presentations in one of two categories – a) basic/translational research, b) clinical research. The CNMSRS was held in conjunction with the CSHRF, and it represents an opportunity for medical students and graduate students to network and discuss each others' research.

We are extremely proud that all three students won top prizes at the conferences. **Will Guest** won Gold Medal Poster Award (CSHRF conference). He presented, "Misfolding of wild-type superoxide dismutase 1 induced by contact with aggregated mutant superoxide dismutase 1 in a defined in vitro system: generalization of the prion 'protein-only' hypothesis to amyotrophic lateral sclerosis". **Matt Mayer** won First Place in Oral Award - Basic/Translational Research category (CNMSRS conference). His presentation was entitled, "Network analysis of the attenuation of hyperinflammatory responses from cystic fibrosis patient leukocytes by an innate defense regulator (IDR) peptide". **Kate Potter** won Silver Medal Poster Award (CSHRF conference). She presented, "Suppression of CHOP in marginal mass islet grafts improves glycemic normalization". They also received funding from UBC Faculty of Medicine and UBC Faculty of Graduate Studies to present at the conferences. Congratulations!

Kudos

Clara Westwell-Roper is selected to sit on the UBC Faculty of Medicine Research Council and Graduate Student Committee representing the MD/PhD Program in 2011-2012.
David McVea is selected as the Basic Sciences Student Representative for the UBC Faculty of Medicine Research Council in 2010-2011.
Two Year 1 students, Julia Pon and Daniel Woodsworth are awardees of the Faculty of Medicine Graduate Support Initiative Tuition Award for the current academic year.
Kate Potter won a Child & Family Research Institute (CFRI) Trainee Travel Grant to present at the Western Regional Islet Study Group, 15-17 April 2011.
Julia Pon presented at the UBC National Student Conference on the Arts and Humanities in Health Care – Medicina, 24-26 June 2011. "Beauty night: Using esthetic and body arts for health promotion in marginalized populations".
Fiona Young is one of the founding members and current Chair of the Board of Directors for the newly formed, Canadian Transverse Myelitis Association.

PhD Comprehensive Exams

The intent of the PhD comprehensive examination is to ensure that the student has adequately prepared for the proposed thesis research and can gain maximum benefit from this experience. The MD/PhD comprehensive examination format consists of two parts: a) a CIHR style research grant proposal in an area of the student's research, and b) an oral examination.

Two MD/PhD Year 3 students, **Michael Copley** and **Clara Westwell-Roper**, successfully passed their comprehensive examinations on 24 May 2011 and 15 July 2011 respectively, and have been admitted to candidacy. Congratulations!

Rural and Underserved Community Practice

Will Guest, Kate Potter and Fiona Young participated in the Rural Family Practice Clerkship (4 week practicum in rural communities) in the summer of 2011. Beginning 26 June, Will is on Gabriola Island with **Dr. James MacKenzie**. Kate will be in Maple Ridge with **Dr. Ken Burns**, July 25-August 19. Fiona Young will be in Port McNeill with **Dr. Prean Armogam**, July 25-August 19. All three of them have completed their PhD thesis, and get immersed back into clinical medicine before starting clerkships in the end of August 2011.

MD/PhD "Building Bridges Seminar Series" — ALL ARE WELCOME

This well established seminar series is aimed at illustrating the relationship that exists between clinical practice and medical research. The meetings offer a casual and relaxed atmosphere in which to profile individuals who have successfully combined both clinical and research aspects into their medical careers. In addition to talking about their active research, the invited speakers also talk about their experiences, discuss their training background, share their advice for prospective clinician-scientists, and talk about their opinions on career development options for clinician-scientists.

All faculty, clinical investigator trainees and students in the Faculty of Medicine are invited. Presentations are video-conferenced and broadcast to the Island Medical Program and the Northern Medical Program. The event is being held at the Medical Student Alumni Centre, 12th Avenue & Heather Street, at 6:00 - 7:00 pm.

On 18 April 2011, we had a special session: our first MD/PhD student exchange event with the University of Calgary. U of C MD/PhD trainees submitted abstracts which were adjudicated by our students, who chose to invite speaker was **Christopher Sibley** from the University of Calgary MD/PhD Program. Chris presented "Culture enriched molecular profiling of the cystic fibrosis airway microbiome" and we were able to compare notes about our two universities, medical schools and clinician-scientist training programs.



Christopher Sibley

Information on upcoming seminars will be posted this fall at http://www.med.ubc.ca/education/md_ugrad/mdphd/seminars.htm, with the next event occurring after our annual Open House.

Upcoming Events

Our annual MD/PhD program Open House will be held on Friday, 9 September 2011, 1-4 pm, at the Michael Smith Laboratories, Multi-Purpose Room, G/F, 2185 East Mall, UBC. ALL ARE WELCOME.

Comments and Suggestions

We welcome comments and suggestions to the UBC MD/PhD Program and to our newsletters. Please send comments to the MD/PhD Program office, 2N6 - 2818 Detwiller Pavilion, 2255 Wesbrook Mall, UBC, Vancouver, BC, Canada V6T 2A1. Phone: 1-604-822-7198 Fax: 1-604-822-7917
Email: ubcmdphd@exchange.ubc.ca Website: <http://www.med.ubc.ca/mdphd>

Edited by Jane Lee, Program Coordinator, MD/PhD Program, UBC