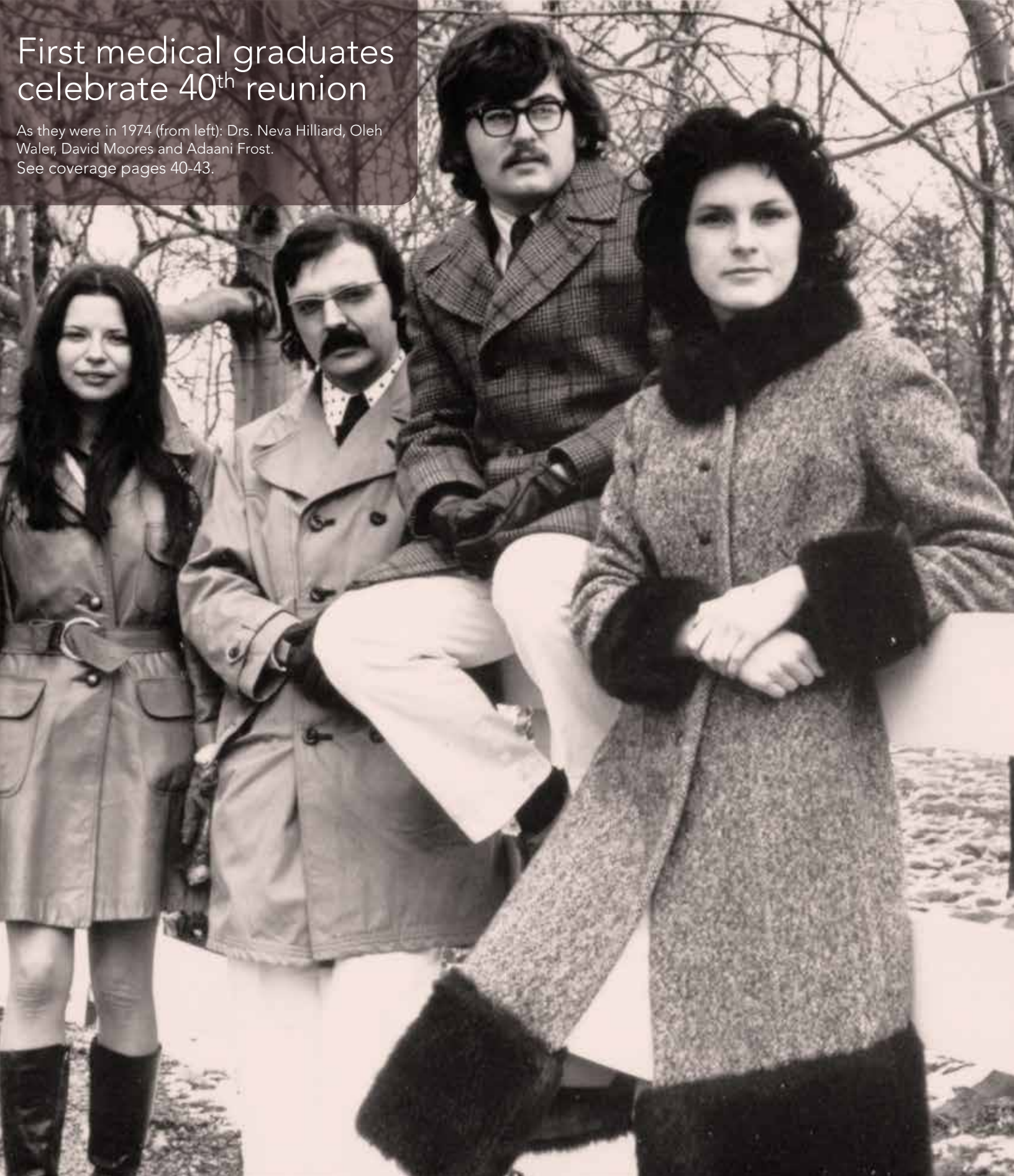


First medical graduates celebrate 40th reunion

As they were in 1974 (from left): Drs. Neva Hilliard, Oleh Waler, David Moores and Adaani Frost.
See coverage pages 40-43.



MUNMED
Faculty of Medicine

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New funding for internal research awards



AN EXPANDED PROGRAM of internal research awards has been initiated by Dr. James Rourke, dean of medicine, to support excellence and success of the Faculty of Medicine's research programs. "With the ending of the CIHR Regional Partnership Program and no provincial committed health research fund, it will be very difficult to develop the strong collaborative research teams that are so important in today's increasingly competitive national research award climate," explained Dr. Rourke. "The Dean's Innovation Fund Grants Program will foster research innovations and collaborations that will build competitive research teams to lead to new programs of externally funded research that will benefit Memorial University and the people of the province.

The fall competition will consist of up to three Dean's Innovation Project Grants (\$45,000) plus a Cox Award (\$50,000) to the top ranked application. The competition is open to all areas of research within the Faculty of Medicine, but with special emphasis on innovative initiatives and collaborations that may lead to new programs of externally funded research. Application deadline for the fall competition is 4:30 p.m. Friday Oct. 25, 2013.

The spring competition will consist of up to eight Dean's Innovation Research Development Grants (\$20,000) to fund small research projects and the collection of preliminary data in support of the development of an application to an external granting agency.

Dr. Reza Tabrizchi, associate dean for research and graduate studies, welcomed the new funding. "Obtaining external funding is becoming very competitive. Grant applications composed of innovative ideas have a much greater chance of being funded at national and international levels – more so if the application is supported by positive preliminary data."

Dr. Tabrizchi said pilot studies can be a vehicle of providing such firsthand data to strengthen a grant application for submission for external funding. "The Dean Rourke Innovation Fund Grants Program will provide the opportunity for researchers in our faculty to conduct innovative studies and use the information and findings in grant applications to compete for external funding. This fund will also enable our faculty to conduct novel studies that are important locally for our province."

Funding for the Dean's Innovation Fund Grants Program comes from consolidation of pooled unspent funds from several accounts, including the Dean's Faculty Research Education Trust (FRET) account and the Medical Research Endowment Fund (MRF).

For further details please see the MRF website at www.med.mun.ca/MRF or direct inquiries to reg.researchmanager@med.mun.ca.



Research that makes a difference™

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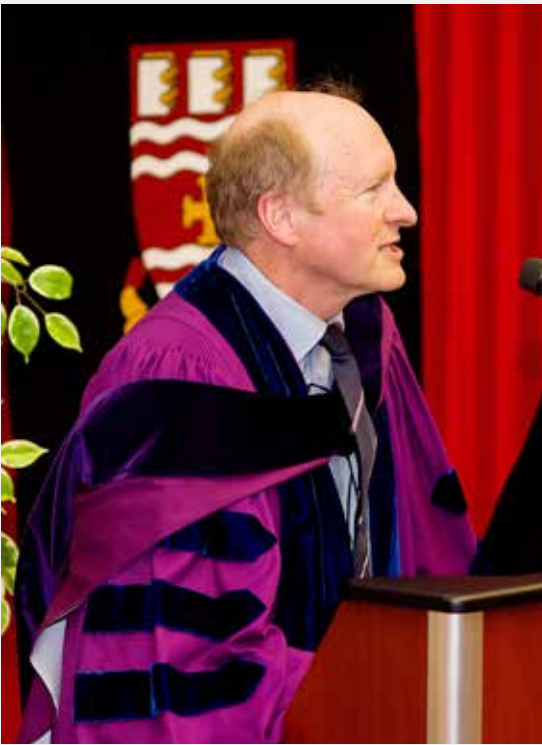
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Cover photo:

Four of the graduates of the first medical class as they were in 1973 (from left): Drs. Neva Hilliard, Oleh Waler, David Moores and Adaani Frost. Eleven members of the first class of 24 students attended the reunion. See reunion coverage pages 40-43.



Head, hands and heart...

Excerpts from the Dean's address to the 2013 MD graduating doctors

DEAR COLLEAGUES, I was honoured to be the first to call you Doctor and welcome you into the profession as you crossed the stage to be hooded to mark the granting of your medical doctor MD degree. I'm sure it will be a most significant and remembered milestone in your life.

For you, family and friends of the medical graduates, this too is a special day of celebration. And like you, I was a proud parent today when my daughter Shannon achieved her MD degree. It is said that it takes a community to raise a child. Developing these great doctors has involved communities in three provinces (NL, NB, and PEI) and beyond! You, as family and friends, have had such a vital role in their quest to become a doctor, nurturing them from a young age and on to admission to medical school – I'm sure you still remember the joy of day they received their offer of admission, the symbolism of the White Coat Ceremony, and sharing their joys and challenges, sorrows and struggles as they progressed through medical school to get to this wonderful day.

For Memorial medical faculty and staff, your graduation marks a special celebration, for this year is the 40th reunion of the first Memorial

MD graduating class of 1973. We do hope to see all of you back for your 40th reunion in 2013, after years of caring and compassionate practise!

I am reminded of the quote, "When one teaches two learn," by Robert A. Heinlein, an American science fiction writer. Truly learning and teaching the art and science of medicine is bidirectional. We have learned from teaching you as students, and now we will learn with you as medical colleagues; as you enter your residency training programs and progress into practice, your roles in teaching future medical students and residents will become increasingly important.

Looking back to your first year in medical school, and way back to mine in 1972, there sure seemed to be a lot to learn. Probably like most of you, before I got into medical school, it seemed that you could pretty much learn everything that was put in front of you. But then I remember anatomy, and coming up against the wall of way too much to learn. So I went to see Dr. Murray, my anatomy professor for some advice. He suggested that I should "concentrate on learning the important things really well rather than trying to learn every vein, nerve, artery, muscle..."

So then on to microbiology, where I applied this principle. I organized my studying around what I thought were the most important diseases, i.e. typhoid fever, cholera, tuberculosis, malaria. Brucellosis was well down the list and in fact I ran out of time before the exam just before getting to brucellosis. The oral exam conducted by Dr. Leslie Hatch was for 100 per cent of the course mark. It went something like this: "Jim I see that you grew up on a farm." "Yes sir." "A farm in Bruce County." "Yes sir." (thinking "Oh No..."). "So tell me everything you know about brucellosis..." Fortunately he agreed to ask me about another disease which with a bit of good luck had been on my list of important things to study.

What I have found is that even after 35 plus years as a doctor you can never know it all. Humility, looking things up (now easier than ever – in fact I don't think I could practice without my Blackberry and iPad), asking for help and working together as a team are so important.

And now that you have become physicians, I would like to provide you with some observations for life and work.

Excellent outcomes are far more likely to be achieved when we develop shared vision and goals and then plan how to get there. A great example is the Team Broken Earth project led by MUN MD graduates Drs. Andrew Furey, Art Rideout, Jeremy Pridham and others that takes a team of 26 doctors, nurses and physiotherapists from the Faculty of Medicine and Eastern Health to work with the local Haitian medical and health professionals to provide safer medical surgical care in the aftermath of the great earthquake

I saw this written above the operating room list at the hospital in Haiti where I was a member of the Team Broken Earth humanitarian mission. "I cried because I had no shoes then I met a man with no legs." In your life and work recognize that others face enormous challenges and difficulties and that we are so fortunate...be helpful and kind. "Kindness is a language the blind can see and the deaf can hear." (Mark Twain).

Continued on next page.

Continued from previous page.

While it may not be an issue for you now as you haven't been paid for anything you have done at medical school, I have observed that some physicians once they get into practice seem to focus on only doing what pays the most, but that rarely buys happiness. You came into medical school to do what should be done, not just what you get paid to do.... I hope you apply this to your day-to-day practice, to non-medical community work, and to do humanitarian work. Your generosity with your time and talent will provide riches far beyond money.

Many medical settings are unpredictable. Emergency departments can be particularly chaotic because of well... emergencies. As chief of an emergency department for many years, I observed that there is no situation that cannot be made worse by panic and being frantic, and that those physicians who could maintain calm while being effective were invaluable. This from a poster of a duck I had framed in my emergency department: "Be like a duck. Calm and cool on the surface but always paddling like the dickens underneath." (Michael Caine).

Barbara Coloroso, in her book *Kids are worth it*, describes the jellyfish, backbone, and brick wall parenting styles. I've observed these approaches in action in families and workplaces! Be a flexible backbone for colleagues and co-workers, family and friends.

Those of you that have siblings may relate to the story in the book *Getting to yes* by Roger Fisher and William Ury. Two sisters were fighting over one orange. Who should get it? The older sister or the younger sister? The bigger sister or the smaller sister? Should the parents take the orange away? In the end they compromised and split it in half. A fair solution yes, but not the best solution because one sister wanted the orange peel for marmalade and the other sister wanted the orange pulp for juice. We need to work together for the best mutual outcome.

In addressing the graduating medical class of Rush Medical College in 1910, Dr. William James Mayo said: "The best interest of the patient is the only interest to be considered, and in order that the sick may have the benefit of advancing knowledge, union of forces is necessary." He was about 100 years ahead of his time. We now recognize that working as a team is so important for safe and effective patient care and also so that we each may have some time off. But at times physicians (and others) can be difficult to work with. There is a saying in trauma care "perfection gets in the way of good." Don't let rigid positions or self-interest or perfection block resolution of important problems.

There is a remarkable transformation occurring in business captured by Gillian Livingston in the *Globe and Mail*: "Play nice or get kicked out of the sandbox." Being a domineering manager is no longer the sure route to promotion or to retention. Increasingly this 21st century paradigm is being applied to physicians in the health care setting. Robert Sutton of the Stanford Engineering School and a researcher in the field of evidence-based management, in his book *The No Asshole Rule* described several examples, with some involving physicians. We have all seen this. Don't accept inappropriate behaviour.

As you now enter into your residencies from coast-to-coast, you will be joining over 2,000 MUN MD graduates whose work every day helps thousands of patients in Newfoundland and Labrador, Canada, and beyond. You will face many challenges and we hope you will not only survive, but thrive. Take care of yourself. In your hectic residents' schedule, sleep when you can, eat when you need to, exercise regularly, and take some time for family and friends.

Dr. Minor Myers Junior commented at a graduation address at Illinois Wesleyan University: "Go out into the world and do well but more importantly go out into the world and do good." Let me paraphrase: You have done well to get into medical school, you have done well in medical school, and now you have developed the knowledgeable heads, the skillful hands and the compassionate hearts to do so much good in your lifetime as medical doctors, starting this July 1 in residency programs here at Memorial and from coast-to-coast all across this wonderful country.

Let me close with one final quote, and that is my Golden Rule for Physicians: "Strive to care for others as you would want to be cared for if you were in their situation; and work hard to develop the knowledge, skills and attitudes to enable you to do so."

All of us at Memorial University, your family and friends, the governments who funded your education, and all the people in society who may become your patients wish you every success in becoming the best doctor you can be!



Dr. James Rourke hooded his daughter Shannon at spring convocation.

GRADUATION 2013

AT THIS YEAR'S Graduation Dinner and Dance, held May 30 at the Sheraton Hotel, the Class of 2013 celebrated with an evening of speeches and awards, and had some fun with a special screech-in. The next evening on May 30, the new class of doctors assembled in the main auditorium of the Faculty of Medicine for the traditional Shingles Night.

For these 72 young men and women, the two days of ceremony marked the transition from medical student to resident. For many it was time to say good-bye to classmates and wish each other well in the future.

Drs. Matthew Curran and Benjamin Taylor were the masters of ceremonies, and Dr. Danika Kung Kean offered

the blessing. The toast and response were given by Dr. Keegan Au and his sister Dr. Kelly Au. Guest speakers were Dr. Lynn Dwyer, who spoke to the graduates about the Medical Graduates' Society, and Dr. Mark Stefanelli.

Dr. Stefanelli congratulated the new doctors, cautioning them to not overlook the humanistic side of medicine. "You have the opportunity to work with teams of people you trust. Embrace your personal strengths and be confident."

Dr. James Rourke addressed the graduating class on both evenings. His speech is found on pages 3-4.

To view all the awards photos from Graduation 2013 please visit bit.ly/medgrad2013.



Dr. Patrick Fleming, left, received the Medical Practice Associates Scholarship for Academic Achievement, presented by Dr. Michael Paul, right. Medical Practice Associates (MPA) is the business association of all full-time clinical faculty members in the Faculty of Medicine. This prestigious scholarship, valued at \$2,000, is awarded to the recipient of the University Medal for Academic Excellence in Medicine. Dr. Fleming also received the Dr. Henry Gault Memorial Scholarship, made available by the colleagues of Dr. Henry Gault, who had an international reputation in nephrology research and was instrumental in building a strong program of clinical and research nephrology at the General Hospital and the Faculty of Medicine. Dr. Fleming also received the Prize in Surgery, the Prize in Internal Medicine, and the Prize in Psychiatry.

Dr. Kelly Monaghan, centre, received the Drs. James and Leslie Rourke Dean's Convocation Award in Medicine, presented by Dean Rourke, right, and Dr. Leslie Rourke. This award, made possible by a generous donation from Drs. James and Leslie Rourke, is awarded to a student who has made an outstanding personal contribution to bettering the lives of others through volunteer work and humanitarian acts while maintaining high academic standing.



Dr. Robin Clouston, left, received the Dr. Harry W. Edstrom Scholarship in Medicine, presented by Mrs. Grace Edstrom. Family, friends and colleagues of the late Dr. Harry W. Edstrom established this scholarship in his memory. Dr. Edstrom was a professor of medicine (respirology) at Memorial who is recognized for his lifetime contributions to teaching and leadership in the medical profession. This scholarship is awarded annually to a medical student who has completed the clerkship component of the MD program, has a strong academic record and who demonstrates leadership during medical studies.

GRADUATION 2013

Dr. Colin Brown, centre, received the Christopher and Donna Cox Scholarship, established through a generous contribution by Dr. Donna Hardy Cox, right, and Dr. Christopher Cox, left. This scholarship is awarded to a graduating MD student who has a strong academic record and who has expressed an interest in specializing in oncology. Dr. Brown also received the Dr. H. Bliss Murphy Cancer Care Foundation Scholarship.



The Gold Humanism Honour Society (GHHS) recognizes fourth-year medical students who have demonstrated exemplary humanistic qualities essential to good doctoring – integrity, excellence, compassion, altruism, respect, empathy and service. The number of honourees is 10-15 per cent of the class. Dr. Scott Moffatt, right, presented certificates to the 10 students selected for 2013. From left: Drs. Jordan Stone-McLean, David Harnett, Patrick Fleming, Amanda Blackwood, Beth Ellen Brown, Meighan Kelly, Jessica Downing, Michelle Kennedy, Kelly Monaghan and Theresa Lee.

THE FOLLOWING FACULTY AWARDS WERE PRESENTED AT THE GRADUATION DINNER



Dr. Mark Stefanelli, right, received the Dr. D.W. Ingram Award, presented by Dr. Marc Kawaja. This award is given to the physician who has provided outstanding clinical teaching, shown interest in students' well-being and served as a positive role model.



Dr. Mohamed Ravalia, right, received the Community Physician Teaching Award, presented by Dr. Michelle Kennedy. Dr. Ravalia is the senior physician in Twillingate and is also assistant dean of the Rural Medical Education Network. The graduating class presents this award to the rural physician who has provided outstanding teaching and guidance to students during their clerkship.

THE FOLLOWING STUDENT AWARDS WERE PRESENTED AT THE GRADUATION DINNER



Dr. Megan Kelly, left, received the Dr. Charles (Chip) Nardini Memorial Award, presented by Dr. Lynn Dwyer (Class of 1986). This award goes to a fourth-year medical student who best exemplifies the characteristics of leadership, friendliness, good humour, care and concern for fellow students and patients. Dr. Chip Nardini was a medical student who died accidentally March 1, 1986 and received his degree posthumously.



Dr. Amanda Blackwood, left, received the Dr. Gregory Rideout Award, presented by Dr. Liam Fardy. This award goes to a fourth-year medical student who has demonstrated an outstanding commitment to activities outside of the medical school that will benefit others. This award was established by Dr. Rideout's classmates (Class of 2003) in recognition of his heroic act that saved the life of a man who would have drowned but for his intervention.



Dr. Mari-Lynne Sinnott, left, received the Dr. I.E. Rusted Award, presented by Timothy Rusted. This award goes to a fourth-year medical student who has made the greatest contribution to the graduating class. Dr. Ian Rusted was the founding father of the medical school: it is because of his vision and determination that Newfoundland and Labrador has a medical school. The medical school admitted its first students in September 1969. Dr. Rusted was inducted into the Canadian Medical Hall of Fame on May 2, 2013, becoming the 100th Laureate.



Dr. Anil Imbulgoda displayed the tile created by the Class of 2013. Class tiles are displayed on the ceiling of Lecture Theatre B.

SHINGLES NIGHT

THE CLASS OF 2013 celebrated on the evening of May 31 in the main auditorium at the 32nd annual Shingles Night. Drs. Bill Eaton and Alan Goodridge entertained the audience of graduates and their families. Dr. David Watton was chosen by his classmates to be valedictorian, and awards for staff and faculty valued by Class of 2012 were presented. Each student received an individual "Shingle" to hang in their future practice. This year's Shingles were made by Ian Wheeler.

Dr. Kelly Au accepted her Shingle from Dr. Scott Moffatt, assistant dean for Student Affairs.



GRADUATION 2013



The Class of 2013 recited the Oath of Hippocrates, led by Dr. William Pryse-Phillips.

Dr. Stephen Duffett received the Outstanding Intern/Resident Award, presented by Dr. Anne Gregory. This award is given to the intern/resident who has provided outstanding teaching and guidance to students during their clerkship.



Dr. Jim Connor, John Clinch Professor of Medical Humanities and History of Medicine, was selected by the Class of 2013 for the Silver Orator Award. The presentation was made by Dr. Kathryn Wheeler. This award is made to the professor who has provided the finest lectures with respect to content, style, humour and aptness.



Mary Dray, left, student affairs co-ordinator, received the Honorary Order of the Killick, presented by Dr. Caroline Barry. This unique award is presented annually to the person who has made an outstanding contribution to the graduating class above and beyond the call of duty.



Valedictory speech

By Dr. David Watton

WELL HERE WE ARE. That's it I guess? The end of a long hard lonely road. Okay maybe half way through a long hard lonely road. One-eighth depending on how you look at things? Either way we've accomplished something great. I'm sure we've all spent a long time thinking about finally getting here. An undergrad degree, four years of medical school and CaRMS have all been leading up to this week and this has been a week to remember (get rid of this if week unmemorable – but seriously my thanks go out to the graduation committee who made this wonderful time all possible). I would also like to again thank those of you that are here today to support us and those that couldn't make it. It's been said already this week but it really cannot be said enough. This would be absolutely impossible without you.

Some of us have been dreaming about this for even longer than a few years. From the first Fisher Price doctor bag or too much time spent at the Janeway with excellent role models. Where some of us felt we always knew what we wanted some others, on the other hand, decided late and full of doubts. We all took different paths and found ourselves ready to get started at the end of August 2009. Poised at the edge with a combination of anxiety, anticipation, and joy. Looking back on it now it feels like much less than four years ago but also an eternity away. We were mostly strangers at first, but we bonded. Some quickly at social events during orientation, and others got the special kind of bonding that can only come from shared seasickness on a whale watching boat the day after a hurricane. Some bonds took a lot longer to form. Friendships were created. Some fell in love. We sat together in this very room and put white coats on for the first time.

And time passed. Months flew by as tests raced up on us. Anatomy. Biochem. Physiology. We discussed ethics and examined cadavers. We started clinical skills, interviewing fake patients – first perhaps a little self-consciously. We ate a lot of sandwiches. Got jiggy with it at Monte Carlo (twice). We grew moustaches, half of us anyway. The only real constant was the people when we went through it with. Even this had small variation. Some of us changed as people too. Some more than we realized.

After those two years we went on to clerkship. Which was pretty much the same sort of exam anxiety with a few extra things added in. Questions on rounds, responsibility for patients, longer work hours, minimal vacation. Oh and the sleep deprivation of being on call. We all dug deep, made sacrifices and powered through. Many of us I'm sure after being awoken in the middle of the night, maybe at St. Clare's on medicine in the dead of winter, by the all too familiar beep beep beep, wondered when will this ever end?

But it did and here we are. Of course, this too shall pass. Just like we think back now on all that has happened, soon this will be a distant memory. When strewn across this province, this country and for some of us eventually the world we'll look back on this hopefully as a great time. And if you're anything like me you'll think of the positive. The pleasant classroom camaraderie, not the exam stress. Our favourite rotations, not the ones that were less so. And the CaRMS interview tour was just an anxiety free, low cost vacation right? Hindsight is 20/20 they say and maybe even a bit rosier.

Continued on next page.

...NO MATTER WHAT HAPPENS WE'LL STILL HAVE THOSE BONDS AS A CLASS. KIND OF LIKE A FAMILY. A SOMEWHAT DYSFUNCTIONAL FAMILY, WITH SOME REALLY INTENSE TYPEA AUNTS AND UNCLES, BUT A FAMILY NONETHELESS. EVEN IF SEPARATED BY DISTANCE. EVEN IF LIFE GETS IN THE WAY AND WE DON'T CALL, E-MAIL OR SKYPE I KNOW THAT THERE ARE SOME PEOPLE IN THIS CLASS WHO WHEN THEY GET BACK TOGETHER IT'LL BE LIKE THE FALL OF 2009 ALL OVER AGAIN.

GRADUATION 2013

Continued from previous page.

At the end of the day I do think we do something special, for lack of a better word. I know it's not perfect and maybe it ain't what it used to be. I also know this sounds kind of pretentious and elitist. And really sometimes we don't need to be reminded of this and maybe we need to be reminded that we aren't as special as we'd like to think we are. However, we are part of something where we can make a difference. We are respected (though, as we've all learnt in HELM not as much as pharmacists, firefighters, butlers, loan sharks and so on). We are privileged and we're challenged. We can be catalysts of change for people, communities, the whole country, and the world. There are folks in the class who have already been hugely involved at the local, national and international levels and have made a big difference.

All of this isn't easy. As medical students we're handled with kid gloves and soon the gloves will come off and the bare knuckle brawl that we've been led to believe residency is will begin. We'll have huge demands placed on us all while we struggle to stay hungry, curious and kind. For me, the challenges of tomorrow are not the focus of today. Much like one might procrastinate exam studying, writing a HELM essay, or crafting a valedictorian speech I think this is something we can put off, for a little while at least. Today we look back at all we've achieved individually and together. I do believe I have some obligation to try and inspire even though I feel dubiously qualified for this given the achievements of some of my classmates. We have a connection among us that will last forever and we must go forth and forge further connections like this. We must admit our limitations as people and physicians and be self-critical all the while being confident in our abilities. Sounds like a tall order but we're ready, even though sometimes it doesn't feel like it.

Finally, no matter what happens we'll still have those bonds as a class. Kind of like a family. A somewhat dysfunctional family, with some really intense type A aunts and uncles, but a family nonetheless. Even if separated by distance. Even if life gets in the way and we don't call, e-mail or Skype I know that there are some people in this class who when they get back together it'll be like the fall of 2009 all over again: Dance practice, quiet hikes, long runs or end of exam celebrations. Reply alls and bouncy castles. We've all been to the fire and like a twisted blacksmith were all melded together whether you like it or not. We look out for each other. I think there lies our greatest strength. Here we sit at the edge of another abyss much like August 2009. A mix of anticipation, nervousness, and sheer terror. But that worked out pretty good in the end didn't it?

New faculty

DR. DEANNA MURPHY was appointed on March 1 as assistant professor with the Discipline of Obstetrics and Gynecology, with a clinical cross-appointment to Eastern Health.

Dr. Murphy graduated with her MD from Memorial University in 2005 and went on to complete her residency in obstetrics and gynecology in 2010 at Memorial. She then completed a fellowship in reproductive endocrinology and infertility from the University of Ottawa in 2012 at the Ottawa Fertility Clinic. She has a clinical interest in infertility, fertility preservation, pediatric and adolescent gynecology and menopause.



Memorial partners with Eastern Health on Molecular Imaging Program

THE NEW MOLECULAR Imaging Program will provide the people of Newfoundland and Labrador with state-of-the-art technology to greatly improve the diagnosis and treatment of certain illnesses, such as cancer.

“The Faculty of Medicine and Memorial University are pleased to partner with Eastern Health to fully capitalize on this significant and strategic investment by the provincial government,” said Dr. James Rourke, dean of medicine, speaking at a news conference July 11.

“The best health care requires up-to-date facilities and excellent health care professionals who are informed by research and education. This project addresses all of these requirements.”

Susan Sullivan, minister of health and community services, said the provincial government is investing approximately \$40 million to provide this new diagnostic testing as well as consolidate nuclear medicine services in one location at the Health Sciences Centre. “With the addition of a positron emission and computerized tomography (PET/CT) scanner to Eastern Health’s Molecular Imaging Program, we are making an important and essential investment in the health of our residents.”

A PET/CT scanner is a vital diagnostic tool most commonly used to detect, assess and treat cancers. This technology is also used for the assessment of cardiac disease and diagnosis of some neurological disorders.

Dr. Rourke noted that the heart of the molecular imaging facility is the cyclotron that can generate an array of radioisotopes for biological and physical investigations. Biomedical science investigations will begin within a specialized research laboratory located near the cyclotron.

For this specialized lab, researchers at Memorial are seeking a major enabling investment to acquire a specialized pre-clinical CT scanner and a high-field pre-clinical spectrometer. “This investment, together with that in the cyclotron, offers the potential for excellence, nationally and internationally,” said Dr. Rourke. “This is a wonderful opportunity and Memorial’s scientific community is keenly interested in the capabilities that this laboratory can offer.”

Dr. Peter Hollett, clinical chief of nuclear medicine at Eastern Health, said operating a PET/CT scanner within this province provides a better chance at fighting various chronic illnesses. “A PET/CT scan would be able to tell a physician whether their patient’s chemotherapy is working far in advance of any other imaging techniques, it will allow physicians to monitor blood flow in the heart more effectively and will provide a means to positively diagnose Alzheimer’s from other types of dementia, which is something we could previously not do in this province.”

A tender to begin realignment of Clinch Crescent to accommodate the project at the Health Sciences Centre was recently awarded. This realignment will be the first phase of development that will include the creation of a new entrance to the Janeway Emergency Department and construction of a new facility to house the Molecular Imaging Program next to the Dr. H. Bliss Murphy Cancer Centre.

In addition to providing Eastern Health and Memorial University with additional research and teaching opportunities, the Molecular Imaging Program will assist with recruitment efforts for physicians. More information about the program can be found on Eastern Health’s website www.easternhealth.ca.

Development of the facility is anticipated to begin later this year. It is expected that the first PET/CT scan will be offered by spring of 2015 and the Molecular Imaging Program should be in full operation by 2016.



Dr. James Rourke



Memorial makes good showing at History of Medicine Days Conference

FOUR STUDENTS in the Faculty of Medicine presented three posters at this year's History of Medicine Days Conference, an annual two-day, nation-wide conference held at the University of Calgary conference March 8-9.

This year's participants were Bolu Ogunyemi, a fourth-year medical student, Carolyn Arbanas, a second-year medical student, and Kylie Goodyear and Hilary Alteen, graduate students.

Mr. Ogunyemi's poster was titled A Cultural History of Ethnic Identity and Aesthetic Surgery in Twentieth Century African Americans. "I chose this particular topic because it consolidates my interests in sociology, cross-cultural medicine, dermatology and history of medicine," he said.

For Ms. Arbanas, this was her second year presenting at History of Medicine Days Conference. Her poster was titled Anti-Vaccine Propaganda: Exploiting the Evolution of Manipulation? "Despite the benefits of vaccines many parents still choose not to vaccinate their children and in turn there are increasing outbreaks of preventable infections," she said. "In my poster I explored the obvious changes in the way the anti-vaccine movements have communicated their message, and highlighted particular tactics that have persisted across eras and movements."

Ms. Goodyear and Ms. Alteen, both graduate students in the Clinical Epidemiology Program, jointly presented a three-panel poster titled Invincible Microbes: At the Limits of Medicine, which covered the history of antibiotic resistance and the evolution of antibiotic stewardship programs.

The poster by the graduate students is composed of three panels tailored to fit the display cases in the science building. The main panel covers the history of antibiotic resistance; the last two panels focus on super bugs (drug resistant organisms) and stewardship programs respectively.

Preceptors for these students were Drs. Jim Connor and Jennifer Connor; presentations were funded in part by the John Clinch Professorship in Medical Humanities and History of Medicine and also Student Affairs (Medicine).

CCHPE receives honourable mention for curricular innovation

MEMORIAL'S CENTRE for Collaborative Health Professional Education (CCHPE) received honourable mention in the Academy for Healthcare Improvement's 2012 competition for the Duncan Neuhauser Awards. This international award recognizes new curricular material that has the potential for significant impact in the teaching of improvement, is innovative in its educational approach, and has the ability to be adopted by other schools, institutions or professions.

There were a record number of submissions for the 2012 competition. CCHPE's submission, Interprofessional education in practicing teams: Improving collaboration and patient safety, was ranked fourth by the review team and received a certificate of honourable mention.

Memorial is a two-time first-place winner in the annual Duncan Neuhauser Award for Curricular Innovation competition. In 2009 and 2010 the CCHPE submissions claimed the top prize.



Dr. Julia Trahey accepted the AHJ award.

New MD program curriculum

QUIET, BEAUTIFUL ST. JAMES, population 13,740, is located near Lynx River and the neighbouring communities of Lynx River, Jim's Arm and Coastal Point. Never heard of it? Don't worry, no one has...yet! St. James, its people and those of the neighbouring communities, are all fictional. They are part of the new story-based spiral curriculum that the Faculty of Medicine is launching this fall for the MD program.

The story-based curriculum will present learning objectives within the context of fictional patients, communities and physician encounters. Throughout the MD program, students will get to know the people of these communities. Topics related to the learning objectives will be revisited over time, and learning broadened throughout the educational process with each successive experience building on an earlier one. This will support the concept of a spiral curriculum to reinforce learning through continued repetition and broadening of a subject. Students will build their knowledge and understanding in a structured fashion.

The need for a new curriculum was identified during the development of the faculty's 2008 Strategic Plan. Since that time, the Medical Education Leadership Team (MELT) has provided direction for planning of a new curriculum. MELT is currently composed of Drs. Sharon Peters, Mary Wells, Alan Goodridge, and Sean Murphy, as well as project manager, Juanita Barrett.

Dr. Murphy said, "Many medical schools have adopted the approach of a spiral curriculum, but there is amazing variability in how it can be applied. Our curriculum will be very much tailored to the specific needs of our students. By shifting away from the discipline or organ-based course structure that we have been using, we can avoid isolating concepts or knowledge. Students can expect to be exposed to material in a more integrated way. Because concepts will be re-visited again and again, but in more depth each time, students will find it easier to retain previous knowledge and won't have to deal with the rapid progression from basic to complex concepts that sometimes can occur in more traditional courses. Medicine is an incredibly integrated profession – you can never forget or ignore any aspect of a patient's health – it only makes sense to learn that way from day one."

Dr. Rourke, dean of medicine, is excited about the innovative curriculum. "In co-operation with MELT, many faculty, residents, students and staff have been involved in the planning. We are now ready to launch this fabulous curriculum which encompasses, maps and integrates the CanMEDS roles and the Medical Council of Canada objectives with new teaching/learning and assessment methods."

Students beginning medical school this fall (September 2013) will learn and be assessed based on the new curriculum. The curriculum for medical students who began the program in 2012 or earlier will not change.

The new curriculum is divided into four phases: Phase I – Health and its Promotion, Phase II – Disease Prevention and Disruptions of Health, Phase III – Diagnosis and Investigation of Illness and Disease, and Phase IV – Integration into Clinical Practice (years 3 and 4 clinical clerkship). Students will be provided with an overview of the curriculum early in the program and will be supported by faculty as they move through the curriculum. As well, students will have the opportunity to participate in groups or teams that will be supporting the implementation and evaluation of the curriculum.

"A significant amount of work has gone into developing the new curriculum," said Dr. Peters. "Along with the other members of MELT, I am very excited to see the new curriculum launch and would like to thank everyone who provided input. This curriculum will provide students in our MD program with a self-directed, active and experiential learning experience for years to come.

For more information on the new curriculum, please visit www.bit.ly/curriculumrenewal, or contact Juanita Barrett via email at idealhealthsolutions@nl.rogers.com or by phone at 709 697 2252.

SOME KEY POINTS WITH THE NEW CURRICULUM INCLUDE:

- Tuesday afternoons will remain unscheduled and free for student-led active learning.
- Clinical Skills sessions will be on Wednesday mornings (for Phase 1)
- There are small group sessions and Special Project half days on most Fridays.
- Student remediation occurs during Phases I-IV.
- Learning in Phases I-III will be blended among disciplines and subject areas to meet learning needs.
- Interactive learning /teaching is key (even during lectures). Facilities in the new building are set up to encourage micro-breakouts.
- Periodic formative and summative assessments will occur throughout the phases.
- Three sets of community visits (with 1/3 class to each visit, remaining 2/3 class Special Projects) will be scheduled in Phases I – III.

Newfoundland Brain Storm winner places third in nationals

WITH THE HELP of some dedicated graduate students in the Faculty of Medicine, Neria Aylward, a grade 11 student at Holy Heart of Mary High School, went from being winner of the provincial Brain Storm competition April 20 to placing third in the Canadian Brain Bee.

The competition, sponsored by the Canadian Institutes of Health Research (CIHR), took place June 1 at McMaster University in Hamilton. Both the provincial Brain Storm and the Canadian Brain Bee are competitions in which high school students are tested on their knowledge of neuroscience in a format similar to the spelling bee.

At the national competition, students are also tested on neuroanatomy. To help Neria prepare for the national competition, graduate students in the neurosciences program within the Faculty of Medicine volunteered to teach her. Over the month of May, Neria spent evenings and weekends with the graduate students in the neuroanatomy labs learning about the amazing complexity of the brain. It paid off with Neria placing third at the national competition. "This is the best a Newfoundland student has done so far," said Dr. John McLean, the neuroscience professor who started the Brain Storm competition at Memorial University and organized it from 2000-2010.



Front row: High school teacher Monika Behr and Neria Aylward, a student at Holy Heart of Mary who placed third in the CIHR Canadian Brain Bee. Involved in Neria's success were (back from left): research assistant Nicole Pittman, Dr. Jackie Vanderluit, and graduate students Vanessa Strong, Alex Dias, Victoria Linehan, Lauren Fogarty, Robert Bartlett, Brian Roome, and Amin Shakhawat. Unavailable for photo: graduate students Natasha Willoughby and Gillian Morrison, and undergraduate student Michael Sloan, who won the provincial Brain Storm in 2009 and placed fifth at the CIHR Canadian Brain Bee that year.



2013 CSEB Student Conference organizing committee members (left to right): Adrian Gee, Yanyan Zhang, Kendra Lester, Christina Tucker, Sheila Marchant-Short, Melody Morton Ninomiya, Mike Hartmann, Jennifer Woodrow, Patricia Harper, Heather Conway, Nathaniel Pollock and Meng Wang.

2013 CSEB National Student Conference a big success for Memorial students

By Jennifer Woodrow

WHAT DO YOU GET when you try to "Screech In" 140 come-from-aways? Besides a plausible Guinness World Record...you get one monumental celebration! That's what several students from Memorial's Faculty of Medicine orchestrated when they hosted the 2013 Canadian Society for Epidemiology and Biostatistics (CSEB) National Student Conference on June 22-23. The student-organized event welcomed graduate students from a dozen institutions across the country to showcase their research. Not only were these visitors made honorary Newfoundlanders, but they were also treated to local musical entertainment and an opportunity to take in the sights and sounds of our infamous George Street.

Dr. James Rourke, dean of medicine, opened the conference with an inspiring talk about the vital research being conducted within our own Faculty of Medicine. This was followed by a keynote address from Dr. Gregory Taylor, deputy chief public health officer with the Public Health Agency of Canada (PHAC). Dr. Taylor discussed how the fields of epidemiology and biostatistics provide essential tools for facing public health challenges and highlighted opportunities for up-and-coming researchers to apply their skills. Several of Memorial's faculty members and students were involved in conducting workshops, reviewing abstracts and judging student presentations.

For more information about this year's conference, please visit www.studentcseb.ca.

New chair for the Discipline of Family Medicine

DR. CATHY MACLEAN has a clear idea for the future of primary care in Newfoundland and Labrador, based on the made-in-Canada vision developed by the College of Family Physicians of Canada and known as the Patient's Medical Home (PMH).

As the new chair of the Discipline of Family Medicine, Dr. MacLean knows there are many challenges ahead. "There are a lot of health issues around chronic disease management in Newfoundland and Labrador," she noted. "The challenge is to provide timely care."

To do that, Dr. MacLean believes that the Patient's Medical Home model can provide the right care by the right person at the right time. The PMH is defined as a family practice in which patients feel most comfortable – most at home – to present and discuss their personal and family medical concerns.

"A Patient's Medical Home can offer its patients a broad scope of services carried out by teams or networks of providers, including each patient's personal family doctor working with other doctors, nurses and others," said Dr. MacLean.

The advantage of this model to the patient is that the PMH ensures timely access to appointments in the practice and advocacy for, and co-ordination of, timely appointments with other health and medical services needed outside the practice.

The advantage of this model to the Discipline of Family Medicine, said Dr. MacLean, is that PMH sites are ideal for training medical students, family medicine residents and those in other health professions, as well as carrying out family practice and primary care research. She said that doctors now graduating want to work in this model. "It's better for recruitment and retention – we want to attract more medical students to family medicine, so we have to look at why only 32 percent of medical graduates at Memorial are choosing to pursue family medicine. In the next four years I'd like to get that up to 50 per cent."

Dr. MacLean brings a wealth of experience and knowledge to her new job. After receiving her MD from Dalhousie University in 1985, followed by a family medicine residency there, she established a family practice at the Moncton Medical Clinic in 1987. She soon began teaching residents and medical students in her comprehensive practice that included obstetrics, hospital work, palliative care and emergency.

In 1992, Dr. MacLean moved to the University of Western Ontario (UWO) where she became undergraduate family medicine director. In 1997 she took on the same role at Dalhousie. From 2007-2012, Dr. MacLean was professor and head of the Department of Family Medicine at the University of Calgary.

During her time at UWO, Dr. MacLean completed a master's in clinical science in family medicine, and later received a master's in business administration from Saint Mary's University in Halifax. She has been active in teaching throughout her career at both the undergraduate and postgraduate levels, receiving awards for teaching from the medical students at UWO, the 2006 Clinical Faculty Teaching Award from the family medicine residents at Dalhousie and the Dalhousie University Community of Scholars Award for Excellence in Medical Education that same year.

On the national front, Dr. MacLean has been involved with the College of Family Physicians of Canada for many years, serving on various committees and the national executive. She served two years as president of the Nova Scotia College of Family Physicians and was president of the College of Family Physicians of Canada in 2009/2010. She is currently on the Triple C Implementation Taskforce, chairs the national Patient Education Committee and also serves on the Patients Medical Home steering committee.

While Dr. Maclean was department head at the University of Calgary, the department received full accreditation of the residency program and, as of July, 2012 fully implemented the new Triple C Family Medicine competency based curriculum. With accreditation coming up in 2016 for Memorial's Family Medicine Residency Program, she would like to see the Triple C curriculum implemented here.

"We have our work cut out for us, especially with the expansion of our training sites to Grand Falls-Windsor, Burin and Nunavut," she noted.

For further information on the Patient's Medical Home model, visit <http://bit.ly/PatientsMedicalHome>.



Gathering held to celebrate the life of Dr. Ken Roberts

ON JUNE 26 friends and colleagues of the late Dr. Ken Roberts gathered in the main auditorium to celebrate the life of a founding member of the Faculty of Medicine, and the first John Clinch Professor of the History of Medicine. Dr. Roberts died in the UK on Dec. 17, 2012.

A tribute and slideshow was presented by his daughter, Alason Roberts, who visited from the UK and attended the gathering. Among the speakers were Dr. James Rourke, dean of medicine; Dr. Brian Payton, retired professor of physiology and organizer of the event; Dr. Roger Butler, past medical student; Dr. Sharon Buehler, past graduate student; Jane Tomlinson, wife of the late professor of anatomy Dr. John (Tommy) Tomlinson; Dr. Bill Pryse-Phillips, emeritus professor, and Dr. Bill Marshall, retired professor of immunology. There were also many email tributes from past faculty and students.

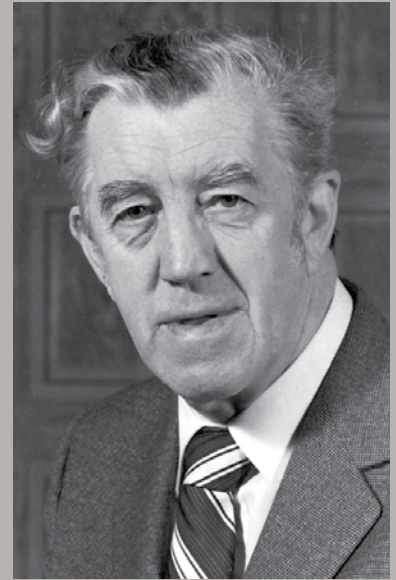
Fittingly, on June 27 Dr. Jim Connor, the third John Clinch Professor (now known as the John Clinch Professor of the History of Medicine and Medical Humanities) gave a Grand Rounds lecture on John Clinch titled About Clinch, by Clinch, on Clinch: A tribute to Ken Roberts. The presentation illustrated the medical contributions of John Clinch (1748-1819) and reviewed aspects of the history of 18th-century Newfoundland.



From left: Dr. Brian Payton, a retired member of the Faculty of Medicine who organized the event celebrating Dr. Roberts' life; Alason Roberts and Dr. Jim Connor.

IN MEMORY

DR. AUGUSTUS (GUS) ROWE, who served as chair of the Discipline of Family Medicine from 1978-1985, passed away on July 20 in Toronto at the age of 92. Born in Heart's Content in 1920, he went on to enrol in pre-medical studies at Memorial College; his studies were interrupted when he joined the Royal Newfoundland



Regiment during WWII. Following the war he graduated from the University of London's Medical School. He began his medical career in 1954 as a general practitioner in Carbonear, where he practiced until 1971. He was then elected a member of the House of Assembly for Carbonear and was appointed minister of health in former premier Frank Moores' cabinet from 1972-1975.

Dr. Rowe had been practicing family medicine for many years in Carbonear when he came to Memorial to do postgraduate work in geriatrics; he later joined the Faculty of Medicine as professor of family medicine and headed up the discipline for seven years. Following his retirement, the Faculty of Medicine established the annual Gus Rowe Teaching Award, which is presented for excellence in the teaching of the examination, assessment and treatment of the whole patient. Over the years, Dr. Rowe held a variety of academic and professional positions, including serving as the president of the Newfoundland and Labrador Medical Association.

Dr. Rowe is survived by his wife Bea (nee Adams) of 68 years, son David (Marian) and daughter Jane (Tammy) and grandchildren Christine and Allan.

Community-based participatory research in action

BY INVOLVING the community in identifying problems and solutions, researchers at Memorial are part of a community alliance to develop a program around youth, mental health and addictions. The community alliance involves partners from the community health clinic, the community board and the school.

Dr. Lisa Bishop, School of Pharmacy, and Dr. Steve Darcy, Discipline of Family Medicine, are heading up the project based in a St. John's community, along with Dr. Cheri Bethune and some other clinicians from the local family medicine clinic and representatives from the community board. Two students have been hired under the Summer Undergraduate Research Awards (SURA) program – medical student Craig Malone and psychology student Chris Singleton.

At a recent folk festival, the community alliance set up a “Talking Wall” to engage the community in more dialogue and give more visibility to the project. The wall was soon filled with hand-written comments showcasing the pride they feel about their community.

The project is based on the principle that for those suffering from addictions, the entire community is affected and has a responsibility to take action. “We need the community to help us develop a program that identifies what the issues are and what works in their community to solve them,” said Dr. Bishop.

Mr. Malone and Mr. Singleton have been working on a systematic literature review of other programs for youth mental health and addictions in order to come up with strategies that can be used to guide the community. “We need to have sustainable engagement with the community,” said Dr. Darcy. “We’ll go back to the community with our findings, and whatever they decide is their agenda. We feel the community has the answers if we create the environment. The process is the most important thing.”

To help with the process, last fall Dr. Bethune arranged a visit from Dr. Ann Macaulay, inaugural director of participatory research at McGill University, who champions all forms of participatory research, and contributes to the academic understanding of this collaborative approach to creating action-oriented knowledge. As a way of sharing ideas and networking with others in the field, in June of this year some members of the community alliance presented their experience with participatory research through a panel discussion at the Community-University Expo in Corner Brook.

“The problems with youth, mental health and addictions are not unique to the community we’re working with,” said Dr. Bishop. “Eventually we’d like to create a model that other communities across the country can follow.”



From left: Dr. Lisa Bishop, Craig Malone, Chris Singleton, Dr. Steve Darcy and Dr. Cheri Bethune.



Students from the Western Regional School of Nursing joined students in St. John's via videoconference for the HIV/AIDS Care Interprofessional Education Module. Front to back (left side): Jennifer Wilcox and Stephanie Marshall, nursing students. Front to back (right side): Meghan Matthews, medical student, Stephanie Dawe and Jordan Lambe, pharmacy students, and Dr. Deborah Kelly, associate professor of pharmacy and facilitator for this session.

Interprofessional education reaches a special milestone at Memorial

FOR MORE THAN A DECADE, the Centre for Collaborative Health Professional Education (CCHPE) has offered an interprofessional education module (IPE) on HIV/AIDS care. The HIV/AIDS module is the longest standing IPE activity offered across health professional education curriculum at Memorial.

At this year's module in February, each interprofessional student group interviewed a standardized patient (SP) enacting the role of the HIV/AIDS patient. The students formulated a plan of care and presented it to the SP. The small-group activity was followed by a plenary session which included a panel

comprised of the provincial HIV clinical team, a representative of the Aids Committee of Newfoundland and Labrador, and a patient. The panel members discussed their roles and collaborative care for persons living with HIV/AIDS.

Students from medicine, nursing, pharmacy and clinical psychology gathered in rooms at the Health Sciences Centre; students from the Western Regional School of Nursing participated via videoconference. Students were very positive about the experience. A second-year medical student said the face-to-face discussion and the interview with a standardized patient were helpful and educational. "Having an actual HIV patient on the panel was unexpected and good as well."

The interprofessional team responsible for planning and implementing the module included Dr. Vernon Curran, CCHPE; Dr. Deborah Kelly, School of Pharmacy; Dr. Sandra MacDonald, School of Nursing; Dr. Bayan Missaghi, Faculty of Medicine; Dr. Michele Neary, Counselling Centre; and Judith Strickland, Western Regional School of Nursing. The Instructional Resource Team included: Kimberley Burt, nurse practitioner with Eastern Health's HIV Program; Brenda Kirby, program manager, CCHPE; Karen Mitchell, standardized patient educator, Standardized Patient Program, Faculty of Medicine; and Blake Stuart, program co-ordinator, AIDS Committee of Newfoundland and Labrador.

"Interprofessional teamwork means the provision of health care services by providers of different health and/or social professions in an integrated and interdependent manner," said Dr. Curran. "An interprofessional team approach brings together different perspectives but also allows providers to contribute from their individual areas of expertise and supports safety and quality in the provision of patient-centred care. The care provided to patients and clients is enhanced by the integration of ideas about patient needs and intervention strategies that would not be possible without the collective insight of an interprofessional team."

The HIV/AIDS module is one of several interprofessional modules co-ordinated through the Centre for Collaborative Health Professional Education for undergraduate students studying in the health and social care professions at Memorial. Each module is supported by an interprofessional curriculum team comprising faculty members from the Faculty of Medicine, Schools of Nursing (St. John's and Corner Brook campuses), Pharmacy, Social Work, and Human Kinetics and Recreation (Therapeutic Recreation), the Faculty of Arts (Diploma in Police Studies), the Department of Psychology and the Centre for Nursing Studies. One hundred per cent of students enrolled in these programs will participate in one or more IPE activities during their education/training. On an annual basis, approximately 1,300 students and medical residents participate in IPE programs offered through CCHPE.

High school science fair winners mentored by biomedical science faculty

BY REACHING OUT beyond the university, some faculty members in the Division of BioMedical Sciences have helped a number of high school students to prepare science projects for competition and go on to win awards. This assistance includes mentoring, offering laboratory space and providing supplies for high school students competing in local, regional and national science fairs.

This year Drs. Karen Mearow, Gary Paterno and Sheila Drover all took the time to help some high school students; Dr. Paterno noted that graduate students also offered tremendous support.

Dr. Drover mentored Hannah Boone, who worked closely with Louisa Weide, an undergraduate student from Germany. Hannah is a Level II student at Holy Heart of Mary High, where science teacher Jaime Parsons is involved in both the Eastern Regional Science Fair and the Canada-Wide Science Fair.

Hannah's project was titled Tea Time: A Breast Cancer Treatment – The Effects of Green Tea and Omega-3 on Breast Cancer Cell Growth. The compound of green tea (EGCG) and omega-3 (DHA) was prepared in the laboratory of Dr. Fereidoon Shahidi in the Department of Biochemistry at Memorial.

At the Eastern Regional Science Fair, Hannah won the Memorial University BioMedical Sciences Award, provided by the Division of BioMedical Sciences, a gold medal, Best in Fair, and the Husky Award that enabled her to travel as one of the six members of Team NL to compete at the Canada-Wide Science Fair held in May in Lethbridge, Alberta. There she won a bronze medal and scholarships for Western University and the University of Ottawa. Funding for Hannah's project came through a grant to Dr. Drover from the Canadian Breast Cancer Foundation.

Dr. Karen Mearow mentored Gabrielle Molloy and Rebecca Casey, with supervision from research assistant Firoozeh Nafar. Gabrielle and Rebecca attend Bishops College, and they went on to win a gold medal in the Senior Life Sciences category at the Eastern Regional Science Fair. Their project was titled Effects of Coconut Oil on Alzheimer's Disease. They were also selected to represent Newfoundland and Labrador at the Canada-Wide Science Fair, and they participated in the Atlantic BioTalent Challenge. Dr. Mearow said that funding for her students' project came from the Canadian Institutes of Health Research and the Research and Development Corporation.

Dr. Gary Paterno mentored Mark Hewitt and Maria Power, with direct supervision provided by Youlian Tzenov, a recently-graduated PhD from the Faculty of Medicine. Their poster was titled The effects of Partridgeberry extract on Epithelial to Mesenchymal Transition in Breast Cancer Cells. Mark and Maria, who attend Bishop's College, went on to win gold medal at the Eastern Regional Science Fair, the MUN Biology Department Prize, and second prize at the Atlantic BioTalent Challenge (sponsored by Sanofi-Aventis).

Dr. Paterno credited Bishop's College science teacher Yvonne Dawe with encouraging many high school students over the years to take part in science fairs and seek out mentoring from biomedical sciences faculty.

High school students mentored by members of the Division of BioMedical Sciences took the time June 10 to display their posters at the Faculty of Medicine. Dr. James Rourke visited the displays and congratulated the students and their mentors on their work.



From left: Research assistants Firoozeh Nafar and Youlian Tzenov, Drs. Gary Paterno and Karen Mearow, high school students Gabrielle Molloy, Rebecca Casey and Hannah Boone, Dr. Sheila Drover, and Dr. Reza Tabrichi, associate dean of research and graduate studies.

Of note

REV. DR. PENNY ALLDERDICE, a retired member of the Faculty of Medicine, won the Award of Excellence for Pastoral Practice in Education from the Canadian Association for Spiritual Care, presented in April in Ottawa. This award recognizes that she has made a significant contribution of pastoral practice and demonstrated excellence in professional practice.

DR. NATALIE BEAUSOLEIL, associate professor of social science and health, had two pieces of art exhibited at the 2013 Canadian Council of Medical Education conference, held in April in Quebec City. Still life was accepted as a juried piece and was shown at the conference; Port Rexton was part of a digital exhibit. In her



upcoming sabbatical, Dr. Beausoleil will be exploring the possibility of developing an arts program in the Faculty of Medicine.

DR. SHAKTI CHANDRA,

an associate professor of anatomy, was presented in April with an Excellence in Teaching Award at a



presentation ceremony organized by Memorial University's Student Union (MUNSU). The award recognizes outstanding dedication to students and to the pursuit of teaching on campus. "I think that the most important part of teaching is to help students learn,"

said Dr. Chandra. "You can teach all you want, but what really counts is helping the students learn – whether it's making it easier for them to see things or helping them understand by relating it to simple examples. I am very honoured to have received this award." The Excellence in Teaching Award is intended to give students the opportunity to give back to those who have had an impact on their lives. These are the only awards for faculty and staff at the university granted solely from students. Dr. Chandra was nominated for the award by her first year medical students.



DR. JIM CONNOR, John Clinch Professor of Medical Humanities and History of Medicine in the Faculty of

Medicine has been elected a Fellow of the Royal Historical Society. The membership draws together individuals from across the world, engaged professionally in researching and presenting history. With his election, Dr. Connor joins a select group of historian-colleagues at Memorial University who are also fellows. Dr. Connor holds cross-appointments in the Faculty of Arts (history) and the Faculty of Science (biology). Recently, he was awarded the inaugural President's Award for Outstanding Teaching (Faculty) at Memorial.

DR. VERNON CURRAN, professor of medical education and director of academic research and development in the Faculty of Medicine, was awarded the 2013 Distinguished Researchers Award from the Canadian

Association for University Continuing Education (CAUCE). Dr. Curran has a record of achievement in research and scholarship, with a particular focus over his career in the fields of continuing medical education (CME), continuing professional education, and interprofessional education in the health professions and adult education. Significant areas of research have also included the fields of tele-education, Internet-based learning and use of low and high-fidelity simulation in medical education. Recent research has focused on exploring key factors influencing the retention of resuscitation skills across the health professions, development of tools for the assessment of interprofessional collaborator competencies and examining the state of non-formal adult learning amongst Canadian post-secondary institutions.



MARY CONNOLLY-WILSON,

a genetic counsellor with the Provincial Medical Genetics Program and a clinical lecturer

at Memorial, will receive the fifth CAGC Leadership award from the Canadian Association of Genetic Counsellors. The award will be presented at the association's annual education conference in Toronto Nov. 5-9. Ms. Connolly-Wilson is a long-standing contributing member to the CAGC and the genetic counselling profession. She began her practice as a genetic counsellor in 1983, laying the

foundations for the profession in Canada. Her clinical and research experience is far reaching with publications pertaining to retinoblastoma, gastric cancer, biochemical genetics and fragile X. She is also the recipient of two hospital based research grants exploring the development of a program to enhance the genetic knowledge of health professionals and a second to research the molecular and biochemical analysis of benign familial neonatal convulsions. She has been with the CAGC from the initial meetings with a few genetic counsellors between 1984 and 1987 to organize what was to become the CAGC to serving on the CAGC founding executive as secretary from 1987-1990 and then as CAGC president from 1990-1992. She went on to chair the Certification Board from 1994 to 1999 and during these years the Certification Board produced the first certification exam for genetic counsellors in Canada. Since 2000 she has been a key member on the Professional Issues Committee and Task Force for Professional Development of Genetic Counsellors and the Professional Competencies Committee, which finalized the Practice Based Competencies for Canadian genetic counsellors in 2012.

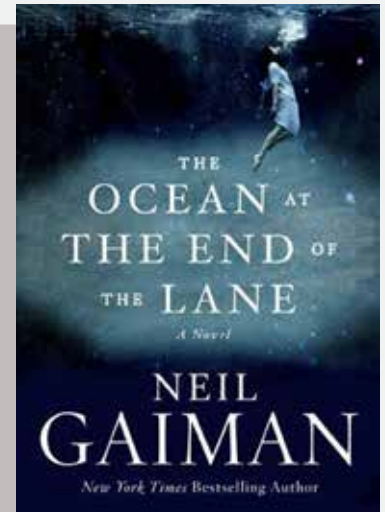


DR. MANI LARIJANI, an assistant professor of immunology and infectious diseases and oncology in the Division of BioMedical Sciences in the Faculty of Medicine, has received the Terra Nova Young Innovator Award in

recognition of his research. This award, valued at \$50,000, recognizes and supports an outstanding and emerging researcher whose innovative work has the potential to significantly impact society. Research in Dr. Larijani's lab has four main aims: to determine the molecular mechanisms of these DNA mutating enzymes; to understand how they are regulated inside cells; to elucidate their contribution to cancer and immunity; and to harness this knowledge towards anti-cancer therapy and the development of novel anti-viral therapies.

Is there a Christopher Kovacs in the house?

If you happen to happen to pick up the #1 New York Times bestseller, *The Ocean at the End of the Lane* by novelist Neil Gaiman,



you may be surprised to find that one of the characters is named Christopher Kovacs. No, it's not our Dr. Christopher Kovacs, but the little boy in the novel by that name is, in fact, named after Dr. Kovacs.

"My wife, children and I had dinner with the author a year ago and it was that evening that Neil decided to name one of the characters in this novel after me," explained Dr. Kovacs. "And so I am in the book, sort of. More correctly, a character in the book is named after me, but it really isn't me. Christopher Kovacs is a little boy, a childhood friend of the protagonist. Originally Neil was going to name a more scurrilous character after me, an opal miner who through his suicide precipitates the entry of evil forces into the world. Thankfully he didn't name that character after me!"

JANET DUPREE retired April 8 after 37 years with Memorial University. Her first job was as a science technician in the laboratory of Dr. Bruce Sells; she completed her Certificate in Animal Care in August 1981 and worked as an animal technician until 1987 when she took a job as stores clerk in the Office of Purchasing in the Faculty of Medicine. Janet was well-known around the medical school, cheerfully delivering materials wherever needed. A retirement party was held for her April 19.



Two decades of service

TWENTY YEARS AGO, Medical Education and Laboratory Support Services (MELSS) was formed, bringing together teaching laboratories, histology services and electron microscopy. Known first as Medical Laboratory Services, the new name of MELSS was adopted in 2000, reflecting the broader mandate of the unit.

MELSS' roots go back to 1969 when the medical school was located in temporary buildings. Historically these services were run individually under faculty direction, but in 1993 the first manager, Margaret Miller, was hired with Dr. Tom Scott as the faculty adviser to the new unified service.

"It was a time of curriculum renewal when we were moving away from wet labs to problem-based learning," explained Ed Evelly, who took over as manager in 1998, having filled that position on an acting basis for a period of time. "By the end of 1995 we'd taken on the surgical research labs and starting in 1996 we got involved in medical simulation. I initiated the joining of the Surgical Research Labs to MELSS and the startup of the Confocal Digital Image Centre and the Simulation Unit – I ran all three along with other units until my retirement."



Back row, from left: Stephanie Tucker, Iliana Dimitrova, Amy Burke, Katrin Zipperlen, Judy Foote and Karen Stapleton. Front row, from left: Kate Williams, Pat Mansfield, Art Taylor and SherriLee Chambers.



Amy Burke works in the Anatomy Unit.

Mr. Evelly said as these changes took place, it was an opportunity to do some strategic planning with the help of an outside consultant. "We were becoming more than a laboratory service; we were a core research facility."

That role as a core research facility was enhanced in 2000 when a room within MELSS was converted to house the Confocal Digital Imagery Centre. Today this unit's capabilities include highest quality optical sectioning, 3D reconstruction and time lapse observation to digitally scan images at different levels, focusing down through the tissue so the attached software can create a three-dimensional image.

Judy Foote, the current manager of MELSS, said the services offered are not only for the Faculty of Medicine, but for the broader university community – in particular the School of Nursing, School of Pharmacy, the Department of Biology and the Department of Biochemistry. "We have about 30 regular clients within the Faculty of Medicine and outside," she said. "We also provide space for high school students through programs such as MedQuest and the annual Discovery Days in Health Sciences."

As an education and laboratory support service unit responsible for the technical personnel, and the set-up of high quality laboratory and clinical based teaching sessions, anatomy and core research facility support, MELSS touches on almost all aspects of the Faculty of Medicine. "We train

the trainer on equipment, and help faculty members figure out what they want and assist them in doing it,” said Ms. Foote.

MELSS also reaches out to the public through the Anatomical Gift Program, which allows a person to donate their body, as a gift, to the Anatomical Unit. “Human bodies are an indispensable aid in medical teaching and research,” said Ms. Foote. “There is a need for anatomical donations that will increase with the demand for more doctors, nurses, physical therapists and other members of the health care professions.”

MELSS is currently undergoing some changes. With the introduction of the new curriculum this fall for undergraduate medical education, the Standardized Patient Program, the High Fidelity Simulation Unit and the Surgical Skills Unit, will be combined in the new Clinical Learning and Development Centre, with Paula Mullins-Richards as manager.

From its humble beginnings in the temporary building, MELSS has grown and developed over the last 20 years as an integral part of the Faculty of Medicine. “It’s a proud legacy of service that speaks to our mission to educate and provide research, clinical, and teaching technical laboratory support to health professionals and the wider university community of Newfoundland and Labrador,” said Ms. Foote.



Stephanie Tucker, sitting, and Kate Williams work in the Electron Microscopy/Flow Cytometry Unit.



Illiana Dimitrova works in the Histology Unit.



Judy Foote is the manager of laboratories at MELSS.



Karen Stapleton works in the Confocal Digital Imaging Unit.



SherriLee Chambers works in the Anatomy Unit.

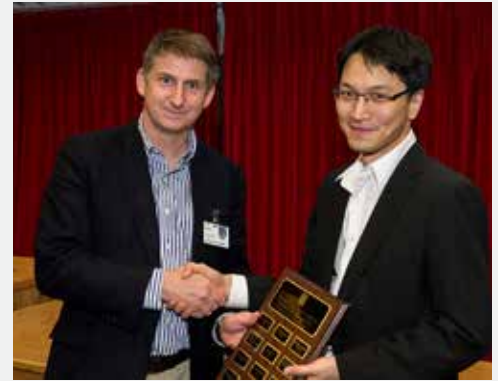
Internal Medicine Resident Research Day 2013

ORAL AND POSTER presentations were featured at this year's Internal Medicine Research Day on May 17. The three judges who participated in this year's research day were Dr. Brendan Barrett, Discipline of Medicine, Dr. Sean Connors, Discipline of Medicine, and Dr. Kathy Hodgkinson, Clinical Epidemiology.

The Dr. David Hawkins Medical Resident Research Award was presented to Dr. Sunkyu Park and Dr. Chai Phua (unavailable for photo), for their presentation on Leading Risks in Male Patients and Carriers with the Valine to Alanine 2016 form of Mild Hemophilia A. The Dr. Grenfell Adams Medical Research Award was presented to Dr. Jamison Mercer for his presentation on Treatment of Radiation Colitis with Argon Plasma Coagulation Therapy and Risk of Colorectal Polyps.

The Dr. Patrick Parfrey Medical Resident Research Award was presented to Dr. Mary Malebranche for her presentation on Validating the Diagnostic Accuracy of Automated Microscopy to Screen for Bacteriuria. The Dr. John Simpson Memorial Award was presented to Dr. Stephen Duffett. This award is given to the internal medicine resident(s), chosen by his or her peers, who demonstrates excellence in teaching other members of the internal medicine house staff and medical students. The award is a tribute to Dr. Simpson, a former medical internist at St. Clare's Mercy Hospital, who died in 1998 at the age of 46.

Dr. Joanna Holland (unavailable for photo) received the Dr. Harry Edstrom Medical Resident Research Award. Her poster presentation topic was titled A Retrospective Study of Surgically Excised Pheochromocytomas in Newfoundland.



Dr. Sunkyu Park, right, and Dr. Sean Connors.



Dr. Jamison Mercer, right, and Dr. Connors.



Dr. Mary Malebranche, right, and Dr. Connors.



Dr. Stephen Duffett, right, and Dr. John Shik.



From left: Dr. Mehrul Hasnain, adjudicator, Dr. James Valcour, adjudicator, Dr. Sinthuja Suntharalingam, and Dr. Weldon Bonnell, research director for the Discipline of Psychiatry.

Psychiatry Research Day

THIS YEAR'S Psychiatry Research Day was held May 31 and featured a keynote speech by Dr. Mehrul Hasnain, associate professor of psychiatry, titled Research: What You Must Know. The afternoon also included three presentations on research in progress and four presentations on completed research, plus a poster viewing on the Ever Green Recycling Program by Ann Ryan.

The Dr. Paul Janssen Award for Excellence in Research went to psychiatry resident Dr. Sinthuja Suntharalingam for her presentation titled Determining the Perceptions of Mental Health and Substance Abuse among Youth and Young Adults in a Small Urban Community.

Thomas Gleason Resident Award for Social Accountability in Research

THE INAUGURAL RECIPIENTS of the Thomas Gleason Resident Award for Social Accountability in Research are Drs. Heather O'Dea and Amy Pieroway, second-year family medicine residents in the Faculty of Medicine.

This new award is named in memory of the late Dr. Thomas Gleason, a retired faculty member of the Faculty of Education at Memorial. Dr. Gleason and his wife Marie Gleason, editor of the *MUN Gazette* from 1978-1990, were strong supporters of the Family Medicine Residency Program, as patients who valued family medicine and family medicine education. The award is made possible through generous donations made to the Discipline of Family Medicine by the Gleason family and friends.

The Thomas Gleason Resident Award for Social Accountability in Research is presented annually at the MUN Family Medicine Resident Forum to the resident project that best addresses the priority health needs of the community, region or nation.

Drs. O'Dea and Pieroway won the new award for their research project on an evaluation of a refugee well woman care program, which provided comprehensive well woman care and education to refugee women in the City. This project was also awarded the Best Overall Family Medicine Resident Research Project Award for the 2012-13 academic year.



Dr. Heather O'Dea, left, and Dr. Amy Pieroway, right, were the inaugural recipients of the Thomas Gleason Resident Award for Social Accountability in Research. The awards were presented by Dr. Kris Aubrey-Bassler.

Anesthesia Research Dinner

THE ANNUAL Anesthesia Research Dinner was held May 16 at the Hungry Heart Café, this year's venue for the discipline's monthly journal club.

Dr. Gerard Farrell, director of the e-Health Unit, and Katrin Zipperlen, a research assistant with the Medical Education Scholarship Centre, were the adjudicators for the 2013 residents' competition. The Canadian Anesthesiologists' Society New Brunswick Division donated the prize money this year. AbbVie Corporation (formerly Abbott), offered a new award this year—a book prize for the best journal club presentation.

The resident presentations were divided into two categories. The Junior Residents Competition consisted of completed research proposals; the Senior Residents Competition consisted of completed research projects. For PGY1s, the research proposal fulfills the requirement for the scholarly project criterion of the Royal College for all residents. Drs. Ainsley Decker, Sarah Tierney, Jadon Harding and Kimberly Macala presented this year.

The winners were Dr. Sarah Tierney for her proposal titled Treatment of Airway Irritation Associated with LMAs: Comparing Topical versus Intravenous Lidocaine; and Dr. Kimberly Macala for her project titled Fatty Emulsion: Rats Survive Clonidine and Propranolol Overdose. Alan Gibson from AbbVie presented Dr. Jane Seviour with the book prize for best journal club presentation.



Dr. Sarah Tierney



Dr. Jane Seviour

Pediatric Residents Research Day 2013

PEDIATRIC RESIDENTS had the opportunity to showcase their research work on April 11 at the annual Pediatric Residents Research Day. There were 11 presentations by all second- and fourth-year pediatric residents.

Topics this year included neonatal outcomes of infants born to glucose-tolerant obese mothers, sport-related concussions and helmet use, rheumatology learning modules for pediatric residents, nausea and antiemetic usage for chemotherapy for pediatric acute lymphoblastic leukemia (ALL), an evaluation of multisource feedback for assessing pediatric residents, childhood exposure to food and beverage television advertisements, and the development case based modules for endocrinology learning, residents teaching residents procedural skills, and a review of outcomes of mild and moderate pediatric diabetic ketoacidosis admissions using different types of insulin.

Dr. Jennie Morison was awarded a \$100 prize for the best project by a second-year resident. Her supervisor, Dr. Leigh Anne Newhook, had previously found an association between birth by cesarean section and an increased risk for a child developing type-1 diabetes. Dr. Morison is conducting further analysis on the same study participants to identify the specific reasons and indications for cesarean section in this population.

Dr. Rikin Patel was awarded a \$200 prize for the best fourth-year project. His project compares pediatric faculty and resident perspectives on the structure and process of the in-training evaluation reports (ITER) to improve the ITER as an evaluation tool for Memorial University's pediatric residency training program.



Dr. Jennie Morison, right, and Dr. Anne Drover, residency director for the Discipline of Pediatrics.



Dr. Rikin Patel, left, and Dr. Roger Chafe, director of pediatric research.

Publication features resident's research



DR. ALISON HAYNES, a past pediatric resident at Memorial, is first author on the article titled Early Nutrition in the Prevention of Allergic Disease: A survey of General Paediatricians and Dietitians in Atlantic Canada, published in *Paediatric Child Health*. The increased rates of allergic disease over the past several decades has made the primary prevention of allergic disease of significant clinical importance; this article, based on Dr. Haynes' resident research, highlights the differences between international guidelines and the advice given by general pediatricians and dietitians in Atlantic Canada with respect to recommendations for maternal elimination diets and the introduction of commonly allergenic foods, with some survey respondents continuing to recommend these despite a growing body of recent evidence against these recommendations, thus demonstrating a need for enhanced education. The other authors on this paper were Sara Leo, Edmond Chan, Roger Chafe and Leigh Anne Newhook.

News from the Discipline of Obstetrics and Gynecology

THE DISCIPLINE of Obstetrics and Gynecology held its 24th Annual Resident Research Day on May 31. There were projects presented by residents and the guest speaker was Dr. Proton Rahman, University Research Professor and professor of medicine and rheumatology. Oral or Poster presentations awards went to Drs. Chris Holden, Stephane Foulem, Carrie Ferguson and Sarah Kean.

“Resident Research Day is a day where academic and clinical worlds meet to provide an opportunity for our residents to present their research findings,” said Dr. Krisztina Bajzak, resident research director. “It’s an inspiring occasion for learning and networking within the context of research. This next generation of clinician scientists will undoubtedly make significant contributions to new knowledge and promote improvements in our ability to deliver quality health care to the women of Newfoundland and Labrador and beyond.”

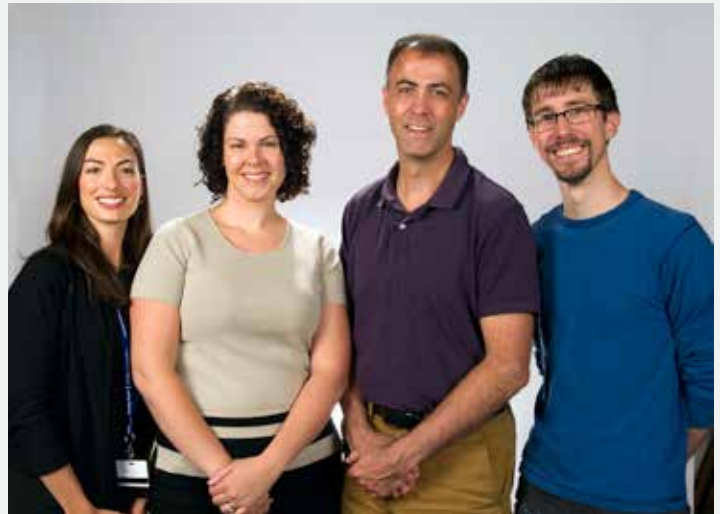
The next Resident Research Day for the Discipline of Obstetrics and Gynecology will be held May 30, 2014.

Dr. Tina Delaney, associate professor and clinical clerkship co-ordinator, received the 2012 APOG Educator Award for Excellence in recognition of excellence, commitment, innovation and leadership demonstrated in teaching knowledge, attitude and skills. This award is given by the Association of Academic Professionals in Obstetrics and Gynecology of Canada in recognition of outstanding educational achievements.

SOGC 69th Annual Clinical Meeting

Residents and faculty members in the Discipline of Obstetrics and Gynecology made a good showing at the 69th annual clinical meeting of the Society of Obstetricians and Gynecologists (SOGC) of Canada, held June 11–14 in Calgary, Alberta.

Memorial residents won the **2013 PPROM Award** (Program Promotion by Residents in Obstetrics for Medical Students) for promotion of the specialty of obstetrics and gynecology to medical students. The PPROM Award recipients are selected by participants in the medical student track at the SOGC annual clinical meeting. The award, selected during the Residents Fair, is given to the students’ favourite program. MUN residents previously received this award in 2010 and 2012.



Drs. Carrie Ferguson, Sarah Kean, Chris Holden and Stephane Foulem.

Dr. Carrie Ferguson was second runner up for the best poster presentation (Analysis of BRCA Mutations in Newfoundland and Labrador: Is There Evidence of a Founder Effect?) at the SOGC annual clinical meeting.

International observerships

The Gynecologic Oncologists of Canada, together with the International Gynecologic Cancer Society, have developed a program of international observerships by which obstetricians/gynecologists from developing countries visit cancer centres in Canada in order to increase their exposure to women’s cancer care. The Division of Gynecologic Oncology at Memorial was invited to participate; Dr. Lawrence Oluwasanmi Akintade from Lesotho, South Africa came for 10 days and observed as a non-practicing physician. A farewell dinner in his honour was hosted by Dr. Krisztina Bajzak.

Dr. Deanna Murphy is a new faculty member in the Discipline of Obstetrics and Gynecology. See story on page 10.

RESEARCH THAT MAKES A DIFFERENCE™

Inaugural Research Excellence Awards

THE FACULTY of Medicine's new Research Excellence Awards were presented April 29. These annual awards, created by Dean James Rourke, recognize faculty members whose contributions to research in their fields have made them active and valued participants in Memorial's vibrant research community.

This year there were four awards handed out – two junior career awards (one to five years into their first faculty appointment), and two mid-career awards (five to 15 years into their first faculty appointment), to both clinical and non-clinical faculty.

Dr. Leigh Anne Newhook (who was unable to attend the presentation) received a Mid-Career Award (Clinical). As a pediatrician with the Janeway Child Health Centre and an associate professor in the Discipline of Pediatrics, Dr. Newhook is a tireless clinician whose commitment not only entails full-time work at the Janeway but also a series of travelling diabetes clinics in Labrador. Her research program is often focused on questions which arise from her clinical work, including a province-wide hospitalization study of juvenile diabetic ketoacidosis (DKA) patients, the results of which will be disseminated throughout the province through knowledge translation and quality initiatives – saving children and families from unnecessary suffering and the health care system from significant expenditures.

Dr. John Thoms received a Junior Career Award (Clinical). Dr. Thoms is a radiation oncologist at the Dr. H. Bliss Murphy Cancer Centre and assistant professor in the Discipline of Oncology. He joined the faculty in May of 2011, becoming the first clinical scientist in the Cancer Care Program and the discipline. He has been a very active clinician and researcher over the last two years, publishing regularly in peer-reviewed journals; he has had eight publications since joining the discipline. His colleagues know Dr. Thoms as a very motivated, intelligent, hardworking young physician who embodies what it is to be a true clinician scientist. His translational work in the area of prostate cancer is extremely important as many patients with this disease ultimately develop resistance to hormonal therapy and chemotherapy.

Dr. Rod Russell received a Junior Career Award (Non-clinical). Dr. Russell is an assistant professor of immunology and infectious diseases in the Division of BioMedical Sciences. The main focus of his research program is the molecular virology of the hepatitis C virus (HCV). Most of the work performed in his laboratory is aimed at this goal, but since his appointment to Memorial in 2008 he has also initiated a number of local, national and international collaborations aimed at understanding other aspects of HCV disease, such as drug resistance and immune dysfunction. The work performed by Dr. Russell and his team contributes to the identification of novel drug targets for HCV, helps to understand how the virus develops drug resistance against currently used therapies, and will expand the understanding of the immune dysfunction observed in chronically-infected HCV-positive individuals.

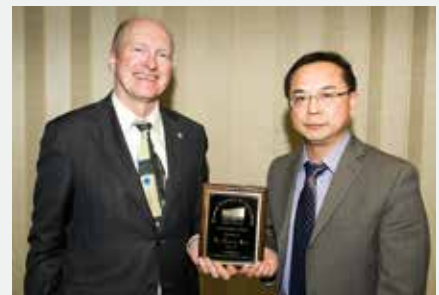
Dr. Guang Sun received a Mid-Career Award (Non-clinical). Dr. Guang Sun is a professor in the Discipline of Medicine. He is an expert in the field of nutrigenomics – the genetic, endocrine and nutritional factors responsible for the predisposition to obesity and diabetes. Dr. Sun and his team study obesity and diabetes in human subjects at different levels; this work includes a study designed to measure gene expression profiles in fatty tissue at a fasting state and in response to a seven-day overfeeding challenge in both lean and overweight/obese young men. A total of 45 genes were identified as being significantly differentially expressed in response to overfeeding. Six genes were also identified that displayed a differential response to the overfeeding intervention between lean and obese subjects. Dr. Sun also pioneered the Complex Diseases in the Newfoundland population: Environment and Genetics (CODING) study, which investigates the link between candidate genes and variations in food intake, body weight, fat percentage, fat distribution and hormones secreted by the gastrointestinal tract, adipose tissue and other related organs; the CODING study incorporates data from approximately 3,000 residents of the province.



Dean Rourke and Dr. John Thoms



Dean Rourke and Dr. Rod Russell



Dean Rourke and Dr. Guang Sun

Research team at Memorial receives new CIHR grant



A RESEARCH TEAM based at Memorial University's Faculty of Medicine has received one of 12 team grants focused on improving community-based primary health care (CBPHC) in Canada and other countries.

Dr. Richard Audas, associate professor of health statistics and economics, is the principal investigator for the project titled Barriers and Facilitators in Access to Child/ Youth Mental Health Services: A Mixed Methods, Inter-

sectorial Study in Atlantic Canada.

The co-investigators on the project are Drs. Roger Chafe, Olga Heath, Marshall Godwin, Sandra Luscombe and Don MacDonald. The value of the grant is \$2.4 million over five years.

The CBPHC Innovation Teams are the first component of CIHR's Signature Initiative in CBPHC. The initiative's goals are to: improve access to appropriate community-based primary healthcare; enhance the patient experience; and contribute to better health outcomes. The second component of this initiative will support CBPHC Health Professional Scientists.

The team at Memorial University will conduct research on children and young adults with autism spectrum disorder, eating disorders, conduct disorder, anxiety and depression.

"These conditions involve myriad service providers from health, education and, in more serious cases, justice and social services," said Dr. Audas. "The approach is to explore each condition through multiple lenses in each Atlantic province to identify crucial gaps in service delivery across the health, education and other public agencies that interact with children and youth."

The team will explore five research questions: What health services are these patient populations currently accessing; what services are they accessing through other agencies; what are the significant barriers/facilitators to accessing these services; what services are effective/ineffective and why; and in what ways can services for children with mental health conditions be better coordinated to improve outcomes and increase efficiencies.

Development of new pain drug has roots in research at Memorial

BASED ON GENETIC research initially carried out at Memorial University, progress has been made in developing a new drug intended for the treatment of pain associated with a rare genetic condition. On April 23, Teva Pharmaceutical Industries Ltd. and Xenon Pharmaceuticals Inc. announced that the U.S. Food and Drug Administration (FDA) has granted orphan-drug designation to the investigational drug XEN402 being developed for the treatment of pain associated with erythromelalgia.

Xenon and Memorial University signed an agreement in November 2000 to collaborate on three genetic diseases prevalent in Newfoundland and Labrador. The agreement with Memorial was negotiated through the university's technology commercialization arm, the Genesis Group. Since then, according to David King, president of the Genesis Group, the Faculty of Medicine has received \$331,000 in milestone payment and \$175,000 in collaborative research funding. In addition, the Genesis Group and Memorial University have received \$94,000 as their share of a milestone payment.

Since the agreement with Xenon in 2000, genetic researchers at Memorial's Faculty of Medicine have collaborated in identifying the gene linked to hereditary sensory and autonomic neuropathy type II (HSAN II). The researchers involved were neurologist Dr. William Pryse-Phillips and geneticists Drs. Banfield Youngusband, Mary O'Driscoll and Roger Green. Xenon cloned and validated the gene.

The most recent development of the investigational drug XEN402 is for pain associated with erythromelalgia (EM), a rare autosomal dominant condition characterized by debilitating spontaneous or easily evoked attacks of symmetrical burning pain in the feet and hands, typically associated with elevated skin temperature and redness of the skin.

Advancing primary health care for persons living with HIV

RESEARCHERS AT Memorial's Faculty of Medicine have partnered with researchers in Ontario and Manitoba for a project on advancing primary health care for persons living with HIV in Canada. The team received one of 12 team grants from the Canadian Institutes of Health Research team grants in community-based primary health care in Canada and other countries.

The principal investigator for the project is Dr. Clare Liddy of the Bruyère Research Institute in Ottawa. Provincial leaders and co-principal investigators are Dr. Chris Kaposy, assistant professor of health care ethics, and Dr. Shabnam Asghari, assistant professor with the Primary Healthcare Research Unit.

Local co-investigators on this project are doctoral student Zack Marshall; Dr. Jill Allison, global health co-ordinator in the Faculty of Medicine and a medical anthropologist; Dr. Kayla Collins, NL Centre for Health Information; Dr. Gerard Farrell, director of the eHealth Research Unit; Dr. Deborah Kelly, associate professor of pharmacy with a cross-appointment to the Faculty of Medicine; Dr. Gerry Mugford, clinical epidemiologist; Kimberley Burt and Cheryl Schulz, HIV Clinic NL; and Philip Lundrigan, AIDS Committee of NL.

The value of the grant is \$499,699 per year for five years. The project will focus on improving the Canadian health care system for those suffering from HIV by introducing innovations such as mapping current use of the health care system, e-consultations, and self-management tools.

The goal is to create an integrated care delivery model for people living with HIV in Canada and change how care is delivered by using innovative strategies to connect family doctors and specialists. The team will also develop tools for providers to understand what ethical issues affect how people receive care and will test strategies for patients to be involved in managing their own care.

Dr. Asghari explained that with improved treatment, people with HIV are now living longer and developing other chronic conditions associated with aging and specific HIV and treatment-associated disorders. "These multiple chronic conditions need to be managed, but the current system is not designed to deliver this kind of comprehensive care," she said. "The goal of this project is to change how care is delivered by using innovative strategies to connect family doctors and specialists."

Since the HIV virus emerged, the care of people with HIV has been a source of ethical issues, said Dr. Kaposy. "Health care providers and people living with HIV have developed ways of managing ethical issues in HIV care. But since the move to an emphasis on primary care is a new development, we are interested in finding out what new ethical issues might arise in this care environment and creating tools to support clinicians and people living with HIV. Our team – with the health ethics expertise available in the Faculty of Medicine – is also available to help provide recommendations on how to deal with these ethical issues."

Mr. Marshall said this project provides an exciting opportunity to partner not only across provinces but also within Newfoundland and Labrador by bringing together an interdisciplinary team of university-based researchers and clinicians, policy makers, community organizations and people living with HIV. "Part of my involvement in this project is to support the engagement of community partners, some of whom will be working together for the first time."



Front row from left: Dr. Deborah Kelly, Dr. Jill Allison, Zack Marshall and Dr. Kayla Collins. Back row from left: Cheryl Schultz, Dr. Shabnam Asghari and Dr. Chris Kaposy.

Prevention Translation Award for work on breast cancer

A TEAM HEADED by Dr. Laura Gillespie, professor of molecular oncology, has received a Prevention Translation Award in the amount of \$149,900 from the Canadian Cancer Society Research Institute. This program targets the translation of basic research findings into the clinic. Co-investigators are Drs. Joy McCarthy, Ken Kao, Nik Makretsov and Gary Paterno.

The project is titled MIER1 alpha as a predictive marker for progression of ductal carcinoma in situ (DCIS) to invasive breast cancer. “We have identified a new molecule called MIER1 α and have discovered that not only can it slow breast tumour growth, but that its location within the cell gradually changes as normal breast cells become a non-invasive form of breast cancer, ductal carcinoma in situ (DCIS), and then become the more serious and deadly invasive breast carcinoma,” explained Dr. Gillespie.

Since only some patients with DCIS will ultimately progress to the invasive form of the disease, the researchers will test their idea that the location of MIER1 α can be used to predict which DCIS patients will develop invasive breast carcinoma. “In this way, more aggressive treatment regimes can be specifically designed for these patients to prevent development of the deadly invasive stage of this disease,” said Dr. Gillespie.

Dr. Joy McCarthy, division chief of medical oncology with the Cancer Care Program of Eastern Health and clinical associate professor of oncology with the Faculty of Medicine, said translational research is seen as a key component to finding practical applications within medicine, especially within oncology. “The current approach of treating patients based primarily on primary cancer site is not well suited to the development of molecularly targeted drugs. Although developing drugs with predictive diagnostics makes drug development more complex, it can provide benefit to individual patients and the economics of healthcare.”

Dr. McCarthy noted that personalized medicine is the future of cancer treatment, and translational research is key to the development of molecular targets for cancer treatment. “With respect to breast cancer, the discovery of which subtypes of DCIS will eventually develop breast cancer will allow more targeted treatments to be developed to prevent future breast cancer events, including, invasive ductal carcinoma.”

Dr. Gillespie said a significant proportion of patients diagnosed with DCIS will experience a recurrence of their disease, usually eight to 10 years later. “In about half of these patients, the recurrence will be a more deadly form: invasive ductal carcinoma. The development and application of predictive markers for those DCIS patients likely to progress to the invasive form of the disease would be of tremendous importance for the health and well-being of these patients. Our research to date suggests that the location of the MIER1 α molecule in the DCIS tumour cell could be such a predictive marker.”

Dr. Gillespie said if the study shows that MIER1 α is an effective predictor of invasive recurrence, then clinicians and their high-risk patients would be able to choose extremely aggressive treatments to prevent future development of invasive breast cancer, and it would also help eliminate unnecessary



Drs. Laura Gillespie and Joy McCarthy.

Atlantic Renal Colic Research Study

THE ATLANTIC Renal Colic Study is now entering its fifth year in the adult emergency departments in St. John's.

“The initial study was a retrospective review of some 2,000 patients presenting with suspected renal colic,” said Dr. Dick Barter, one of the co-investigators on this project of the Primary Healthcare Research Unit (PHRU). “Several medical students were involved with this review as well as Dr. Gena Bugden who was a third-year emergency medicine resident at the outset of the study.”

Dr. Kris Aubrey-Bassler, the principal investigator, explained that the study was designed to see if a decision rule to assist physicians in deciding whether a CT was necessary to assess, confirm or locate a stone could be derived. A CT scan is a costly test and results in a relatively high exposure to ionizing radiation which has been linked to the subsequent development of cancer. “Because most kidney stones will pass uneventfully without procedural intervention, we believe that many CT scans performed for suspected renal colic are unnecessary,” he said.

The study also reviewed other pathologies that were found on the CTs. This review and subsequent decision rule are pending publication in the *Canadian Journal of Emergency Medicine*. This article was authored by co-principal investigator Dr. Kris Aubrey

“This led to a prospective study that is ongoing,” said Dr. Barter. “We plan to enrol approximately 1,100 patients presenting with suspected renal colic. These patients receive a follow-up phone questionnaire and review of their subsequent follow-up. We are trying to determine if by eliminating the renal protocol CT for a proportion of this group of patients we would miss serious other pathology.”

During the winter of 2013 Richard Cullen, project co-ordinator with the PHRU was successful in applying for a grant of \$10,000 from the Health Care Foundation of Eastern Health. This grant has enabled the group to hire a research assistant.

“The expected outcome of this work is hopefully less CT scans, therefore fewer resources used and fewer radiation exposure for the patients,” said Dr. Barter.

Work on patient safety receives funding



INCREASED ATTENTION in recent years on patient safety has placed it at the forefront of both medical educators and learners. Doctoral student Patti McCarthy is working to develop a valid, reliable and multi-source feedback (MSF)/360° patient safety assessment tool (PSAT360°) that will be used to provide medical residents with feedback on their patient safety skills and inform the teaching institution

and organization when developing relevant educational programs, policies and procedures.

Ms. McCarthy, who is supervised by Dr. Vernon Curran, has received a total of \$62,990 in grants for this PhD work. Most recently, she received \$25,000 in the first competition from the Commission of Inquiry Research Fund: Enhancing Health Care in Newfoundland and Labrador, established through a partnership through the Dr. H. Bliss Murphy Cancer Care Foundation, the Government of Newfoundland and Labrador, and Eastern Health. She has also received an Eastern Health Quality Health Care Scholarship in the amount of \$6,500 and a grant from the Medical Council of Canada: Research in Clinical Assessment Fund in the amount of \$31,490.

Ms. McCarthy said the increased focus on patient safety is a result of a more complex health care system due to an increase in medical knowledge, interventions and treatments. “Patients are increasingly more engaged in health care issues, their own health and wellness issues and are calling for greater transparency in the health care system. For this reason, when a medical mistake occurs, people want to witness accountability and openness. This places greater demands on health professionals who must be highly trained to work in this environment.”

The PSAT360° study is a five-phase study which involved input from an extensive network of experts in the areas of MSF and patient safety across the country and in the United Kingdom. Ms. McCarthy also invited residents, leaders in medical education, faculty, allied health and nurses to provide feedback on the content and organization of the tool.

This fall, Ms. McCarthy is hoping to pilot this tool within various disciplines in the Faculty of Medicine. Anyone interested in being involved can email her at pattimccarthy@mun.ca.

New therapy for cancer of the blood

THE LATEST RESEARCH in a new field of therapy for treatment of lymphoma or leukemia was featured at this year's first public meeting of the Newfoundland and Labrador Thrombosis, Blood and Immune Disorders Education and Research Project, held May 30 at the St. John's Geo Centre.

The Newfoundland and Labrador Thrombosis, Blood and Immune Disorders Education Research Project is a project of Dr. Mary-Frances Scully, associate professor of medicine (hematology), Dr. Palinder Kamra, clinical associate professor of pediatrics, and Dr. Mani Larijani, assistant professor of immunology and infectious diseases. Public events such as this one are organized through the hard work of dedicated volunteers, in particular Charlie Cheeseman, Ken Noseworthy, Holly King and Derrick Roul.

Dr. Kevin Curran of the Memorial Sloan Kettering Cancer Center in New York spoke on Adoptive T-Cell Therapy for Cancer: How Your Immune System Can

Cure Cancer. He discussed the latest research in this new field of therapy, which genetically alters a patient's own immune cells to attack and eliminate cancer cells. Dr. Paul Moorehead from the Faculty of Medicine also spoke on the topic of Acute Leukemia in Children. The evening also included a presentation by Holly King, family member to a cancer survivor.

"WE ACCOMPLISHED ONE OF OUR MAIN GOALS, WHICH IS TO CONVEY A SENSE OF HOPE TO PATIENTS AND THEIR FAMILY MEMBERS, BY CONNECTING WITH CANCER RESEARCHERS AND THROUGH EDUCATION ON EMERGING AND PROMISING TREATMENTS."

aim to increase awareness of the symptoms and signs of anemia, iron deficiency, bleeding disorders, clotting disorders, immune deficiency and the early diagnosis of cancers of the blood and immune system."

Dr. Larijani added that the event was a tremendous success in terms of turnout. "We accomplished one of our main goals, which is to convey a sense of hope to patients and their family members, by connecting with cancer researchers and through education on emerging and promising treatments."



From left: Holly King and Drs. Kevin Curran, Paul Moorehead, Mani Larijani and Mary-Frances Scully.

Graduate student publications

In this issue of MUNMED we continue our feature on some of the publications by our graduate students. While the first author on these papers are graduate students in the Faculty of Medicine, in all cases these students are greatly supported by their supervisors and other team members.

Dietary magnesium intake inversely associated with insulin resistance



FARRELL CAHILL, a PhD student supervised by Dr. Guang Sun, is first author on a paper that found strong evidence that dietary magnesium intake is inversely associated with insulin resistance.

“Our results indicate that higher dietary magnesium intake is inversely associated with insulin resistance and that overweight and obese individuals

in the general population and pre-menopausal women are more explicitly affected by this beneficial relationship,” explained Mr. Cahill.

“Moreover, we provide the first evidence that the association between dietary magnesium and insulin resistance is more strongly associated with the percentage of body fat than body mass index (BMI) and the concomitant increase in the percentage of body fat BMI. Due to the fact that the percentage of body fat more accurately represents adiposity than BMI, caution should be taken when attempting to utilize BMI as a measure of adiposity in population based studies.”

A total of 2,330 subjects (600 men and 1,725 women) participated in this study; they are volunteers with the ongoing CODING (Complex Diseases in the Newfoundland Population: Environment and Genetics) study.

Mr. Cahill said these findings highlight the importance of dietary magnesium intake as a potential target for the prevention and treatment of Type 2 diabetes (T2D) in humans. “Although there is currently no medical intervention capable of preventing the development of diabetes, simple lifestyle modifications – such as macro and micronutrient intake – have been shown to attenuate the onset of T2D.”

These findings have been published in *PLOS ONE*. The authors in the paper are in: Farrell Cahill, Mariam Shahidi, Jennifer L. Shea, Danny Wadden, Wayne Gulliver, Edward Randell, Sudesh Vasdev and Guang Sun. The research team led by Dr. Sun has made many important discoveries in the fields of human genetics, endocrinology and nutrition on obesity and diabetes.



NELLY ABDEL FATAH, a PhD student supervised by Dr. Terry-Lynn Young, is first author of the paper titled A novel deletion in SMPX causes a rare form of X-linked progressive hearing loss in two families due to a founder effect, published in *Human Mutation*. X-linked

hearing loss is a rare type of senseneuroal hearing loss caused by mutations on X-chromosome gene which contributes to one per cent of all non-syndromic deafness cases and to five per cent of prelingual male deafness. “We identified a multiplex family from Newfoundland segregating X-linked hearing loss,” explained Ms. Abdelfatah. “Deletion of one base pair of SMPX gene has identified, through X chromosome scan and sequencing of positional candidate genes, to cause the hearing loss in this family. We have also identified another NL family with the same deletion which suggests that this deletion is a founder mutation. This finding opens the bridge for clinical translation to families and clinicians. Knowing the genetic etiology of hearing loss in a family can help in early detection of the hearing loss through genetic testing. Early detection of hearing loss will help to reduce the delays in language development and help in educational success. Also it helps in early identification hearing loss in female carriers and their children.” The other authors on this paper are Merner N, Houston J, Benteau T, Griffin A, Doucette L, Stockley T, Lauzon JL and Young TL.



LANCE DOUCETTE, who was a PhD student supervised by Dr. Terry-Lynn Young and is now doing a post-doc in Edmonton, is first author on the paper titled Molecular genetics of achromatopsia in Newfoundland reveal genetic heterogeneity, founder effects and the first cases of Jalili syndrome in North America, published in *Ophthalmic Genetics*. This paper examined a number of families with a retinal condition called achromatopsia (ACHM), a genetically recessive

condition affecting specifically the cone photoreceptors of the retina causing loss of detailed vision, and colour vision.

Mutations in one of four genes are known to cause this condition – this study examined eight families from Newfoundland who were thought to have ACHM. Sequencing of the four previously identified genes identified a total of five mutations which were known to cause ACHM in seven of the eight families, two of which showed evidence of a founder effect in the Newfoundland population. The samples from the unsolved eighth family then underwent whole exome sequencing, which identified a recessive mutation in a gene called CNNM4, a gene previously associated with a recessive condition known as Jalili syndrome.

“This rare syndrome has been described in a handful of families, mostly of Middle Eastern descent, and affects the rod and cone photoreceptors of the retina, as well as causing dental anomalies,” said Dr. Doucette. “The members of the eight unsolved families all had dentures at young ages due to lack of routine dental care in rural areas of Newfoundland, and thus we were unable to determine a dental issue. Dr. Jane Green then requested and reviewed archived medical records from the late 70s/early 80s, which revealed a description of soft enamel and various dental malformations, consistent with amelogenesis imperfecta, which lead us to a rediagnosis of Jalili syndrome instead of ACHM in this family. Our study highlights the importance of whole exome sequencing technology as a diagnostic tool, as well as the importance of accurate and well-maintained medical records from physicians.”

The other authors on this paper were Green J, Black C, Schwartzentruber J, Johnson GJ, Galutira D, and Young TL.



ROWAN EL-BIALY, an M.Sc. student supervised by Dr. Shree Mulay, is first author on two publications. The first, titled

Processing of English compounds is sensitive to the constituents’ semantic transparency, was published in the *Mental Lexicon*, and reports three studies on the cognitive processing of compound words (e.g., blueberry, catwalk, etc.). The other authors on this paper are Gagne, C. and Spalding, T. Ms. El-Bialy is also sole author of the article titled Questioning the assumptions of universality in psychiatric approaches to mental healthcare in Canada, published in *Health Science Inquiry*.



MAHMUD HASAN, a research technician supervised by Dr. Jacqueline Vanderluit, is the author of the paper titled

Mcl1 regulates the terminal mitosis of neural precursor cells in the mammalian brain through p27Kip1, published in the August 1, 2013 issue of the journal *Development*. This work is based on his M.Sc. thesis in neuroscience at the Faculty of Medicine. Mr. Hasan’s research focused on identifying the molecular mechanisms that regulate the survival and differentiation of neural precursor cells. The embryonic neural precursor cells are a heterogeneous population composed of neural stem cells and progenitor cells. Thus, understanding the cellular mechanism by which these cells survive and then differentiate into nerve cells provides great insight about stem cell biology and

will be beneficial for designing stem cell-based therapy. Mr. Hasan contributed to some previous work done in Dr. Vanderluit’s lab providing evidence that Mcl1 is a critical survival factor for both embryonic and adult neural precursor cells. In this publication, he discovered a previously unknown role of Mcl1 – promoting differentiation of neural precursor cells. He found that Mcl1 regulates the activity of p27Kip1, a key protein required for the differentiation of neural precursor cells. Therefore, upregulation of p27Kip1 by Mcl1 promotes a neural precursor cell to become a nerve cell in the developing brain. “This is exciting because we found one particular protein, which promotes not only survival of neural precursor cells, but also promotes their differentiation”, said Mr. Hasan. “I hope that this knowledge will be helpful in the future for designing stem cell based-therapies in clinically relevant brain injury models.”



JOHN CHARLES HENNESSEY, a M.Sc. student supervised by Dr. John McGuire, is first author of the paper titled Attenuated

Vasodilator Effectiveness of Protease-Activated Receptor 2 Agonist in Heterozygous par2 Knockout Mice, published in the journal *PLOS One*. Dr. McGuire is also an author on this publication, which investigates how proteins in our blood vessels, called protease-activated receptors, modulate blood pressure. “The paper then goes on to correlate specific genetic markers of one protease-activated receptor, PAR2, and how it can modify an animal’s ability to respond to PAR2 activation,” said Mr. Hennessey.

Graduate student publications



PANAYOTA KOLYPETRI, a PhD student supervised by Dr. George Carayanniotis, Immunology and Infectious Diseases, is first

author of the article titled Identification of pathogenic T cell epitopes near cathepsin cleavage sites in thyroglobulin, published in the February 2013 issue of *The Journal of Immunology*. She explained that thyroglobulin (Tg), the most abundant thyroid protein, encompasses pathogenic peptides in its sequence that induces experimental autoimmune thyroiditis (EAT) in mice. Mapping the exact location of these pathogenic peptides provides a stimulus to study the immunoregulation of T cells that recognize them and become activated infiltrating the thyroid gland. “In this paper, it was examined whether putative pathogenic peptides of Tg are located near cathepsin cleavage sites,” said Ms. Kolypetri. “This study described a new methodology for mapping pathogenic T-cell determinants in Tg.”



LIU LIN, a M.Sc. student supervised by Dr. Peter Wang, is first author of the article Assessing the Validity of a Self-Administered Food-Frequency

Questionnaire (FFQ) in the adult population of Newfoundland and Labrador, published in *Nutrition Journal*. The Food-Frequency Questionnaire (FFQ) is a dietary assessment tool frequently used in large-scale nutritional epidemiology

studies. “However, due to differences in food supply and dietary habits from one population to another, there is no universally accepted FFQ that can be used for all populations,” explained Ms. Lin. “The primary objective of the study was to develop a NL based FFQ that is which is valid and can be self-administrated. Our results suggest that this 169-item FFQ developed specifically for the NL population has moderate relative validity and therefore can be used in studies to assess food consumption in the general adult population of NL. This work may contribute greatly to future epidemiological studies and other nutritional studies in this province.” The other authors on this paper are Peter Wang, Barbara Roebothan, Ann Ryan, Sandra Tucker, Jennifer Colbourne, Natasha Baker, Michelle Cotterchio, Yanqing Yi and Guang Sun.



DONNA ROCHE, a PhD student supervised by Dr. Peter Wang, is the first author on the paper titled Sex Differences in All-Cause

and Cardiovascular Mortality, Hospitalization for Individuals With and Without Diabetes, and Patients With Diabetes Diagnosed Early and Late, published in *Diabetes Care*. Cardiovascular disease (CVD) is the most common comorbidity associated with diabetes and the most common cause of death for individuals with diabetes. This study compared the risk of all-cause, CVD, acute myocardial infarction and stroke mortality and hospitalizations for males and females with and without diabetes and those diagnosed early and late with diabetes.

For females, risk of all-cause mortality and CVD hospitalizations was significantly higher compared to their male counterparts. Females diagnosed late had an increased risk of CVD mortality and CVD hospitalizations compared to females without diabetes and both were significantly higher compared to their male counterparts. “Females with diabetes have a greater risk of mortality than males with diabetes,” said Ms. Roche. “CVD has a greater impact on females with diabetes than males, especially when diagnosed at a later stage. Different management strategies should be considered for males and females and those diagnosed early and late with diabetes.



MOHAMMED SARHAN, a PhD student supervised by Dr. Thomas Michalak, is first author on three recent publications. The

paper titled Hepatitis C Virus Infection of Human T Lymphocytes is Mediated by CD5 was published in the *Journal of Virology*. “In this paper we identified for the first time a receptor for HCV infection specifically expressed on T lymphocytes that allow for the virus to get into these cells,” said Mr. Sarhan. The second paper, published in the *Journal of General Virology*, is titled Patient-Derived Hepatitis C Virus and JFH-1 Clones Differ in Their Ability to Infect Human Hepatoma Cells and Lymphocytes. “We compared between the plasma-derived natural HCV (wild-type virus) and two JFH-1 strains which are surrogate viruses used in tissue culture models to infect liver hepatoma cells and we found that patient-derived and culture-adapted viruses differ

in their ability to infect T cells and hepatoma cells, only natural HCV virus can infect T cells,” he said. The third paper, titled Differential Expression of Candidate Virus Receptors in Human T Lymphocytes Prone or Resistant to Infection with Patient-Derived Hepatitis C Virus, was published in *PLOS ONE*. “We checked whether the HCV candidate receptors identified to date are expressed on lymphocytes and compared between cells which are susceptible to infection versus cells which are not and we identified a unique set of receptors for the naturally occurring virus that are expressed on lymphocytes,” explained Mr. Sarhan.



AMIN SHAKHAWAT, a PhD student supervised by Dr. Qi Yuan, is first author on the paper titled Olfactory Bulb $\alpha 2$ -

Adrenoceptor Activation Promotes Rat Pup Odor-preference Learning via a cAMP-independent Mechanism, published in *Learning & Memory*. This study looked at exploring the underlining cellular mechanism for odour learning and memory formation in the mammalian brain. Rat pups just after birth specifically depend on their smelling ability to explore the nest for food and to find their mother and other pups for survival. At this early stage of life rat pups can't open their eyes, which makes it possible to focus solely on specific cellular changes

involved in olfactory learning and memory formation. “We showed three lines of evidence that suggest a role for $\alpha 2$ -adrenoreceptors in rat pup odor-preference learning in this study, and we suggest that norepinephrine can act through multiple bulbar adrenoceptor subtypes to induce odor learning and that cAMP-dependent, as well as cAMP-independent, signals may act as unconditioned stimuli,” said Mr. Shakhawat. The other authors on this paper are Carolyn Harley and Qi Yuan.



JENNIFER WOODROW, a PhD student supervised by Dr. Peter Wang, is co-first author with Fang Liu, (who recently her M.Sc.) of

the paper titled Smoking and Alcohol Consumption Patterns among Elderly Canadians with mobility disabilities, published in *BMC Res Notes*. The study found that smoking and alcohol patterns present different associations with the severity level of mobility disabilities. Compared with the general population, elderly Canadians with mobility disabilities had similar smoking prevalence but differ significantly in terms of alcohol consumption – seniors having more-severe disability were less likely to consume alcohol regularly. Ms. Woodrow said results from this research will be relevant to decision makers involved in program planning, health education, and policy development as it pertains to the prevention and

management of age-related disability. The other authors on this paper are Loucks-Atkinson A, Buehler S, West R and Wang PP.



Hao Wu

YUN ZHU AND HAO WU, M.Sc. students supervised by Dr. Peter Wang, are co-first authors on the article titled Dietary patterns and colorectal cancer

recurrence and survival: a cohort study, published in *BMJ Open*. This study of 529 newly-diagnosed colorectal cancer patients from Newfoundland were recruited from 1999 to 2003 and followed up until April 2010. Participants reported their dietary intake using a food frequency questionnaire. Dietary patterns were identified with factor analysis. Disease-free survival among the patients was significantly worsened among patients with a high processed meat dietary pattern. No associations were observed with the prudent vegetable or the high-sugar patterns. The study concluded that the processed meat dietary pattern prior to diagnosis is associated with higher risk of tumour recurrence, metastasis and death among patients with colorectal cancer. The other authors on this paper are Wu H, Wang PP, Savas S, Woodrow J, Wish T, Jin R, Green R, Woods M, Roebathan B, Buehler S, Dicks E, McLaughlin JR, Campbell PT and Parfrey PS.

Graduate Student achievements celebrated

THE ACHIEVEMENTS of graduate students in the Faculty of Medicine during 2012-13 were celebrated April 30 with a luncheon in the Junior Common Room. Dr. Gary Kachanoski, president of Memorial, and Dr. James Rourke, dean of medicine, brought greetings. Dr. Jules Doré, assistant dean for graduate studies (medicine), emceed the event.

“I know very well that research, scholarship and creative activities at a university, and the impact that this has on our communities and province, are intimately linked to graduate studies and the work of graduate students,” said Dr. Kachanoski, who is a former dean of graduate studies and research at the University of Saskatchewan and vice-president (research) at the University of Alberta.

“Memorial’s research intensity, reputation and impact on our extended communities is directly reflected in the growing number of outstanding graduate students, like those we are celebrating today, who are choosing to study at Memorial,” said Dr. Kachanoski.

Dr. Rourke noted that the Faculty of Medicine has seen significant growth in graduate enrolments over the past five years. “This is reflected in terms of the number of students who apply to the programs, who are recommended for admission and enter at the diploma, master’s and PhD levels. The biggest limitation over the past five years has been a lack of space but by this time next spring we will have moved into floors 3, 4 and 5 of the new building and will be reallocating the current research space used by genetics to expand other areas of research within the Faculty of Medicine.”

A full list of the achievements recognized and all photos are available at bit.ly/Gradachievements. The following are some of the awards recognized April 30.

Faculty of Medicine Awards

Farrell Cahill, supervised by Dr. Guang Sun, received the Colman PhD Award, established on behalf of Genevieve and Roberta Colman.

Daniel Wadden, supervised by Dr. Guang Sun, received the Dr. Alfred T.H. Burness Graduate Awards in Medicine, established in memory of Dr. Alfred Burness.

Hao Wu, supervised by Drs. Victor Maddalena and Peter Wang, received the Dr. Jorge Segovia Scholarship in Health Sciences Research.

Two Medical Graduate Students’ Society Scholar and Community Involvement Awards were given to PhD student Kerri Smith, supervised by Dr. Ann Dorward, and Clare Lewis, supervised by Drs. Ann Dorward and Jules Doré.



The Colman PhD award was presented to Farrell Cahill, right, by Dr. Jules Doré.

Faculty of Medicine Scholarships

PhD Dean’s Fellowships were received by: Rachel Landy, supervised by Dr. Natalie Beausoleil; and Zack Marshall, supervised by Drs. Chris Kaposy and Fern Brunger. Fellowships to Justin King, supervised by Dr. Mani Larijani, and Jennifer Woodrow, supervised by Dr. Peter Wang, are deferred.



Recipients of PhD Dean’s Fellowships with their supervisors (from left): Dr. Natalie Beausoleil, Rachel Landy, Dr. Chris Kaposy, Zack Marshall, Dr. Fern Brunger, Justin King, and Dr. Mani Larijani.

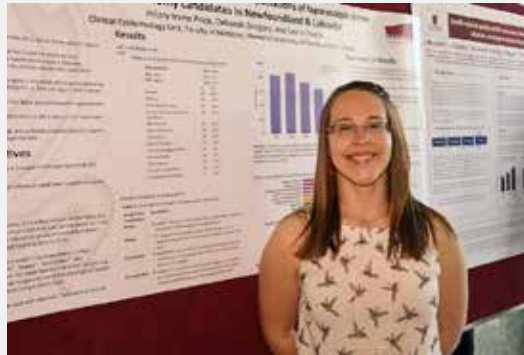
Dean’s Fellowships (M.Sc.) were received by Erfan Aref Eshghi, supervised by Dr. Guangju Zhai; Alexander Dias, supervised by Dr. Michiru Hirasawa; Kylie Goodyear, supervised by Drs. Laurie Twells and Deborah Gregory; Victoria Linehan, supervised by Dr. Michiru Hirasawa; and Meng Wang, supervised by Dr. Yangang Yi. An M.Sc. Dean’s Fellowship to Lauren Fogarty, supervised by Dr. Jacqueline Vanderluit, is deferred.



Recipients of M.Sc. Dean’s Fellowships and their supervisors (from left): Drs. Kensuke and Michiru Hirasawa, Lauren Fogarty, Victoria Linehan, Alex Dias, Dr. Guangju Zhai, Erfan Aref Eshghi, Meng Wang and Dr. Jackie Vanderluit.

Grad student news

TWO GRADUATE STUDENTS in clinical epidemiology took home awards from the Canadian Society for Epidemiology and Biostatistics National Student Conference, hosted by the Faculty of Medicine June 21-23. Hilary Price and Kendra Lester, graduate students in clinical epidemiology under the joint supervision of Drs. Laurie Twells and Debbie Gregory, were awarded prizes. Ms. Price took second place for her poster presentation titled Postoperative Weight Loss Goals and Expectations of Laparoscopic Sleeve Gastrectomy Candidates in Newfoundland & Labrador. Ms. Lester received second place for her oral presentation on the improvement of glycemic control in patients with prediabetes and type 2 diabetes undergoing laparoscopic sleeve gastrectomy in Newfoundland and Labrador.



Hilary Price

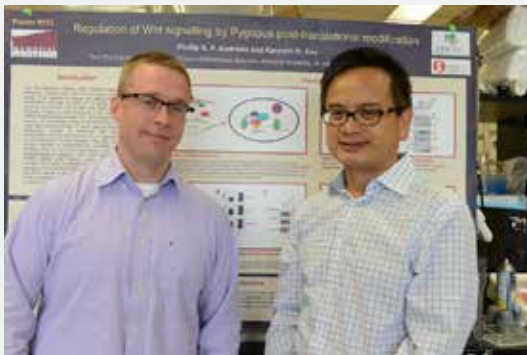


Kendra Lester

Neuroscience graduate student **Natasha Belanger-Willoughby** won the Oral Presentation Prize at 2013 Canadian NeuroMetabolic Club meeting in Toronto on May 20. Ms. Belanger-Willoughby, an M.Sc. student supervised by Dr. Michiru Hirasawa in the Division of BioMedical Science, won the prize for her presentation titled Western Diet Impairs Thermosensing in Orexin Neurons. In this presentation she showed that western-style high fat, high sugar diet attenuates the response of neurons in the brain that signal satiety in a rat model. This finding may explain how palatable western-style diet induces overeating and subsequent weight gain.



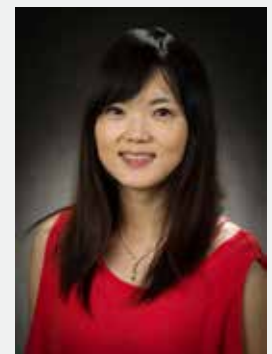
Natasha Belanger-Willoughby



Phillip Andrews, left, and Dr. Ken Kao

Phillip Andrews, a PhD candidate in the Cancer and Development program, supervised by Dr. Kenneth Kao, was selected to attend the fifth annual Canadian Student Health Research Forum held in Winnipeg in June. He won a \$1,000 travel award from the conference organizers to present his poster, titled, Regulation of Wnt signaling by Pygopus post-translational modification, to a panel of judges for the CIHR National Poster Presentation and won a silver medal, competing amongst a field of the top 200 students across Canada. "This is was a tremendous honour and recognition for Phil," said Dr. Kao. "Not only is it testimony to his dedication to outstanding research, but it is positive affirmation of our top-notch graduate biomedical program."

Yun Zhu, an M.Sc. student supervised by Dr. Peter Wang who will enter her PhD program in January, has received a trainee award from the Beatrice Hunter Cancer Research Institute with funds provided by the Cancer Research Training Program as part of The Terry Fox Foundation Strategic Health Research Training Program in Cancer Research at CIHR. Dr. Wang said this is a very prestigious recognition and also very competitive. The award provides \$17,850 per annum for a maximum of two years. Ms. Zhu's master's project is titled Influence of Prediagnostic Diet and Smoking Habits on Colorectal Cancer Survival: A Cohort Study. For her PhD program she will use a Medelian randomization study design to examine the association between folate, alcohol consumption and colorectal cancer survival.



Yun Zhu



MGS reunion 2013

THE ANNUAL Medical Graduates' Society (MGS) Reunion was held August 2-3 at the Faculty of Medicine. This year over 100 graduates of the MD classes of 1973, '78, '83, '88, '93, '98 and '03 enjoyed reconnecting for social events as well as a Saturday morning CME session. For the Class of 1973, the first graduating class, this was a special milestone as they celebrated their 40th anniversary.

Dr. Paul Hart, Class of 1973, spoke the morning of Aug. 3 about medical volunteering. In 2011, Dr. Hart was named Volunteer Physician of the Year by the Massachusetts Medical Society; he has been a tireless champion of equitable health care for the uninsured/underserved in Massachusetts and around the globe. Dr. Hart said there are many positive effects to volunteering, both for the recipients of the volunteering and for the volunteers. He noted that about 100 hours per year are needed to gain positive health outcomes from volunteering. His presentation included photos from volunteer trips he has been part of in Brazil, South Africa and India.

Video celebrates life of Dr. Ian Rusted

AS PART of his opening remarks at the MGS Reunion CME morning, Dean James Rourke spoke about the founding dean of the Faculty of Medicine, Dr. Ian Rusted, and showed a video produced by the Canadian Medical Hall of Fame for the 15th Induction Ceremony and Dinner held May 2 in Halifax, when Dr. Rusted became the 100th Canadian Medical Hall of Fame Laureate.

Dr. Rusted was inducted in the category of "Builder" in recognition of the courage, dedication and perseverance it took to establish a medical school in Newfoundland and Labrador. The Faculty of Medicine was founded in 1967 when Dr. Rusted was appointed dean of medicine. The first students were accepted just two years later, and the first class graduated in 1973.

Today Memorial's Faculty of Medicine has over 2,000 medical graduates who have carried with them the legacy of Dr. Rusted. Through his belief in strong clinical skills and dedication to community-based learning, Dr. Rusted laid the foundation for superb medical education, training doctors to work in both rural and urban areas around the world.

To view this video, visit bit.ly/rustedvideo.



Dr. Ian Rusted
Portrait courtesy of the Canadian Medical Hall of Fame and Irma Coucill, portrait artist.

Snapshots of Reunion 2013

OVER 100 ALUMNI attended this year's reunion re-connecting with classmates and catching up on all the news. Here are some photos from Friday and Saturday's activities.



Among members of the Class of 1978 attending the reunion were (front from left): Drs. Catherine Donovan and Dawn House. Middle row (from left): Marilyn Bishop, Jean Mercer and Anne Casey. Back row (from left): Drs. Jennifer Cant, Bill Waymouth, Maureen Dunne, Tor Wasmeier and Minnie Wasmeier.



Among members of the Class of 1983 attending the reunion were (from left): Drs. Andrew Hutton, Karen (Ash) Fung-Kee-Fung; Gerry Cooper and Glenn Pearce.

Among members of the Class of 1993 attending the reunion were (front row, from left): Drs. Stephanie Philpott, Shelly Dunne, Krisztina Bajzak, Leigh Anne Newhook, Sabine Jurgens, Carmen Stuart, Kim Butt, Lesa Dawson, Kara Laing and Selig Wilansky. Back row (from left): Drs. Chris Goodyear, Greg Browne, Kirk Hollohan, John Lewis, John Murdoch and Shawn Blunston.





From left: Dean James Rourke, Dr. Natalie Beausoleil, Dr. Wallace Ingram and Dr. Lynn Dwyer.

Ingram Award will support the arts in medical education

ON FRIDAY NIGHT during the alumni reception in the medical school foyer, the 2013 Dr. Wallace Ingram Award was presented to Dr. Natalie Beausoleil, associate professor of social science and health in the Division of Community Health and Humanities, to fund a project to promote artistic activities and explore the possibility of integrating an arts program in the Faculty of Medicine. This year's award, contributed by members of the classes attending the MGS Reunion, was \$7,500. Dr. Ingram attended the reception to present the award.

"In Canada and beyond, the nature of medical education is changing, focusing now on creating well-rounded professionals with a balance of arts, humanities and science informing their medical practice," said Dr. Beausoleil. "Educators in medical schools all over the world emphasize that it is crucial for physicians to understand patients' pain and suffering in order to practice good medicine. The arts provide powerful ways for patients to express their pain and suffering."

Dr. Beausoleil, who is also a visual artist, said the power of the arts can significantly contribute to health professional education. "This study will promote reflective capacity and artistic creativity while exploring a possible integration of an arts program in the new curriculum currently developed in our medical school."

Dr. Beausoleil said that artistic creativity has not yet been investigated from a health perspective in Newfoundland and Labrador. "In the Faculty of Medicine, instructors use film, history and literature as an intrinsic part of the clinical skills course to first and second-year students, and instructors in other courses also use films as teaching tools on an ad hoc basis. However, our faculty does not offer a comprehensive arts program which would include music, visual arts, performing arts, reflective and creative writing for all medical students, even as an elective."

One important outcome of the project will be recommendations for the implementation of arts-based teaching and learning and the integration of an arts program for our medical school. "As we make the transition to a new curriculum, harnessing the power of the arts and community to heal thyself and others seems indeed like a very good idea," said Dr. Beausoleil.

"THE POWER OF THE ARTS CAN SIGNIFICANTLY CONTRIBUTE TO HEALTH PROFESSIONAL EDUCATION."

Class of 2003 celebrates their first reunion



There was a good turnout from the Class of 2003 for their first reunion. Among those attending were (front row, from left): Drs. Melanie Seal, Xing Wong, Mary-Clare Royle, Michelle Temple, Vickie Martin, Colleen O'Brien, Peter Montesano, James Coffey, Darlene Hodgson, Dawn Turner, Jennifer Williams and Jackie Elliott. Back row, from left: Drs. Keegan Au, Brian Farrell, Darryl Young, Arthur Payne, Mark Smallwood, Robert Kennedy, Tracy Scott, Karan Shetty and Scott

Class of 1973 celebrates their 40th reunion

"I AM SO GRATEFUL TO THIS MEDICAL SCHOOL; IT GAVE ME MY LIFE AND A CAREER THAT I LOVE."

Dr. Steve Shore, class of 1973



Among the members of the Class of 1973 celebrating their 40th reunion were (front, from left): Drs. David Moores, Steve Shore, Terry Delaney and Don Eddy. Second row (from left): Drs. Rosemary Hutchinson, Adaani Frost, Mark Chalom and Oleh Waler. Back (from left): Drs. Adolphe Giovannini and Daniel Shu.



A backwards view

The good idea

By Dr. Bill Eaton

ONCE UPON A TIME a doctor had a good idea. Now generally speaking, doctors don't have many good ideas. Even when they do they don't, speaking generally, know what to do with them. So they toil away at seeing their patients and eventually the good idea fades and everything returns to normal.

This time, however, things went awry. The good idea would not recede into the mists of middle-aged cerebral involution and kept breaking the surface of the doctor's consciousness. The idea kept the doctor awake nights.

A NATIONAL CONSENSUS CONFERENCE WAS PLANNED AND THE DOCTOR WENT OFF TO SASKATCHEWAN TO LAY THE FOUNDATIONS OF THIS IMPORTANT CONGRESS. PRESS AGENTS AND GUIDELINE WRITERS WERE BROUGHT IN TO FLESH OUT THE DOCTOR'S IDEA TO PREPARE THE MEDICAL COMMUNITY AS WELL AS THE GENERAL PUBLIC.

While driving, the doctor would miss a turnoff. Once the car lights were left on and the doctor needed a boost in the hospital parking lot. At medical staff meetings the doctor's mind would drift. The good idea was flooding the doctor's brain, drowning most other cognitions.

After a month of this, the doctor decided to express the good idea to coffee room colleagues. All who heard the news thought it was a good idea. The surgeons all said decisively, "That's a good idea!" The internists reflected, "Could be a useful idea." The radiologists remarked, "Might be a good idea, can't really see it from this perspective. Need more views." While the anesthetists couldn't agree if it really was an idea at all, let alone a good one.

Buoyed up by such comments, the doctor took the good idea to the chief of staff. Now, the doctor usually avoided administration but this time the chief liked the idea so much she kicked it upstairs. The VP medical thought the idea was good enough to be expounded and expanded and the doctor was soon sitting in the deputy minister's office holding a raft of papers with facts galore and background material.

Over time the doctor's practice suffered. Clinics were cancelled to accommodate the meetings with senior officials, overdue charts built up, staff meetings were missed. Still the doctor persisted and wound up in Ottawa at a meeting with the national minister of health. His Honour decided to act on the good idea and set up an office to house the new task force.

A national consensus conference was planned and the doctor went off to Saskatchewan to lay the foundations of this important congress. Press agents and guideline writers were brought in to flesh out the doctor's idea to prepare the medical community as well as the general public.

The doctor spent much time as a talking head on the TV. The doctor contemplated quitting the practice of medicine and taking up full-time public relations. Colleagues back home had moved on, the patients were bonding with other doctors.

A senior minion in the Ministry of Health hinted at a big-time job with private industry. The doctor started dreaming of a big house in Toronto.

On the day before the big press release the federal cabinet was shuffled and the minister was replaced. The public presentation of the good idea was cancelled. Nobody from industry called. The task force was disbanded. All the hangers-on dispersed. The office, once so full of energy and hope, was closed. The sign on the door that had once advertised the doctor's name in bold letters was gone, replaced by a sign reading, "Coming soon...an organic sandwich shop."

Three months later, back in practice and not really sure what had happened, the doctor picked up a major medical journal to read that three prominent industry-funded researchers had teamed up with a former deputy minister of health. Their pilot project was to begin next spring.