



**DALHOUSIE  
UNIVERSITY**

FACULTY OF MEDICINE  
Dalhousie Medicine  
New Brunswick



# DALHOUSIE MEDICINE NEW BRUNSWICK

## Annual Report 2014 - 2015





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# Dean's Message



Dr. David Anderson  
Dean, Dalhousie Medical School

I continue to be impressed by the scope of the work being done at Dalhousie Medical School and our affiliated teaching sites across the Maritimes. It's been a pleasure for me to get acquainted with the many facets of our research, our educational programs, and the people who work in New Brunswick, Nova Scotia, and Prince Edward Island.

Over the last year, our undergraduate medical education program grew in several ways. The Longitudinal Integrated Clerkship (LIC) continues to expand in New Brunswick, with our newest site opening in Moncton. While the entire program has been a success, most pleasing is hearing from students how much they've enjoyed incorporating this opportunity into their training. Going forward, we intend to launch the LIC in Nova Scotia and PEI.

We also introduced a service-learning pilot into the undergrad curriculum. This is going to be a very rewarding and enriching experience for our students, as they'll have the opportunity to give back to our communities in ways they haven't before.

Diversity programs at Dalhousie got a boost late in the year thanks to the generous support of the Johnson Scholarship Foundation. Promoting Leadership in Health for African Nova Scotians and the Aboriginal Health Sciences Initiative will have the opportunity to significantly extend their reach thanks to the foundation's generosity.

At both campuses, we're busily preparing for accreditation. In 2017, the Committee on the Accreditation of Canadian Medical Schools (CACMS) will be reviewing our undergraduate MD program. Though I fully expect us to make it through the review, there's a lot of work that has to be done in preparation for the CACMS visits. Then in 2018, our postgraduate programs are due to be accredited.

Research at the medical school had just as many high points in 2015. Our researchers were in the news for tackling important health care issues such as liver disease, the development of a new psoriasis treatment, heart rhythm disorders, and spinal cord repair, to name a few. We were also part of the global response to this year's Ebola crisis thanks to an experimental vaccine tested at the Canadian Center for Vaccinology.

Of course, our research enterprise at Dalhousie Medicine New Brunswick continues to grow, too. We welcomed our fourth cardiovascular researcher to our DMNB-based research team. And Drs. Naga Puvvada and Keith Brunt made headlines across the Maritimes when they discovered a new way to deliver chemotherapy.

By spring 2016, the medical school will have a new strategic plan in place. I look forward to partnering with Dr. Jennifer Hall, DMNB's associate dean, to advance our research, education, and community service mandate across our academic health sciences network.

Sincerely,

*David Anderson, MD*  
Dean, Dalhousie Medical School

# Associate Dean's Update



Dr. Jennifer Hall  
Associate Dean, DMNB

2014-2015 has shown the continued growth and maturity of Dalhousie Medicine New Brunswick. In May 2015, we were pleased to see the launch of our second graduating class. Approximately half of the graduating students have chosen family medicine and half have chosen royal college specialties. A number of these new residents will continue their training in New Brunswick through the residency programs in Family medicine and Internal medicine based here in New Brunswick. The expansion of the third year Longitudinal Integrated clerkship into Moncton, and the success of this program in Miramichi and Upper River Valley, demonstrate the ability of highly motivated faculty to deliver a strong clinical clerkship in a very New Brunswick context. We hope this will encourage students to practice in these communities upon completion of their residency programs.

As the program has matured, DMNB has added two new leadership positions to continue to develop the program. Dr. Rob Boulay from Miramichi has been appointed as Assistant Dean Clinical Education responsible in coordinating and developing the clinical aspects of medical education training around the province in coordination with our Halifax-based colleagues. Dr. Lisa Searle has been appointed Director of Faculty Development DMNB. Her role is to help develop and coordinate activities that enable DMNB faculty to become better teachers and researchers.

We have also said goodbye to the first Associate Dean DMNB, Dr. John Steeves. Dr. Steeves demonstrated leadership, innovation and commitment that established DMNB. We wish him well in his retirement and thank him for the enormous contribution to the development and success of DMNB.

The research program at DMNB continues to enjoy success and growth due to the determination, innovation, and drive of the Principal investigators and their students. Their pursuits in grant acquisition and teaching demonstrate their commitment to high-quality science and clinical research at DMNB.

With the continued development and maturity described above, DMNB has become a key resource to the Dalhousie Faculty of Medicine as well as a partner in medical education and research.

Sincerely,

*Jennifer Hall, M.D.*  
Associate Dean, DMNB

# Admissions

In 2014-2015, the student population of Dalhousie Medicine New Brunswick increased to a total of 121 students with all four cohorts present for the second year in a row. The class of 2018 is comprised of students from health zones served by the Horizon Health Network.

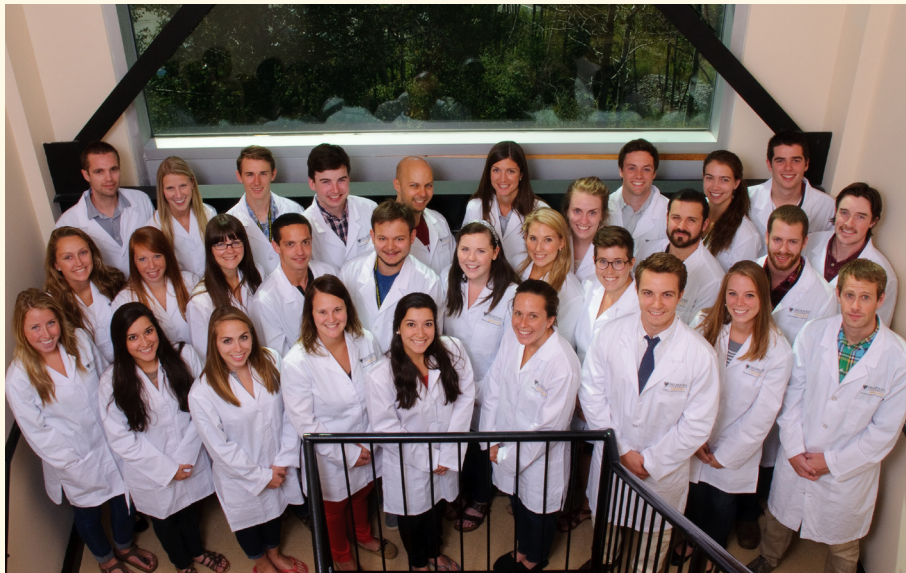
A total of 120 students from the Dalhousie application pool underwent their Multiple Mini Interviews (MMIs) in Saint John on November 22, 2014. The purpose of the MMIs is to assess the applicant's abilities in communication, critical thinking, and problem solving. They are also used to gauge the applicant's motivation and commitment to a career in medicine. Over 100 faculty, staff and students worked together to run the MMIs.

In 2014, \$491,800 in scholarships and bursaries were available to DMNB students through the Faculty of Medicine. The total distributed to DMNB students was \$116,010. In addition, six Dalhousie Medicine New Brunswick students were awarded new scholarships through the New Brunswick Medical Education Trust, totaling \$51,000. 15 Dalhousie Medicine students had renewable scholarships totaling \$142,500.

For entrance in September 2015, a total of 89 were candidates were ranked. Of these, 42 were offered a position and 12 of these came from the waitlist for a total enrollment of 30. Of the 30 students, 20 are from New Brunswick universities; the majority of whom attended the University of New Brunswick. For the second year in a row, the class of 2019 male to female ratio is close at 13:17.

Presentations about the Dalhousie Medicine New Brunswick program and admission requirements to the Dalhousie Faculty of Medicine program were made by Pamela Murphy, Student Affairs Coordinator, to students at the University of New Brunswick Saint John, Mt. Allison University (2), and University of Prince Edward Island (2). Information has also been given over the phone, by email, and at one-on-one meetings to interested students.

Online application for the Class of 2020 opened on July 1, 2015 and closed August 15, 2015. The Medical College Assessment Test (MCAT) underwent major revisions this year. The new admission standard includes only the results from the renewed MCAT; exam results from previous years are no longer used.



*Dalhousie Medicine New Brunswick Class of 2018*

# Curriculum

Over 164 physicians were recruited in 2014/15 to deliver components of the Med I and Med II curriculum. These physician led case based learning discussions, demonstrated and assessed students on patient physical examinations and communication skills and provided clinical context in anatomy sessions.

Our first Med IV Objective Structured Clinical Exam (OSCE) was successfully conducted in March.

The Positioning, Integration, Evaluation, Research/Review (PIERs) unit is an intensive review and practice component on the skills required for clinicians that incorporates an exam. Our first PIER IV was successfully held from March 23 – April 30, 2015.

The Professional Competencies is a longitudinal unit, running through first and second year. In it, students prepare to work in collaboration with patients, caregivers, and communities in all dimensions — biological, emotional, cultural, and social. The program focuses on improving the health of populations, respecting fundamental rights, meeting core responsibilities, keeping patients safe, delivering the best care in the best way and shaping it to patients' needs in the context of their lives and communities. Students also take part in or lead efforts to sustain and improve the healthcare system. The Professional Competencies unit is the foundation for a life of “meaningful work” in medicine.

Pier IV ran from March 23 to April 10, 2015. As reported by PIER IV coordinator, Dr. Alexa Smith, all fourth year DMNB students participated in the course. The primary goal of Pier IV is to prepare students for the transition from medical student to resident.



The program focused on practical, clinical skills and offered students a wide breadth of knowledge in which all specialties were represented. There was a good mix of didactic, small groups with hands-on learning. Students were introduced to high-fidelity simulation and demonstrated excellent communication skills in each scenario.

There were challenges in the development of Pier IV last year, but the course remains a valuable part of Med IV. With the development of competency based residency training programs, the medical school will have a growing role to play in preparing student to achieve the first competency, “Transition to Discipline.” Significant improvements have already been made by the Pier IV planning committee and a much more structured and viable course will be offered in 2016.



# Curriculum

## Research in Medicine

RIM was introduced in 2012 and is a 4-year longitudinal program. The first program of its kind in Canada, Research in Medicine is a mandatory course that introduces Dalhousie medical students to research from the start of their medical training. From first year on, it fosters their research and critical thinking abilities as they complete independent research projects. A total of 75 clinicians and basic scientists have been recruited to date. The Research mentor is paired with one or more students and their role is to guide students through the scientific method and help him/her develop and hone critical thinking skills. During the first and/or second summer of the Research in Medicine (RIM) course there is an opportunity for medical students to receive a stipend while conducting research for their RIM projects.

The first RIM day was March 30, 2015. Both the Class of 2017 (30 students) and the Class of 2018 (30 students) participated. 74 faculty members have expressed interest in being RIM mentors for the 2016/2017 academic year.





# Curriculum

## Longitudinal Integrated Clerkship Dalhousie

The Moncton site has been approved as our third Longitudinal Integrated Clerkship Dalhousie (LICD) site. It was submitted for approval last year by Dr. Simon Field, Assistant Dean Clerkship. The site will commence operation in September 2015.

Fredericton leadership continues to explore opening an LICD program at their site. Their original goal of opening in September 2016 has been pushed back to September 2017.

Students organized a number of successful events and workshops that proved to be of great benefit to the community and its members.

A number of coffee houses were held around the city in order to raise money for Hospice Miramichi. Both students and local musicians performed.

The LIC worked with the Miramichi Youth House, an organization that offers free, long-term living arrangements for at-risk youth. Together with the Youth House, the LIC worked to bring Halifax musician, Joel Plaskett to Miramichi to perform in

concert. At the show, students sold 50/50 tickets. Half of the proceeds went to the Youth House.

Students also provided in-house information sessions on topics varying from drug-use and sexually transmitted diseases, to nutrition.

Students also taught after-school cooking classes to children focusing on healthy, whole foods. Proving a success, LIC students moved on to noon hour cooking classes at the Miramichi Women's Emergency Shelter. As a result of their community engagement and initiative, the group won the Medical Student Leadership Bursary from the New Brunswick Chapter of the College of Family Physicians of Canada.

DMNB student Andrew Chan spent a significant amount of time at Eel Ground First Nation's Health and Wellness Centre. Below is an excerpt from a letter sent from their Health Director expressing the impact Andrew had on the centre.

*Mr. Chan was a wonderful addition to our team. He displayed such professionalism and was very eager to assist our staff with any community promotions. As part of our health prevention and promotion, through the delivery of a variety of community based activities, Andrew presented on various health-related topics such as heart health, diabetes, menopause and immunization. He also attended our Camp Natoaganeg, located at Camp Sheldrake and did a career presentation to about 17 youth from the ages of 11 to 15 years of age. The staff noted that the youth were all very engaged in his presentation and his demeanor was very personable. He also participated in one of our smudging ceremonies for an Elder's gathering that was held in our community and the feedback was positive. He was also very well received by members of our community that participated in his information sessions.*

*We would like to thank you for allowing the Eel Ground Health and Wellness Centre the opportunity to partner and benefit from Dalhousie University's LICD program.*

# Curriculum

## Rural Health Week

30 physicians based in rural New Brunswick opened their specialty and family medicine practices to students in the final week of their first year of studies. The purpose of this unit is to help students identify the characteristics of clinical practice in a rural setting, as well as health-care delivery and resource access/use in rural areas.

Rural Health Week gets students thinking in concrete ways about how the social determinants of health influence the health of individual patients, and gives students a flavour of the reality of practicing in small towns. Having this experience early on in their medical school careers helps get many students to consider rural medicine as a career option, which will help with recruitment in smaller towns.

The students who are open about how rural practice is not for them acknowledge how they will be more aware and understanding of the local realities and limited resources when accepting patient transfers or calls for telephone advice from rural doctors in the future. This improvement in collegiality is good for the health of rural residents in the future.

Rural Health Week coordinator, Dr. Melissa McQuaid, believes that though one week is too short of a time to affect any real social change, extending the program to two weeks would give students a further understanding of the workings of these small communities; a change that could be of major benefit to both community members and students.

## Student Performance

DMNB student performance is compared to the performance of their Halifax counterparts. Examination of this data did show some differences between the student groups in Med I but no differences were shown in the Med II or Med III cohorts.

All 2014 DMNB graduates passed the Medical Council of Canada (Part 1) exam and were matched to a residency program through the Canadian Residency Matching Service (CaRMS). 50% of 2014 DMNB graduates selected Family Medicine as their specialty of choice.

## Public Engagement

DMNB programs are dependent on the engagement of the community volunteers and members of the community who enable students to develop their clinical skills. The number of volunteer patients was higher this year at 65, up from 46 last year. 19 of the 65 patients were new. All patients from the previous year (46) continued volunteering. Simulated patients totaled 137, 23 of whom were new.

# Accreditation and Evaluation

Dalhousie Medicine New Brunswick and Dalhousie Medicine continue to work towards its accreditation to the Canadian Committee on the Accreditation of Canadian Medical Schools (CACMS) and its American counterpart the Liaison Committee on Medical Education (LCME).

Preparation is underway and working groups have been established to prep all New Brunswick representatives on accreditation requirements. Sub-committees have been established and New Brunswick representation will ensure all documentation completion for the accreditation body. Document control inventory includes academic, financial and administrative data.

Current preparations are underway as an external review auditor has been invited in for practice accreditation. Accreditation will happen in February 2017. Associate Dean DMNB Dr. Jennifer Hall and the associate Dean Undergraduate medicine, Dr. Sutton are co-leading two of the groups, including one group regarding standards associated with a distributed medical school.

DMNB faculty and staff have been contributing to the completion of the data collection instrument for each of the standards (information about the DCI is available on the website); DMNB faculty, staff and students are participating on various sub-committees and the Task Force; and DMNB students participated in and contributed to the recent student questionnaire that was recently distributed.

DMNB faculty, staff and students will be part of the work to determine if standards are being met and developing recommendations if deficiencies are identified through the self-study process. DMNB faculty, staff and students will also meet with the accreditation site team when they visit in February 2017. It is also expected that the site team will visit Saint John as part of the site visit.

Additionally, DMNB representatives are serving on the Student Learning Experience Group sub-committee, led by Darrell White. The sub-committee is working to ensure that DMNB provides a diverse and inclusive learning environment, and that it will meet the CACMS standards. They will also be part of the development of recommendations to address any identified deficiencies.

Five DMNB staff members, seven faculty (plus one former), and one student is participating in the accreditation process.



# Students

In September 2014, the fifth class of Dalhousie Medicine New Brunswick was welcomed into the study of medicine in New Brunswick at the annual First Light Ceremony. Dr. Tom Marrie attended the ceremony as Dean of Faculty of Medicine, Dalhousie University.

The majority of the Class of 2019 come from Saint John and Fredericton and surrounding areas, with roughly 23% coming from rural areas within the province.

## CaRMS

The second CaRMS iteration was held in March, 2015. DMNB student performance was comparable to the Halifax campus with one student unmatched. All students graduated. The DMNB student who remained unmatched post CaRMS has been accepted to Med V program offered by Dalhousie University.

## Sherbhousie

The annual Sherbhousie event was hosted by Sherbrooke Medical Students on the Universite de Moncton campus May 1-2, 2015. This weekend provides New Brunswick medical students with a unique opportunity to connect and learn from peers and future colleagues. The highlight of the weekend took place Saturday, during which students were divided into small groups and rotated through a series of different skill sessions such as intubation and suturing as well as simulations, all of which were instructed by the hosting medical students.

## Canadian Blood Services Awards

Dalhousie Medicine New Brunswick were the recipients of the second Canadian Federation of Medical Students “Phlebotomy Bowl” Champions in recognition of the medical school with the highest participation rate of blood donors each year.



## DMNB Golf Fall Classic

Organized by Med II Lynn Symington and a dedicated team of Med II committee members, the DMNB Charity Golf Classic was a sold-out success with 120 golfers. Held at Rockwood Park Golf Course, funds raised (\$7950) went to the purchase of a neo-natal transportation unit to be purchased by the Saint John Regional Hospital Foundation.

Committee members worked together with the Saint John Regional Hospital Foundation to help make the event a success. The SJRHF is keen to team up again next year to host another successful fundraiser.

# Students

## Hidden Realities

DMNB students continue to organize Hidden Realities Series lectures. Med II Emma Sumner organized the first of this year's lecture, *Think globally, act locally ... Hepatitis C and beyond*, presented by Dr. Duncan Webster on Nov 25, 2014. The second lecture, organized by Med I, Sofija Rans, featured Dr. Colleen O'Connell on April 7, 2015 presenting, *New Coalition on Global Health*.

## FEAR Memorial Conference

The Department of Surgery and the Division of Medical Education co-hosted the 4th Annual Thomas Fear and Alice Morgans FEAR Memorial Conference, Simulation Education in the Maritimes, November 14 and 15, 2014.

The conference objectives were to: a) Showcase the simulation activity within Dalhousie Faculty of Medicine, Faculty of Health Professions and partner institutions in Halifax and Saint John sites; b) Highlight the interprofessional nature of simulation education; c) Share developments in research and innovation in simulation education; and d) Build capacity through the implementation of a province or Maritime wide network in simulation.

The overall goal of the conference was to provide the audience with a sense of the scope of simulation activity within all health related professions and within both campuses of the Dalhousie medical community. It included several presentations highlighting a variety of simulation innovations from the various faculties as well as two live simulation demonstrations. In addition, in view of plans for the Simulation Network to expand to involve health practitioners within other Maritime communities, a lecture was dedicated to the

development of a provincial simulation network. A presentation was provided on interprofessional simulation education and another related to simulation based educational research. The three keynote speakers and specific topics included:

- Dr. Dimitri Anastakis, University of Toronto, ON - Building a Provincial Network for Health Professions Simulation – Lessons Learned
- Ms Colette Foisy-Doll, MacEwan University, AB - Simulation-Based Education: Building Interprofessional Excellence
- Dr. Stan Hamstra, University of Ottawa, ON - What's going on in research in simulation education? National and international perspectives

Faculty and staff from the Faculties of Medicine (on both sites) and Health Professions, and IWK, provided simulation demonstrations and presentations. The various presentations were distributed via teleconference to separate theaters in Halifax and Saint John.

Total registration for this conference was 91 (Alberta = 1; New Brunswick = 23; Nova Scotia = 65; Ontario = 1).

# Students

## Class of 2015

The Launch Ceremony for the Class of 2015 was held on May 15, 2015 at the Imperial Theatre in Saint John. During the Launch Ceremony, several people were recognized for their contributions to DMNB.

**Builder's Award** was presented to Sara Davidson. This is awarded by staff and presented to the graduating student they feel has made the greatest contribution to DMNB.

**Anchor Award** was presented to Tricia Cole. This is awarded by the graduating class recognizing the individual who has made the most significant contribution to their experience at DMNB.

**Director's Choice Clinical Skills Award** was presented to Laura Stymiest for her excellence in clinical skills. The recipient is chosen by the director of the Skilled Clinician Course.

**Stefan Mildenburger Social Pediatrics Award** was presented to Laura Stymiest. The Stefan Mildenburger Social Pediatrics Award is awarded in honour of Stefan Mildenburger, an exceptional social worker at the Saint John Regional Hospital. The award recognizes a member of the graduating class of DMNB who has contributed to social pediatrics.

## Convocation

The Launch Ceremony was followed by the graduation ceremony at Dalhousie University in Halifax on May 29, where 31 DMNB students met all the medical degree qualifications following four years of study in New Brunswick.

A number of DMNB students were recognized for their academic performance. The following is a list of the awards and distinctions received by members of

the DMNB Class of 2015.

**Graduation with Distinction:** Rachele Blackman

**Dr. S. G. Burke Fullerton Award** - for greatest promise and potential shown for family medicine in fourth year: Ryan Pawsey

**Dr. N. N. Isa Achievement Award** - for outstanding achievement during his/her core rotation in the Department of Obstetrics & Gynecology at the Saint John Regional Hospital: Adam Parks

**DMRF Dr. J. Donald Hatcher Award for Medical Research** - for the most meritorious and significant research project during the undergraduate program, including summer electives: Adam Parks

**Dr. John M. Embil Award for Research in Infectious Diseases Research** - for completing the best research project in infectious diseases during all four years of study: Brandyn Chase

**Dr. Robert & Mrs. Dorothy Forsythe Prize** - for a strong aptitude and interest in mental health through clinical, research, or volunteer endeavours: Andrew Dutcher

**DMRF Dr. Richard B. Goldbloom Award in Pediatrics** - for best combining medical knowledge, clinical skill, and sensitivity to the social and emotional needs of children and their families: Laura Stymiest



# Faculty & Staff

## Faculty Development Program Overview

18 faculty members attended core (basic and advanced) faculty development; most staff and faculty have already attended these sessions. There were 35 faculty development sessions offered over and above the basic and advanced sessions. This includes a one-hour faculty development session that was distributed out of Halifax to all sites, as well as face-to-face sessions offered to New Brunswick sites only.

In the 2014/2015 year, there were eight face-to-face sessions offered. Most have had an additional face-to-face session. Some have had more than one over the year. The number of development sessions offered via video-conference is noted above. On average, two videoconference development sessions occurred each month.

Sessions that are distributed by videoconference to all sites in New Brunswick and Nova Scotia are usually information sharing in nature (i.e. how to set up a busy practice for teaching). The face-to-face sessions that occur are typically longer in duration and offer topics better suited for a group dynamic or discussion format. These include communication skills based sessions, like allowing time for discussion among the Preceptors with idea sharing for the LIC.

## Faculty Recruitment

Faculty recruited to support:

- a. Med I and Med II core curriculum: 164 (6/164 new)
- b. Research in Medicine course: 75 (15/75 new)
- c. Rural Week: 30
- d. Shadow-a-physician: 30
- e. Clerkship/Elective:
  - I. Saint John Site: 191
  - II. Fredericton Site: 148
  - III. Miramichi Site: 38
  - IV. Upper River Valley Site: 23
  - V. Moncton Site: 134

# Humanities Update



Dr. Wendy Stewart  
Director of Humanities

The Director of Humanities is responsible for overseeing all aspects of the Humanities program at DMNB and Halifax. This includes liaison with the student's representatives and administrative support to assist with the planning and implementation of any events and activities. Other responsibilities include: offering new events for students, residents and faculty in the areas of the medical humanities, development of an integrated longitudinal humanities theme in the curriculum, establish relationships with community organizations and management of trust funds.

## Student Initiated Events

- Youth Photovoice Exhibit. October 23, 2014. Photovoice is a participatory action project conducted by youth from Needham Community Centre and St. George's YouthNet. The youth took photos of aspects of their community that were meaningful to them and shared stories behind their photos.
- History of Medicine symposium: March 21st, 2015. Medical Marvels: A Journey through History. The greatest epidemics and how they happened. This student-organized event, was presented by students who are members of the Dr. John Stewart Society for the History of Medicine.

## Events

- Annual DMNB Memorial Service: this celebratory, non-denominational service was initiated two

years ago to honour and commemorate individuals who have donated their bodies for medical education and research.

- TJ Murray Visiting Scholar: January 13-14, 2015. Dr Gary Bloch was this year's visiting scholar.
  - Play: A Good Death: January 17, 2015. I was part of a panel for this play exploring choice around death. I arranged for 24 students to attend and many remained for the panel discussion after the play.
  - Dr. G.W. Archibald Gold Headed Cane Award and Dinner: February 7, 2015. Dr. Mary Lynch was chosen as the recipient of this year's award.
  - Music in Medicine: at both the Halifax and Saint John sites, there has been ongoing student support and involvement in this aspect of the program. Concerts have occurred at both sites and students have provided music at the Gold Headed Cane dinner.
  - The Humanities HEALS program supported delivery of presentations in association with the Dalhousie Art Gallery's show entitled: Anatomica.
- ## Faculty Development
- Workshop entitled: Dare to Teach Differently: Integrating the Humanities into Medical Training. February 7th, 2015. This took place at the Dalhousie University faculty club, and involved the current and previous artists in residence who are interested in being involved in the integration of the humanities into the core curriculum.

# Humanities

## Artist in Residence

- Kim Morgan was chosen as the Artist in residence this year. She has been able to engage a number of students in the plan for her art installation.

## Electives and Research

- A number of 4th year students have chosen to do a narrative elective in a variety of topics.
- Two students (one in Halifax and the other at DMNB) have chosen to do humanities related RIM projects. One is in collaboration with the a faculty member in the department of theatre at Dalhousie University and the other on Interprofessional Education using Team Based Learning and medical readers theatre techniques.

## Presentations

- An Anatomic Discourse on Professional Identity. Workshop at the Arts and Health Australia conference in Melbourne, November 11-13, 2014.
- Reflective Pools of Wisdom: From Conception to Completion. Oral presentation. Arts and Health Australia conference in Melbourne, November 11-13, 2014.
- The Evolution of Professional Identity: What is the Role of Humanities? Workshop accepted for CCME, Vancouver, April 2015.

## Looking Ahead

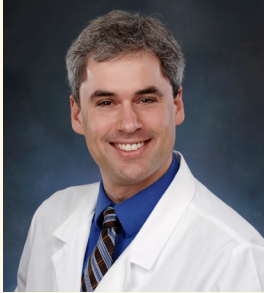
- Review of the curriculum to identify where the humanities could play a role in the delivery of the material. One of the Med II students has agreed to work with me on this.

- Repeat the workshop: Dare to Teach Differently: Integrating the Humanities into Medical Training.

- Develop an annual Conference entitled “A Celebration of the Humanities”. This will be in collaboration with interested students and would offer students, residents and faculty an opportunity to present their humanities related projects and research locally. I plan to link it with the annual Music is the Best Medicine Concert, and have an awards luncheon to celebrate creative writing, and an evening dinner to award the Dr. G.W. Archibald Gold headed Cane Award.



# Update - Assistant Dean, DMNB, Research



Dr. Anthony Reiman  
Assistant Dean, Research

2014-2015 was a busy year for DMNB's Research Department. With new developments implemented and many more on the horizon, our team is currently working on a number of exciting projects.

Our team of four biomedical cardiovascular researchers is collaborating with colleagues at the NB Heart Centre, UNB, Dalhousie Halifax and beyond on several exciting projects, dissecting the biology of cardiovascular diseases with the larger goal of improving diagnosis and treatment.

Our JD Irving Ltd. Chair in Occupational Medicine, Dr. Anil Adisesh, is working on important research initiatives to advance the health of the workforce. In 2014, the first Foundation Course in Occupational Medicine was offered to family medicine physicians in the Maritimes, leading to 10 successful completions. 2015 heralded the second offering of the Foundation Course in Occupational Medicine, responding to the increased demand for continuing medical education in Occupational Medicine.

The next generation of health researchers is currently in training. DMNB researchers are delivering the Research in Medicine program to DMNB medical students, providing all of our students with opportunities to engage in research, and to better understand the basis of the evidence on which their future practices are based.

At present, apart from faculty and staff, the research department is comprised of three PhD students, three post-doctoral fellows and seven graduate students working at DMNB.

Both Dr. Pulinnilkunnil and I are members of the Dal FoM Research Review Committee, tasked with surveying the scope of current research activities in the faculty, identifying key issues and providing input to the Dean to inform the FoM's strategic plan for research.

At the end of the research section, you will find a list of grants awarded, publications and conference presentations from DMNB researchers during the 2014-2015 year.

Sincerely,

*Dr. Tony Reiman*  
Assistant Dean, DMNB, Research

# Research

## Chesley Research Fund

The Research Fund is sponsored by the Chesley Family Endowment and the Health Innovation Research Fund. The fund's mandate is to increase collaborative research initiatives between Dalhousie Medicine New Brunswick and Horizon Health Network, Saint John Area.

Mrs. Doris Chesley announced the third group of recipients for the Chesley Research Fund. The three research projects benefiting from this investment are:

Dr. Petra Kienesberger and Dr. Ansar Hassan - The effect of obesity on post-operative outcomes in patients undergoing cardiac surgery (Prospective Study).

Dr. Michael K Howlett and Dr. JoAnn Talbot - Critical Dynamics Intervention Trial: Prospective Evaluation of a Coping Style Intervention to Reduce Work Burnout in Emergency Department Health Professionals.

Dr. Yagang Xie and Dr. Terrance Comeau - Whole-exome Sequencing of BCR-ABL-Negative Myelo-proliferative Neoplasms – Searching for the Novel Causative/Modifier Gene(s).

## Summer Students

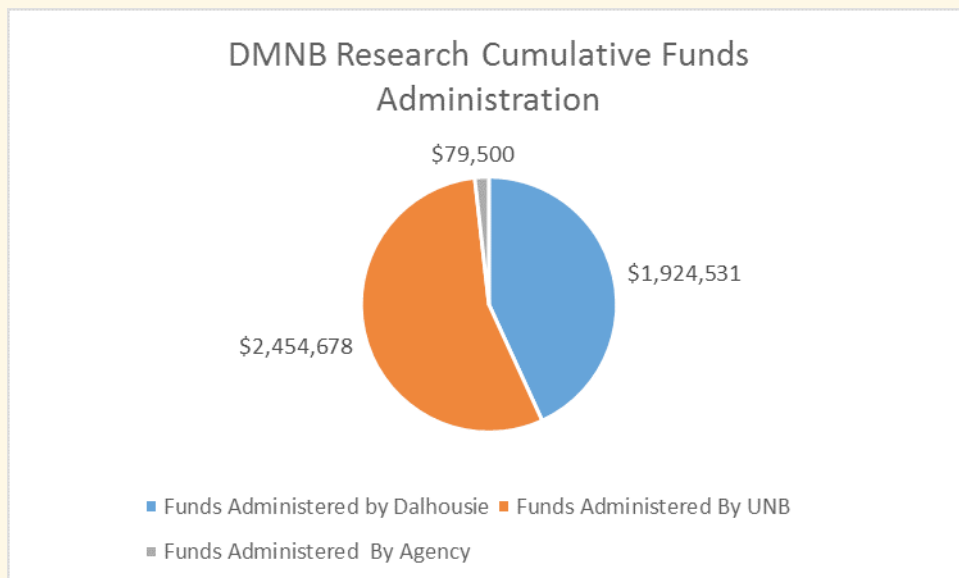
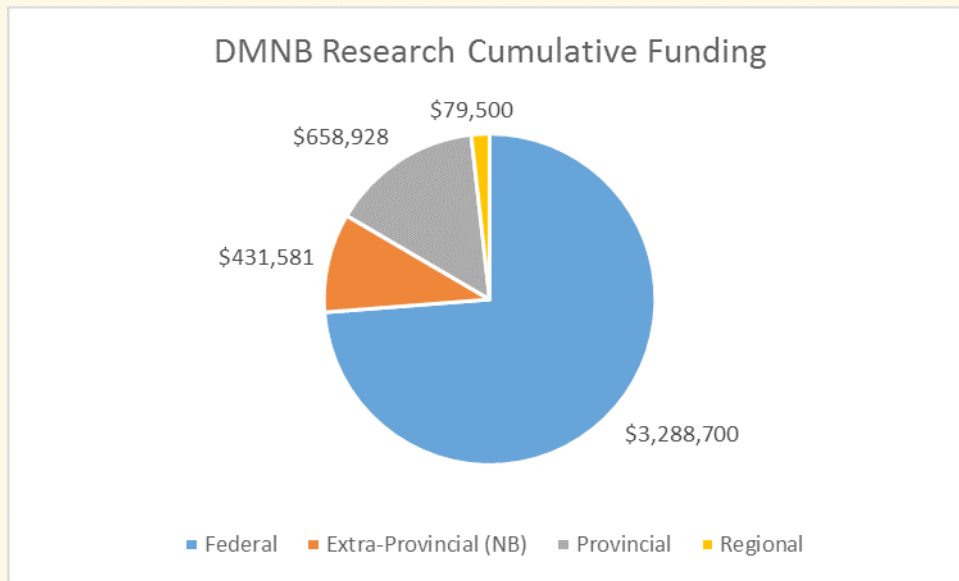
The summer of 2015 was a very busy and productive one for the 20 summer students working at the DMNB lab. The students included graduate and undergraduate level students, from various universities, as well as local high school volunteers. In fact one summer student came from Brazil to do research at DMNB, having received funding through the Mitacs Global Link program.

In other funding successes, three students were awarded New Brunswick Health Research Foundation (NBHRF) summer studentships to work on various projects with Drs. Brunt, Kienesberger and Pulinilkunnil. Also, one student was awarded a 2015 Canadian Breast Cancer Foundation - Atlantic Region Award through the Beatrice Hunter Cancer Research Institute, in partnership with NBHRF. The success in obtaining these awards show the very high calibre of students working with DMNB researchers. Research in Medicine students were also working in the DMNB lab throughout the summer on various projects.

## Funding Update

DMNB researchers have continued to be successful in attracting funding from national, provincial, regional and industrial competitions. The chart below shows the breakdown of cumulative funding (as of August 2015), which totals approximately \$4.5 million. This is comparative to the funding reported last year, which was the cumulative amount. The majority of funds, approximately \$3.8 million, are from outside of the Province of New Brunswick.

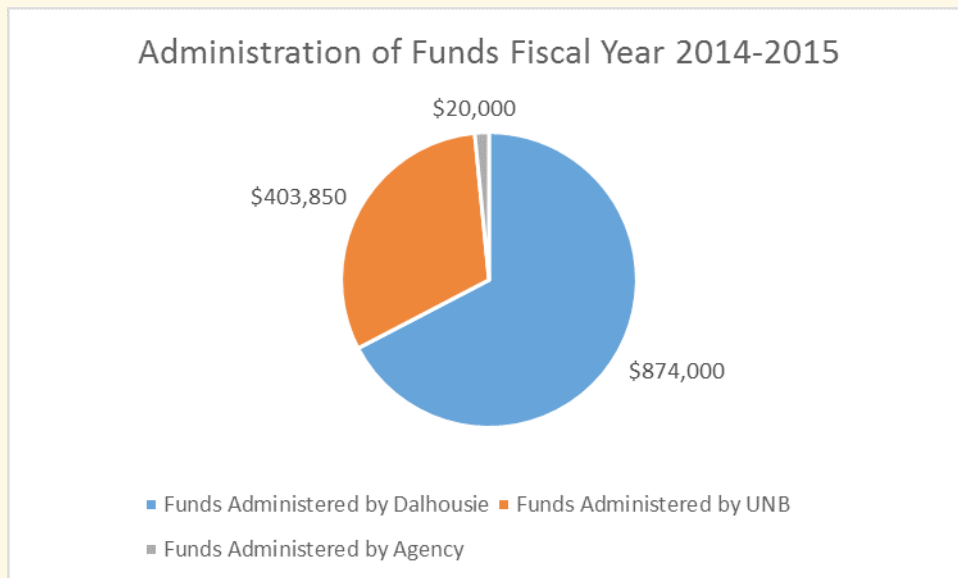
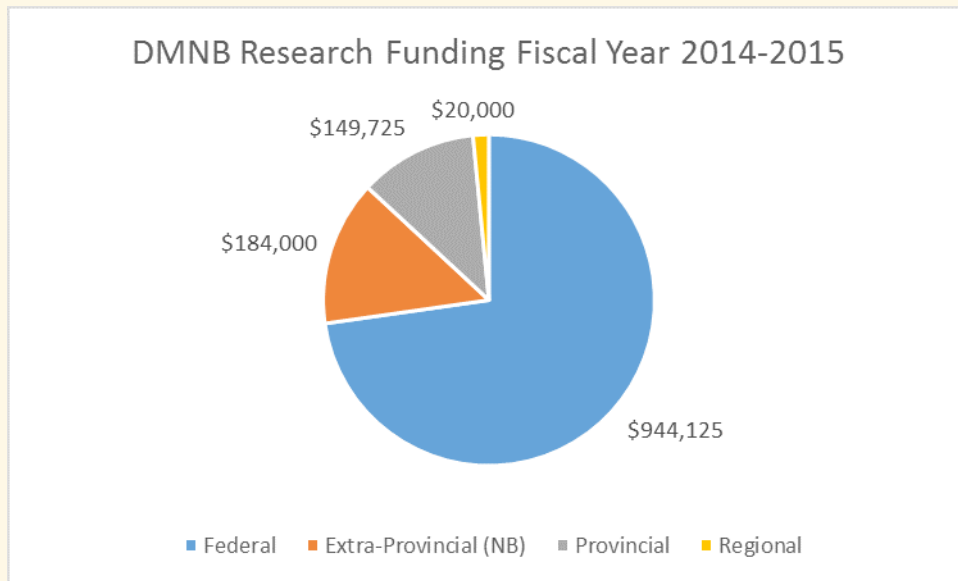
# Research





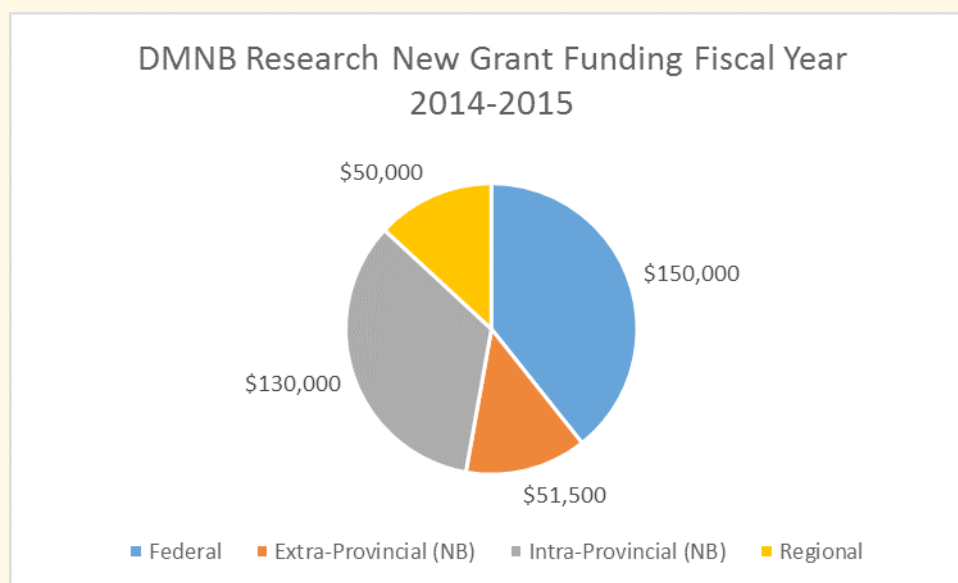
# Research

For the fiscal year 2014-2015 the annualized research funding totalled approximately \$1.3 million, with the majority of funding coming from federal sources and administered through Dalhousie University.



# Research

DMNB researchers have also had a successful fiscal year attracting approximately \$380,000 in new grants, with the majority of funds coming from outside of the province. These new funds are administered predominantly by UNB.



## DMNB grant acquisition and student funding listing July 2014 to August 2015:

- Renewed Canadian Cancer Society Research Chair at the University of New Brunswick for 5 years, totalling \$550,000
- 3 CTN Network Cancer Centre Grant \$150,000
- NSERC Research Tools and Instruments Grants Program \$150,000, which NBIF Research Innovation Fund topped up with \$73,000
- NBIF Research Technician Award \$75,000
- Banting Research Foundation \$25,000
- Private grants \$100,000 and \$52,000 (phased funding) totalling \$152,000
- 2 NBHRF Bridge Operating Grants \$30,000 and \$25,000, totalling \$55,000
- Dalhousie University Faculty of Medicine Bridge Funding \$30,000
- NBHRF & CIHR-SPOR-MSSU Postdoctoral Fellowship \$50,000 for 2 years, totalling \$100,000
- 1 Killam Doctoral Fellowship \$25,000/year for 4 years, totalling \$100,000
- 1 NSERC Canada Graduate Scholarships-Master's \$17,500

# Research

- 1 BHCRI Cancer Research Training Program Graduate Student Award (in partnership with NBHRF) \$17,850
- 3 NBHRF Summer Studentships, \$5,768 per student, totalling \$17,304
- 3 NSERC USRAs were awarded to DMNB students (they were declined due to other funding)
- 1 BHCRI & NBHRF Summer Studentship \$6500 Inter-institutional Collaborations:
- Maritime SPOR SUPPORT Unit (MSSU) funding \$3,400,000 per year for 5 years totally \$17,000,000

## DMNB Graduate Studentship

In March 2015 the first two successful applicants for the DMNB Graduate Studentship were awarded \$17,500 each for the duration of one year. This ongoing funding opportunity, provided through an endowment, for graduate students working with DMNB researchers will contribute to attracting excellent students and creating an invigorating student research environment.

## Commercialization and Private Sector Partnerships

DMNB researchers are engaged in their broader communities, including with the private sector on ventures that are mutually beneficial. The innovative research at DMNB has also led to potential commercialization of finding.

Dr. Keith Brunt started the company BioMatrix, with a partner, and it is currently evaluated at \$1 million. He also has submitted a provisional patent since beginning as research faculty at DMNB. Dr. Brunt also has engaged with such companies as CloudDx, Merck, IBM, and Medeo.

Dr. Anthony Reiman continues to work with the New Brunswick company Soricimed Biopharma Inc on innovative cancer treatments. His and Dr. Alli Murugesan's work with them has led to the submission of a provisional patent.

## Research Lab Space Update

The DMNB lab and animal care facilities are now fully operational. The animal care facility also now has a fully operational Zebrafish lab, as of February 2015. The facility currently houses mice, rats and zebrafish.

The radioactive waste storage is currently under construction at DMNB and is ongoing.

## Publications and presentations by DMNB Research faculty and staff 2014-2015

### Dr. Anthony Reiman Invited Presentations

1. (2015). Treatment of newly diagnosed multiple myeloma. Myeloma Canada Annual Conference, Halifax, Canada.
2. (2015). Myeloma. Resident Noon Rounds, Saint John Regional Hospital, Saint John, Canada.
3. (2015). Update on intergroup maintenance trial proposal. NCIC Clinical Trials Group Annual Spring Meeting, Co-Chair of Myeloma Sessions, Toronto, Canada.
4. (2015). Update on LY.15: A phase I trial of GDP plus Romidepsin. NCIC Clinical Trials Group Annual Spring Meeting, Co-Chair of Myeloma Sessions, Toronto, Canada.

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5. (2015). Myeloma priorities at NCIC CTG. NCIC Clinical Trials Group Annual Spring Meeting, Co-Chair of Myeloma Sessions, Toronto, Canada.

6. (2014). Approach to the solitary pulmonary nodule. Internal Medicine Noon Rounds, Saint John Regional Hospital, Saint John, Canada.

7. (2014). Lung Cancer. Department of Oncology Rounds, Saint John, Canada.

8. (2014). Lung cancer: What's new that you really need to know. Department of Medicine Grand Rounds, Saint John Regional Hospital, Saint John, Canada.

9. (2014). Living with Cancer. Facilitator in a 2-hour exchange between medical students and cancer survivors, Dalhousie University, Saint John, Canada

## Publications

1. Courneya KS, Friedenreich CM, Franco-Villalobos C, Crawford JJ, Chua N, Basi S, Norris MK, Reiman T. Effects of supervised exercise on progression-free survival in lymphoma patients: an exploratory follow-up of the HELP Trial. *Cancer Causes & Control*. 2015 Feb;26(2):269-76. doi: 10.1007/s10552-014-0508-x. Epub 2014 Dec 10.

2. Toumishey E, Prasad A, Dueck G, Chua N, Finch D, Johnston J, van der Jagt R, Stewart D, White D, Belch A, Reiman T. Final report of a phase II clinical trial of lenalidomide monotherapy for T-cell lymphoma. *Cancer*. 2015 Mar 1;121(5):716-23. doi: 10.1002/cncr.29103. Epub 2014 Oct 29.

3. Faruque LI, Lin M, Battistella M, Wiebe N, Reiman T, Hemmelgarn B, Thomas C, Tonelli M. Systematic review of the risk of adverse outcomes

associated with vascular endothelial growth factor inhibitors for the treatment of cancer. *PLoS One*. 2014 Jul 2;9(7):e101145. doi: 10.1371/journal.pone.0101145. eCollection 2014. PubMed PMID: 24988441; PubMed Central PMCID: PMC4079504.

## Abstracts

1. Morrison S, Bos A, Johnson JA, Gray CA, Murugesan A, Reiman T. Anticancer Activity of Canadian Medicinal Plants. Interprofessional Health Research (iHR) Day 2015, Saint John, Canada, 2015-03-20.

2. Hay AE, Murugesan A, DiPasquale AM, Tom Kouroukis T, Irwindeep Sandhu I, Vishal Kukreti V, Bahlis NJ, Lategan J, Reece DE, Lyons JF, Sederias J, Powers J, Xu H, Seymour LK, Reiman A. A Phase II Study of AT9283, an Aurora Kinase Inhibitor, in Patients with Relapsed or Refractory Multiple Myeloma; NCIC Clinical Trials Group IND.191. *Blood*. December 6, 2014; *Blood*: 124 (21). The American Society of Hematology Annual Meeting, San Francisco, United States, 2014-12-04.

3. Han M, Murugesan A, Reiman T. Single nucleotide polymorphisms (SNPs) in host genes as potential treatment efficiency and toxicity biomarkers in multiple myeloma patients: Genotyping results on 50 polymorphisms in 332 patients. BHCRI/TFRI Cancer Research Conference in Atlantic Canada, Halifax, Canada, 2014-11-03.

4. Seymour LK, Le Teuff G, Tsao M, Brambilla E, Shepherd F, Soria JC, Kratzke R, Graziano S, Douillard JY, Rosell R, Reiman A, Lacas B, Bourredjem A, Le Chevalier T, Pirker R, Filipits M, Hainaut P, Janne PA, Pignon JP. Prognostic and Predictive Biomarkers for ACT (Adjuvant Chemotherapy) in Resected Non-Small Cell Lung Cancer (R-NSCLC): LACE-Bio. Oral presentation at the Annual Meeting of the European Society of Medical Oncology (ESMO) Madrid, Spain, 2014-09-26.



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## **Dr. Anil Adishesh**

### **Invited Presentations**

1. (2014). Medical Insights in the Accommodation Process. Lancaster House workshop, St. John's, Canada.
2. (2014). Medical Insights in the Accommodation Process. Lancaster House workshop, Moncton, Canada.
3. (2014). UK and EU approach to Hand Arm Vibration Control. Canadian Workshop on Hand, Arm and Whole Body Vibration, Toronto, Canada.

### **Publications**

1. Basu S, Fletcher A, Shale D, Adishesh A, (2014). Death and work: Frequency of medical recognition and investigation by the coroner. *Occupational Medicine (London)*. 65(3):197-201
2. Giri P, Basu S, Sargent T, Rimmer A, Pirzada O, Adishesh A. (2014). Pre-placement screening for tuberculosis in healthcare workers. *Occupational Medicine (London)*. 64(7):524-9.
3. Basu S, Giri P, Adishesh A, McNaught R. (2014). Healthcare workers and measles-mumps-rubella (MMR) status: how worried should we be about further outbreaks? *Epidemiology and Infection*. 142(8):1688-94.
4. Roff M, Basu S, Adishesh A. (2014). Do active safety-needle devices cause spatter contamination? *The Journal of Hospital Infection*. 86(3): 221-3.

## **Dr. Keith Brunt**

### **Invited Presentations**

1. (2015). Commercialization of Ideas. True Growth, Enterprise Saint John, Saint John, Canada
2. (2015). Diagnostics & Predictive Analysis. NBHRF & Spring Board Atlantic, Canada
3. (2015). How the Heme Are You?. Universite de Moncton, Invited Speaker, Moncton, Canada
4. (2014). Inside & Out-Translating Research-Innovations to Improved Cardiovascular Outcomes. 6th Annual New Brunswick Health Research Conference, Moncton, Canada

### **Publications**

1. Melissa A. Allwood, Douglas Griffith, Christopher Allen, Jameson Reed, Qusay H. Mahmoud, Keith R. Brunt, Jeremy A. Simpson. (2015). Lennie: A smartphone application with novel implications to the management of animal colonies. *Laboratory Animals (#LA-13-030)*. 49(3): 258-62.
2. Puvvada N, Rajput S, Kumar BNP, Sarkar S, Konar S, Brunt KR, Rao R, Mazumdar A, Das SK, Basu R, Fisher PB, Mandal M, and Pathak A. Novel ZnO hollow-nanocarriers containing paclitaxel targeting folate-receptors in a malignant pH-microenvironment for effective monitoring and promoting breast tumor regression (*Scientific Reports*, 2015).
3. Aguiar C, Brunt KR Wilm's tumor 1 (re)activation in evidence for both epicardial progenitor and endothelial cells for cardiovascular regeneration. (*Journal of Molecular and Cellular Cardiology*, 2015).

# Research

4. Allwood MA, Griffith D, Allen C, Reed J, Mahmoud QH, Brunt KR, Simpson JA. Lennie: A smartphone application with novel implications for the management of animal colonies. (Laboratory Animals, 2015).

5. Kumar BNP, Puvvada N, Rajput S, Sarkar S, Das SK, Emdad L, Sarkar D, Venkatesan P, Pal I, Dey G, Konar S, Brunt KR, Rao RR, Mazumdar A, Kundu SC, Pathak A, Fisher PB, Mandal M. Sequential release of drugs from hollow manganese ferrite nanocarriers for breast cancer therapy (Journal of Materials Chemistry B, 2015).

6. Allwood M, Kinobe RT, Ballantyne L, Melo LG, Ward CA, Brunt KR†, Simpson JA†. Heme oxygenase-1 over-expression exacerbates heart failure in aged mice and pressure-overload but is protective against isoproterenol induced cardiomyopathy (Cardiovascular Pathology, 2014, Jul-Aug 23).

7. Brunt KR, Zhang Y, Mihic A, Xue P, Li S, Li M, Basmaji S, Zhang W, Tsang K, Weisel RD, Yau T, Li RK. Role of Wnt/ $\beta$ -Catenin Signaling in Rejuvenating Myogenic Differentiation of Aged Mesenchymal Stem Cells from Cardiac Patients (Am J Pathol, 2014, Sep 29).

## Abstracts

1. Philip S, Melville S, Brunt K, Student Operated Interprofessional Community Health Clinics Can Enhance Primary Care Outcomes Through Collaborative Practice & Training. 6th Annual New Brunswick Health Research Conference, Moncton, Canada, 2014.

2. Melville S, Lutchmedial S, Brunt K, Assessment of the Non-Invasive Pulsewave Health Monitor™ for Blood Pressure Determination in a Clinical Setting of Cardiovascular Catheterization. 6th Annual New Brunswick Health Research Conference, Moncton, Canada, 2014.

## Dr. Petra Kienesberger Invited Presentations

1. (2015). A Tale of Two Lipases and Their Role in Energy Metabolism. Graduate Student Symposium, Department of Biochemistry, Memorial University, NL.

2. (2015). A novel adipokine related to metabolic dysfunction. CSMB 58th Annual Conference, Halifax, NS.

3. (2014). Lipid Hydrolases at the “Heart” of Health and Disease. DK DocDay, Graz, Austria.

4. (2014). Lipid Hydrolases at the “Heart” of Health and Disease. University of Moncton, Department of Chemistry-Biochemistry seminar, Moncton, NB.

## Publications

1. Reeves V, Trybula J, Wills R, Goodpaster B, Dubé J, Kienesberger PC, Kershaw E. (2015). Serum Autotaxin/ENPP2 Correlates with Insulin Resistance in Older Obese Humans. Accepted in Obesity.

2. Rachakonda V, Reeves V, Wills R, Trybula J, DeLany J, Kienesberger PC, Kershaw E. (2015). Serum autotaxin is independently associated with hepatic steatosis in severely obese women. Obesity. 23(5): 965-972.

3. Zordoky BNM, Nagendran J, Pulinilkunnil T, Kienesberger P, Masson G, Waller TJ, Kemp BE, Steinberg G, Dyck JRB. (2014). AMPK-Dependent Inhibitory Phosphorylation of ACC is not Essential for Maintaining Myocardial Fatty Acid Oxidation. Circulation Research. 115(5): 518-524.

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## Abstracts

1. Cowie A, Slade L, Sarty K, Mercer A, Koh J, Kidd K, Kienesberger PC, Pulinilkunnil T, Martyniuk CJ. Dietary exposure to the organochlorine pesticide dieldrin results in neurotoxic and cardiotoxic effects in Zebrafish (*Danio rerio*). SOT 2016 Annual Meeting, March 13-17, 2016. New Orleans, Louisiana.
2. D'Souza K, Trivedi P, Touaibia M, Kershaw EE, Pulinilkunnil T, Kienesberger PC. Regulation of the adipokine autotaxin by nutritional stimuli and insulin resistance. CSMB 58th Annual Conference, Jun 14-17, 2015. Halifax, NS.
3. Cowie AM, Trivedi P, Braun J, D'Souza K, Kienesberger PC, and Pulinilkunnil T. Leucine inhibits myocardial palmitate oxidation at baseline and following ischemia reperfusion. CSMB 58th Annual Conference, Jun 14-17, 2015. Halifax, NS.
4. Trivedi P, Cowie A, D'Souza K, Braun J, Kienesberger PC, Pulinilkunnil T. Glucolipotoxicity reduces lysosomal protein expression and impairs autophagy in the obese-diabetic mouse heart. CSMB 58th Annual Conference, Jun 14-17, 2015. Halifax, NS.
5. D'Souza K, Lin C, Weatherbee-Martin N, Trivedi P, Légaré JF, Pulinilkunnil T, Kienesberger PC. Regulation of autotaxin in hypertrophic cardiomyopathy. INMD CIHR New Investigator Meeting, Jan 26-28, 2015. Oak Island, NS.
6. D'Souza K, Sobodu O, Trivedi P, Touaibia M, Kershaw E, Pulinilkunnil T, Kienesberger P. Autotaxin, a novel serum marker of insulin resistance, is nutritionally regulated, IHR Day Saint John, March 20, 2015. Saint John, NB.
7. Trivedi P, Cowie A, D'Souza K, Braun J, Weatherbee-Marti N, Kienesberger P, Pulinilkunnil T. Obesity and diabetes impairs lysosomal autophagy in the murine myocardium, IHR Day Saint John, March 20, 2015. Saint John, NB.
8. Ihionu F, Bartlett J, Trivedi P, Kienesberger P, Pulinilkunnil T. Doxorubicin inhibits lysosomal autophagy in human breast adenocarcinoma cells. IHR Day Saint John, March 20, 2015. Saint John, NB.
9. Slade L, Cowie A, Trivedi P, Martyniuk C, Kienesberger P, Pulinilkunnil T. Dieldrin augments mTOR signaling and inhibits lysosomal acidification in the adult zebrafish heart (*Danio rerio*), IHR Day Saint John, March 20, 2015. Saint John, NB.
10. Trivedi P, Weatherbee-Martin N, Kienesberger P, Pulinilkunnil T. Diet induced obesity and type 2 diabetes impairs lysosomal autophagy in the murine myocardium. 6th Annual New Brunswick Health Research Conference, Nov 11-13, 2014. Moncton, NB.
11. Slade L, Cowie A, Trivedi P, Martyniuk C, Kienesberger P, Pulinilkunnil T. Dieldrin augments mTOR signaling and inhibits autophagy in the adult zebrafish heart (*Danio rerio*). 6th Annual New Brunswick Health Research Conference, Nov 11-13, 2014. Moncton, NB.
12. Zwicker A, Robarts T, Nadaradjana RD, Martyniuk C, Taylor SA, Kienesberger P, Webster D, Pulinilkunnil T. A subcellular fractionation method to enrich endoplasmic reticulum from *Saccharomyces cerevisiae* and human fibroblasts with ALG9 mutation. Conference Abstract Book. 6th Annual New Brunswick Health Research Conference, Nov 11-13, 2014. Moncton, NB.
13. Trivedi P, Weatherbee-Martin N, Kienesberger P, Légaré JF, Pulinilkunnil T. Angiotensin II

# Research

acutely increases lysosomal autophagy in the murine myocardium. Conference Abstract Book. 6th Annual New Brunswick Health Research Conference, Nov 11-13, 2014. Moncton, NB.

14. D'Souza K, Lin C, Weatherbee-Martin N, Trivedi P, Légaré JF, Pulinilkunnil T, Kienesberger P. Regulation of autotaxin in hypertrophic cardiomyopathy. Conference Abstract Book. 6th Annual New Brunswick Health Research Conference, Nov 11-13, 2014. Moncton, NB.

## **Dr. Thomas Pulinilkunnil Presentations**

1. Nutrition, Obesity and Cardio-metabolic Health. Symposia on Foods for Health held June 2015, Charlottetown, New Brunswick. Keynote Speaker.

2. Exploring metabolic networks in health and disease. 6th Annual New Brunswick Health Research Conference held November 2014, Moncton, New Brunswick.

## **Publications**

1. Schoiswohl G, Stefanovic-Racic M, Menke MN, Wills RC, Surlow BA, Basantani MK, Sitnick MT, Cai L, Yazbeck CF, Stolz DB, Pulinilkunnil T, O'Doherty RM, Kershaw EE. Impact of reduced ATGL-mediated adipocyte lipolysis on obesity-associated insulin resistance and inflammation in male mice. *Endocrinology*. 2015 Jul 21;en20151322. Epub ahead of print.

2. O'Neill HM, Lally JS, Galic S, Pulinilkunnil T, Ford RJ, Dyck JR, van Denderen BJ, Kemp BE, Steinberg GR. Skeletal muscle ACC2 S212 phosphorylation is not required for the control of fatty acid oxidation during exercise. *Physiol Rep*. 2015 Jul;3(7). pii: e12444. doi: 10.14814/phy2.12444.

3. Dube, J., Sitnick, M., Schoiswohl, G., Wills, R., Basantani, M., Cai, L., Pulinilkunnil, T., Kershaw, E. Adipose triglyceride lipase (ATGL) deletion from adipocytes, but not skeletal myocytes, impairs acute exercise performance in mice. *AJP- Endocrinology and Metabolism*, 308(10):E879-90, 2015.

4. Adishes, A., Melville, S., Pulinilkunnil, T., Lutchmedial, S., Brunt, KR. Holiday reading. Diving into the ice bucket challenge. *Canadian Medical Association Journal*, 186(18):1404-5, 2014.

5. Zordoky, B., Nagendran, J., Pulinilkunnil, T., Kienesberger, PC., Kemp, BE., Steinberg, G., Dyck, JRB. AMPK-dependent inhibitory phosphorylation of ACC is not essential for maintaining myocardial fatty acid oxidation. *Circulation. Res.*, 115(5):518—24, 2014.

6. O'Neill, HM., Lally, JS., Galic, S., Thomas, M., Azizi, PD., Fullerton, MD., Smith, BK., Pulinilkunnil, T., Chen, Z., Samaan, MC., Jorgensen, SB., Dyck, JR., Holloway, GP., Hawke, TJ., van Denderen, BJ., Kemp, BE., Steinberg, GR. A single amino acid in ACC 1 and 2 is essential for liver lipid homeostasis and the beneficial effect of metformin. *Diabetologia*, 57:1693-702, 2014.

7. Kraus, D., Yang, Q., Kong, D., Rodgers, J., Pirinen, E., Pulinilkunnil, T., Sauve, A., Asara, J., Peroni, O., Monia, B., Bhanot, S., Becker, T., Alhonen, L., Puigserver, P., and Kahn, BB. Nicotinamide N-Methyltransferase (NNMT) Knockdown Protects Against Diet-induced Obesity. *Nature*, 508:258-62, 2014.

## **Abstracts**

1. D'Souza K, Trivedi P, Touaibia M, Kershaw EE, Pulinilkunnil T, Kienesberger PC. Regulation of the adipokine autotaxin by nutritional stimuli and insulin resistance. CSMB 58th Annual Conference, Jun 14-17, 2015. Halifax, NS.



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2. Cowie AM, Trivedi P, Braun J, D'Souza K, Kienesberger PC, and Pulinilkunnil T. Leucine inhibits myocardial palmitate oxidation at baseline and following ischemia reperfusion. CSMB 58th Annual Conference, Jun 14-17, 2015. Halifax, NS.
3. Trivedi P, Cowie A, D'Souza K, Braun J, Kienesberger PC, Pulinilkunnil T. Glucolipototoxicity reduces lysosomal protein expression and impairs autophagy in the obese-diabetic mouse heart. CSMB 58th Annual Conference, Jun 14-17, 2015. Halifax, NS.
4. D'Souza K, Lin C, Weatherbee-Martin N, Trivedi P, Légaré JF, Pulinilkunnil T, Kienesberger PC. Regulation of autotaxin in hypertrophic cardiomyopathy. INMD CIHR New Investigator Meeting, Jan 26-28, 2015. Oak Island, NS.
5. D'Souza K, Sobodu O, Trivedi P, Touaibia M, Kershaw E, Pulinilkunnil T, Kienesberger P. Autotaxin, a novel serum marker of insulin resistance, is nutritionally regulated, IHR Day Saint John, March 20, 2015. Saint John, NB.
6. Trivedi P, Cowie A, D'Souza K, Braun J, Weatherbee-Martin N, Kienesberger P, Pulinilkunnil T. Obesity and diabetes impairs lysosomal autophagy in the murine myocardium, IHR Day Saint John, March 20, 2015. Saint John, NB.
7. Ihionu F, Bartlett J, Trivedi P, Kienesberger P, Pulinilkunnil T. Doxorubicin inhibits lysosomal autophagy in human breast adenocarcinoma cells. IHR Day Saint John, March 20, 2015. Saint John, NB.
8. Slade L, Cowie A, Trivedi P, Martyniuk C, Kienesberger P, Pulinilkunnil T. Dieldrin augments mTOR signaling and inhibits lysosomal acidification in the adult zebrafish heart (*Danio rerio*), IHR Day Saint John, March 20, 2015. Saint John, NB.
9. Trivedi P, Weatherbee-Martin N, Kienesberger P, Légaré JF, Pulinilkunnil T. Angiotensin II acutely increases lysosomal autophagy in the murine myocardium. 6th Annual New Brunswick Health Research, Moncton, Canada, 2014-11-13.
10. Trivedi P, Weatherbee-Martin N, Kienesberger P, Pulinilkunnil T. Diet induced obesity and type 2 diabetes impairs lysosomal autophagy in the murine myocardium. 6th Annual New Brunswick Health Research Conference, Moncton, Canada, 2014-11-13.
11. Zwicker A, Robarts T, Nadaradjana RD, Martyniuk C, Taylor SA, Kienesberger P, Webster D, Pulinilkunnil T. A subcellular fractionation method to enrich endoplasmic reticulum from *Saccharomyces cerevisiae* and human fibroblasts with ALG9 mutation. 6th Annual New Brunswick Health Research Conference, Moncton, Canada, 2014-11-13.
12. Slade L, Cowie A, Trivedi P, Martyniuk C, Kienesberger P, Pulinilkunnil T. Dieldrin augments mTOR signaling and inhibits autophagy in the adult zebrafish heart (*Danio rerio*). 6th Annual New Brunswick Health Research Conference, Moncton, Canada, 2014-11-13.
13. D'Souza K, Lin C, Weatherbee-Martin N, Trivedi P, Légaré JF, Pulinilkunnil T, Kienesberger P. Regulation of autotaxin in hypertrophic cardiomyopathy. 6th Annual New Brunswick Health Research Conference, Moncton, Canada, 2014-11-13.

## **Dr. Shirya Rashid** **Invited Presentations**

1. Seminar presentation on my body of work on PCSK9 at Oxford University, United Kingdom (March, 2015).

## **Publications**

1. Co-Authored with Dr. Sergio Fazio: On the function and homeostasis of PCSK9: Reciprocal interaction with LDLR and additional lipid effects. *Atherosclerosis* 238 (2015) 264- 270.

# Additional Presentations & Publications

**Jackie Phinney, DMNB Librarian**

## **Invited Presentations**

Supporting Curriculum Changes Through  
Evidence Syntheses: A Systematic Review of  
Embedded Research Programs in Undergraduate  
Medical Education With Robin Parker, W.K.  
Kellogg Health Sciences Library Dalhousie  
Conference on University Teaching and Learning;  
April 2015

## **Publications**

Phinney, J. (2015). BrowZine. Journal of the  
Canadian Health Libraries Association, 36 (1), 32-  
34. doi: 10.5596/c15-001

# DMNB Moving Forward

The next 12 months at Dalhousie Medicine New Brunswick will target a number of milestones, including the development and implementation of a new Strategic Plan. Although not a complete list, below is a sampling of our strategic goals/activities for 2016:

- Co-ordinate a faculty development program for New Brunswick based faculty to enhance their teaching and research skills under the leadership of the newly appointed Director of Faculty Development DMNB Dr. Lisa Searle
- Continue the development and evaluation of the Longitudinal Clerkship Model within New Brunswick sites under the direction of the newly appointed Assistant Dean Clinical Education, Dr. Robert Boulay.
- Implement recommendations arising from Miramichi Social Accountability Pilot Project.
- Increase the participation of New Brunswick based faculty in teaching and administrative roles within the Dalhousie Faculty of Medicine Undergraduate program.
- Develop an educationally sound and fiscally responsible plan for simulation-based teaching in New Brunswick.











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FACULTY OF MEDICINE  
Dalhousie Medicine  
New Brunswick