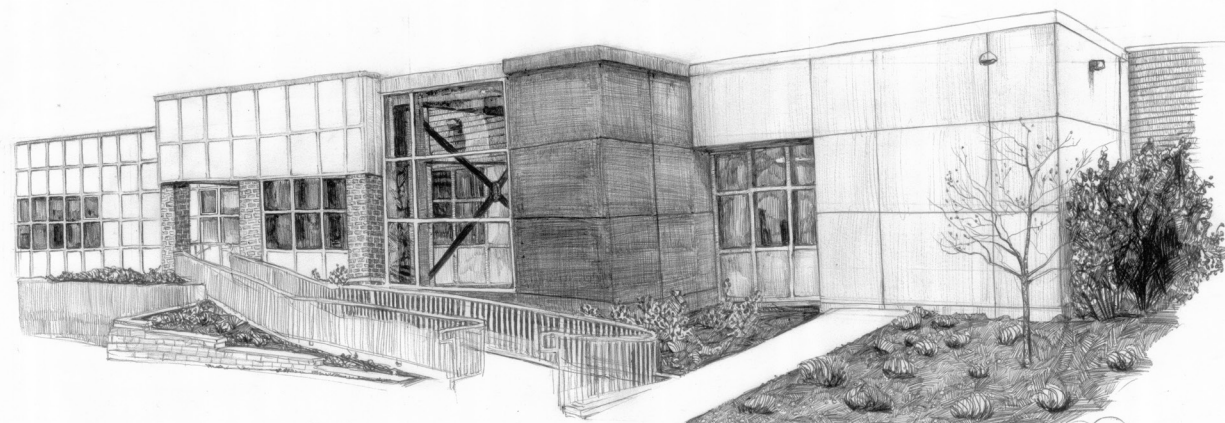


Dalhousie Medicine New Brunswick

Annual Report 2013-2014



Dalhousie Medicine
New Brunswick

D. J. G. Lyle 2013

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Dean's Message

This was a banner year for Dalhousie Medical School: we successfully graduated our first class of New Brunswick medical students. This is a tribute to the hard work and dedication of Dr. John Steeves, associate dean, Dalhousie Medicine New Brunswick (DMNB), our faculty members throughout the province of New Brunswick, and DMNB staff. It's also a testament to our relationship with the University of New Brunswick and the support of the provincial government.

In July, nine of these graduates began their residency training in New Brunswick, with many others staying in the Maritimes. We can now say with confidence that our efforts in New Brunswick have come full circle. Let's keep improving upon this success.

Dalhousie's medical students are now being introduced to research early in their studies through our Research in Medicine, or RIM, program. A first of its kind in Canada, it will develop a student's critical thinking and creativity through a mentored research project throughout the four-year curriculum. Students are diving into topics that may prove to have real benefits for population health. They're investigating everything from improved outcomes in spinal cord injuries, to early intervention in autism, to bettering foot conditions among our homeless population. We'll be sharing more about our students' projects as the program develops.

We continue to grow our research enterprise across our provincial campuses. DMNB's lab facilities are now in full use, complemented by a full slate of scientists. We welcomed Dr. Shirya Rashid to our New Brunswick faculty in October 2013, and are pleased to say that Dr. Anthony Reiman has agreed to stay on as assistant dean of research at DMNB for another five years.

The Strategy for Patient Oriented Research (SPOR) is well underway thanks to the support of project members and the provinces of Nova Scotia, New Brunswick, and Prince Edward Island. Finding efficiencies in the health care system and improving health outcomes is a challenge, but our Maritime partners are already advancing this agenda. We are determined to keep growing this initiative.

During my last year as dean, my priorities will focus on improving the fundraising efforts of our medical research foundation, and building health outcomes research--our Faculty's fall retreat will focus on these two themes. I look forward to sharing the results of this retreat with you in the near future.

It's been wonderful to see Dalhousie Medical School flourish the way it has these past five years. My sincere thanks goes out to the medical school's faculty, staff, and students, and to our provincial partners.

Sincerely,

Tom Marrie, MD
Dean, Dalhousie Medical School



Associate Dean's Update

This past academic year has been the culmination of hard work by many people in multiple organizations, including our partners in the Government of New Brunswick and the University of New Brunswick. The successful residency program placements (CaRMS match) and the graduation of our first class of students were the highlights of our year.

Starting in the fall of 2013 we opened our biomedical research lab, welcomed our fourth cardiovascular scientist and held a session to create a long term strategic plan for developing research at DMNB. Our researchers have already achieved success in capturing three tri-council funding grants in 2014. With six principal investigators now at DMNB our lab is fully operational. They are also expanding the graduate student and summer student programs.

In November we hosted the first NB visit of the Gairdner Foundation Lecturer, Dr Rod McInnis. The Gairdner Foundation's award is Canada's most prestigious medical science prize. Nineteen of the last 29 Gairdner award recipients have gone on to become Nobel laureates. Our video conference system allowed Dr. McInnis to talk about scientific research with high school students in three different NB cities simultaneously. We are already organizing the 2014 Gairdner Foundation Lecture to be broadcast from Moncton.

Humanities continues to be an important part of our students' development. This year our Humanities Coordinator, Dr. Wendy Stewart, introduced the "community school" project, an initiative to provide students with the opportunity to learn about different support groups that exist and the services they provide to their respective clients. This knowledge will give our students a better understanding of services that may exist in communities to support the needs of their future patients.

Our first CaRMS Match occurred this spring and I am delighted to report that our students performed comparably to their classmates in Halifax. The matching program is becoming increasingly competitive. To meet this increased demand, we are enhancing our initiatives on career planning at both campuses through the curriculum and over all four years.

In mid-May we said goodbye to our first class of students at DMNB. It was a momentous and happy celebration as we "Launched" them into the next phase of their careers and celebrated our accomplishments as a program offering all four years of the undergraduate curriculum in New Brunswick. As a nod to the history of shipbuilding in the Maritimes, our first Launch ceremony occurred in the Marco Polo Cruise Terminal at the Port of Saint John the week prior to their graduation in Halifax. We were honoured and touched to have so many members of our DMNB community of family, friends, volunteers, and physicians join us in the celebration.

On an administrative side, the original partnering agreement with Dalhousie University, University of New Brunswick and the Province of New Brunswick is being renewed for 2015-2020. This will set a solid financial footing for our next five years of development.

The next year will open a new chapter in the growth of DMNB. We are evolving into the Dalhousie Faculty of Medicine administrative arm in New Brunswick for program delivery across the continuum of medical education from undergraduate, through post graduate with continuing professional development and health research.



John Steeves, M.D.

Admissions

In 2013-2014 the student population of Dalhousie Medicine New Brunswick increased to a total of 119 students with all four cohorts present for the first time. The Class of 2017 is comprised of students from health zones served by the Horizon Health Network.

A total of 96 students from the Dalhousie application pool underwent their Multiple Mini Interviews (MMIs) in Saint John on 23 November 2013. 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 80 faculty, staff and students worked together to run the MMIs.

Eighty-one of the students who went through the MMI process were New Brunswickers who met the residency requirement for the DMNB program; up from 72 in 2013. It was noted for the first time in over a decade, there were no discernable differences among all the candidates to Dalhousie Medicine.

In 2013, \$991,525 in scholarships and bursaries were available to DMNB students through the Faculty of Medicine. The total distributed to DMNB students was \$379,760. The ratio of DMNB student population to scholarships and bursaries awarded (25:20) which is slightly more than 2012 (20:20). In addition, 11 Dalhousie Medicine New Brunswick students were awarded new scholarships through the New Brunswick Medical Education Trust, totaling \$95,000.



DMNB Class of 2017

For entrance in September 2014, there was a total of 46 candidates ranked. Of these, 30 were offered a position and seven offered a position from the waitlist. Of the 30 students, 16 are from a NB university. The majority of these students, 11 are from UNB (eight UNB Fredericton, three UNBSJ). Other NB universities include Mount Allison University and St. Thomas University. The Class of 2018 male to female student ratio is close at 13:17.

Presentation about the DMNB program and the admissions requirements to the Dalhousie Faculty of Medicine program were made to students at the University of New Brunswick Saint John. The presentation was made in April to approximately 30 students, down from previous years due to inclement weather which also prevented presentations at other universities throughout the province. Information has been given over the phone, by email and at one-on-one meetings to interested students.

Applications will open for the Class of 2019 on July 1st and close on August 15th 2014. The Medical College Assessment Test (MCAT) is undergoing major revisions for 2015. There appears to be consensus among Canadian schools that the new admission standard in 2015 will include only the results from the renewed MCAT; exam results from previous years will not be used.



DMNB recipients of the 2014 New Brunswick Medical Education Trust Scholarships.

Curriculum

Our first Med III Objective Structured Clinical Exam (OSCE) was successfully conducted in September.

The second component of the renewed clerkship curriculum (PIERs) was implemented in December, along with the development of the Skilled Clinician Course which spans over the four years of the undergraduate curriculum.

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. The Skilled Clinician Course is an integrated course throughout the four years of undergraduate medical education that focuses on communication and physical exam skill development.

In February, DMNB welcomed First Nations representatives from the Maritimes to engage in discussion with students on issues surrounding the healthcare of First Nations people. This was included as part of the Professional Competencies unit.

A student based in Miramichi is currently undertaking a community project, focussing on health issues in the First Nation's community.

Research In Medicine (RIM)

During the first and/or second summer of the RIM course there is an opportunity for medical students to receive a stipend while conducting research for their RIM projects. A total of 29 students participated in this opportunity for 2013-2014.

The Research in Medicine (RIM) curriculum continues to evolve. A total of 83 faculty have indicated interest in serving as mentors in the 2014-2015 academic year. A new software program is being tested which will facilitate the matching of students to mentors at DMNB this fall.



Leadership tour of the NB sites including the newest LICD site in Upper River Valley

Longitudinal Integrated Clerkship Dalhousie (LICD)

Upper River Valley Hospital in Waterville (URVH) was approved as the fifth LICD teaching site following our first NB Clerkship Director tour of the five NB sites; meeting with the leadership and students at each site. The directors were able to meet to share experiences and develop stronger relationships.

The LICD Site Director URVH is Dr. Rose Anne Goodine and the part time Clerkship Coordinator staff member is Deborah Lutes. The Medical Education unit in URVH was named in honour of Dr. Fred Goodine at a reception on 23 June 2014.

The student match process for the LICD beginning in September 2014 is complete with two students being selected for URVH and four students in Miramichi.

A proposal for the establishment of a third LICD site, in Moncton, was submitted for approval from Dr. Simon Field, Assistant Dean Clerkship. Pending approval this site would commence in 2015. Fredericton leadership has expressed interest in exploring an LICD program at their site in 2016.

Some early discussions have occurred with Memorial University regarding effective integration of rotations in NB with the changes in capacity with the introduction of LICDs. Impact on clinical capacity is becoming a concern especially in Family Medicine.

Curriculum

Mini-Clinical Evaluation Exercise (CEX)

The mini-CEX is a skills assessment designed to provide the Med III clerks with ongoing formative feedback on their performance of the skills required in all domains of good patient care (history taking, physical exam, communication skills, patient counselling and clinical reasoning). This assessment provides a snapshot of a student's skills in performing different aspects of patient care. Not all of the skills are assessed each time a student receives the assessment, rather the clerk decides which domain will be assessed based upon a set of guidelines.

Clerks are required to complete two mini-CEX assessments during each six week (core) clinical rotation and one during each three week (core and/or selective) clinical rotation. Students participating in the LICD program are required to complete one mini-CEX assessment once every three weeks. The same guidelines for the clinical disciplines apply. Clerks are required to approach a clinical preceptor to act as an assessor.

Learners are required to complete a total of 15 mini-CEX assessments during the Med III clerkship year. At the end of the year, clerks may choose five of the 15 completed assessments (one relating to each of the five skills to be assessed) to be included in their learning portfolio for their clinical skills program. These assessments will factor in to the overall pass/fail grade for the program.

Student Performance

The performance of students from New Brunswick and Nova Scotia for the 2013-2014 academic year had no statistical difference for Med I, II or III.

One student is on medical leave. Progress to Med II will be determined.

Volunteers

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 42, up from 35 last year. There were 30 returning and 12 new volunteers recruited. Simulated patients totaled 82 with 42 for Med I, 50 for Med II and 41 for special events (including OSCEs, PIERs) with an overlap of 19.



Simulated patient with DMNB student

Accreditation & Evaluation

There has been a new memorandum of understanding between the Canadian Committee on the Accreditation of Canadian Medical Schools (CACMS) and its American counterpart the Liaison Committee on Medical Education (LCME). This agreement will allow modification of standards to better align with the Canadian context.

In June 2014 the first Canadian accreditation document came from the medical council of Canada's blueprint initiative. The modifications to standards in the new document focus on four areas: 1) Social accountability linked to the mission statement of the school; 2) Issues related to interprofessional education; 3) Service learning; 4) Assessment - using assessment to drive curriculum.

Students

In September 2013 the fourth class of DMNB was welcomed into the study of medicine in New Brunswick at the annual First Light Ceremony. Dr. Richard Florizone attended the ceremony; the first Dalhousie president to participate in the annual welcome.

CaRMS

The first CaRMS iteration was held in March, 2014. DMNB student performance was comparable to the Halifax campus with three students unmatched. Following the second iteration one DMNB student remains unmatched. The DMNB student who remained unmatched post CaRMS, has been accepted to the new Med V program offered by Dalhousie University. This program provides the opportunity for students to continue to carry out elective clinical experiences, in preparation for CaRMS.

Student Activities

In November 2013 DMNB students participated in the 5th Annual New Brunswick Health Research Conference in Saint John. Eleven students presented posters and three received the top awards for posters presented by medical students. They were:

First place: Brandyn Chase, Class of 2015

Second place: Kelan Kennedy, Class of 2016

Third place: Claudia Cote, Class of 2016

Student Run Clinic

Students are exploring the opportunity to create a student run clinic that would provide primary care under the supervision of mentors. This clinic, it is hoped, will be an interprofessional clinic that would include DMNB students, UNBSJ nursing students and NBCC nursing students.



Dr. Richard Florizone, President of Dalhousie University holds the Asklepiian Torch at the 2013 First Light Ceremony. This marks the first time a President of the University has attended the First Light Ceremony.

Dalhousie/Sherbrooke Student Event

The second annual “Sherbhousie” event was held for the first time at DMNB on 02 & 03 May 2014, with focus on teaching of anatomy. Sherbhousie is an event to bring preclinical students together from both medical campuses in New Brunswick for discussions of common interest.

Hidden Realities

The students continued to organize Hidden Realities Series lectures. This year’s lectures featured Dr. Pamela Forsythe on *Maintaining boundaries when your patient is your neighbour*, and Dr. Don Lalonde on *Volunteering in developing countries and how to inject local anesthesia so it hardly hurts at all*. The lectures were organized by Emma Sumner (Med I) and Shona Philip (Med II).

Students also organized and participated in a variety of awareness and fundraising activities this year including:

- Blood Drive,
- CIBC Run for the Cure team,
- volunteered for Transplant Games held in Moncton;
- Food Drive for local food banks,
- Children’s Wish Foundation fundraising event (Dal Med NB Fall Golf Classic),
- MD vs MD-To-Be Hockey Tournament, and
- the Making Waves program at the Canada Games Aquatic Centre.

Canadian Blood Services Award

DMNB students were the recipients of the first 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 students receive the Canadian Federation of Medical Students “Phlebotomy Bowl” award from Canadian Blood Services. Pictured from left to right: Tom Bishop, Canadian Blood Services, Emma Sumner (2017), Fraser MacKay (2016), Meghan Flood (2017).

Students

Class of 2014

A Launch Ceremony for the Charter Class of 2014 was held on 17 May 2014. By all accounts it was a successful celebration with over 250 in attendance. This was followed by the graduation ceremony in Halifax, where 28 DMNB students met all the medical degree qualifications following four years of study in New Brunswick.

During the Launch Ceremony, several people were recognized for their contributions to DMNB.

Builder's Award was presented to William Stymiest. 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 Pam Murphy. 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 Philippe Tremblay for his excellence in clinical skills. The recipient is chosen by the director of the Skilled Clinician Course.

Stefan Mildenberger Social Pediatrics Award was presented to Lyndsay Russell for her work with the "Making Waves" program in Saint John. The *Stefan Mildenberger Social Pediatrics Award* is awarded in honour of Stefan Mildenberger, 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.

Making Waves Update

Jefferson Hayre (Class 2017)

Making Waves strives to provide affordable one-on-one swimming lessons for children with physical and cognitive disabilities. Last year we hosted 15 sessions where 48 children were involved in 30 minute lessons. Our 20 full time student volunteers each take an hour to an hour and a half each Sunday to teach two or three children. Many of our volunteers find this an extremely rewarding opportunity and a great way to take a break from school and give back to the community. We are excited to see Making Waves grow this year with 26 student volunteers and 62 children.

Graduation

During graduation in Halifax on May 23, 2014 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 2014.

Graduation with Distinction - Brittany Hayre & Emma Rose Savidge

Dr. N. N. Isa Achievement Award - Brittany Hayre. *Given for outstanding achievement during her core rotation in the Department of Obstetrics & Gynecology at the Saint John Regional Hospital.*

Dr. John M. Embil Award for Excellence in Clinical Infectious Diseases - Jaclyn LeBlanc.

For recognizing the commitment and enthusiasm of an undergraduate medical student in the field of clinical infectious diseases.

Right photo: Dr. John Steeves with the DMNB Class of 2014 following the Launch Ceremony.

Below photo: Dr. John Steeves and Dr. Wendy Stewart with the DMNB members of the Class of 2014 following Graduation in Halifax.



Faculty and Staff

Recruitment

To support the LICD in URVH, four co-preceptors (family medicine) and six specialty preceptors were recruited.

One new cardiovascular scientist was hired, Dr. Shirya Rashid, bringing the complement of researchers in the biomedical research lab to four. Dr. Rashid has received a tenured position of associate professor in the Department of Pharmacology.

Three of the researchers have Dalhousie MSc students who started work with them in the Fall of 2013. A PhD student will start in the Fall of 2014.

Two post-doctoral fellows, Dr. Alli Murugesan (UNB affiliation) and Dr. Naga Prasad Puvvada (Dalhousie affiliation) also work in the lab with Dr. Anthony Reiman and Dr. Thomas Pulinilkunnil respectively. Dr. Murugesan has received two prestigious fellowships: Terry Fox Postdoctoral Fellowship from the New Brunswick Health Research Foundation and an Elevate Postdoctoral Fellowship from Mitacs.

Dr. Anil Adishesh was formally announced as the inaugural endowed J.D. Irving, Limited Research Chair in Occupational Medicine at an event in September 2013 at Lily Lake Pavilion.



Dr. Adishesh announced as the J.D. Irving Limited Research Chair in Occupational Medicine.

Dean's Retreat

The second Dean's Retreat held outside of Halifax took place at the Diamond Jubilee Cruise Terminal in Saint John in November 2013, with guest speaker Dr. Oscar Casiro from the Island Program, University of British Columbia. There was broad representation of NB leadership in Medical Education and Research present.

Dr. Oscar Casiro speaks to faculty at the Dean's Retreat November 29, 2013



Faculty Development

The returning pre-clinical faculty for the 2013-2014 academic year was 112, with 13 new faculty members. This is up from 11 new faculty in 2012-2013. All tutors attended faculty training prior to teaching. Advanced Training for tutors is being offered. Twelve tutors received Advanced Training in the second year of those eligible.

During the 2013-2014 academic year there were 30 faculty development sessions either hosted by DMNB or video-conferenced from Halifax to the various sites including:

- Research and Publishing
- Effective Feedback
- Professionalism in Educational Context
- Developing Interprofessional Learning Environments in Classroom and Clinical Settings

Academic Billing numbers

To ensure maintenance of clinical care when faculty are teaching, 27 full time equivalency of clinical care physicians can be recruited through special billing numbers (academic billing numbers). This year academic billing numbers have been obtained for Family Medicine, Plastic Surgery and Orthopaedic Surgery.

Leadership

The Search Committee for the Associate Dean DMNB has been struck under the Chair of Dr. James O'Brien. Shortlisted candidates will be contacted for an interview in late summer. It is anticipated the Committee will make its recommendation in September.

Dr. Darrell White has been appointed Senior Associate Dean, Faculty of Medicine, replacing Dr. Preston Smith, commencing July 1, 2014.



Physicians provided feedback and suggestions on how to improve the DMNB program at a faculty debrief session in June 2013.

Faculty and Staff

Staff

Sue Adishes has accepted the term position of Simulated Patient Educator replacing Stephanie Rutherford who is currently on a maternity leave of absence. A second term position was given to Melanie Richard in August 2014 to replace Tricia Cole, Simulated Patient Educator, who will also be going out on a maternity leave of absence.

Boon Kek, Great-West Life, London Life and Canada Life Educational Specialist in Occupational Medicine, was hired on 30 March 2014.

The position of Grant Administrative Assistant has been awarded to Natasha Hanson. Natasha joined DMNB in July 2014.

The position of Animal Care Technician has been filled by Shelly Nauss, who began in May 2014 with on-site training in Halifax.

Awards & Recognition

5 Year Recognition

Staff who have been with DMNB for five years were recognized at the annual June staff retreat. Those who received recognition are:

- Pamela Bourque
- Angela Hogan
- Pamela Murphy
- Dasse Nadaradjan

Lifesaver Award

Awarded to the DMNB staff member who has provided outstanding assistance to others throughout the year.

The first recipient of this award is Amanda Cook for her assistance in 2013.

Best In Class Award

This award is determined annually by the students in the first and second year of their medical program. The recipient is selected as having demonstrated an outstanding commitment to and passion for teaching excellence while exemplifying the best characteristics of a skilled tutor.

The 2013-2014 recipient of the Best in Class Award is Judy Buchanan.



National Awards received by faculty

Dr. Paul Atkinson received the Grant Innes Award on behalf of the SHoC-ED (Sonography in Hypotension and Cardiac Arrest in the Emergency Department) study group, including recent graduate Dr. James Milne, at the Canadian Association of Emergency Physicians (CAEP) conference in Ottawa on June 3, 2014. The competition for the Grant Innes Award had over 400 entries, including the top research centers in Ottawa, Toronto and Vancouver.

Dr. Wendy Stewart received the Canadian Association of Medical Education's Certificate of Merit Award at the Canadian Conference on Medical Education (CCME) 2014 in Ottawa on April 27, 2014.

Humanities

Dr. Wendy Stewart, coordinator of the Humanities Program at DMNB, is looking into how the humanities can be integrated in to the core curriculum as a longitudinal component. She sees the humanities program as becoming a seamless component, with core and elective opportunities. Her vision for the humanities focuses on five main areas: 1) professionalism teaching/remediation, 2) student/physician health, 3) interprofessional teaching/collaboration, 4) research, and 5) community networking. These five areas place an emphasis on the importance of relationship, teamwork, and connectedness to the patient experience.

A new component that will now be 'core' is exposure to community advocacy and support groups. In collaboration with NBCC, Dr. Stewart organized an event in fall 2013 where community groups were invited to give a five-minute presentation of their activities and have a client share how the organization has assisted them, followed by discussion. This will now be part of the core curriculum in Professional Competencies in September 2014.

Spirituality & Wellbeing

The second annual Memorial Service recognizing the Dalhousie Human Body Donation Program was held in April with over 30 family members attending the service. This student focussed event was led by Dr. Wendy Stewart.

Claire Humphrey, Class of 2016, took the lead on organizing Yoga classes for the medical students. Dr. Stewart connected her with a local instructor and they ran regular sessions. The attendance was variable but felt to be a successful venture.

Literature

Kyle Trabouslee, Class of 2016, has taken the lead on the book club and monthly meetings continued throughout the school year. The goal is to get more faculty involved next year. Some of the books read are *Cloud Atlas*, *Dune*, *The Book Thief*, *Name of the Wind*, and *Ender's Game*. Meghan Flood, Class of 2017 is taking the lead in September 2014.

Visual Arts

Taryn O'Neill, Class of 2016, had a piece accepted for the White Coat Warm Art Exhibition, CCME 2014.

One of the Artists in Residence, Anke Fox, funded by the Pope Foundation ran a weaving workshop in Saint John.

Miro Davis, a previous Artists in Residence in Halifax, was commissioned to create a community art piece at the Atlantic Pain Conference in Fredericton. The art piece is entitled "Reflective Pools of Wisdom." It was completed at DMNB, involving students, faculty and staff. The piece was donated to DMNB and is now on the wall.

Presentations/Publications

1. WA Stewart and S Oore. Music in Medicine. *Workshop presented at DMNB for Medical Students and Musicians in the Community*. January 2014.

2. Elizabeth Gold, Anna MacLeod, Wendy Stewart. *What is new in Case-Based Tutor Training?* Dalhousie University Health Research Day, June 2014.

3. WA Stewart, J. Leblanc, A Russell, S. Higgs, S King. *Dealing with the Hidden Curriculum: An Assessment of Coping Strategies over the First Year of Clerkship*. AMEE, Prague, August 2013.

Performing Arts

The Humanities program supported bringing in the play "Momma's Boy". It was performed in Halifax and at the Saint John Art's Centre in November 2013. In association with this we had a panel including Dr. Tim Christie, ethicist, Dr. Alexandria Ross, family physician and Linda Williams, a community nurse from the sexual health program. There was a facilitated discussion following the play, exploring unwanted pregnancy, abortion and some of the local issues. I will be examining whether this format could be used in the core curriculum when these issues are being discussed.

Music

Heartbeat! the DMNB choir and Ceol, the DMNB Ceilidh band gave several performances throughout the 2013-2014 year. They included:

Christmas concert - November 2013

Burns Night - February 1 2014

Ceilidh in Hampton - March 2014

Music, Medicine & Mayhem - April 5, 2014

Music is the Best Medicine in Halifax - May 2 2014

Ceol, which means music in gaelic, released their first cd

Update - Assistant Dean, DMNB Research

Over the past five years, the development of the DMNB research program has been a great success story built on hard work by many people. In October 2013 we officially opened our new biomedical research laboratory at DMNB. This has enabled our researchers, their graduate students and post-doctoral fellows to begin working on their respective experiments. The open concept biosafety level two, Canadian Nuclear Safety Commission certified laboratory is fully operational and very busy – this summer the space held 23 people, including our initial group of Research In Medicine (RIM) students! The animal care facility is now operational and ready to receive mice. Our research program is supported by an administrative assistant, grants administrator, animal care technician, and two laboratory technicians who are all part of our core DMNB staff, along with many additional grant-funded staff and students.



We welcomed our fourth faculty cardiovascular researcher, Dr. Shiryah Rashid in October 2013.

Our first three recruited faculty cardiovascular researchers, Keith Brunt, Thomas Pulinilkunnil and Petra Kienesberger were each successful in obtaining five-year Natural Sciences and Engineering Research Council of Canada (NSERC) operating grants .

Our J.D. Irving, Limited Chair in Occupational Medicine, Dr. Anil Adishes, is in full swing with initiatives ongoing in research and education at the local, regional, national and global levels. He is leading the World Health Organization's International Clarification of Diseases 11 revision of occupational medicine disease code definitions in his area of specialty.

In November 2013 we held a DMNB research strategic planning retreat in Saint John, attended by representatives from partner institutions around NB and from the Halifax campus. The information gathered has been incorporated into a draft one-year 2014/15 operating plan and five-year strategic plan document. These are being circulated for review and should be finalized this fall.

A proposed budget to support the DMNB research program has been put forward as part of the ongoing negotiations with the government of New Brunswick regarding the renewal of the DMNB contract. This research budget will fit within the existing envelope of funds for DMNB and will provide the core stability that the existing research program needs to be sustainable.

Our overarching objectives for the next year, support our goal to sustainably grow a robust DMNB research program which provides a research environment for our students, and fulfill the mission of the Faculty of Medicine to make meaningful advances in medicine through research are:

- To support the Dalhousie contract negotiations team in order to see the DMNB research budget proposal approved;
- To ramp up the animal care facility;
- To build on the initial success of the DMNB research team we have recruited over the last few years with funding, trainees, publications, presentations and other scholarly activity;
- To finalize our five-year strategic plan for DMNB research;
- To continue to grow our capacity to support the increasing number of RIM students in NB;
- To continue to build our relationships with UNB and other partners to enhance the DMNB research program as well as those of the rest of our Faculty and partner institutions.

Anthony Reiman, M.D.

Research

AMGEN Scholarships

In 2010 AMGEN Canada, a biotechnology firm, established a fund to support research and scholarly activity by DMNB students in the first two years of their program. Three scholarships totalling \$5,000 are awarded each year and are selected on the basis of research. Scholarly work eligible includes work done in the context of an elective or summer research. In 2013 the third group of students to receive the scholarships from AMGEN for their research were Adam Parks (Class 2015), Ronald Yan (Class 2016), and Claudia Cote (Class 2016).



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.

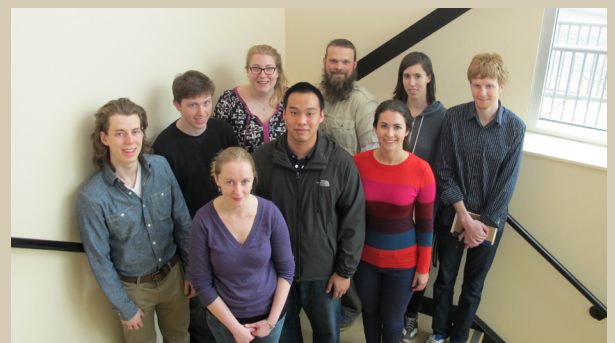
The recipients of the 2013 Chesley Research Fund include:

- Dr. Thomas Pulinilkunnil, Dr. Anthony Reiman and Dr. Anil Adishes – *Role of anti-oxidant metabolism in doxorubicin cardiotoxicity and its impact on life quality.*
- Dr. Neil A. Manson and Dr. Edward P. Abraham – *Psychological risk factors for poor spine surgery outcomes.*
- Dr. Don Lalonde and Dr. Geoff Cook – *A randomized controlled trial comparing combination therapy of ibuprofen + acetaminophen versus hydrocodone + acetaminophen for the treatment of pain after carpal tunnel surgery.*

Summer Students in the Lab

This past summer the DMNB research lab space was home to fourteen summer students from a variety of schools and a variety of programs. We welcomed students from high school, undergraduate and graduate programs. The schools represented include Maritime universities, like Dalhousie, St. Francis Xavier and Mount Allison, as well as an Ontario based university, Western. The student positions which lasted from a few short weeks to a couple of months were funded through various grants received by the principal investigators. We also had a number of first year medical students who were working on their Research In Medicine projects who were based in the lab.

The diversity of the students who worked alongside the DMNB based graduate students and post-graduate fellows provided a rich learning environment where students were able to learn different laboratory techniques from one another.

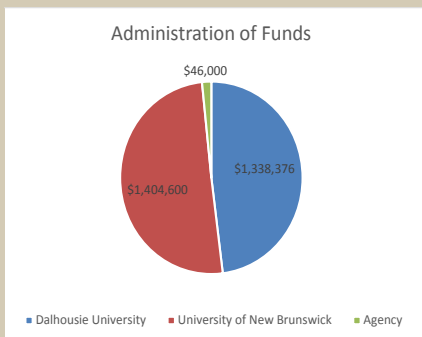
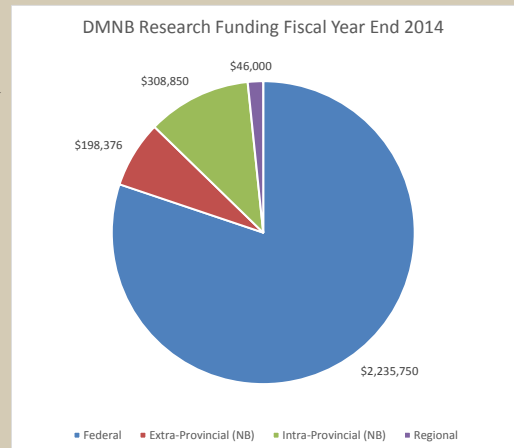


A few of the 14 summer students at DMNB research lab

Research

Funding Update

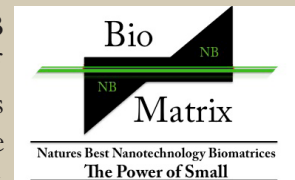
DMNB's scientists, in addition to their research activities, have been busy attracting funding from national, provincial, regional and industrial competitions. The chart on the right provides a breakdown of the total funding received for the fiscal year end 2014. Of the total \$2.7 million awarded, \$2.2 million in funding is being invested from outside the Province of New Brunswick.



The administration of the funds is being shared equally between Dalhousie University and the University of New Brunswick. This cooperation is based on the collaboration of the researchers at both institutions working together to improve research and healthcare in New Brunswick.

Private Sector Involvement/Investment

NB-BioMatrix Inc. is a start-up company born out of a DMNB collaboration with the UNB school of business. Dr. Keith Brunt (DMNB) is the Chief Scientific Officer and Mr. Jeff Jennings (UNB) is the Chief Executive Officer. The company will utilize nanotechnologies to provide innovative products for sustaining clean water in the oil and gas industry, provide innovative solutions in agriculture for soil enhancement and for pest deterrents. Additionally, the company is developing nano medicines and new biomaterials for stem cell and regenerative medicine applications. The company is seeking investment capital to launch production based on the research developed at DMNB that involves collaborations with HLSNB Inc., BioNB Inc., Economic Development NB, and the National Research Council.



Other private sector companies have recently been attracted to New Brunswick in order to establish collaborations with DMNB scientists. Globavir Inc. has entered into a collaboration with Dr. Thomas Pulinilkunnil (DMNB) and Dr. Duncan Webster (HHN/UNB) to assess new agents for the diagnosis and treatment of infectious and genetic diseases with support from Foundation Glycosylation. Additionally, Dr. Lutchmedial (HHN/NBHC) and Dr. Brunt (DMNB) are collaborating with BioSign Inc. & Cloud Diagnostics Inc. with support from NBHRF and HLSNB Inc. to assess the clinical utility of new medical devices that use digital technology to analyze vital signs. Additionally, Dr. Reiman (DMNB/UNB) and his post-doctoral fellow, Dr. Alli Murugesan (UNB) are collaborating with Soricimed Inc. through partnerships with Mitacs and the Terry Fox Foundation to investigate new anti-cancer agents.

Research

Alli Murugesan

Post Doctoral Fellow, Department of Biology, University of New Brunswick

Adjunct appointment, Faculty of Medicine, Dalhousie University

Dr. Alli Murugesan obtained her Bachelor in Science in Chemistry (1996) and her Masters in Biochemistry (1998) from India. She attended Jawaharlal Nehru University in India for her Ph.D. training in biotechnology. During her PhD she studied in the lab of Dr. Aparna Dixit where she was able to develop proteomic techniques and sequencing that have since been patented both nationally and internationally.



Upon completing her PhD in 2006, Dr. Murugesan undertook her postdoctoral training at Dalhousie University in Halifax, NS. She spent three years working with Dr. Victor Rafuse in the area of medical neuroscience. Her research work focused on the role and detection of the protein sonic hedgehog in neuronal precursor cell proliferation and migration. In 2010 Dr. Murugesan obtained her clinical research experience as a research associate under Dr. Timothy Christie, regional director of ethics at the Saint John Regional Hospital.

In 2010 she began a postdoctoral fellowship with Dr. Anthony Reiman, Canadian Cancer Society Research Chair at the University of New Brunswick, Saint John. Her work focuses on cancer biology. She is focused on deciphering new biomolecules with medicinal properties from natural sources.

In 2014, Dr. Alli Murugesan was awarded both the prestigious Terry Fox Postdoctoral Fellowship from the New Brunswick Health Research Foundation and an Elevate Postdoctoral Fellowship from Mitacs.

Presently, as a Postdoc under Dr. Anthony Reiman, a renowned medical oncologist and the Canadian Cancer Society research chair at UNB Saint John, Dr. Murugesan is currently partnering with Soricimed Biopharma Inc. to test their peptide antagonists for her Mitacs research. Her current work focuses on deciphering novel therapeutics for multiple myeloma, an incurable bone marrow cancer. She is scheduled to begin her Terry Fox Fellowship August 2014. She is also a co-mentor for the RIM project medical students at Dalhousie Medicine New Brunswick.

Research Lab Space Update

The renovations to the Anatomy/Multi-purpose lab are on time for completion by September, 2014 with funding provided through the deferred revenue carry forward. This renovation resulted in changes to both the histology and anatomy curriculum, and to enhance capacity to support the Research in Medicine (RIM) course. The space will also be used for emergency back-up to support the Bio-medical Research Program.

Significant challenges were experienced in the full implementation of the lab and animal care facilities. Continued delays in completing all outstanding construction issues for both the lab and the animal care facility delayed sentinel testing. Mouse sentinel testing occurred in August 2014. Modifications to the cage wash system supported initial research activities for the first six months of 2014.

There were issues with the operation of the HVAC systems in the lab and animal care facility. The heat load assessment was reviewed and sensor adjustments to the HVAC system were made to ensure functioning within an acceptable range.



Dr. Keith Brunt provides a tour of the research lab at the official opening, October 2013.

Research

Gibanananda Ray, PhD

Research Lab Technician

Dr. Ray is a PhD in Biosciences and Master of Health Administration (MHA). He completed his PhD on *Cytogenetics and Biochemical Studies in Breast Cancer* in 2002. The thesis involved measurements of free radicals and antioxidants along with chromosomal abnormalities in breast cancer patients, and correlated the results with breast cancer stages.



He began a Post-doctoral Fellowship in 2003 in Kansas University Medical Centre, Kansas City, Kansas, USA and worked in beta-catenin signaling pathway in the area of cancer biology. Beta-catenin is an oncoprotein and involves in cell proliferation and survival in many cancer types. While treatment of prostate cancer cells with 2-methoxy estradiol (2-ME2), an anticancer drug, he and his colleagues found that 2-ME2 arrests cells at G2/M phase of cell cycle and induces apoptosis. Beta-catenin was found to be increased in membrane fraction and decreased in nuclear fraction of cells. 2-ME2 also decreases Cyclin D1 and Bcl-2 protein expression, both of these proteins involved in cell proliferation.

In another study they found that MCF-7, an estrogen receptor positive breast cancer cells, can form tumor in mice with more aggressive tumor when mice periodically injected with 17-beta estradiol. This results was positively correlated with WISP-2 expression which is a member of CCN family of secreted, extracellular matrix-associated signaling proteins. When they treated the mice with tamoxifen, a drug used in breast cancer treatment, reduced tumor volume along with reduction in WISP-2 expression. They concluded that WISP-2 could be a noble target molecule for the breast cancer treatment.

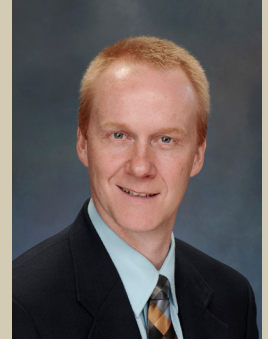
Dr. Ray joined as Post-doctoral Fellow in Department of Biochemistry and Molecular Biology, Dalhousie University in 2005 and started further exploring beta-catenin signaling pathway in cancer. They found in a study that beta-catenin blocks apoptosis of malignant kidney and intestinal epithelial cells and promotes their anchorage-independent growth by down-regulating death-associated protein kinase-2 (DAPk-2), a pro-apoptotic protein.

He has published more than 22 papers in biomedical journals.

Presently Dr. Ray is involved in cardiovascular, obesity, diabetic research studies along with the researchers in DMNB Lab. He is interested working in angiogenesis which is a process of neovascularization. Macrophage, a differentiated form of monocyte plays important role in wound healing and angiogenesis. He would like to find the role of macrophage in angiogenesis process in post myocardial infarction, and is looking for molecular target for the treatment after heart attack.

Update - Assistant Dean, DMNB Postgraduate

The office of Assistant Dean DMNB Postgraduate will have completed its first complete academic year since development in January of 2013. The postgraduate training in New Brunswick follows the direction of Dalhousie Postgraduate Medical Education (PGME) with our DMNB office providing strong academic and administrative leadership to local faculty and trainees.

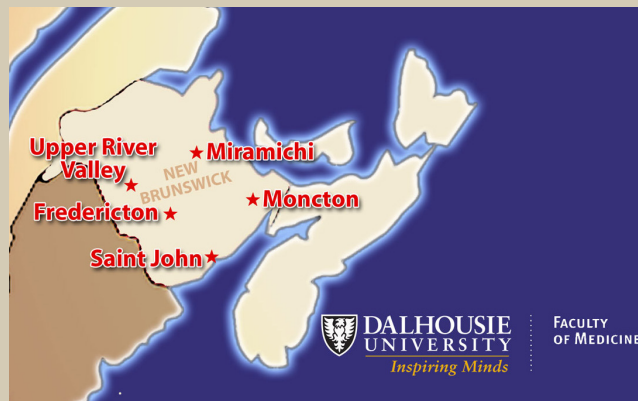


Highlights of this academic year include:

- Completion of the three year integrated rural Family Medicine – Emergency Medicine by our two pioneer residents in June 2014.
- Delivery of our fifth annual New Brunswick Medical Education Forum in Upper River Valley on May 9, 2014.
- Increase in CaRMS matching seats for New Brunswick based Internal Medicine program.
- Development of principles for Postgraduate training in New Brunswick to be integrated into the DMNB contract renewal discussions.

Dalhousie PGME in New Brunswick

- Fredericton – 45 residents
- Saint John – 183 residents
- Moncton – 85 residents
- Miramichi – 5 residents
- Upper River Valley – 4 residents



Issues that will need to be addressed in 2014 and beyond include:

- Capacity building for resident training in New Brunswick;
- Faculty development in Competency Based Medical Education;
- Integration of undergraduate and postgraduate administration and oversight through DMNB;
- Negotiation of funding with Department of Health to replace Health Canada funding for integrated rural Family Medicine - Emergency Medicine program;
- Additional funding and creation of further CaRMS training seats; and
- Development of a stronger academic mission and culture within New Brunswick faculty.

Todd Lambert, M.D.

Strategic Plan

The Faculty of Medicine's strategic plan, "The Way Forward" has been extended for another year which will allow the new plan to be developed in conjunction with the arrival of a new Dean of Medicine. The DMNB strategic plan will continue to be integrated into the Faculty of Medicine plan. The creation of the new Faculty of Medicine plan a new contract with the program partners (Province of New Brunswick and UNB) by June 2015.

The 2013-2014 DMNB Strategic Plan outlined several key goals for the staff to work toward during the academic year. The majority of the goals (90 percent) were accomplished and others are underway. Some of the accomplishments include:

- Developed an interprofessional experience for the LICD students in Eel Ground aboriginal health clinic;
- Successfully implemented a first year Research In Medicine course;
- Developed a proposal for establishing a LICD in Moncton for September 2015;
- Implemented the PIER program;
- Recruited the fourth basic science researcher for DMNB; and
- Held the first Launch Ceremony to recognize the end of the students' four year undergraduate medical education in New Brunswick and 'launch' them into the next stages of their careers as physicians.

FACULTY OF MEDICINE STRATEGIC PLAN – "THE WAY FORWARD"

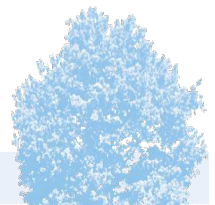
Updated: April 2014

EDUCATION & RESEARCH EXCELLENCE, ORGANIZATIONAL & FISCAL RENEWAL

MISSION: Improve health of New Brunswickers' through medical education and health research.

VISION: Provide an innovative but comparable education experience across the continuum of medical education which meets or exceeds accreditation standards and is socially accountable while being fully integrated into NB communities. The academic program will be supported by collaborative biomedical, clinical and educational research activities.

VALUES: Integrity, accountability, social responsibility, evidence-based practices, collegiality, ethics, professionalism



DMNB, FACULTY OF MEDICINE – 2014/15 PRIORITIES

Educating Doctors and Researchers of the Future

- Establish a program for assessment skills development in the faculty
- Establish a simulation working group regarding high fidelity simulation collaborations in New Brunswick
- Establish a pilot project exploring the use of ultrasound as a teaching tool, i.e., anatomy.
- Work with student affairs and UGME to establish a comprehensive four-year program for career development for students
- Support establishment of the opening of a LICD in Moncton and recruitment of 6 students
- Explore establishment of LICD in Fredericton
- Introduce interdisciplinary practice based small group learning in health education for faculty in 5 clinical teaching sites.
- Implement PIER 1 & 4 and revision of PIER 2

Enhancing Patient Care and Population Health

- Support students in the development of a student community health clinic.
- Develop a program for service learning involving NGO's and patient advocacy groups.
- Collaborate with Horizon Health Network for a hand washing initiative for patient health and safety.
- Work with Dalhousie CPD to promote value added care in Horizon Health Network
- Develop a Maritime collaborative training program in occupational health for physicians in practice.
- Host a conference in Occupational Medicine

Advancing an Innovative Research Agenda

- Recruit additional 30 research mentors for RIM
- Implement and develop a model of review for the 5-year DMNB strategic plan for research and supporting annual operational plan
- Explore integration of primary care research into the DMNB research administrative structure
- Be successful in a health and life sciences New Brunswick grant application for translational research.
- Double grant acquisition success.
- Advancement to tenure track for three basic scientists
- Support at least one clinician researcher for the NBHRF Clinician Scholars Program

Organizational, Operational & Fiscal Renewal

- Establish a program and functional scheduling for 100% review of academic leadership that reports directly to the Associate Dean DMNB
- Ensure seamless transition of leadership including all administrative functions, key working relationships, and document transfer
- Renovate multi-purpose/anatomy lab for clinical research use
- Build a nuclear medicine waste disposal unit for the biomedical lab
- Improve space utilization for work and study (room 244)
- Explore the expansion of clinical teaching capacity in clerkship through collaboration with MUN
- Identify & train an individual with accreditation review skill sets
- Enhance stability and administrative efficiencies through shared operational and leadership responsibilities with Halifax Campus
- Establish a strategic plan to achieve a goal of 25% of shared curriculum content delivery by DMNB faculty for undergraduate programming

LONG TERM VISION STATEMENTS

Graduating DMNB students see themselves as having become the best they could be - Be seen as the medical education destination of choice for New Brunswickers - Be fully integrated with the Maritimes 'medical school while maintaining a unique identity and community relationship that is responsive to NB health needs - Double biomedical research activity in New Brunswick - Be recognized in the Faculty of Medicine for providing leadership in lifelong learning and workplace experience.



The Faculty of Medicine is committed to "Making Choices: Dalhousie's Strategic Focus 2010-2013"

LOCATED Project

Location of Clinicians and Trainee Education at Dalhousie (LOCATED) Project

In 2010, Dalhousie Medical School opened the Dalhousie Medicine New Brunswick Program (DMNB) to provide undergraduate medical training to residents of NB and increase recruitment/retention of students within underserved areas in the province.

The LOCATED Project, adapted from Learners and Locations Project (Memorial University), aims to evaluate the Dalhousie Medical Program by establishing a process to integrate data from both admissions/undergraduate offices and national databases (Canadian Post-MD Education Registry and Canadian Medical Directory) to examine possible relationships of educational experience (i.e., time spent in a community) with demographic characteristics (e.g., gender, age), career choice and practice location.

The LOCATED Application, an integrated longitudinal tracking system linked with Geographic Information Systems-GIS, is able to generate automatized analysis in the form of charts, maps, tables and descriptive statistical analysis.

Findings will be used by senior management in the Faculty of Medicine and the Accountability and Oversight Committee. Data will also be used for program evaluation and planning purposes.

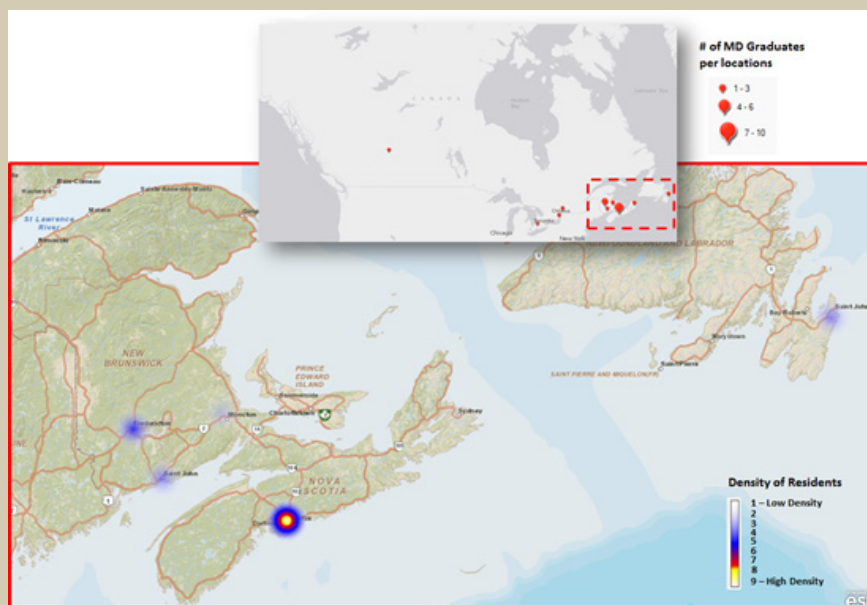


Figure –Residency Program Match's Locations of the DMNB graduates – Heat Map (Source: Steeves et al., 2014)

Reference

Steeves, J.; Paixao, S.; Fedak, T.; Alexiadis Brown, P.; Power, G.; Smith, P.; Sutton, E.; MacPherson, K.; Mohammed, R. Can you track the long term outcome of your graduates? Muster Conference, Australia, 27-30 October 2014

Appendix I

List of Acronyms

- AMEE - Association for Medical Education in Europe
- AFMC - Association of Faculties of Medicine of Canada
- AHT - Anical Health Technology
- CACMS - Committee on Accreditation of Canadian Medical Schools
- CAEP - Canadian Association of Emergency Physicians
- CAPER - Canadian Post-MD Education Registry
- CaRMS - Canadian Resident Matching Service
- CCME - Canadian Conference on Medical Education
- CFI - Canadian Foundation for Innovation
- CIHR - Canadian Institutes of Health Research
- CJEM - Canadian Journal of Emergency Medicine
- CFMNB - Centre Formation Medicale du Nouveau Brunswick
- DMNB - Dalhousie Medicine New Brunswick
- FMEC - Future of Medical Education in Canada
- HHN - Horizon Health Network
- ICD - International Clarification of Diseases
- LCME - Liasion Committee on Medical Education
- LICD - Longitudinal Integrated Clerkship Dalhousie
- LOCATED - Location of Clinicians and Trainee Education
- MCAT - Medical College Assessment Test
- MHA - Master of Health Administration
- MMIs - Multiple Mini Interviews
- NBCC - New Brunswick Community College
- NBHRF - New Brunswick Health Research Foundation
- NSERC - Natural Sciences and Engineering Research Council of Canada
- OSCE - Objective Structured Clinical Examination
- PGME - Post-Graduate Medical Education
- PIERs - Positioning Integration Evaluation Research/Review
- RIM - Research in Medicine
- SHoC-ED - Sonography in Hypotension and Cardiac Arrest in the Emergency Department
- SPOR - Strategy for Patient Oriented Research
- UNB - University of New Brunswick
- URVH - Upper River Valley Hospital
- WHO - World Health Organization

Appendix II

Publications and presentations by DMNB faculty and staff 2013-2014

Dr. Tony Reiman

Publications

1. 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.
2. Ocio EM, Richardson PG, Rajkumar SV, Palumbo A, Mateos MV, Orłowski R, Kumar S, Usmani S, Roodman D, Niesvizky R, Einsele H, Anderson KC, Dimopoulos MA, Avet-Loiseau H, Mellqvist UH, Turesson I, Merlini G, Schots R, McCarthy P, Bergsagel L, Chim CS, Lahuerta JJ, Shah J, Reiman A, Mikhael J, Zweegman S, Lonial S, Comenzo R, Chng WJ, Moreau P, Sonneveld P, Ludwig H, Durie BG, Miguel JF. New drugs and novel mechanisms of action in multiple myeloma in 2013: a report from the International Myeloma Working Group (IMWG). *Leukemia*. 2014 Mar;28(3):525-42. doi: 10.1038/leu.2013.350. Epub 2013 Nov 20. Review. PubMed PMID: 24253022.
3. Chng WJ, Dispenzieri A, Chim CS, Fonseca R, Goldschmidt H, Lentzsch S, Munshi N, Palumbo A, Miguel JS, Sonneveld P, Cavo M, Usmani S, Durie BG, Avet-Loiseau H; International Myeloma Working Group. IMWG consensus on risk stratification in multiple myeloma. *Leukemia*. 2014 Feb;28(2):269-77. doi: 10.1038/leu.2013.247. Epub 2013 Aug 26. Review. PubMed PMID: 23974982.

Abstracts

1. Ethan Toumishey, Angeli Prasad, Gregory S. Dueck, Neil Chua, Daygen Finch, Douglas A. Stewart, Darrell J. White, Richard H. van der Jagt, James B Johnston, Andrew R Belch, and Tony Reiman. Final Report of a Phase II Clinical Trial of Lenalidomide Monotherapy For T-Cell Lymphoma. November 15, 2013; *Blood*: 122 (21). Poster presentation at the Annual Meeting of the American Society of Hematology, New Orleans, LA, December 2013.
2. Jonathan Moore, Philippe Tremblay, Jane Agar, Kim Miller, Alli Murugesan, Brian Johnston, Cenk Acar, Tony Reiman. FOSL2 as an immunohistochemical biomarker for survival outcomes in Stage II-III non-small cell lung cancer. Poster presentation at the Canadian Cancer Research Conference, Toronto, ON, November 2013.
3. Philippe Tremblay, Jonathan Moore, Sean Dolan, Terrance Comeau, Jane Agar, Kim Miller, Alli Murugesan, Lakshmi Rajapanir, Tarek Rahmeh, Tony Reiman. Expression and prognostic significance of TRPV6, a novel therapeutic target protein in multiple myeloma. Poster presentation at the Canadian Cancer Research Conference, Toronto, ON, November 2013.
4. L.K. Seymour, G. Le Teuff, M. Tsao, E. Brambilla, F. Shepherd, J.-C. Soria, R. Kratzke, S. Graziano, J.-Y. Douillard, R. Rosell, A. Reiman, B. Lacas, A. Bourredjem, T. Le Chevalier, R. Pirker, M. Filipits, P. Hainaut, P.A. Janne, J.-P. Pignon. Prognostic and Predictive Biomarkers for ACT (Adjuvant Chemotherapy) in Resected Non-Small Cell Lung Cancer (R-NSCLC): LACE-Bio. Accepted for oral presentation at the Annual Meeting of the European Society of Medical Oncology (ESMO), Madrid, Spain, September 2014.

Dr. Anil Adisesh

Publications

1. Pre-placement screening for tuberculosis in healthcare workers. Giri P, Basu S, Sargeant T, Rimmer A, Pirzada O, Adisesh A. *Occup Med (Lond)*. 2014 Oct;64(7):524-9. doi: 10.1093/occmed/kqu107. Epub 2014 Aug 18.
2. Do hinged (bench-activated) safety needles cause spatter contamination? Roff M, Basu S, Adisesh A. *J Hosp Infect*. 2014 Mar;86(3):221-3. doi: 10.1016/j.jhin.2014.01.006. Epub 2014 Feb 5.
3. Healthcare Workers and MMR Status: How worried should we be about further outbreaks? Basu S., Giri P, Adisesh A., McNaught R. *Epidemiol Infect*. 2014 Aug;142(8):1688-94. doi: 10.1017/S0950268813002859. Epub 2013 Nov 14.
4. Guidance on the use of respiratory and facial protection equipment. Coia JE, Ritchie L, Adisesh A, Makison Booth C, Bradley C, Bunyan D, Carson G, Fry C, Hoffman P, Jenkins D, Phin N, Taylor B, Nguyen-Van-Tam JS, Zuckerman M; The Healthcare Infection Society Working Group on Respiratory and Facial Protection. *J Hosp Infect*. 2013 Nov;85(3):170-82. doi: 10.1016/j.jhin.2013.06.020. Epub 2013 Sep 17.

continued...

Appendix II

Publications and presentations by DMNB faculty and staff 2013-2014

Dr. Anil Adisesh

Publications continued

5. Cost-Effectiveness Analysis of MMR Vaccination in Healthcare Workers. Giri P, Basu S, Farrow D, Adisesh A. *Occup Med (Lond)*. 2013 Sep;63(6):422-4. doi: 10.1093/occmed/kqt086. Epub 2013 Jul 16.

Abstracts

1. Death and Work: Frequency of Medical Recognition and Investigation by the Coroner. S. Basu, A. Fletcher, D. Shale, A. Adisesh, Society of Occupational Medicine, Annual Scientific Meeting July 2014 Nottingham, UK.
2. Pre-Placement Screening for Tuberculosis in Healthcare Workers. P. Giri, S. Basu, T. Sargeant, A. Rimmer, A. Adisesh Society of Occupational Medicine, Annual Scientific Meeting July 2014 Nottingham, UK.
3. Work related stress and job satisfaction in commercial aviation pilots. Helen Hoar, Anil Adisesh presentation at the 85th Annual Scientific Meeting of the Aerospace Medical Association San Diego, CA, May 11-15, 2014.
4. UK Standards of Care for Occupational Contact Dermatitis and Occupational Contact Urticaria. Adisesh A., Robinson E., Nicholson P.J., Sen D. and Wilkinson M. Poster, Occupational and Environmental Medicine Association of Canada, Montreal, Sept. 2013.

Dr. Keith Brunt

Publications

1. Allwood MA, Kinobe RT, Ballantyne L, Romanova N, Melo LG, Ward CA, Brunt KR, Simpson JA. Heme oxygenase-1 overexpression exacerbates heart failure with aging and pressure overload but is protective against isoproterenol-induced cardiomyopathy in mice. *Cardiovascular pathology: the official journal of the Society for Cardiovascular Pathology*, 23(4), 231-7, 2014.

Abstracts

1. Shona Philip, Andrew J. Chan, Keith R. Brunt. Nanocardiology – Promotion of coronary re-endothelialization post stent injury by increasing Heme Oxygenase-1 levels through nanoparticle delivery of curcumin. Abstract, IHRTTP - Integrated Health Research Training Program, Halifax, 2013-11-13.
2. Andrew J. Chan, Shona Philip, Keith R. Brunt. Nanoparticles for diagnostic imaging of pathophysiological processes: Theranostics in atherosclerotic lesions via radiofluorescent nanoparticles mimicking high-density lipoprotein (HDL) molecules. Poster, NBHRF - New Brunswick Health Research Foundation, Saint John, 2013-11-15.
3. Singh K, Mihic A, Hatta K, Amini-Nik S, Wu J, Li SH, Lu S, Alman BA, Weisel RD, Brunt KR, Li RK. Beta-catenin improves cardiac remodeling after myocardial infarction by reducing cell death and limiting scar formation. Abstract, Canadian Cardiovascular Congress, Canada, Quebec, Montreal, 2013-10-17.

Dr. Petra Kienesberger

Publications

1. Zordoky BNM, Nagendran J, Pulinilkunnil T, Kienesberger P, Masson G, Waller TJ, Kemp BE, Steinberg G, Dyck JRB. AMPK-Dependent Inhibitory Phosphorylation of ACC is not Essential for Maintaining Myocardial Fatty Acid Oxidation. *Circulation Research*, July 7 2014 Epub.
2. Willis MS, Bevilacqua A, Pulinilkunnil T, Kienesberger P, Tannu M, Patterson C. The role of ubiquitin ligases in cardiac disease. *Journal of Molecular and Cellular Cardiology*, 71, 43-53, 2013.
3. Nagendran J, Pulinilkunnil T, Kienesberger PC, Sung MM, Fung D, Febbraio M, Dyck JR. Cardiomyocyte-specific ablation of CD36 improves post-ischemic functional recovery. *Journal of Molecular and Cellular Cardiology*, 63, 180-8, 2013.
4. Breckenridge RA, Piotrowska I, Ng KE, Ragan TJ, West JA, Kotecha S, Towers N, Bennett M, Kienesberger PC, Smolenski RT, Siddall HK, Offer JL, Mocanu MM, Yelon DM, Dyck JR, Griffin JL, Abramov AY, Gould AP, Mohun TJ. Hypoxic Regulation of Hand1 Controls the Fetal-Neonatal Switch in Cardiac Metabolism. *PLoS Biology*, 11(9), 2013.

Appendix II

Publications and presentations by DMNB faculty and staff 2013-2014

Dr. Thomas Pulinilkunnil

Publications

1. 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. AMPK phosphorylation of ACC2 is required for skeletal muscle fatty acid oxidation and insulin sensitivity in mice. *Diabetologia*, 57(8), 1693-702, 2014.
2. Willis MS, Bevilacqua A, Pulinilkunnil T, Kienesberger P, Tannu M, Patterson C. The role of ubiquitin ligases in cardiac disease. *Journal of molecular and cellular cardiology*, 71, 43-53, 2014.
3. Kraus D, Yang Q, Kong D, Banks AS, Zhang L, Rodgers JT, Pirinen E, Pulinilkunnil TC, Gong FY, Wang YC, Cen YN, Sauve AA, Asara JM, Peroni OD, Monia BP, Bhanot S, Alhonen L, Puigserver P, Kahn BB. Nicotinamide N-methyltransferase knockdown protects against diet-induced obesity. *Nature*, 508(7495), 258-262, 2014.
4. Pulinilkunnil T, Kienesberger PC, Nagendran J, Sharma N, Young ME, Dyck JR. Cardiac specific adipose triglyceride lipase overexpression protects from cardiac steatosis and dilated cardiomyopathy following diet-induced obesity. *Int J Obes*, 38(2), 205-215, 2014.
5. Fullerton MD, Galic S, Marcinko K, Sikkema S, Pulinilkunnil T, Chen ZP, O'Neill HM, Ford R, O'Brien MO, Hardie GD, Macaulay SL, Schertzer JD, Dyck JRB, Denderen BJV, Kemp BE, Steinberg GR. Single phosphorylation sites in Acc1 and Acc2 regulate lipid homeostasis and the insulin-sensitizing effects of metformin. *Nature medicine*, 19(12), 1649-54, 2013.
6. Sitnick MT, Basantani MK, Cai L, Schoiswohl G, Distefano G, Ritov V, Delany JP, Schreiber R, Stolz DB, Gardner NP, Kienesberger PC, Pulinilkunnil T, Zechner R, Goodpaster BH, Coen P, Kershaw EE. Skeletal muscle triacylglycerol hydrolysis does not influence metabolic complications of obesity. *Diabetes*, 62(10), 3350-3361, 2013.
7. Nagendran J, Pulinilkunnil T, Kienesberger PC, Sung MM, Fung D, Febbraio M, Dyck JR. Cardiomyocyte-specific ablation of CD36 improves post-ischemic functional recovery. *Journal of molecular and cellular cardiology*, 63C, 180-188, 2013.

Dr. Shirya Rashid

Publications

1. Alirocumab: PCSK9 inhibitor for LDL cholesterol reduction, *Expert Review in Cardiovascular Therapy*, 2014 Oct;12(10).
2. Rashid, Shirya; Tavori, Hagai; Brown, Patrick E; Linton, MacRae F; He, Jane; Giunzioni, Ilaria; Fazio, Sergio. Proprotein convertase subtilisin kexin type 9 promotes intestinal overproduction of triglyceride-rich apolipoprotein B lipoproteins through both low-density lipoprotein receptor-dependent and -independent mechanisms. *Circulation*, 130(5):431-41, 2014.
3. Rashid S, Sniderman A, Melone M, Brown PE, Otvos JD, Mente A, Schulze K, McQueen MJ, Anand SS, Yusuf S. Elevated cholesteryl ester transfer protein (CETP) activity, a major determinant of the atherogenic dyslipidemia, and atherosclerotic cardiovascular disease in South Asians. *European Journal of Preventive Cardiology*, 2014 Mar 21.
4. Rashid, Shirya; Kastelein, John J P. PCSK9 and resistin at the crossroads of the atherogenic dyslipidemia. *Expert Review of Cardiovascular Therapy*, 11(11):1567-77, 2013.

Abstracts

1. Shirya Rashid Ph.D., Michelle Melone M.Sc., Hagai Tavori Ph.D., Ilaria Giunzioni M.Sc., David Neff D.O., Sergio Fazio M.D., Ph.D. PCSK9 Inhibition Augments the Therapeutic Effect of Ezetimibe in Lowering Intestinal Apolipoprotein B Lipoprotein Production. *European Atherosclerosis Society, Madrid, Spain, 2014 (Published in Atherosclerosis)*. 2014.
2. Shirya Rashid Ph.D., Hagai Tavori Ph.D., Ilaria Giunzioni M.Sc., Sergio Fazio M.D., Ph.D. PCSK9 Promotes Intestinal Overproduction of Triglyceride-Rich Apolipoprotein-B Lipoproteins through both LDL-Receptor Dependent and Independent Mechanisms. *European Atherosclerosis Society, Madrid, Spain, 2014 (Published in Atherosclerosis)*. 2014.
3. Shirya Rashid. Elevated CETP Activity is Associated with Low, Dysfunctional HDL in High Cardiovascular Risk South Asians. *International Atherosclerosis Society, Rome, Italy, 2014*.
4. Melone M, Davis HR, Ai X, Neff DR, Fazio S, Rashid S. PCSK9 Inhibition Augments the Therapeutic Effect of Ezetimibe in Lowering Intestinal Apolipoprotein B Lipoprotein Production. *American Heart Association Conference, Dallas, Texas, USA, 2013 (Published in Circulation)*. 2013.
5. Melone M, Davis HR, Ai X, Neff DR, Fazio S, Rashid S. PCSK9 Inhibition Augments the Therapeutic Effect of Ezetimibe in Lowering Intestinal Apolipoprotein B Lipoprotein Production. *Canadian Cardiovascular Conference, Montreal Quebec, 2013 (Published in the Canadian Journal of Cardiology)*. 2013.

continued...

Appendix II

Publications and presentations by DMNB faculty and staff 2013-2014

Dr. Shirya Rashid

Abstracts continued

6. Melone M, Tavori H, I Giunzioni I, Davis HR, Neff DR., Fazio S, Rashid S. Physiological Levels of PCSK9 Promote Hepatic and Intestinal Overproduction of Apolipoprotein-B Lipoproteins through LDL-Receptor Dependent and Independent Mechanisms. Canadian Cardiovascular Conference, Montreal, Quebec, 2013 (Published in the Canadian Journal of Cardiology). 2013.

Dr. Shelley Doucet

Published Refereed Papers

1. Doucet, S., MacKenzie, D., Loney, E., Godden-Webster, A., Lauckner, H., Alexiadis Brown, P., Andrews, C., & Packer, T. (in press). Curricular Factors that Unintentionally Affect Learning in a Community-Based Interprofessional Education Program: The Student Perspective. *Journal Target: Journal of Research in Interprofessional Practice and Education*.
2. *Mackenzie, D., *Doucet, S., Nasser, S., Godden-Webster, A., & Andrews, C. (2014). Collaboration behind-the-scenes: Key to effective interprofessional education. *Journal of Interprofessional Care*, 28(4): 381–383. doi: 0.3109/13561820.2014.890923
3. Price, S., Doucet, S., Lackie, K., & McGillis Hall, L. (2014). The historical social positioning of nursing and medicine: Implications for career choice, early socialization, and interprofessional collaboration. *Journal of Interprofessional Care*, 28(2), 103-109. doi: 10.3109/13561820.2013.867839
4. Doucet, S. (2014). Becoming a nurse scientist: The critical role of mentorship, collaboration, and foundational experiences as a graduate student. *Scholarly and Research Communication*, 5(1), 1-6.

Silvane Paixao

Publications

1. Manuscript submitted: Development of Basemap for Longitudinal Databases Silvane Paixao, John Steeves Dalhousie Medicine New Brunswick (DMNB); Raafey Mohammed, University of New Brunswick V Simpósio Brasileiro de Ciências Geodésicas e Tecnologias da Geoinformação, Brazil, Recife - PE, 12- 14 de Nov de 2014.

Jackie Phinney

Publications

1. Phinney, J. (2013). Library Usage Habits of First- and Second-year Medical Students at a Satellite Campus: Report on an Exploratory Questionnaire. *Journal of the Canadian Health Libraries Association*, 34, 147-152. doi: 10.5596/c13-046



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