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CAMPUSES ENGAGEMENT DISTRIBUTED LEARNING ADVANCEMENT MEDICAL EDUCATION PH

On the Cover

From left to right:

Dr. Simon Côté, NOSM Resident Dr. Claire Perreault, NOSM Board Member and Assistant Professor, Clinical Sciences Ashley Mackey, NOSM First-Year Student

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Northern Ontario School of Medicine

The Northern Ontario School of Medcine's Community Report is published annually.

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Several things make the Northern Ontario School of Medicine (NOSM) truly unique and innovative among Canadian and international medical schools. The School is a made-in-the-North solution that is attracting attention from around the world for its many extraordinary components and features. The Northern Ontario School of Medicine is no ordinary medical school.

Welcome to NOSM's fourth annual Community Report. The theme of this report is "Local Engagement, Global Leadership," and it speaks to the national and international recognition that NOSM has gained for its distinct model of distributed, community-engaged medical education and research. This model incorporates a mandate to be socially accountable to the people and communities of the region it serves. Through innovative education, governance, and community collaboration, NOSM has become a world-recognized leader in the health education field, yet it remains truly a School "of the North, for the North, and by the North."

Last year, NOSM launched a new strategic plan to guide the next phase of the School's development through the years 2010 to 2015. Much has been achieved in NOSM's first five years of operations, and this second plan, guided by the vision of *Innovative education and research* for a healthier North, builds on NOSM's founding principles, which are consistent with progressive changes occurring at the forefront of medical education.

Congratulations and well done to all who have contributed to NOSM's many achievements over the last year, and thank you to all employees, faculty, learners, and community partners for working to make NOSM extraordinary.



DR. BRIAN STEVENSONPresident, Lakehead University
and Chair, NOSM Board
of Directors

MESSAGE FROM

THE CHAIR, BOARD OF DIRECTORS

On behalf of Lakehead University, and as Chair of NOSM's Board of Directors, I am pleased to congratulate the Northern Ontario School of Medicine on its many honours over the last year. Since my arrival at Lakehead in August of 2010, I have had the pleasure of witnessing NOSM's growing national and international reputation as a leader in distributed, community-engaged, medical education and research. Several recent provincial, national, and international awards demonstrate conclusively that NOSM's unique and innovative program is being recognized among Canadian and international medical schools.

The success that the School has experienced over the past year would not be possible without the tremendous contributions of staff and faculty, and the support of our colleagues and community partners. NOSM brings together over 70 community partners, nearly 1,000 clinical, human, and medical sciences stipendiary faculty, and over 200 employees – all part of a unique solution aimed at addressing health professional shortages in Northern Ontario. Congratulations to all for contributing to this regional and global success story.



MR. DOMINIC GIROUX
President, Laurentian University
and Vice Chair, NOSM Board
of Directors

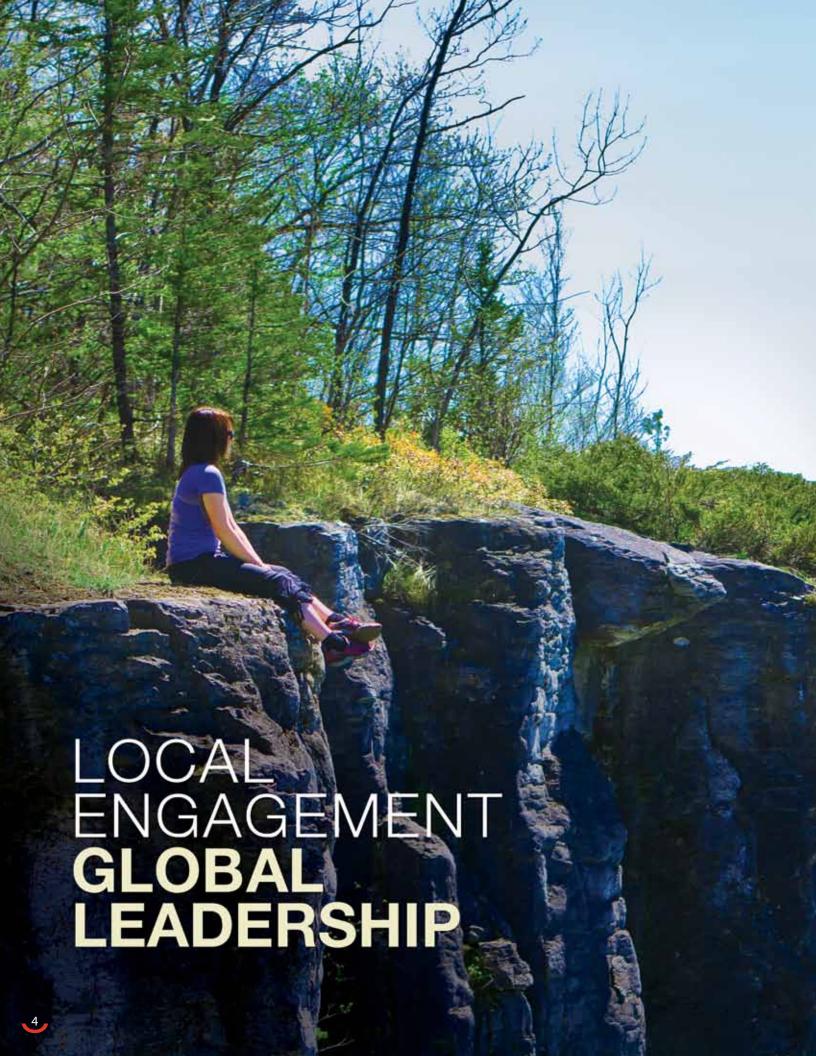
MESSAGE FROM

THE VICE CHAIR, BOARD OF DIRECTORS

This has been another remarkable year for the Northern Ontario School of Medicine. On behalf of Laurentian University, and as Vice Chair of NOSM's Board of Directors, I congratulate NOSM on its recent accomplishments while working towards achieving the strategic vision of *Innovative education and research for a healthier North*.

NOSM is a medical school that is making, and will continue to make, a profound difference to the people and communities of Northern Ontario. This is a medical school that has a mandate of educating high quality physicians and health professionals who have the leadership, knowledge, and skills to practice in Northern Ontario, and beyond. And, this is a medical school that has created a socially accountable medical education model that is attracting the attention of medical educators around the world.

NOSM is our medical school, the North's medical school. Congratulations to NOSM and its many partners for its success.





Since its official opening in 2005, the Northern Ontario School of Medicine has developed and delivered a distinctive model of distributed, community-engaged, and socially accountable medical education and research. This bold, new approach to medical education was essential to ensure success in responding to the health needs of geographically, socially, and culturally diverse Northern Ontario communities.

Across the region, NOSM learners (medical students, residents, and learners from other health disciplines such as rehabilitation studies, physiotherapy, dietetics, and physician assistants) are gaining relevant clinical experience under the guidance of health-care professionals in community hospitals, clinics, and family practices.

NOSM's success is very much a result of partnerships and collaborations with individuals, communities and organizations, hospitals and health services, physicians and other health professionals, universities and colleges, information communication technology organizations, and other medical schools.

Over the past year, NOSM has received considerable accolades for its innovation and leadership. In February 2010, the Ontario Library Association bestowed two awards in recognition of NOSM's Health Science Library's innovative programming and collaborative approach to adopting an open source library system. In April 2010, NOSM was the recipient of the 2010 Rural Medical Education Award granted by the Society of Rural Physicians of Canada in recognition of NOSM's success in graduating physicians heading toward a career in rural medicine. That same month, NOSM received top international honours with three 2010 Global Best Awards, granted by the International Partnership Network, for the successful relationships the School has built with Aboriginal community partners. And last, but not least, in November 2010, the School was recognized with the prestigious national 2010 IPAC/Deloitte Public Sector Leadership Award, receiving gold in the category of Education.

In just five years, NOSM has become a world leader in communityengaged medical education and research, while staying true to its social accountability mandate of contributing to improving the health of the people and communities of Northern Ontario.

IN STEP WITH THE **FUTURE** OF MEDICAL EDUCATION

NOSM's Approach to Medical Education is Consistent with AFMC's Recommendations for Change

In response to society's evolving health care needs and the health challenges of our diverse populations, the Association of Faculties of Medicine of Canada (AFMC) conducted a comprehensive review of M.D. education in Canada. The result was a report entitled *The Future of Medical Education in Canada (FMEC): A Collective Vision for M.D. Education*, launched simultaneously nationwide at NOSM and Canada's other 16 medical schools in January 2010.

Notably, the Northern Ontario School of Medicine has taken an approach to developing its M.D. program that is consistent with the ten recommendations in the AFMC report.



A FULL COPY OF THE AFMC REPORT IS AVAILABLE AT:

WWW.afmc.ca

SHARING NOSM'S STORY WITH THE WORLD



The Making of the Northern Ontario School of Medicine: A Case Study in the History of Medical Education

The Future of Medical Education in Canada (FMEC): A Collective Vision for MD Education

In November 2009, NOSM officially introduced a book celebrating Canada's first new medical school of the 21st century. Written by twelve contributors, The Making of the Northern Ontario School of Medicine: A Case Study in the History of Medical Education provides a detailed account of the challenges and rewards faced by those who insisted on creating a patient-centered, community-based, and culturally-sensitive learning environment for the physicians of tomorrow.

The peer-reviewed collection describes the development of NOSM and its significance to the history and evolution of medical education both in Canada and the world.

Public launches and signings of the book, which is available in both official languages, were held in Sudbury, Thunder Bay, Toronto, and Ottawa during the 2009-2010 academic school year.



TEN PERCENT OF ALL BOOK SALES GOES TO SUPPORTING NOSM'S STUDENT BURSARY FUND. WWW.nosm.ca/book

ACTIVE IN THE INTERNATIONAL MEDICAL EDUCATION COMMUNITY

NOSM's collaboration with organizations around the world provides opportunities to learn from, and engage with, partners in medical education who share a similar commitment to community-engaged medical education and health care in rural and remote regions. The School's partnerships with these organizations demonstrate a commitment to enhancing collaboration and communication with community partners at home and abroad.





The Association for Medical Education in Europe (AMEE) is a worldwide organization that keeps teachers, curriculum developers, researchers, and administrators up to date in the rapidly changing world of medical education. Faculty and employees of NOSM attend AMEE's annual medical education conferences - the largest in the world - and present on topics such as social accountability, community engagement, and informatics.

CLIC

NOSM participates in the Consortium of Longitudinal Integrated Clerkships (CLIC). This group of medical schools is distinguished by M.D. programs with a focus on longitudinal integrated curricula. NOSM is the first medical school in the world where all students undertake a community-based longitudinal integrated clerkship.



NOSM is one of eight medical schools in the Training for Health Equity Network (THEnet). All members share a core mission to recruit students from, and produce physicians for, under-serviced communities. Members follow the same principles, including: social accountability to the populations they serve; in-context learning determined by the health needs of communities; an environment that teaches basic and clinical sciences alongside population health and social sciences; and, patient-centred learning.



NOSM is a member of The Network: TUFH - a global association of individuals, groups, institutions, and organizations committed to improving and maintaining health in the communities they have a mandate to serve. The Network: TUFH is a Non-Governmental Organization in official relationships with the World Health Organization.



NOSM's participation in the World Organization of Family Doctors (WONCA) continues to be key in drawing international attention to the School's innovative education and health programs. WONCA-sponsored rural health conferences bring together rural practitioners from around the world to share common experiences, learn from each other, and work towards improving rural health care around the globe.



NOSM has been a steadfast leader and advocate of rural health initiatives which have increasingly been recognized as crucial to world health issues by the World Health Organization (WHO), the public health arm of the United Nations. At the invitation of the WHO, Dr. Roger Strasser, NOSM Dean, was called upon to speak to rural health educators around the world in September 2010 about principles underlining the success of the School and the key concepts in rural health. Strasser's international leadership in rural and remote health has been a formative influence in NOSM's education, training, and research programs geared toward community needs.

BLUEPRINT FOR INNOVATIVE EDUCATION AND RESEARCH

In June 2010, the Northern Ontario School of Medicine launched a new strategic plan intended to guide the School's progress through the years 2010 to 2015. NOSM's vision – Innovative education and research for a healthier North – is supported by a mission that will enhance the School's mandate for the education of high-quality physicians and health professionals, and reinforce NOSM's international recognition as a leader in distributed, learning-centred, community-engaged education and health research.

VALUES

Innovation, Social Accountability, Collaboration, Inclusiveness, Respect

STRATEGIC PRIORITIES

- Enhancing NOSM's Education Programs
- Strengthening NOSM's Research Initiatives
- Developing NOSM's Learning Environment
- Fostering Excellent Faculty Relations
- Enhancing Collaboration and Communication with Community Partners





TO ACCESS THE COMPLETE VERSION OF NOSM'S STRATEGIC PLAN, PLEASE VISIT: www.nosm.ca/strategicplan

HEALTH MINISTER **VISITS** NOSM TO ANNOUNCE NEW INCENTIVES

In March 2010, the Honourable Dr. Deb Matthews, Ontario Minister of Health and Long-Term Care, visited NOSM's West Campus in Thunder Bay to announce the creation of two new physician recruitment and retention initiatives. These incentives significantly increase the size of grants to physicians who agree to practice in Northern and rural communities, and complement NOSM's social accountability mandate to contribute to improving the health of the people and communities of the region.



SIGNIFICANT

ECONOMIC AND IMPACT

The CRaNHR study provides tangible measure of the positive economic and social impact the Northern Ontario School of Medicine is having on the people and communities of Northern Ontario.

Dr. Roger Strasser NOSM Dean

In February 2010, the Northern Ontario School of Medicine and the Centre for Rural and Northern Health Research (CRaNHR) held an event to officially release the results of a study examining the School's impact on the region. The findings were included in a report entitled *Exploring the Socio-Economic Impact of the Northern Ontario School of Medicine*, conducted by CRaNHR, Lakehead University, and Laurentian University with support from the Ontario Ministry of Health and Long-Term Care.



Total direct spending by NOSM and its undergraduate medical students is estimated at \$37 million annually, and the recirculation of these funds generates between \$67 million and \$82 million of economic activity. Communities across Northern Ontario which are involved in NOSM programs and activities benefit financially from their participation in the School.

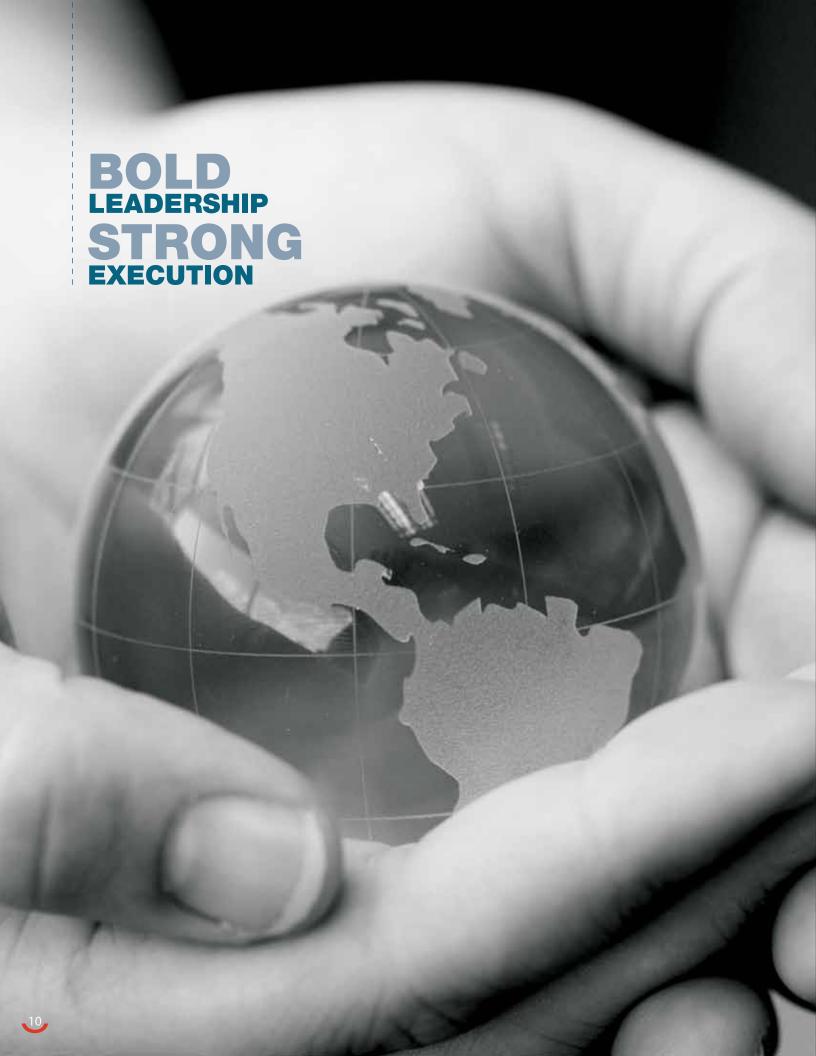
Job creation is also a direct economic benefit. At the time of the study, NOSM funded over 230 full-time equivalent (FTE) positions, and it is estimated that the School supports a total of 420 - 510 FTE positions in Northern Ontario through various economic effects. NOSM also pays stipendiary fees to more than 670 physician teachers in multiple teaching and research sites in over 70 Northern Ontario communities.

ENHANCING HEALTH AND EDUCATION SECTORS

Interviewees in the CRaNHR study reported that NOSM has had a positive impact on the host universities and affiliated health-care institutions, as well as community hospitals which have transitioned to teaching hospital status. The establishment of the School is seen as a major contributor to a growing knowledge-based economy in Northern Ontario.

Individuals interviewed as part of the study anticipate that NOSM graduates will relieve the chronic shortage of physicians across Northern Ontario, and that Francophone and Aboriginal medical learners will help alleviate the shortage of the physicians serving these two population groups.





HIGH ESTEEM FOR OUR APPROACH



ACCOLADES FOR INNOVATION AND COLLABORATION

At an awards presentation held in Toronto on February 27, 2010, NOSM's Health Sciences Library and four partner organizations collaborating on an initiative entitled "Project Conifer" were the recipients of two 2010 Ontario Library Association's (OLA) Divisional Awards, recognizing the partners for their innovative and collaborative approach in adopting an open source library system.

Project Conifer is the shared implementation of a single system that supports 24 different libraries among the five project partners – the Northern Ontario School of Medicine, Laurentian University, Algoma University, McMaster University, and the University of Windsor.

TOP INTERNATIONAL AWARDS FOR COMMUNITY PARTNERSHIPS

In April 2010, the Northern Ontario School of Medicine was named the recipient of three 2010 Global Best Awards, including "Overall Global Winner," granted by the International Partnership Network.

NOSM was recognized for the successful relationships the School has built with Aboriginal community partners to facilitate the Aboriginal Integrated **Community Experience** (ICE) in the NOSM M.D. program. All first-year students spend one month in rural and remote Aboriginal communities to learn about the delivery of health-care services, heighten their cultural competency, increase their understanding of issues affecting Aboriginal peoples, and gain new insights regarding their emerging roles as future physicians.

RECOGNITION FOR CONTRIBUTION TO RURAL FAMILY MEDICINE

Also in April 2010, the Northern Ontario School of Medicine received the 2010 Rural Medical **Education Award granted** by the Society of Rural Physicians of Canada (SRPC). Each year, the SRPC confers the Rural Medical Education Award to an undergraduate medical education program which has excelled in graduating physicians heading toward a career in rural medicine. In 2009, 40.3 percent of NOSM graduates from the M.D. program were successfully matched to rural family medicine residency programs.

TOP NATIONAL HONOUR FOR EDUCATION LEADERSHIP

NOSM was thrilled to be the recipient of the prestigious national 2010 IPAC/Deloitte Public Sector Leadership Award in November 2010, winning gold in the category of Education.

Each year, the Institute of Public Administration of Canada (IPAC) and Deloitte present awards designed to formally reward excellence in leadership within the public sector in Canada. The awards recognize the important work that is being done in the public sector and how it affects Canadian citizens. This award recognizes NOSM for the leadership it has demonstrated in creating a bold, new approach to medical education.

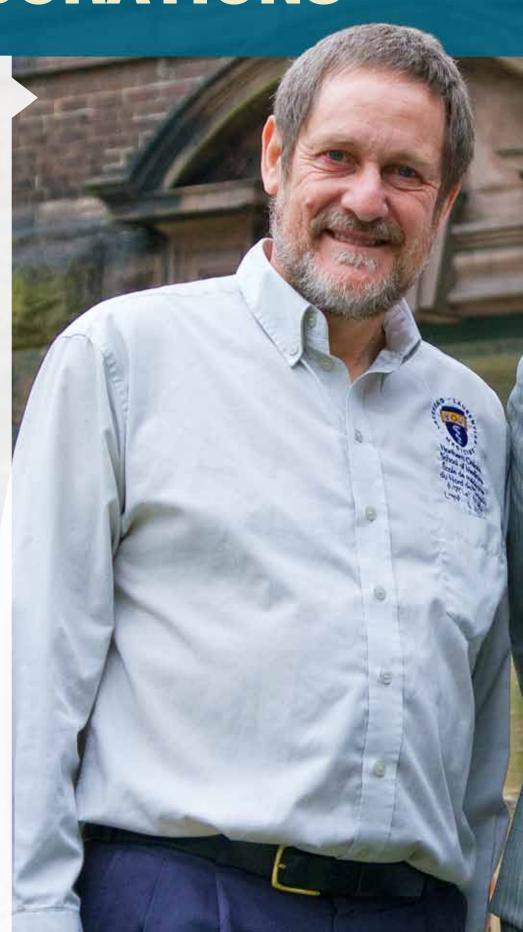
INNOVATIVE COLLABORATIONS

EXPANDING NOSM'S PARTNERSHIP WITH THE UNIVERSITY OF TORONTO

The Northern Ontario School of Medicine and the University of Toronto (UofT) Faculty of Medicine signed a Collaboration Agreement in March 2010 which expands the existing partnership shared by the two parties. The agreement will allow the schools to collaborate and share expertise and resources in the areas of applied health sciences and research, including working together to find opportunities that maximize the positive impact each is having on the populations they serve.

PHYSICIAN ASSISTANT PROGRAM WELCOMES NEW CLASS

In January 2010, the Consortium of PA Education comprised of NOSM, UofT Faculty of Medicine, and the Michener Institute for Applied Health Sciences welcomed the first students to a Bachelor of Science Physician Assistant education program. This program is the second PA program in Ontario. The mission of the Consortium is to deliver Physician Assistant education programs built on a foundation of social accountability, particularly to rural, remote, and underserved communities.





VIRTUAL PATIENT COLLECTION AIDS CLINICAL TRAINING

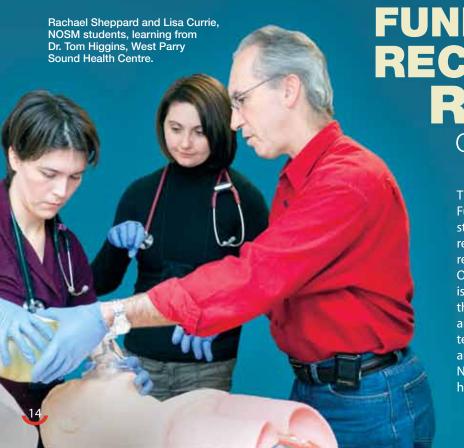
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VIRTUAL PATIENT INTERACTIVE CASES ARE FREE AND PUBLICLY AVAILABLE ONLINE AT: http://vptestv1.nosm.ca/pine

The Pathways for Interactive Narrative Education (PINE) project has created a series of online clinical scenarios, and is a partnership which includes the participation of NOSM, Laurentian University, McMaster University, and Confederation College. This collaborative initiative brought together doctors, midwives, nurses, physiotherapists, and patients to develop a series of game-like educational, virtual patient cases.

These computer-generated simulations of real-life scenarios provide learning opportunities in clinical training, education, and assessment for medical students and interprofessional learners. By making the rich, and often extraordinary, stories of health-care practitioners come to life through the use of games and electronic media, the virtual patients developed by the PINE authors help learners better understand health issues in the North and be prepared for practice.





FUNDING PLAN ENABLES
RECRUITMENT AND
RETENTION

OF PHYSICIAN TEACHERS

The Academic Health Sciences Centres Alternate Funding Plan provides academic physicians with stable support for their clinical, teaching, and research responsibilities and enables the recruitment and retention of new physician teachers. The Northern Ontario Academic Medicine Association (NOAMA) is the governing body for these funds and ensures that funding reaches participating NOSM faculty in an open and transparent manner. By facilitating the teaching, research, recruitment, leadership, innovation, and academic governance of participating physicians, NOAMA works with NOSM toward the greater goal of a healthier Northern Ontario.

PARTNERSHIP EXPLORES BIOFUELS AND NATURAL HEALTH PRODUCTS

A collaborative research partnership between NOSM, Laurentian University, Xstrata Nickel, Al Consultants Inc., and Sussex Research Inc. is exploring the reduction of energy consumption and greenhouse gases while generating value-added activities on non-productive mine lands.

Led by Dr. Ashley Scott, Professor of Bioengineering at Laurentian University, and Dr. Greg Ross, Associate Dean of Research at NOSM, seven graduate researchers are investigating links between energy recovery and greenhouse gas production with the view of creating biofuels and natural health products for the benefit of communities.

This multi-partnered project, entitled Mining Sites as Incubators for Green Energy and Other Value-Added Products, will use mine lands to support the production of microalgae which produce up to 30 times more oil feedstock for biodiesel production than other plants.

The initiative will capture smelterproduced waste heat and carbon dioxide in a way that will significantly enhance algal productivity for the co-production of biodiesel and highvalue natural health products.







ONGOING PARTNERSHIPS

COLLABORATION WITH ALGOMA UNIVERSITY IDENTIFIES RESEARCH OPPORTUNITIES

The Northern Ontario School of Medicine and Algoma University (AU) signed a Collaboration Agreement in October 2009, which allows the two parties to collaborate and share expertise and resources in the area of research. This agreement offers a unique partnership for two organizations with a vested interest in providing education and research that is relevant to Northern Ontario.

NOSM and AU will work together to identify specific projects and joint responsibilities in the areas of life sciences and clinical research, and work together to create regional access to research and resources.

PARTNERSHIP WITH CAMH PROVIDES PSYCHO-SOCIAL RESOURCE TO STUDENTS

NOSM's community-engaged distributed model of undergraduate medical education has received numerous accolades for its innovative nature. That said, there are also challenges associated with the delivery of this model. One of those challenges is how to provide psycho-social support to students who are located at distributed clinical teaching sites. This is especially true for third-year Comprehensive Community Clerkship (CCC) students where they spend eight months in one of twelve communities.

With this in mind, NOSM has partnered with the Centre for Addiction and Mental Health (CAMH) to offer the School's CCC students the opportunity for expedited mental health/psychiatric care. CAMH is Canada's largest mental health and addiction teaching hospital, as well as one of the world's leading research centres in the area of addiction and mental health.

FRANCOPHONE COLLABORATION

The Northern Ontario School of Medicine is committed to fostering connections with Francophone people and communities in Northern Ontario.

In April 2010, NOSM held its third Francophone Symposium in Sudbury. Over 140 participants gathered to explore dimensions of health care related to Francophone populations during the three-day event, which featured a series of presentations and workshops structured around the theme of *Health – A Community Issue*.

Motivational speaker and Cultural Identity Consultant, Lise Paiement, opened the symposium by encouraging participants to create and nurture a Francophone environment within the health system. Keynote speaker, Dr. Gilles Julien, an internationally recognized Social Pediatrician from Montreal, called attention to the need to establish a range of integrated and adapted services to optimize learning paths for children, in part by providing equal opportunity and preventing exclusion.

Additional highlights included a presentation of NOSM's place within Francophone communities, an overview of NOSM's programs, and the official launch of a report, entitled *Francophone Community Engagement: Insight* | *Guidance* | *Action.* The report, which compiles feedback received as the result of consultations NOSM had with Francophone communities across Northern Ontario, recommends enhancements to programs and services offered to Francophones by the School.

MEANINGFUL ENGAGEMENT

COLLABORATION DES FRANCOPHONE

L'École de médecine du Nord de l'Ontario (EMNO) se fait un devoir d'encourager les liens avec les citoyens et collectivités francophones du Nord de l'Ontario.

L'École de médecine du Nord de l'Ontario a tenu son troisième symposium francophone au mois d'avril 2010 à Sudbury (Ontario). Pendant trois jours, plus de 140 participants se sont rassemblés pour explorer des facettes des soins des populations francophones au cours d'une série de présentations et d'ateliers portant sur le thème « La santé – Un enjeu communautaire ».

Lise Paiement, spécialiste de la motivation et consultante en identité culturelle, a ouvert le symposium en encourageant les participants à créer et à entretenir un environnement francophone dans le système de santé. Le conférencier principal, le D' Gilles Julien, pédiatre social de réputation mondiale établi à Montréal, a attiré l'attention sur la nécessité d'instaurer une gamme de services intégrés et adaptés pour optimiser les parcours d'apprentissage des enfants, en partie en leur offrant des chances égales et en prévenant l'exclusion.

Parmi les autres points saillants du symposium figuraient une présentation sur la place de l'EMNO dans les collectivités francophones, un aperçu des programmes de l'école et le lancement officiel d'un rapport intitulé « Engagement communautaire francophone : Comprendre | Orienter | Agir », qui compile des commentaires recueillis lors des consultations dans les collectivités francophones du Nord de l'Ontario, recommande des améliorations aux programmes et services que l'École offre aux francophones.



LA VERSION INTÉGRALE DU RAPPORT SE TROUVE À : WWW.nosm.ca/rapportfrancophone



THE COMPLETE REPORT IS
AVAILABLE AT:
www.nosm.ca/francophonereport

LEARNING FROM EACH OTHER

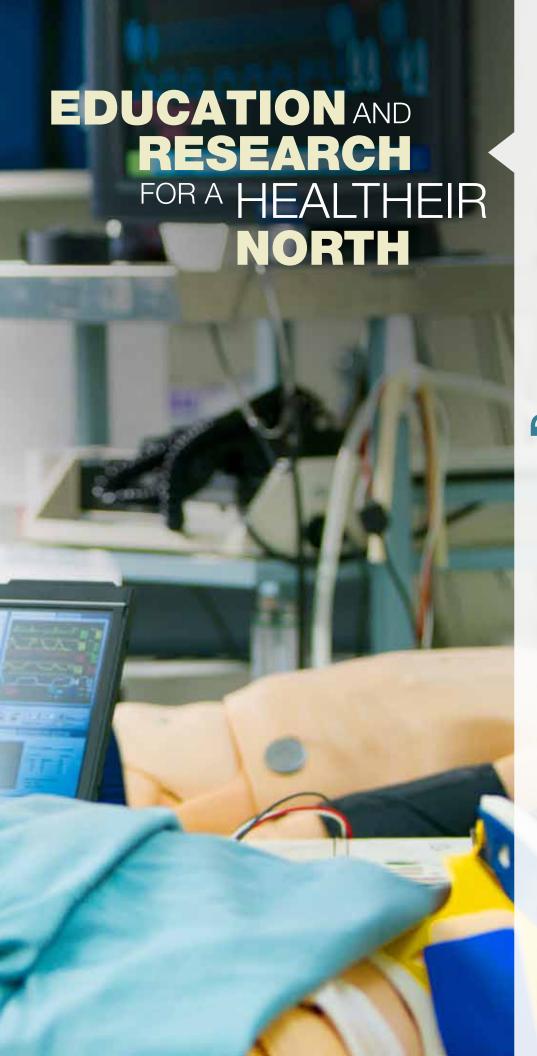
NOSM STAFF AND FACULTY "ADOPTED" BY ABORIGINAL COMMUNITIES

During the last academic year, the Aboriginal Affairs Unit at NOSM launched a pilot "Adoption" program whereby NOSM staff and faculty members increase their cultural knowledge and competency by visiting and living in Aboriginal communities for an extended period of time. While immersed in these communities, the staff and faculty participate in, and contribute to, meaningful community projects.

JOHN FRIESEN







SIMULATION SKILLS SESSION HIGHLIGHT OF CCC RETREAT

NOSM learners, faculty, and staff, nursing students from Canadore College, local high school students, and members of the Parry Sound health-care community gathered in Parry Sound in January 2010 to participate in a Comprehensive Community Clerkship (CCC) Retreat.

THIS IS THE FIRST TIME

we have taken such a large simulation presence into a community setting. The enthusiasm of the learners, teachers, and the many volunteers involved all contributed to ensuring that the experience was a great success.

DR. CHRISTINE KUPSH

NOSM EVALUATIONS COORDINATOR, PGY3 EMERGENCY MEDICINE

An important component of the retreat was a series of clinical skills stations at the West Parry Sound Health Centre that consisted of a range of disaster and emergency response scenarios oriented to Northern Ontario. These simulation skills sessions attracted significant interest from the community, including a visit by the Honourable Tony Clement, MP for Parry Sound - Muskoka.

The CCC Retreat was sponsored by the Northern Ontario Heritage Fund Corporation (NOHFC), Scotiabank, Royal Bank of Canada (RBC), and Parry Sound Area Community Business, and Development Centre, and delivered by NOSM in partnership with West Parry Sound Health Centre and Canadore College.

RELEVANT TO NORTHERN POPULATIONS

"The Northern Health Research Conference demonstrates NOSM's commitment to health care and education to the people of Northern Ontario and beyond. Tackling the questions that will help improve the health of people in Northern Ontario is a key mandate for the research program at the Northern Ontario School of Medicine.

Dr. Greg Ross NOSM Associate Dean, Research

The Northern Ontario School of Medicine held its fifth annual Northern Health Research Conference (NHRC) at Laurentian University in Sudbury in June 2010 to coincide with the University's 50th anniversary celebrations. Over 160 delegates from across Northern Ontario and around the world attended the conference the largest NHRC to date.

Conference highlights included the

"Legislation and Francophone's Health in Ontario: A Challenging Duo," and special guest presentation by Dr. Richard Hays, former Founding Dean of James Cook University School of Medicine in Australia, who emphasized the history of innovation in relation to medicine and challenged participants to capitalize on the opportunities for research in rural health.

PURSUING BEST PRACTICES THAT SAVE LIVES

Research for busy physicians in Northern communities has its challenges, but for dedicated investigators like Dr. Len Kelly, it's a professional requirement. "Physicians may lack the infrastructure and funding support and time, but research is a developmental part of one's clinical career," he says. Kelly, a family physician associated with the Meno Ya Win Health Centre in Sioux Lookout, has invested the last ten years in community-based research with a direct relevance to local populations.

One of his more recent investigations explores the influence that NOSM, FedNor, and the Northern Ontario Heritage Fund Corporation (NOHFC), have had in the creation of a yearlong internship designed to attract and retain researchers, as well as to encourage them to develop skills applicable to their region. Kelly's qualitative studies on First Nations palliative care, traditional birthing practices, and cross-cultural perspectives are also examples of socially accountable endeavours that benefit the patients he serves in Northwestern Ontario.





"NOSM will focus on further developing its research agenda in line with its distributed education model, and continue to broaden the academic experience of its learners, faculty, and staff. These research activities will respect the unique cultural attributes of NOSM's Aboriginal, Francophone, and other culturally distinct partners."

- Excerpt from NOSM's 2010-2015 Strategic Plan

INTERNATIONAL COLLABORATION TO IMPROVE INDIGENOUS

Bridging the cultural divide in the investigation of diseases has been both a passion and a professional pursuit for Dr. Kristen Jacklin, Assistant Professor in the Human Sciences Division at NOSM's East Campus. Since 2005, Jacklin has been the lead investigator in the multiple stages of a diabetes study in the Aboriginal community of Wikwemikong Unceded Indian Reserve on Manitoulin Island.

From the beginning, Jacklin has taken direction from the community's research advisory group. The process of investigation is participatory throughout. Jacklin focuses on community capacity building by training local researchers and on community empowerment by enlisting research participants who are successfully managing their diabetes. Her research is also shaped by bringing together Western and Indigenous ways of analyzing data

Jacklin has recently partnered in a major international collaboration with three Canadian universities, the University of Auckland in New Zealand, and the University of Western Australia in Australia. The five-year project is called "Educating for Equity: Exploring how health professional education can reduce disparities in chronic disease care and improve outcomes for Indigenous populations." As co-principal investigator, Jacklin believes that the project has the potential to improve outcomes for Aboriginal people living with diabetes in Northern Ontario.



VARIOUS NOSM FACULTY RESEARCH PROJECTS **UNDERWAY**

NOSM faculty members research a wide variety of topics, many with a focus on improving the health of the people of the North. The following is a sample of research projects currently underway at the School.

Dr. Jacques Abourbih

Dr. Abourbih's studies include screening for carcinoma of the prostate, implementation of Interprofessional collaboration in Northern Ontario, and developing clinical diagnostic tools that can help family practitioners diagnose and manage mild traumatic brain injury.

Dr. S. Zaki Ahmed

Dr. Ahmed and the Intensive Care Unit (ICU) at Thunder Bay Regional Health Sciences Centre are currently involved in two international multi-centred trials, PROWESS-SHOCK and HELP. Other studies include nutrition in the ICU, use of non-invasive mechanical ventilation, blastomycosis and multi-organ dysfunction and use of intravenous insulin.

Green algae dried on microfilters used to study antioxidants. Dr. Gerry Cooper The Critical Analysis of NOSM's Orientation Effectiveness (CANOE) study explores the hypothesis that joining the medical profession

Dr. Timothy Best

Drs. Timothy Best and Santé Fratesi in Sault Ste. Marie are conducting a clinical research study entitled "Surgical Peripheral Nerve Decompression for the Treatment of Diabetic Neuropathy in the Foot." This is a randomized, single-blind study of 60 patients with painful diabetic neuropathy of the feet not responsive to nonsurgical treatments, to examine the effectiveness of nerve decompression in the leg for the treatment of this disorder.

Dr. Malcolm Brigden

Dr. Brigden, in collaboration with Dr. Marina Ulanova in Thunder Bay, and 23 patients from the Algoma District Cancer Program, enrolled in a study of the Evaluation of the risk of invasive Haemophilus influenzae and Streptoccocus pneumoniae disease in patients with secondary immunodeficiency caused by asplenia or multiple myeloma. Study results are expected in early 2011.

can be daunting with many potential problems for both the novice and the institution. Orientation for the M.D. program at NOSM involves an intense week of social events and travel, and meetings between learners, faculty and the many communities with which the School engages. The research team, comprised of Dr. Cooper, Dr. Rachel Ellaway, Tracy Al-idrissi, Tim Dube, Laura Csontos, and Cathy Schroeder believes that the orientation process at NOSM is a critical step in transforming undifferentiated learners into medical students.

Dr. Rachel Ellaway

Dr. Ellaway's research portfolio spans informatics, medical education, and simulation. Current projects include exploring the technical and educational aspects of integrating simulation devices, tutors and learners at multiple locations to create 'simulation continua', researching aspects of the NOSM M.D. program, communityengaged medical education, and the philosophy of medical education.

Dr. Len Kelly

Dr. Kelly's interdisciplinary research team examined the incidence and outcomes of 480 live births and maternal exposure to narcotics during pregnancy. The findings are now the subject of two peer-reviewed journal articles and have been shared with the regional First Nations chiefs who have identified this as a priority issue.

Dr. Martin Katzman

Dr. Martin Katzman's research deals chiefly with the diagnosis and treatment of mood and anxiety disorders, including pharmacotherapeutic management and cognitive behavioural therapy.

Dr. Neelam Khaper

Dr. Khaper's research is to understand the role of oxidative stress and inflammation in the pathogenesis of cardiac dysfunction subsequent to diabetes, iron overload and hypoxic stress. Other collaborative projects include investigating the role of gasotransmitter and integrin receptor in cardiac redox regulation and inflammation.

Dr. Tom Kovala

Dr. Kovala's projects are focused in two areas. The first area involves studying the regulation of gene expression involved in the formation of blood vessels and the relationship to inflammatory processes in the endothelium. The second area involves the mechanisms by which cancer drugs induce the death of tumour cells.



Interesting Facts About NOSM's Research Laboratories

NOSM's research facilities are shared with academic partners in the North, including universities, cancer centres, and hospitals. Collaboration is key to all research programs, and the interaction of investigators from all of our partner organizations greatly facilitates multi-disciplinary studies. Research facilities at NOSM have been designed with integration in mind. Major infrastructure components are networked within information management systems, offering outstanding efficiencies in the use of technology. Equipment at NOSM's East Campus, for example, can be easily accessed by researchers at NOSM's West Campus, and vice versa. In addition to the value this integration provides funding partners (equipment need not be duplicated) it allows learners to study with academic leaders from a variety of backgrounds and locations.

Dr. Carita Lanner

Dr. Lanner's research is on the genetic mechanisms underlying the development of drug resistance in ovarian cancer, a serious problem contributing to the high mortality rate of ovarian cancer patients. The research team has developed drug resistance ovarian cancer cell lines which can be used to study the genes involved in drug resistance.

Dr. Marion Maar

Dr. Maar's research focuses on Aboriginal health in the area of diabetes prevention and management, as well as cultural safety in mental health with partner communities in Ontario. This year Maar has also provided consultations for Local Health Integration Networks (LHINs) and Health Canada on Aboriginal mental health and addictions services and is collaborating on an international research initiative on Indigenous child oral health.

Dr. Ronald Mahler

Dr. Mahler's clinical research, published in Journal of Cutaneous Medicine and Surgery in 2009, examines the physical, mental, social, and fiancial burdens experienced by Canadians with psoriasis. Results showed that in patients with severe to moderate psoriasis, a four-fold increase in medical and psychological co-morbidities exist.

Dr. Yasser Mohamed

Dr. Mohamed is studying antibiotic therapy. The goal of antibiotic therapy is to achieve the best possible clinical outcomes while consuming the least amount of hospital resources. Health-care systems are under intense pressure to increase the quality of care and at the same time reduce costs. Pressure to reduce the cost of antimicrobial therapy is especially intense because these drugs may account for a large portion of a hospitals pharmacy budget.

Dr. Aaron Orkin

Dr. Orkin is working with the Sachigo Lake Wilderness Emergency Response Education Initiative – a collaboration between community leaders and health professionals to build first response capacity through local training programs in a remote First Nations community. The project seeks to improve local pre-hospital care and investigate how community-based training might contribute to local emergency management capacity in remote settings.

Dr. Deborah Saunders

Dr. Saunders has embarked on two interesting and valuable studies whose correlations could have the potential to impact treatment intervention for head and neck cancer patients. The projects are entitled "Genetic Factors Influencing Nicotine Dependence and Smoking Cessation in Head and Neck Cancer Patients" and "Manuka Honey for Radiation-Induced Oral Mucositis: A Double-Blinded, Randomized Placebo-Controlled Trial."

Dr. Anthony Skehan

Dr. Skehan's trials include: Intraprostatic Botox injection for Benign prostatic hyperplasia (BPH), Finasteride with Tadalafil for BPH, Tanezumab for interstitial cystitis, Intravesical Botox injection for overactive bladder and for neurogenic bladder, Degarelix for BPH, Oral Citrorelix for BPH, Protox injection for BPH, Intravesical Uracyst for interstitial cystitis.

Dr. Zacharias Suntres

Dr. Suntres' research focuses on the design, development, and characterization of nanoscale drug delivery devices for the prevention and treatment of pathological conditions such as infection, lung injuries, and cancer.

Dr. Steve Socransky

The Emergency Department at Sudbury Regional Hospital continues its efforts in producing emergency ultrasound research. The research team includes Drs. Steve Socransky and Ray Wiss, as well as this year's emergency ultrasound fellows, Drs. Martin Betz and Maja Stachura. This year's research projects include comparing distance education to a live course for teaching jugular venous pressure (JVP) assessment using bedside ultrasound, and the comparison of the supraclavicular and infraclavicular approaches for ultrasound-guided central line placement via the subclavian vein route.

Dr. Leslie Sutherland

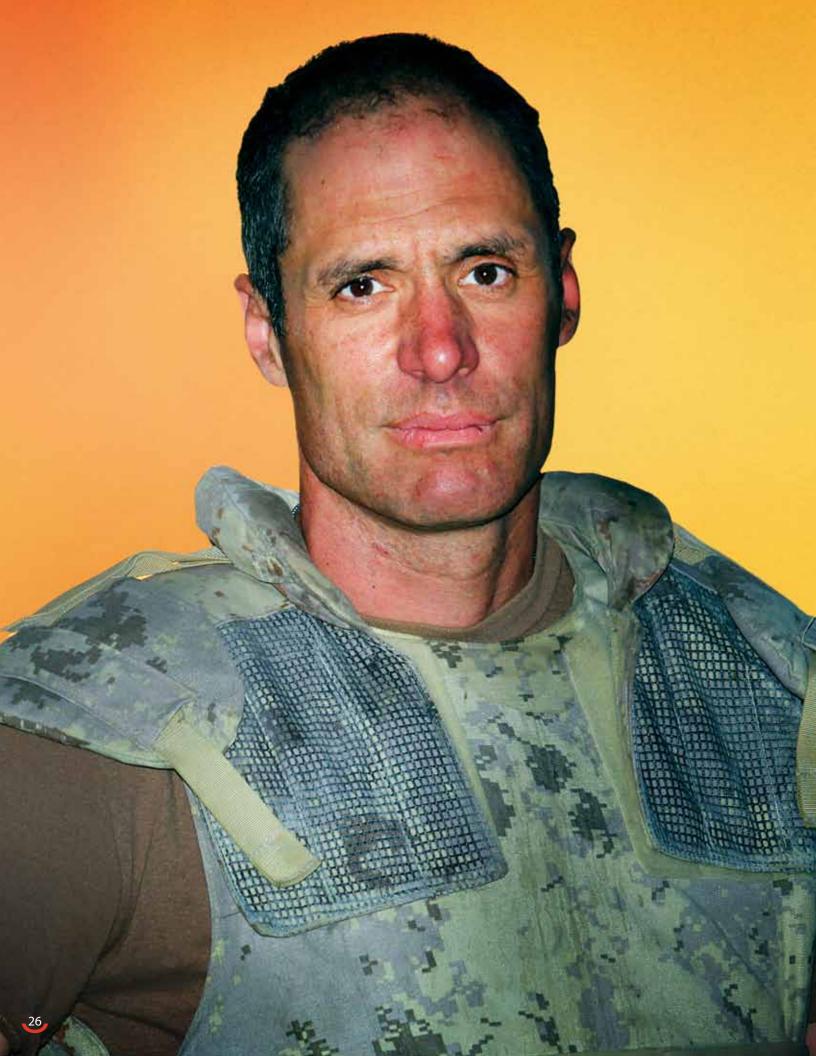
Dr. Sutherland's research program concerns the regulation of cell death by RNA binding proteins. She also has a collaborative research project with Dr. Céline Boudreau-Larivière at Laurentian University, to examine the non-tumour associated function of two RNA binding proteins. This collaboration involves an examination of their involvement in the differentiation of immature muscle cells to mature muscle cells.

Dr. Christopher Winn

Dr. Winn's retrospective review and analysis of the outcomes of the Northern Studies Stream and Rehabilitation Studies programs will gather information from students who participated in the programs from 2002 to 2009 in order to determine the rate of professional recruitment.

Dr. Marina Ulanova

Dr. Ulanova's research interests are in the area of immunology of infections. She investigates: i) innate immune mechanisms against the opportunistic pathogen Pseudomonas aeruginosa and ii) immunoepidemiology of infections caused by Streptococcus pneumoniae and Haemophilus influenzae in Northern Ontario with specific emphasis on secondary immunodeficiency states as predisposing conditions.





COLLECTIVE VISION

Many faculty members of the Northern Ontario School of Medicine participate in international consortia, collaborations, research projects, and health-care experiences.

Sharing knowledge and ideas with their colleagues and peers, and working to build important networks of expertise, NOSM faculty contribute to a world community committed to the principles of socially accountable and community-engaged medical education and research.

PRIME MINISTER PAYS TRIBUTE TO NOSM PROFESSOR

IT IS TO THE MEN AND WOMEN, like Dr. Wiss, who have answered the call to such service, that we owe so much of the peace and prosperity we enjoy

to this very day.

The Right Honourable **STEPHEN HARPER**

Prime Minister of Canada April 7, 2010

Prime Minister Stephen Harper attended an event in Sudbury in April 2010 to honour NOSM Associate Professor, Dr. Ray Wiss, for his contribution to the provision of medical and military service in Afghanistan.

"Dr. Wiss put more time in a combat area than any other physician since the conflict in Afghanistan began," the Prime Minister said. Wiss, a Sudbury-based emergency physician, has completed two tours of duty as a medic in the Canadian Forces and is the author of FOB Doc, A Doctor on the Front Lines in Afghanistan and A Line in the Sand: Canadians at War in Kandahar. These were the best-selling military books in Canada in 2009 and 2010 respectively.



FACULTY MEMBER DELIVERS KEYNOTE ADDRESS TO INTERNATIONAL AUDIENCE

In February 2010, NOSM Associate Professor of Physiology, Dr. David MacLean, presented a keynote address at the 11th Annual International Repetitive Strain Injuries (RSI) Awareness Day event. MacLean engaged participants by drawing attention to the structure, function, and various influences that affect muscle physiology, as well as to the overall implications of muscle physiology for the workplace environment.

The lecture was delivered as a faceto-face session to event participants in Sudbury, and was broadcast live from the eDome at Cambrian College to sites across Canada, the United States, and several other countries around the world.



FACULTY PROVIDE MEDICAL STUDENTS WITH GLOBAL PERSPECTIVE



Parry Sound's Local NOSM Group is taking a global approach to their Comprehensive Community Clerkships (CCC). Drs. Dave Clarke,

Brad Hunkin, and Maureen Thompson took third-year NOSM medical students Kristine Woodley and Amber Bacenas to San Marcos, Nicaragua in April 2010 to experience working in a developing country where they would challenge their clinical skills and diagnostic abilities with limited resources.

The working visit to Nicaragua was an opportunity for these future physicians to gain an international perspective on health. Physicians in Parry Sound believe exposure to the determinants of health as they apply in a developing nation lay the foundation for compassionate Northern physicians. This was the third annual trip to involve third-year medical students in an international medical experience.

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PARRY SOUND was an amazing community in which to complete my CCC, and the opportunity to travel to Nicaragua added to the adventure and learning that comes with NOSM's third-year clerkship. Nicaragua provided me with a chance to learn about the practice of rural medicine in another country. Working with a multidisciplinary team that included translators allowed me to gain new skills and techniques in collecting and providing information to patients, as well as diagnosing and treating common conditions.

KRISTINE WOODLEY ENTERING CLASS 2007

6xcellence

The 2010 NOSM Awards of Excellence were presented to NOSM learners at a Board of Directors dinner held in Sudbury, Ontario in December 2010. Award recipients were assessed and selected from an impressive list of nominees chosen by their peers.

As well, Awards of Excellence were given to outstanding NOSM Faculty and Preceptors, as selected by the School's undergraduate medical students.

Faculty/Preceptor Awards of Excellence recipients: Learner Awards of Excellence recipients:

Dr. Yvon Gagnon Dr. Tom Kovala Dr. Richard Kvas Donna Newhouse Louisa Marion-Bellemare Tiffany Parsons Allison Sweeney Zachary Veitch





CANADIAN FEDERATION OF MEDICAL STUDENTS AGM

HOSTEDBYNOSM STUDENT SOCIETY

The NOSM Student Society hosted the Canadian Federation of Medical Students (CFMS) Annual General Meeting in Thunder Bay in September 2009.

Over 100 delegates representing all the medical schools in Canada came together for a conference focusing on many topics including distributed medical education, rural health and rural medical education, and global health.

NOSM Dean, Dr. Roger Strasser, provided the welcome address at the convention, encouraging CFMS members to continue advocating for high quality medical education which not only meets their needs, but also prepares all Canadian medical graduates to have the necessary knowledge and skills to be responsive to the needs of the people and communities they serve.

NORTHERN TRAINING BENEFITS CITIZENS IN GUYANA

Medical residents at NOSM are not only gaining skills from their training in the rural and remote communities of Northern Ontario, but also sharing their knowledge and experience with others around the world. Dr. Sara Kalechstein, a third-year general surgery resident, recently participated in a surgical elective in Georgetown, Guyana. During her three-week rotation with Guyanese and Canadian surgeons, she was engaged in a variety of learning experiences. "The scope of practice of a surgeon in Guyana is quite a bit more extensive than a typical surgeon in North America, as most general surgeons also work in orthopedics, urology, thoracics, neurosurgery, and even obstetrics and gynecology," explained Kalechstein. She believes that the most fulfilling part of her elective was learning from, and teaching new skills to, the Guyanese residents. As for the patients she encountered, she believes that she relied on the training obtained in Northern Ontario for her ability to understand the Guyanese citizens she helped treat. Some citizens wait until their ailment is quite advanced before seeking medical assistance. "My Northern Ontario education prepared me well for this experience," said Kalechstein.

M.D. HOODING CEREMONIES

MARKING THE TRANSITION TO PHYSICIAN

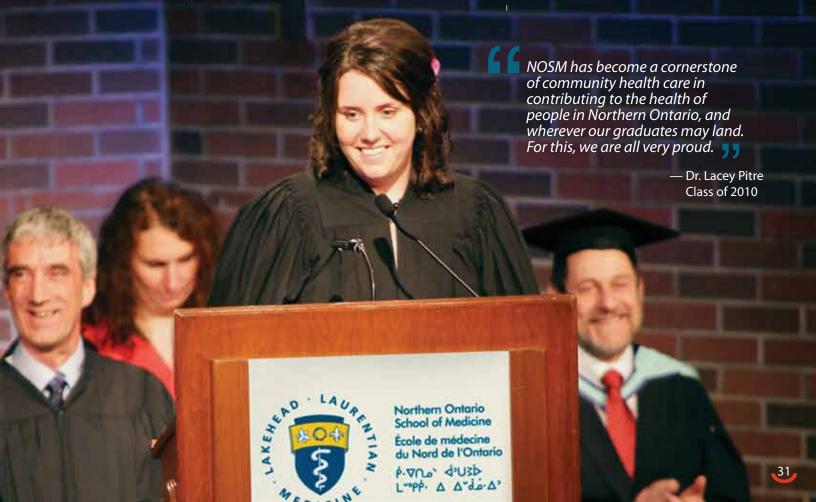
Graduating medical students and faculty members were joined by family and friends for their ceremonial transition from medical student to medical professional at Hooding Ceremonies held in Thunder Bay on May 28, 2010 and Sudbury on June 3, 2010.

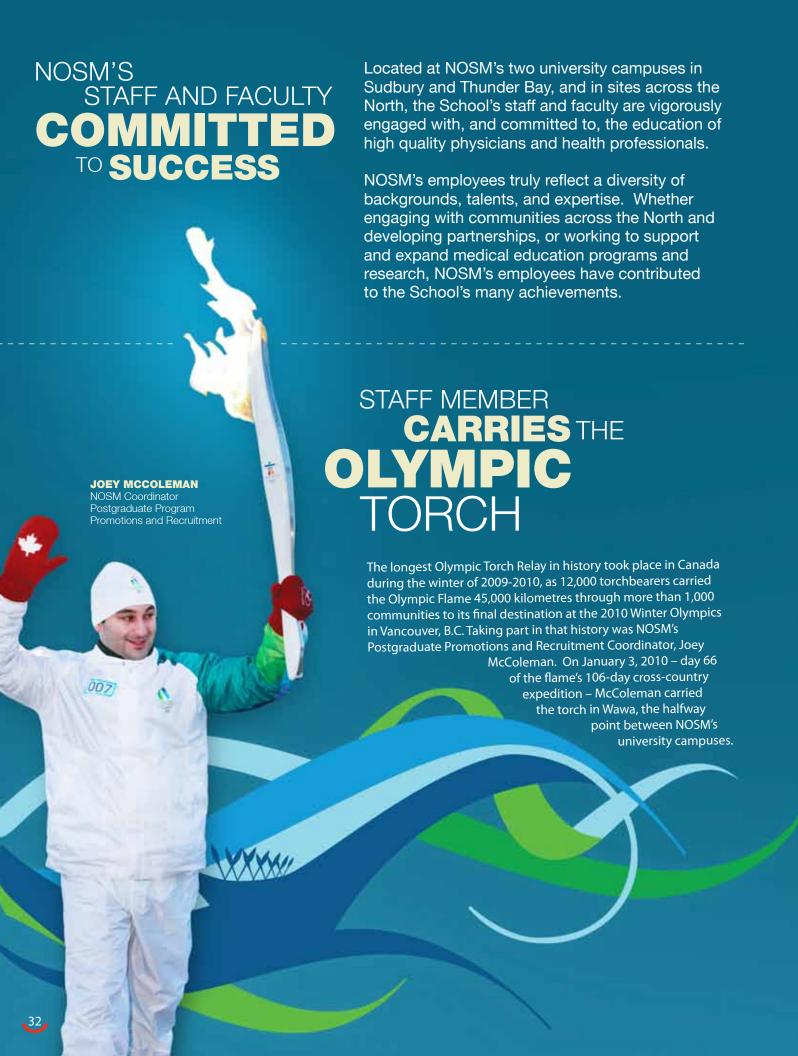
Dr. David Hawkins, former Association of Faculties of Medicine of Canada (AFMC) Executive Director and Secretary of Committee on Accreditation of Canadian Medical Schools (CACMS), was the guest speaker for the West Campus students' very moving Hooding Ceremony, which included taking the Hippocratic Oath. The East Campus Hooding Ceremony included guest speaker Dr. James Rourke, Dean of Medicine at Memorial University in Newfoundland.



NOSM LEARNERS OUR FUTURE HEALTH PROFESSIONALS

In June 2010, a second cohort of M.D. students and Family Medicine Residents of the Canadian Shield (FM RoCS) completed their medical education and training at NOSM. A third class of dietitians enrolled in the Northern Ontario Dietetic Internship Program also graduated in August 2010.





NOSM AND OPSEU STAFF UNIT REACH FIRST COLLECTIVE AGREEMENT The Northern Ontario School of Medicine is pleased to have reached a first collective agreement with the Ontario Public Service Employees Union (OPSEU) Staff Unit in 2010. Approximately 150 staff members work in office, clerical, administrative, technical, and service positions across Northern Ontario. These employees are valued and contribute greatly to the success of NOSM. The School appreciates the patience shown by its many valued partners and stakeholders during last year's labour disruption.





COMMUNITY-BASED TEAMSENCOURAGING DONATIONS

FUNDRAISING TO SUPPORT NOSM LEARNERS, RESEARCH, AND SPECIAL PROJECTS

The **Dean's Solicitation Team** (DST) is a new initiative at the Northern Ontario School of Medicine created to encourage charitable donations from individuals, groups, and companies across Northern Ontario. Each DST is community-based and made up of dynamic, local individuals who are able to assist NOSM's fundraising initiatives in support of financial aid to learners, research studies reflective of the health concerns of Northern Ontario, and other financial priorities identified in NOSM's 2010-2015 Strategic Plan.

The search has begun for individuals to join one of the teams being established in our Comprehensive Clerkship Communities. For more information, or to join one of our local teams, please contact NOSM's Advancement Unit at 1-800-461-8777.

NEW CHARITABLE STATUS SIMPLIFIES DONATION PROCESS

NOSM has been granted its own charitable registration number. This new charitable status simplifies the donation process and empowers donors with a diversity of investment choices. Supporters may contribute to learner bursaries in accordance with personal preference, or invest in additional NOSM initiatives, such as research and other special projects important to the health of the people of Northern Ontario.

BANKING ON OUR FUTURE

50,000

= 200

J = 50

NUMBER OF DONORS

†††††††††††††††††**1**,182

TOTAL BURSARY DOLLARS AWARDED



\$504,056

FUNDS RAISED IN 2009/2010

NUMBER OF † 191

AVERAGE BURSARY AMOUNT **\$6,841**

TOTAL NUMBER OF NAMED AWARDS



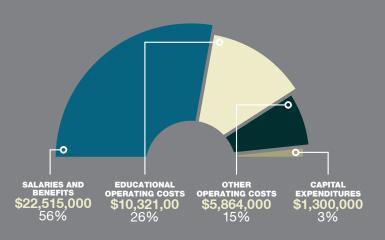


THRIVING IN A CHALLENGING ENVIRONMENT

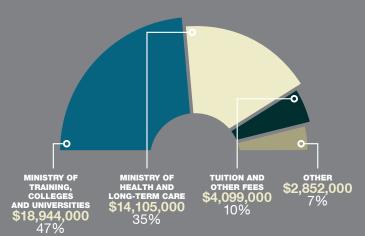
In 2009-2010, NOSM entered the world of fixed formula based funding. This means that, like every other University across Canada, revenues correspond directly to the number of undergraduate and postgraduate learners enrolled. NOSM, as with most public sector organizations in the province, is operating in an environment which is facing significant fiscal pressures and structural funding challenges.

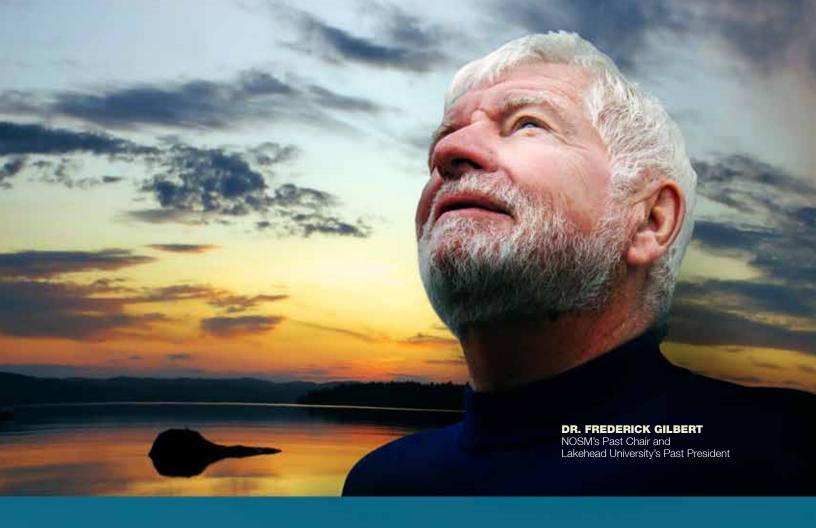
NOSM is prepared to meet this challenge head on and has already implemented a multi-year financial framework that will allow the School to manage the structural deficit and support NOSM's priorities in the near future.

APPROVED BUDGET EXPENDITURES



BUDGETED SOURCES OF FUNDING





HOSTS BOARD RETREAT

BOARD MEMBERS PAY TRIBUTE TO DEPARTING CHAIR, DR. FREDERICK GILBERT



The 2010 Board Retreat was held in Elk Lake in May 2010, where Board Directors paid tribute to their departing Chair.

Members participated in a special ceremony to recognize Dr. Frederick Gilbert, Past Chair of the Northern Ontario School of Medicine's Board of Directors and Past President of Lakehead University, for his exceptional leadership and commitment to the Northern Ontario School of Medicine.

While serving two terms as NOSM's Chair of the Board of Directors and one term as Vice Chair, Dr. Gilbert presided over landmark developments at NOSM, and was acknowledged by the Board for his significant part in the creation of the School and his role in NOSM's mandate to contribute to improving the health of the people and communities of Northern Ontario.

The 2010 retreat, held at the Elk Lake Eco Resource Centre (shown left), included several presentations and interactive sessions on the topics of NOSM's strategic plan, regional hospitals becoming academic centres, and the role of the Board Directors.

NOSM Board Members also enjoyed visits to the Temiskaming Hospital and the Centre de santé communautaire du Témiskaming.

NOSM'S BOARDOF DIRECTORS



*One Seat Vacant

DR. BRIAN STEVENSON

Chair, Thunder Bay President, Lakehead University

DOMINIC GIROUX

Vice Chair, Sudbury President, Laurentian University

DR. ROGER STRASSER

Secretary, CEO and Dean, NOSM

DR. CHRIS

Thunder Bay

DR. JEAN

ANAWATISturgeon Falls

TRACY BUCKLER

Thunder Bay

FRANCINE CHARTRAND-DUTRISAC

Sudbury

RON CHRYSLER

Sudbury

DR. ROGER COUTURE

Sudbury

HELEN CROMARTY

Sioux Lookout

DEREK DEBASSIGE

M'Chigeeng

DR. GEORGE DOIG

Thunder Bay

JACKIE DOJACK

Thunder Bay

JIM GORDON

Sudbury

FABIEN HÉBERT

Hearst

ARIE HOOGENBOOM

Dryden

AUSTIN HUNT

Kagawong

DR. LORI LIVINGSTON

Thunder Bay

DR. PETER HUTTEN-CZAPSKI

Haileybury

NEIL MACODRUM

Greenstone

DR. NEIL MCLEOD

Thunder Bay

DR. DERMOT

Sioux Lookout

DR. BILL MCMULLEN

Sudbury

PAUL MIRON

Sudbury

DR. ADAM MOIR

Thunder Bay

ROSIE MOSQUITO

Thunder Bay

MICHAEL S. O'NEILL

Sault Ste. Marie

DR. CLAIRE PERREAULT

Sudbury

ANGELA RECOLLET

Sudburv

CAROLYN SINCLAIR

Sudbury

DR. TODD SPENCER

Sudbury

LOU TURCO

Sault Ste. Marie

BRIAN WALMARK

Thunder Bay

JESSE ZROBACK

Thunder Bay

Departing Board Members in 2009/2010

Dr. Frederick Gilbert, Past Chair

Dr. Gratien Allaire

Dr. John Augustine

Liliane Beauchamp

Dr. Sheila Cote-Meek

Dr. Tyler Christie

David Harris

Goyce Kakagamic

Maureen Lacroix

Elizabeth Moore

Dr. James Taylor

Dr. John Whitfield



Clerkship (CCC)

Third-year medical students spend eight months completing the CCC in a host community in Northern Ontario.

Clinical Clerkships

Fourth-year medical students undertake six core rotations in a twelve month period at the hospitals in Sudbury and Thunder Bay.

Residency training at NOSM occurs at distributed learning sites throughout Northern Ontario.

Northern Ontario Dietetic Internship Program (NODIP)

Year-long internships are completed in one of five primary sites throughout Northern Ontario and the North Simcoe Muskoka area.

Physician Assistant Program (PA)

PA students undertake 40 weeks of supervised clinical rotations in rural and urban settings throughout Ontario.

the province, is geographically kilometres, about the size of Germany and France combined; nevertheless, it has a relatively small population of only 840,000.

Sixty percent of the population lives in rural and remote communities within diverse communities and cultures including Aboriginal, Francophone (French speaking), and Englishspeaking peoples.





Northern Ontario School of Medicine

École de médecine du Nord de l'Ontario

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East Campus

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Tel: 705-675-4883 Fax: 705-675-4858

West Campus

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Tel: 807-766-7300 Fax: 807-766-7370