



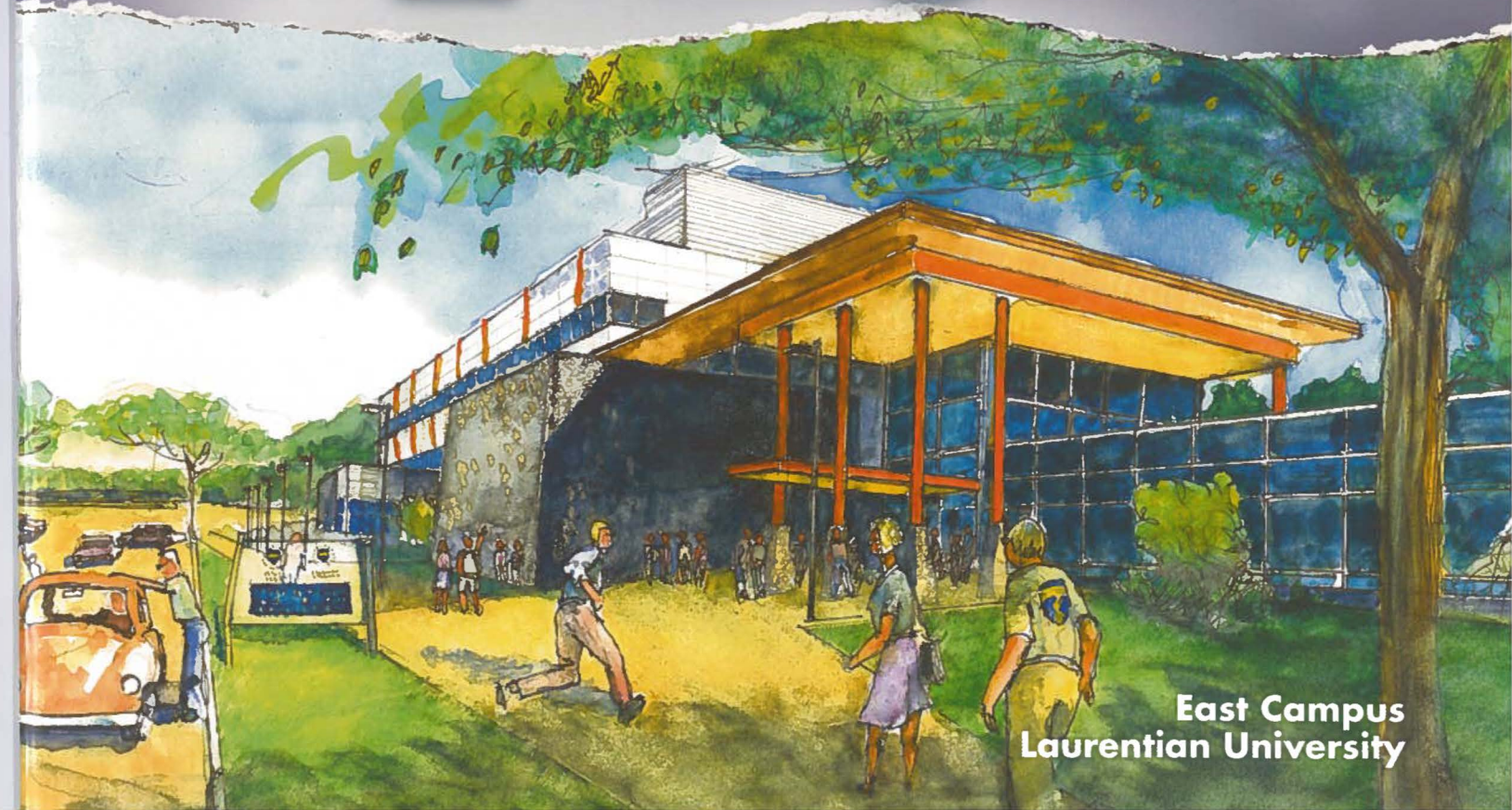
West Campus
Lakehead University



Northern Ontario
School of Medicine

Breaking new ground for a healthier Northern Ontario

Inaugural



East Campus
Laurentian University

Leave a Legacy



On May 31st, 2005, Northern Ontario School of Medicine (NOSM) Founding Dean Dr. Roger Strasser and Associate Dean of Admissions and Student Affairs Dr. Jill Konkin delivered precious cargo to Canada Post Mail Carrier Joan Stevens: letters of acceptance addressed to 56 of the applicants to the School.

Dr. Konkin was in charge of establishing the School's selection and admissions process. The method chosen, developed by McMaster University, involved a circuit of ten, 10 minute mini-interview stations through which potential students would rotate. The interviewer at each station was a community volunteer who had also gone through a selection process!

NOSM's choice of an innovative selection process proved to be successful when one considers that from a field of nearly 2,100 initial applicants, a group of 56 Charter Class students were chosen within a few short months. Of the Charter Class -- 32 students on the East Campus

at Laurentian University in Sudbury, and 24 on the West Campus at Lakehead University in Thunder Bay, fully 80% have lived in Northern Ontario for ten years or more. Truly, NOSM's Inaugural Year students are playing a lead role in "breaking new ground for a healthier Northern Ontario".

In addition, the success of the School's Northern Ontario Bursary Fund has allowed NOSM to live up to its policy that no student shall be denied admission to a medical school due to a lack of finances. Too often Northern students have been reluctant to apply to medical schools outside the North because of cost. Thanks to the Bursary Fund, students like Nicole St. Jacques can pursue their dream of becoming a physician.

Your contribution to the Bursary Fund will assist other NOSM students. Please donate now.

"I deeply and sincerely thank those who have helped create and are thinking of donating to the Northern Ontario School of Medicine Bursary Fund. These generous donations from individuals, companies and community groups will greatly help to relieve the financial stress that we medical students face. It is not only financial aid which I would like to thank you for; it is also the support and encouragement it signifies. To have the community make such an investment in my future is truly touching and in return I promise to work my hardest and dedicate myself to serving the people of Northern Ontario throughout my studies as well as in the future."

- Nicole St. Jacques, Charter Class Student



Northern Ontario
School of Medicine

Be a part of **history**. Contribute to the **future**.

The Northern Ontario School of Medicine
Bursary Fund

For further information or to contribute, call 705-675-1151
ext. 3452 or 807-766-7310 or visit www.normed.ca

www.normed.ca



Northern Ontario
School of Medicine

Welcome to our Inaugural

Dr. Roger Strasser
Founding Dean, Northern Ontario School of Medicine



Whether you're simply reading this magazine, or attending our Grand Opening Ceremony, or partaking in the myriad of other events planned for the Inaugural Year of the Northern Ontario School of Medicine (NOSM), all of us here at the School hope you'll catch the spirit of this once-in-a-lifetime event.

The term "historic" may be overused these days, but in this case it truly applies. NOSM is just the sixth medical school in the province of Ontario, and the seventeenth in all of Canada. We are the first new medical school in Canada in a generation; the first to open its doors in more than 30 years.

After our Grand Opening on Sept. 13th, 2005, we will also become, for a few months at least, the newest medical school on the planet. And, as a frequent participant in global conferences devoted to rural health education, I can tell you that the whole world is watching developments here in Northern Ontario.

Our social accountability mandate; our reliance upon the North's far flung communities; our twin campus sites; our use of state-of-the-art technology to deliver curriculum; our commitment to the region's Aboriginal and Francophone communities; and our dedication to pioneering innovation and research truly make NOSM "a medical school like no other." My dictionary defines the act of inauguration as "to begin or initiate under favourable or auspicious circumstances or with ceremony; to commence or enter upon (esp. something beneficial); to set in motion." Could any other two dozen words better describe what our School's Inaugural Year means for the people of Northern Ontario and the province as a whole?

It's my hope that we can be celebratory over the course of this year without being overly self-congratulatory. Not because the fabulous team that has moved NOSM from dream to reality over such a short timeframe doesn't deserve approbation, it most certainly does; but because the Northern Ontario School of Medicine stands upon the shoulders of so many other institutions and individuals.

I think especially of McMaster's Northwestern Ontario Medical Programme or NOMP, and the Northeastern Ontario Medical Education Corporation or NOMECE, affiliated with the University of Ottawa. These medical education networks enabled NOSM's decentralized curriculum delivery by organizing hundreds of physician preceptors across Northern Ontario. These doctors, tempered in the

flame of Northern practice and by now veteran mentors, will prove absolutely essential to our success in the years to come.

I think, too, of the two universities that have hosted NOMP and NOMECE, Lakehead and Laurentian, respectively. Their names are ensconced on our School crest, and without them there would be no NOSM. Lakehead President Dr. Fred Gilbert and Laurentian President Dr. Judith Woodsworth have worked long and hard to make the School a reality; this is their Year, too. A special thank you as well to the 35 distinguished Northerners who have agreed to serve on our Board of Directors.

One names more names with trepidation; the full roster would fill this entire magazine, much less this page.

But I must single out several of the School's most senior administrators for special mention. Our Vice Dean, Academic Activities, Dr. Dan Hunt, has brought invaluable experience and wisdom from his long tenure at Seattle's University of Washington School of Medicine to this start-up project. Dorothy Wright, NOSM's first, and so far only, Chief Administrative Officer, is the living embodiment of Ernest Hemingway's dictum that "courage is grace under pressure." And Dr. Jill Konkin, Associate Dean, Admission and Student Affairs, and her team performed brilliantly in recruiting the School's first or Charter Class of incoming students.

Special credit must go, too, to a much maligned species: the politicians of the Ontario and federal governments. In a profession where a career might last only a few years, the leadership of all three Ontario political parties has given unwavering support to an undertaking that will cost more than \$200 million and require a full decade before producing its first practising physician. This is true foresight and commitment to the public interest.

Finally, I must acknowledge my life partner, Dr. Sarah Strasser, and our children Rupert, Jeremy, Bridget, Douglas and Felicity for their willingness to uproot their lives in Australia to allow me to help make NOSM a reality.

So, let's pause, reflect, celebrate and enjoy the arrival of NOSM's Inaugural Year. We are now one giant step closer to achieving our great, overarching collective goal: improving the health care of each and every resident of this wonderful region we call Northern Ontario. ▲

MISSION STATEMENT



**Northern Ontario
School of Medicine**

The Northern Ontario School of Medicine (NOSM) is a pioneering faculty of medicine working to the highest international standards. Its overall mission is to educate skilled physicians and undertake health research suited to community needs. In fulfilling this mission NOSM will become a cornerstone of community health care in Northern Ontario.

**École de médecine du Nord
de l'Ontario**

L'École de médecine du Nord de l'Ontario (EMNO) est une pionnière en son genre et répond aux plus hautes normes internationales. Sa mission générale consiste à former des médecins qualifiés et à entreprendre de la recherche en santé fondée sur les besoins de la communauté. En s'acquittant de cette mission, l'EMNO deviendra une pierre angulaire des soins de santé communautaire dans le Nord de l'Ontario.

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Mayors' Messages



Lynn Peterson

Congratulations to the students, faculty, staff and Board of Directors on the occasion of the inaugural year of the Northern Ontario School of Medicine. On behalf of City Council and the citizens of Thunder Bay, I am pleased to offer a special welcome to the members.



This is a celebration for all of Thunder Bay and Northern Ontario. In Thunder Bay, we have an expanding sense of community pride that comes from a series of remarkable achievements including the new hospital, new Advanced Technology & Academic Centre, new aviation training facility and now, the new Northern Ontario School of Medicine – Canada's first new School of Medicine in more than 30 years.

Our pride in this new facility and its people is amplified by the fact that the School was developed in Northern Ontario by Northern Ontario for Northern Ontario. The School resulted from a group of people from across Northern Ontario coming together in support of a Made in Northern Ontario solution to physician shortage. Future physicians who work and study in the North are more likely to choose to live in the North following graduation.

This unique Pan Northern School will reflect the diversity and geography of Northern Ontario. The school will attract the best and brightest students from Northern Ontario and around the world, and it will feature advanced technology to keep faculty and students connected, sometimes across thousands of kilometres.

Health and Education are key economic drivers for Thunder Bay. The new School of Medicine will enhance this impact, drawing new people to Thunder Bay and creating new research and development opportunities.

As a community, and as a region, we take great pride in the new Northern Ontario School of Medicine as you mark your inaugural year.

Congratulations on your success and all the best for continued excellence.
Sincerely,

Lynne Peterson

Lynn Peterson, Mayor - City of Thunder Bay



A dream becomes reality!

The Northern Ontario School of Medicine is like no other. Anchored in two great Northern communities – Greater Sudbury and Thunder Bay – with links, both fibre optic and human, to scores of other communities – it is a research centre created by Northerners, for Northerners; open to the world.

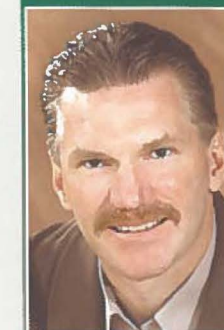
This joint venture of Laurentian and Lakehead Universities mirrors who we are and where we live – in rural, urban and sometimes isolated communities, with significant Francophone and Aboriginal populations. It addresses our aspirations for the future – career opportunities for our young people; retaining doctors in our communities; better health care; better health. It reflects our values and our way of life – the importance we attach to teamwork; our love of community. It showcases our capacity for innovation – our use of information technology to connect with one another; to connect with the world. We have many to thank for this new and vital resource – our medical professionals, for seeing a better way to safeguard our health; our educators and community leaders, for making sure Northerners have the same benefits and opportunities as those who live in the South; the members of the school's Board of Directors, for their vision and stewardship; the School's faculty and first students, for leading the way.

Together, these and countless other groups from across our region have worked together to build an institution that will serve the citizens of Northern Ontario for generations to come. And they've done so in a manner that's distinctly Northern – with the determination of a frosty winter; with the clarity of a wilderness lake; with the strength of the Canadian Shield.

On behalf of the citizens of the City of Greater Sudbury, kudos to you and to those who will follow in your footsteps. Best wishes.

17/11/11

Dave Courtemanche, Mayor - City of Greater Sudbury

**Dave Courtemanche**

Dawn of a New Era

The Northern Ontario School of Medicine owes much to the visionaries who first imagined it: retired Laurentian University professor and administrator Geoff Tesson, distinguished Thunder Bay physician emeritus Dr. John Augustine, and Deputy Grand Chief Goyce Kakegamic of the Nishnawbe-Aski Nation recall the beginning in conversation with *Inaugural's* Mick Lowe.



DREAMCATCHERS: (left to right) Goyce Kakegamic, Geoff Tesson, Dr. John Augustine

Alfred Boyd Photographer

M.L. I would like to start with Dr. Augustine, because I suspect his memory of this project is the longest. Tell us, what is the earliest conversation you can remember having about the need for a medical school in Northern Ontario?

J.A. The very first indication I had was back in 1968 when they were opening McMaster Medical School. Glenn Sawyer, the well known secretary of the Ontario Medical Association, contacted the Thunder Bay Medical Society because they were looking around for a possible sixth medical school, way in

the future, of course. So the then President of the Thunder Bay Medical Society got in touch with me and asked me what I thought. I said: "Well, gee it sounds interesting."

So this filtered around for a while and in the spring of 1969 we actually held some meetings and wrote some letters and phoned around. But of course nothing really came of it.

M.L. Can you quickly run forward through the 1970's and 1980's as to what transpired?

J.A. Out of our three meetings held in the spring of 1969, we got in touch with John

Evans, the first Dean of McMaster Medical School, whom I happened to know from my post-graduate training in Toronto in the 1950s. As you may know McMaster Medical School had a lot of young innovative medical faculty. They were looking for outlying areas for their undergraduate students to gain some real hands on experience.

Out of this arose the Northwestern Ontario Medical Programme (NOMP). I was appointed the first chair of this plan, whereby undergraduate medical students and some post-graduate medical students would come for one month to two or three months and work in Northwestern

Ontario. It became very, very successful.

Well along came Robert McKendry, in August 1999, appointed by the then Ontario Minister of Health, Elizabeth Witmer. He had 37 suggestions on how to improve medical care in Ontario, one of which was to develop a new medical school. Of course, that fell on eager ears in both Sudbury and Thunder Bay and that is how we came onto the stage.

M.L. Now McKendry, there's a name that resonates, even for a casual follower of the news. Though by the time that commission was appointed, people at Laurentian Univer-

sity in Sudbury had been in this game for some years, am I right, Geoff?

G.T. Well, picking up the story from John, we did not have quite the length of history, but in the early 1990s when the family medicine residencies were established to develop residencies in Northern Ontario, that led to the development of the Northeastern Ontario Medical Education Corporation, NOMECE, through the University of Ottawa. I sat on the NOMECE board so I saw a huge growth in interest in medical education amongst a network of doctors throughout the North. All of the doctors who were taking stu-

dents got interested in medical education. Historically, doctors have always seen, as part of their function, to teach as well as to deliver health care, and I think Northern doctors took that very seriously. I think the success of those early programs was a tremendously important stimulus.

M.L. Geoff, we should say that at your initial appearance on the board of NOMECE, presumably you were a representative of Laurentian University?

G.T. I was, and it is interesting that in those early days the connection between the physi-
continued on page 8

continued from page 7

cian community and the university was not very close. Doctors are fiercely independent people and so part of my job was to build a bridge between the university and NOMECE. Medical schools are not like any other university programs. They are managed through the academic setting, but to a large extent, most medical education takes place outside of your institutional walls such as in your clinical context, in community hospitals, or major hospitals that are outside of the university. I came to understand that the right relationship between the university and the medical community was important in building confidence, that we could do this in the North and we could do it right.

J.A. That is a very important point Geoff, because the attitude in the 1960s and 1970s in the medical, educational sphere was 'What could a student possibly learn from a doctor in Sudbury or Thunder Bay?' The medical schools were the repository of all knowledge. It brings to mind that we had a Chief of Surgery at the University of Toronto and at the Toronto General Hospital in the mid-1960s who was called upon at a coroner's inquest and one of his statements was: "Well north of 401, there really is no competent medicine performed in Ontario."

G.T. Fighting words!

J.A. Which were fighting words indeed! But the attitude has all changed for the better today.

M.L. Goyce Kakegamic, you come from communities very far north of the 401. Tell us about your initial involvement with the medical school, and why it is so important from where you sit?

G.K. First Nation communities in Northwestern Ontario I think are some of the most underserved citizens in Ontario. In our communities we have no resident doctors whatsoever. We do have nursing stations in some areas, but some of them do not even have a nursing station or nurses resident. We are struggling with a high rate of diabetes and high rate of suicides, which dramatically exceeds national averages. Since 1987, we have lost close to 300 of our young sons and daughters to suicide.

We believe that access to medical attention in our communities is decreasing. I believe the shortage of doctors and professional specialists is one of the reasons why



that is happening. Our people do not even have the basics that we take for granted here. Canada likes to take pride in itself as one of the best countries to live in and yet if these same standards, which the United Nations uses to determine that Canada is one of the best countries in the world to live in, were applied to First Nations in Northwestern Ontario, our country would be more rated with the Third World countries. The lack of health care would be one of the key factors.

I do not think it is too strong of a statement to make that many lives in First Nations in our territory and even in the Northwestern Ontario communities will depend on the availability of qualified doctors and specialists. That is one of the reasons why we got involved in it as the Nishnawbe-Aski Nation (NAN), in the dream of a medical school in Northwestern Ontario. We took a proactive role to ensure that a Northern Medical School becomes a reality, a real Northwestern Ontario school in Thunder Bay. We were thrilled that Thunder Bay became a part of it.

M.L. What would you like us to touch on for posterity?

G.T. I have one thing that I would like to talk about as someone who is not involved anymore. I am full of admiration for the amount of work that has been done since the early days, and I am looking at my schedule here. They established in the fall of 2001 the



Implementation Management Committee whose task it was to produce a business plan and at that point we set the wheels in motion of hiring the first Dean. So in April and May 2002, Roger Strasser was brought on board. He did not actually get here until August 2002. If you think August 2002 and we are now in August 2005, that is three years putting a whole new staff, putting a whole new curriculum together and getting the school up and running, that is astounding. I think that all of the people that were involved in that deserve a great deal of credit.

M.L. Goyce, if I ask you to name some of the people whom you think deserve recognition in making this dream, as you put it, a reality, who comes to mind?

G.K. I have to echo Geoff's comment on Dr. Strasser. I think a lot of credit and acknowledgement has to go to Dr. Strasser for making this dream a reality through his leadership. Of course, right now he has excellent staff and we are working with vibrant board members.

G.T. I want to reflect a little on some of the people I think have been really key. I have learned a huge amount from physician educators that I have encountered in this process. First of all, Dr. John Augustine opened up doors for us that brought a depth of experience to our early work that was extraordinary-

ly helpful. For myself personally I learned a great deal from a couple of Sudbury doctors, Dr. Bill McMullen and Dr. John Mulloy. Dr. McMullen led to the development of NOMECE and was a key figure in driving forward this process through from the Sudbury end at least in getting a sense that yes; physicians in Sudbury could become a medical faculty.

Miriam Macdonald of NOMECE was a huge eye opener to me to see how much could be done and how proud people become of making things work. When we actually developed the proposal for the northern school, we got some excellent advice from Jim Rourke. Jim was a faculty member at that time at the University of Western Ontario and was a leading figure in the Canadian rural health scene. He was a leading advocate of rural medical education. He ran a program out of Western. He influenced us enormously, in fact he wrote a lot of the key components of the medical education parts of the proposal we put into the expert panel. He and Tom Scott were advisers to us, so they put in a lot of work and gave us, I think, the orientation towards rural medical education that Roger has now taken up and that represents his area of expertise.

Also, I worked very closely with John Whitfield who was my counterpart at Thunder Bay. And I know that two Chiefs of Staff at the hospitals, David Boyle from Sudbury Regional Hospital and Blair Schoales from Thunder Bay were enormously helpful in pushing this forward.

Last but not least, there were some politicians who did this. You have to give credit, whatever your political stripe, to Mike Harris' government for taking what at the time was a pretty bold step. His government did that and it may have been an issue close to Mike Harris' heart. His Minister of Health at the time, Elizabeth Witmer, and her successor, Tony Clement, took a step that not many other jurisdictions have taken of creating a new school in a rural environment. It took some courage to do that.

We got an enormous amount of help from Arnie Aberman, we might think paradoxically, since Arnie was the former Dean of Medicine at the University of Toronto, the biggest medical school in the country and the most urban medical school in the country. Here he is, serving as a consultant dean in the period before

we got Roger Strasser in place. He brought a lot of experience of how medical schools operate and was particularly influential in determining our governance structure. The School is the only school in Canada that is established as a distinct legal entity connected academically to two universities, but it actually is established as an independent and is funded directly from the government with representation from the university and from committee groups on its board. I think this was as a result of Dr. Aberman's intervention.

One more group of people that I would like to mention because they don't get talked about very often, and they often get berated, are the civil servants involved. I am thinking particularly of George Zegarac, who was at that point the Director of the Health and Human Resources branch at Ministry of Health and Long-Term Care, Caroline Abrahams, who worked closely with the expert panel and subsequently Kevin Costante, who was the Deputy Minister of Training Colleges and Universities who helped the actual birth of the process. I remember the Deputy Minister of Northern Development and Mines, Cam Clark from Thunder Bay was quietly very helpful in this project.

J.A. We also have an outstanding CAO that is Dorothy Wright who has come from the provincial government and has done an exceptionally good job. I would also laud both presidents of Laurentian and Lakehead Universities because, although it is a great feather in their cap perhaps, it is a feather that has taken a lot of adjustment and strain

to get in place. I would also mention something that we call the National Advisory Board and that was headed by Dr. John Evans who I mentioned earlier was the first Dean at McMaster University and has a wide attachment to many health issues in Canada. Dr. Robert McMurtry, he was the immediate past Dean of Medicine at Western and was in the Department of Health or Ministry of Health in Ottawa. Locally in Thunder Bay, Ken Boshcoff was the mayor of Thunder Bay and very vigorous in his support as was the entire Northwestern Ontario Municipal Association.

G.T. A couple more people have come to

mind. In the later iteration of the business plan, Jim Gordon, then mayor of Sudbury played an important role in chairing that committee. The mayors of Thunder Bay, Timmins, Sault Ste. Marie, Sudbury and North Bay got together and went down to meet with Elizabeth Witmer. The mayors played a pretty important political role in making sure that this happened. I think they deserve credit for that. I also would like to mention people who worked very closely with me at the university who did a huge amount of work on the proposal. I particularly want to acknowledge the work of Ann Pegoraro, who worked with me as a developer, who did terrific work in getting funding in and making sure that a lot of the proposal was kept together. Ann Moro and Diane Moncion worked out of my office. We had a great little team who put a lot of energy and a lot of heart and soul into it. A number of them are still with the school, but they did the leg work and I remember them with affection.

M.L. I want to shift gears a little bit now and turn back to Goyce. Let's say 10 years from now, how do you think the Medical School will have changed your constituency?

G.K. One thing I learned from this process was the comment working in solitude will not end our isolation. We missed a lot of opportunities until we came out as Aboriginal people with our rural neighbours. We were able to do great things that will benefit all our people and rural people. My approach to resolving issues always has been of one informed decision working in a cooperative partnership mode, not a competition. One thing I learned from this experience is we can go into other issues. One thing that all First Nations encounter is the sustainability of our communities' economic base. We have to get away from this economic dependency and hand-outs from the government. I have been trying to pass a resolution by the Chiefs' Assembly that we need to dialog or have some sort of protocol of First Nations and their municipality leadership. I think in order to do that we need the support of our partners. That is what excites me; I think that it is possible. It is not a political conflict, it is a conflict of two different cultures and certainly we are not immune in Canada. Look what is happening in Québec and I hope that conflict stays in the political and legal arena. But you know, I think we are not immune to that in the North or Northwestern Ontario. We need to work together. It excites me what we did and that there are other challenges we can tackle here. ▲

“One thing I learned from this process is that working in solitude will not end our isolation.”

- Goyce Kakegamic

Comptant plus de 8 200 étudiantes et étudiants à temps plein et à temps partiel, l'Université Laurentienne est un reflet du Canada. C'est l'une de deux seules universités bilingues du pays, qui compte aussi une importante population étudiante issue des Premières nations, ainsi qu'un nombre croissant d'étudiantes et étudiants étrangers.

La Laurentienne offre une expérience éducative personnalisée et marquée par le soutien. Elle tire aussi profit des éléments uniques liés à son emplacement géographique, mise sur les aspects uniques de ses gens, et cette expérience est manifeste dans son dévouement envers l'apprentissage.

Nos programmes (plus de 90 de premier cycle, 18 de maîtrise et 4 de doctorat) et nos travaux de recherche reflètent la diversité de notre population étudiante et de notre personnel enseignant. La Laurentienne offre diverses occasions uniques d'enrichissement personnel et professionnel et d'épanouissement communautaire par l'entremise de la découverte et de la transmission du savoir.

La mise sur pied de la première école de médecine depuis 30 ans au Canada, fruit d'un partenariat unique entre la Laurentienne et l'Université Lakehead, est un bel exemple de notre engagement à l'égard des questions relatives à la santé en région nordique et rurale et de notre volonté à collaborer avec nos partenaires dévoués.

À l'Université Laurentienne, on bouge. L'augmentation du nombre de nos programmes, de nos inscriptions et de nos activités de recherche, de la construction sur le campus, de nos partenariats et des dons témoigne de nos progrès importants et continus. ▲

**Apprendre, naturellement.
Learning. It's in our Nature.**

With more than 8,200 full-time and part-time students, Laurentian University is a mirror of Canada itself. Laurentian is only one of two bilingual universities in the country, with a significant First Nations student population and a growing number of international students.

At Laurentian, we offer an educational experience that is personalized and supportive. It also capitalizes on the unique aspects of our geography, our people and is reflected in our dedication to learning.

Our programs (more than 90 undergraduate, 18 master's and four doctoral) and research reflect the diversity of our students and faculty. Laurentian also offers a variety of unique opportunities for enriching personal, professional and community growth through the discovery and transmission of knowledge.

Developing Canada's first new Medical School in more than 30 years, in a unique partnership with Lakehead University, is a solid example of our dedication to northern and rural health issues and of our willingness to work collaboratively with dedicated partners.

Laurentian University is on the move. Our growth in programs, enrolment, research activity, on-campus construction, partnerships and donations attest to our continuing and significant progress. ▲



Lakehead
UNIVERSITY

Ranked Canada's #1 Value-Added University

Congratulations to all those who have contributed their expertise, time, effort, money, support, and influence to the establishment of the Northern Ontario School of Medicine. This is an historic moment in the annals of Northern Ontario, and a truly remarkable feat that honours the commitment and perseverance of the people of this region. Lakehead University is proud to be home to the west campus of the Northern Ontario School of Medicine. There will be 24 students of the School on Lakehead's campus starting in August 2005. During their time here, these students will be a part of Lakehead University's vibrant campus.

Lakehead is one of Canada's more exciting comprehensive universities with enrollments of under 10,000. It has been ranked by Maclean's as Canada's #1 in Value-Added for three years. Known for its strong leadership and commitment to students' needs, Lakehead has earned a reputation for innovative programs and enriched learning opportunities.

Unique Student Experience

With a campus backyard that includes the Canadian Shield and the world's largest freshwater lake, many programs in Environmental Studies, Anthropology, Biology, Forestry, Geography, Geology, Kinesiology, and Outdoor Recreation, Parks & Tourism utilize this natural laboratory. Northern socio-economic problems are addressed in Lakehead's Gerontology, Sociology, Business Administration, Social Work, Nursing, Psychology, Indigenous Learning, and Teacher Education programs.

The Thunderwolves hockey team plays regularly in front of thousands of fans at the Fort William Gardens, while other varsity programs compete at the C.J. Sanders "Thunderdome" on campus. In early 2005, the Hangar, a new \$6-million athletics facility, was opened.

Economic Impact on Northwestern Ontario

In 2003-2004, Lakehead had an economic impact of \$215.1 million on the City of Thunder Bay. With 1,600 employees, Lakehead University is one of the largest employers in the region. It makes a significant contribution to the region in the form of technology transfer through its many research centres. Lakehead researchers working in collabora-

tion with the staff, faculty, and students of the Northern Ontario School of Medicine will create further opportunities for economic, social, and cultural growth.

Meeting the Needs of Aboriginal Students

Northern and Native issues are on the research agenda of many professors at Lakehead, and these issues form the nucleus of some undergraduate and graduate programs. Lakehead offers specific academic programs designed to meet the needs of Aboriginal learners. Aboriginal Cultural and Support Services help to ensure that students learn within a culturally sensitive and welcoming climate on campus. ▲

LAKEHEAD UNIVERSITY - 955 Oliver Road ▲ Thunder Bay, ON P7B 5E1
Tel: (807) 766 7300 ▲ www.lakeheadu.ca





A Message From The Premier of Ontario



Premier of Ontario- Premier ministre de l'Ontario

On behalf of the Government of Ontario, I am delighted to congratulate the students, faculty, staff, volunteers and Board of Directors on the opening of the new Northern Ontario School of Medicine (NOSM).

Our government recognizes that health care professionals do tremendous work every day and are essential to maintaining a healthy and strong society. Their dedication to the well-being of others is second to none - and making sure they have the most current and comprehensive education and training is a priority for our government.

The opening of NOSM - a joint initiative between Lakehead and Laurentian Universities - is a huge step in building a stronger health care system in Northern Ontario. By investing in the education and training of the next generation of doctors, we are increasing access to care, shortening wait times and helping prevent illness by promoting healthy living. I am confident that NOSM will distinguish itself as a leading faculty of medicine and will become a cornerstone of community health care for the North.

Our government is proud to have been a partner in this important project. We are helping to ensure that Ontario families have access to a doctor of their own, when they need one, close to home. We recognize that, in the vast North, this is especially crucial. NOSM will mean more doctors and better access to health care for people across the province and, especially, in Northern Ontario.

To the students, faculty, staff, volunteers and Board of Directors of the Northern Ontario School of Medicine: please accept my sincere best wishes for much success in your inaugural year - and in the years to come.

Dalton McGuinty

Dalton McGuinty
Premier



Opening New Doors

By Craig Gilbert

Economic Development: Dorothy Wright, CAO of the Northern Ontario School of Medicine, opens the door of NOSM's newly completed West Campus at Lakehead University in Thunder Bay. She predicts that NOSM's presence will provide significant long-term stimulus to the economy of Northern Ontario. ►



The people of Northern Ontario are not the only ones who stand to be healthier once the Northern Ontario School of Medicine (NOSM) gets down to work. The North's economy will receive a healthy dose of economic stimulus as well, through the design, construction, and ongoing operation of Canada's newest medical school.

The School has received a total of \$95.3 million in start-up funding from the provincial government. About \$32.9 million went toward the construction of the campuses in Thunder Bay and Sudbury, creating dozens of jobs in both cities for the duration of the project, according to NOSM CAO Dorothy Wright. That left \$62.4 million for start-up operational expenses.

"When we finish our start-up money, we will have ongoing funding of around \$21 million per year, in addition to what funds may be coming in from research and from other specific initiatives," Wright explains.

As of Aug. 1, the School had around 100 academic and administrative full-time staff. When the School is going full-bore it will employ in the neighbourhood of 500 to 600 people. But as Wright points out, the economic benefits to the North do not stop there. Research, and research money, is a significant part of a medical school. "Its economic impact is not to be underestimated."

So far NOSM has acquired \$6 million from the federal government to help build the School's research capacity. This money has gone into the purchase of specialized equipment for both sites, an investment that will allow NOSM researchers to engage in specialized work, and to attract even more research dollars to the North.

Dr. Greg Ross, NOSM's Associate Dean, Research, would be very pleased to attract \$4 million in research grants between the two campuses. "That's ambitious, but I think we can get there."

Some of the work to be performed at NOSM could have significant economic impact if it can be commercialized, according to Dr. Ross. Bio-prospecting, or the search for new therapeutic agents, for example, holds significant promise.

Dr. Ross plans to use technology to screen and cross-reference vast libraries of compounds, literally hundreds of thousands of them, in the search for new medicines for maladies such as hypertension, or cancer treatment.

"It's modern drug discovery," he says. "It's what pharmaceutical companies have been doing. It (the libraries that researchers create) could be a great spin-off from an economic development point-of-view."

Gary Polano, NOSM's Project Manager, Research and Innovation, was the general manager of the committee that wrote the original business plan for NOSM.

From that came a project aimed at exploring the potential for growth in the health research sector in Northern Ontario in terms of economic development.

A year ago, former Sudbury mayor and current NOSM board member Jim Gordon took the reins of a sub-committee charged with exploring the job creation potential of these research and innovation activities. A final report is expected near the end of September. It will offer recommendations on how to build on the existing health research sector in smaller communities and larger centres across Northern Ontario.

The sector is ripe for the picking, according to Polano. "It is growing across Canada and the federal government is going to invest in that sector. We want to take advantage of that."

The School is a great jumping off point for such initiatives and activities, he says. He adds that though he can't divulge the contents of the report, he can say it contains good forecasts and solid models in terms of the impact of the School.

The School has generated an incredible sense of optimism, according to Dr. Fred Gilbert, President of Lakehead University. "It's not just about health care in the long term, it's about a linkage with economic development."

As Dr. Gilbert concludes, the wonderful thing about NOSM is that it will pay dividends for decades to come. It truly is an investment in the North's future. ▲

Research Activities

By Colleen Kleven

Laurentian University biochemist Dr. Gerardo Ulibarri studies molecular structures using MIRARCO's Virtual Reality Laboratory.

Alfred Boyd Photographer

Testing the breath for pre-disposition to cancer, eliminating cancer cells at the molecular level, removing resistance to drug treatments and guided tours inside the brain; these are just some of the cutting edge projects being undertaken by researchers at the Northern Ontario School of Medicine.

Scientists from all over the world have made their way to NOSM, and it is fully expected that their efforts will soon establish Northern Ontario as a centre of world-class medical research. Canada's newest Medical School intends to instill an atmosphere of support and respect for research activities, and to support these efforts with the latest in technology.

NOSM researchers are already utilizing the breathtaking benefits of the Virtual Reality Laboratory (VRL) at MIRARCO. Located in the Willet Green Miller Building at Laurentian University in Sudbury, the VRL has a 22-foot wide, 12-foot high concave screen providing 3-dimensional stereographic imaging linked to a data sensing, monitoring, database storage and processing facility. Previously utilized solely by the mining industry for engineering purposes, medical researchers at NOSM have recently discovered another use for this \$1 million data visualization facility.

Dr. Gregory Ross, Associate Dean of Research at NOSM, explains how medicine and mining are able to share technologies. "Miners use virtual reality to look at a mine shaft in 3-dimension. Medical researchers can use this technology to look at blood vessels in a brain in order to conduct stroke research. This is spacial data. Researchers use their own software for their specific applications. Mining and medicine can share the hardware at MIRARCO."

Campuses at Laurentian University in Sudbury and Lakehead University in Thunder Bay also offer NOSM researchers valuable data analysis resources through access to the "super computers" at the two universities.

Help has Arrived

There is a palpable level of excitement among NOSM researchers. These fifty highly respected faculty researchers come from all over the United States and Europe. Many of the Medical School's researchers are repatriated Northerners who are thrilled that NOSM has provided this opportunity for them to pursue their careers in Northern Ontario.

Dr. Tom Kovala, Associate Professor of Biochemistry at the school's East Campus, spent nine years in the United States after completing his schooling in southern Ontario. His enthusiasm at being back in the North is evident. "There is a lot of research going on here, and it is great to be able to get involved in that. I grew up here. I have family here. I love the area. It's not very often you have the opportunity of being in on the ground floor at the beginning of a new school. In most institutions you are filling in a slot. Here you can really feel like you are doing something to make a direct contribution to the North."

Searching for Answers

continued from page 15

Attitude of Inquiry

Every medical school values research, however the decision to integrate research into its curriculum is one of many reasons the Northern Ontario School of Medicine is unique. In choosing to deliver a four year, eight month program rather than the alternative three year, twelve month course of study, NOSM will also provide students with the option to work in research laboratories in the summer.

Research is woven into the very fabric of the institution; it can be found in the School's vision and mission statement and in its guiding principles. Dr. Roger Strasser, Founding Dean of NOSM, explains: "The primary reason for having the school is to help improve the health of people in Northern Ontario. The way to do that is to look at the factors for improving their health. The way to do that is through research - quality research that addresses questions regarding the health of people in Northern Ontario. This is why we're here."

Dr. Gregory Ross agrees. "Research is one of the more exciting aspects of all of our jobs. We will be encouraging and fostering an attitude of inquiry that involves research. Our medical educators will always be asking the question, 'Is there a better way that I can do this?' Don't just assume. Get evidence to support your theory/belief. This way of thinking will foster a research attitude. This is an attitude we will encourage."

Focused on the North

Researchers at NOSM are focused on asking questions that directly affect Northerners. In rural communities the effect health has on lifestyle is obvious when a Northern senior can no longer drive safely. Driving cessation affects mobility and access

to health care. It frequently triggers an increase in depression symptoms while affecting self-esteem and quality of life.

Dr. Michel Bedard is Associate Professor in the Human Sciences Division at NOSM's West Campus. He is also Canada Research Chair in Aging and Health at Lakehead University. Dr. Bedard's research into driving cessation is specifically designed to help understand the cognitive mechanisms that support safe driving and to look at potential interventions to minimize these issues. Dr. Bedard emphasizes the importance of the research being done here. "In some types of research it doesn't matter where it's being done, but many issues in the North are quite different. For rural residents, loss of driving capacity often necessitates an unwanted move to a larger urban centre. By doing the research here we make it relevant to issues of the North."

In some instances, conducting research in a Northern setting greatly assists the potential volume of data collection. Such is the case for Dr. Gregory Ross. His work as a physiologist in the area of neurodegenerative disease has led him to research aimed at identifying environmental factors that may contribute to Parkinson's, Alzheimer's and ALS disease. The NOSM Associate Dean for Research is exploring the link between metal ions in water and the formation of senile plaques, which are found in the brains of Alzheimer's patients. He samples fish from a substantial number of Sudbury area lakes to study the pathology of their brains. Thanks to the wealth of historical data that has been collected in Greater Sudbury because of the mining and smelting activity in the area, Dr. Gregory Ross can frequently determine what metal ions (copper, zinc or aluminium) each fish has been exposed to over its lifespan. Many of these fish are 20 years old. By cor-



relating this data with information collected regarding senile plaques, he can in effect conduct a 20 year study. This would be impossible to do elsewhere.

In Thunder Bay, Dr. Brian Ross, Associate Professor of Pharmacology in the Medical Sciences Division of NOSM, is turning the simple act of exhaling into a fascinating study with potential implications for cancer patients. This interest in breath research stems from the many benefits of breath analysis in screening for diseases. Breath analysis can detect high ketone levels in an undiagnosed diabetic, and high isoprene levels in a patient whose liver is producing too much cholesterol.

Breath research has major implications for patients with undiagnosed lung cancer, as Dr. Brian Ross explains. "One thing definitely in your breath is all the chemicals from your lungs. What we have noticed over the years is that lung cancer tumours in cell cultures in the lab give off odd gases that can be detected. You don't generally see cells giving off these gases."

West Campus will soon have a highly advanced machine called Selected Ion Flow Tube Mass Spectrometry (SIFT-MS). This machine detects gases at the low levels necessary for study. It will do this in approximately one minute as opposed to the 45 minutes the previous technology needed to analyse one breath sample.

According to Dr. Brian Ross, "SIFT-MS is holding out the promise that this will become a much more utilitarian technique. I will study samples taken from patients with diagnosed lung cancer in various stages (before and after their treatments) to see what chemicals are at higher levels. These can be used as a marker. The machine data will be computer analysed to scan for new markers we can detect and look

for in at-risk patients. The ultimate goal is to stop people from dying of lung cancer."

Working together Works

At NOSM's East Campus, Dr. Tom Kovala, Associate Professor of Biochemistry, is undertaking cell biology studies involving the MAP Kinase Cascade (the signal pathway a healthy cell must follow in order to develop normally). MAP Kinase is a regulator of cell proliferation and growth that is found within all healthy cells. When MAP Kinase is turned "on" all the time, in the case of cancer, the normal response of apoptosis (programmed cell death) is not working. The unhealthy cancer cells are left to multiply unchecked.

Dr. Kovola is concentrating on Extra Cellular Signaling Regulated Kinase (ERK) inhibitors that will turn "off" the MAP Kinase. "We are looking at a small molecular compound (a drug) that specifically inhibits MAP Kinase in breast cancer cells. If we can block that pathway, the cells from our preliminary research indicate that they are sensitized to apoptosis. It's a long road before this can be used to treat patients but it's got a lot of potential application."

In conjunction with this work, Dr. Greg Ross and Dr. Gerardo Ulibarri, Assistant Professor in Medicinal Chemistry at the Department of Chemistry and Biochemistry at Laurentian University, are working to test potential drugs for selectivity (to eliminate side effects) and potency (the strength of interaction with the molecule's protein).

A drug must fit into an "active site" through molecular interaction in order to trigger the necessary effect. As Dr. Ulibarri explains, "I make the drugs and Dr. Gregory Ross tests them. It's like fitting a key in a lock. If the drug is introduced and absorbed by the mol-

ecule, it must be held in place through electrostatic interactions and hydrogen bond. By using the virtual reality visualization facilities (VRL) at MIRARCO, we can see how well the key fits and holds."

In order to fully implement all potential resources, the Northern Ontario School of Medicine has also formed strategic collaborations involving several local health and educational institutions including the Sudbury Regional Hospital (HRSRH) and the Northeastern Ontario Regional Cancer Centre (NEORCC). This seamless collaboration has resulted in the creation of joint appointments for a number of their valued medical researchers including Dr. Amadeo Parisenti. At the NEORCC, he is Chair in Cancer Research for the Regional Cancer Program of the Sudbury Regional Hospital. At NOSM's East Campus he is a Professor in the Medical Sciences Division and Co-ordinator of the Basic Sciences curriculum.

Dr. Parisenti's research work includes the study of drug resistance in cancer cells and the study of Protein Kinase C in cancer induction. Research to identify agents able to circumvent drug resistance received approximately \$450,000 in funding from the Ontario Cancer Research Network. His efforts in understanding how cancer is initiated through the activation of certain members of the Protein Kinase C family have received two grants of approximately \$250,000 from the Canadian Institute of Health Research.

Thinking Ahead

Collaboration is one thing, duplication is another. As Dr. Gregory Ross points out, "There is also an enormous amount of high technology that goes into research testing. We, as a medical school are a kilometre down the street from the cancer centre. It would be foolish for both institutions to make a major purchase without discussion. Before we invest in any piece of equipment, we seriously look at whether or not we need to own it or if we can share it. We are in constant communication with the NEORCC."

There is truth in the statement that "institutions don't do research, researchers do research." Through its focus on research, and its relentless search for the best researchers in the field, the Northern Ontario School of Medicine provides the infrastructure to allow Northern Ontario to expand its reputation for doing world-class research. These are exciting times for medical education in Northern Ontario, and it is all strictly non-fiction. ▲



A Message From The Prime Minister



PRIME MINISTER • PREMIER MINISTRE

I am delighted to extend my heartfelt greetings and congratulations to the faculty, students and staff of the Northern Ontario School of Medicine at the beginning of this inaugural year for your establishment.

The opening of Canada's newest Medical School is the end result of a vision by a group of highly dedicated people from across Northern Ontario who were committed to a unique pan-Northern approach to the teaching and training of our future medical experts. As an excellent mosaic of the many features that define Northern Ontario, your school represents the remarkable diversity of culture in this great land - a cornerstone of our nation's success and prosperity. Moreover, as an outstanding international centre for excellence, the noble work carried out by this School will help improve the quality of life of our entire nation by putting health care on a truly sustainable footing.

Indeed, I am certain that the academic experience gained from this establishment will provide our future medical experts with the tools and knowledge necessary to make confident decisions and to meet future challenges with great competence and enthusiasm. I join with all those present in wishing the faculty, students and staff all the best in this inaugural year.

Please accept my warmest regards and best wishes for a most memorable celebration.

Paul Martin
Prime Minister



A Message From The Commissioner of Official Languages

Commissioner of
Official Languages



Commissaire aux
langues officielles

I would like to offer my most sincere congratulations to the number of people who helped bring about this important moment in the history of Northern Ontario.

Because it was conceived by people from the region, the new Medical School takes into account regional realities. It makes full use of innovative information technologies to support a network of contributors spread out across the vast territory of Northern Ontario.

This school belongs to everyone who lives in the North, whether they live in urban, rural or remote areas, and whether they are Anglophone, Francophone or Aboriginal. In this spirit, as Commissioner of Official Languages, I am particularly pleased about the measures that were taken to support future health care professionals who wish to practise in the two official languages, and about the fact that the distinctive characteristics of the Franco-Ontarian community were taken into consideration from both the education and research standpoints.

I have no doubt that the Northern Ontario School of Medicine will prove to be an invaluable contribution to the development of the region. Reducing the shortage of health care professionals, developing methods of health care delivery that are adapted to the realities of Northern Ontario, and helping to diversify the economy of the region are all challenges that you will be quite capable of meeting.

Who knows, perhaps today you are laying the foundations of an institution that will become an inspiring example for other regions grappling with similar issues.



J'aimerais offrir mes plus sincères félicitations au grand nombre de personnes dévouées qui ont contribué à la réalisation de ce grand moment dans l'histoire du Nord de l'Ontario.

Parce qu'elle a été conçue par des gens de la région, la nouvelle école de médecine prend bien compte des réalités régionales. Elle fait pleinement usage de technologies de l'information innovatrices pour soutenir un réseau de collaborateurs s'étendant sur l'ensemble du vaste territoire nord-ontarien.

Cette école est celle de tous ceux et celles qui habitent le Nord, qu'ils habitent en ville, en milieu rural ou en en région éloignée, qu'ils soient anglophones, francophones ou autochtones. Dans cet esprit, et à titre de commissaire aux langues officielles, je me réjouis particulièrement des mesures qui ont été prises pour appuyer les futurs professionnels de la santé qui désirent pratiquer dans les deux langues officielles et du fait que l'on prenne en considération les caractéristiques particulières de la communauté franco-ontarienne, tant du côté de l'enseignement que celui de la recherche.

Je n'ai aucun doute que l'École de médecine du Nord de l'Ontario saura apporter une contribution inestimable au développement de la région. Réduire la pénurie de professionnels de la santé, développer des modes de prestation des soins de santé adaptés aux réalités du Nord de l'Ontario et aider à diversifier l'économie régionale sont tous des défis que vous saurez relever.

Qui sait, peut-être jetez-vous aujourd'hui les bases d'une institution qui deviendra un exemple inspirant pour d'autres régions aux prises avec des défis semblables.

Dyane Adam
Commissioner of Official Languages / Commissaire aux langues officielles

DOCTOR & PATIENT!

NOSM Curriculum

By Laura E. Young

When Kirkland Lake's Dr. Richard Denton talks about helping the Northern Ontario School of Medicine write ground-breaking curriculum that will create a new breed of innovative, self-reliant medical generalists, you get the sense he knows what he is talking about.

Denton has experience in anaesthetics, obstetrics, trauma, and intensive care, as well as family medicine; has run two nursing homes; has served as coroner of Kirkland Lake; has spent six years on city council; and has served a term as mayor (from 1997 to 2000). He has spoken out on issues such as the now-scrapped scheme to ship Toronto's garbage to Kirkland Lake's abandoned Adams Mine site, and he has served on numerous boards and committees at the provincial and national levels.

Dr. Denton's latest challenge: serving as Chair of the Northern and Rural Health Team Committee at NOSM, a position intended to ensure that the School's curriculum is unique and meets the health care demands of Northern and rural Canada.

The Kirkland Lake physician has come full circle from the day when, as a graduate of McMaster University's School of Medicine, he opted to work in an underserved area. "I felt I didn't need to go off to Africa to do that."

And now, Denton is hoping to create a new breed of generalists: physicians

who can handle a variety of health concerns in the culture and context of Northern Canada, doctors who can do anything from removing a gall bladder, to setting bones, to performing a C-section, and practising internal medicine. As well, they will advocate for their community on larger questions of public health and preventative medicine, while at the same time working effectively on health care teams with midwives, nurse practitioners, social workers, and other health care providers.

His own political activism notwithstanding, Dr. Denton insists the medical profession is not returning to the days when a small-town doctor did everything in his or her community.

"The government, with family health networks and teams, is completely changing the image of the small town family doctor. The type of family doctor who did everything is definitely changing. What the doctors of the future will need to know will be where to find the knowledge, sift through it and to whom to refer their patients."

And the pedagogical foundation for imparting those skill sets is being laid this fall when NOSM's Charter Class begins its medical education.

On the one hand, NOSM, like the other 16 medical schools in Canada, will graduate skilled physicians ready to pursue residency and to practise anywhere in Canada or the world, says Dr. Roger Strasser, Founding Dean of the

"It takes a village to train a doctor."

- Dr. Dan Hunt

Northern Ontario School of Medicine. The Undergraduate Medical Education program meets all North American standards for accreditation.

Although the focus of the curriculum is on primary care or generalist practice, NOSM's graduates will have the opportunity to choose whatever specialty they desire. "We're not just training family doctors. That's an important distinction," stresses Dr. Joel Lanphear, NOSM's Associate Dean of Undergraduate Medical Education.

On the other hand, NOSM's curriculum is unique because it addresses specific Northern needs, including the shortage of family physicians. From first year, students are immersed in the study of general practice in the hope that they will become family doctors who will choose to practise in the North. And while NOSM's curriculum is a river of five themes that courses through all four years, the Northern and Rural Health theme is not found in any other Canadian medical school curriculum, according to Dr. Strasser. Northern and Rural Health is part of NOSM's social accountability mandate, adds Dr. Lanphear. "It's to improve the quality of life by improving the health of the people living in the North, particularly Aboriginals and Francophones."

The highly integrated curriculum is based on complex real life scenarios grounded in Northern Ontario. "They are actually using real data from real Northern Ontario communities so it's just like being a physician in one of those communities. The students get to know the socio-demographics, the health profile, who the people are in the community," explains Dr. Strasser.

As well, the cases are rooted in what Dr. Denton calls cultural competency. "We will be placing students in the context of different cultures," with an emphasis on First Nations and Francophone communities. Traditionally, medicine has looked at the patient as an individual. About a generation ago, the context of the patient's family was added to the scenario. Now a patient's culture and how that is defined is factored into medicine, says Dr. Denton. "Therefore a doctor needs to be aware of [a patient's] culture. What things are important to them from a health point of view?"

In order to start learning answers to those questions, Year 1 NOSM students will attend two clinical sessions per week interviewing and examining standardized patients, individuals who are trained - like actors - to simulate an illness. (See sidebar.) At the end of Year 1 students will be assigned to

a community placement for a month long immersion in Northern Aboriginal communities. "As far as I'm aware, that (placement) doesn't happen anywhere else in the world," notes Dr. Strasser.

In second year, the students will be dispatched for clinical placements in rural and remote towns. "They're really getting into those communities and health problems and learning clinical skills in community settings. It's really about community based medical education where the students don't just learn but actually experience the diversity of cultures and the different health services delivery models in Northern Ontario," says Dr. Strasser.

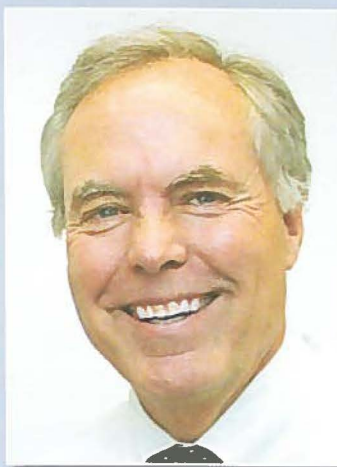
In third year, the students will spend 30 weeks "abroad in the North" performing a comprehensive community clerkship in one of 10 or so Northern communities. They will be based in family practice, learning surgery, internal medicine, and obstetrics-gynecology, the core clinical disciplines.

While this may sound like training in a more conventional medical school, "in those programs, the traditional ways are to do it in boxes (rotations)," Dr. Strasser says. "Ours is parallel community clerkship where they're learning all the clinical disciplines in parallel based in communities long enough that they become part of the community. We hope they'll feel at home enough in that community that they'll entertain the idea of returning once they've finished their training."



Dr. Joel Lanphear
Associate Dean, Undergraduate
Medical Education

The vast majority of health care happens outside major medical centres and away from hospitals, emphasizes Dr. Lanphear. NOSM's goal is to teach doctors to think outside the box: to look at a medical case, and to diagnose and treat the patient using all their skill combined with available technology. Basically, the students become highly skilled, self-reliant problem solvers able to regard a patient in the context of his or her family, community and culture.



Dr. Dan Hunt
Vice Dean, Academic Activities
NOSM



Dr. Richard Denton
Chair, Northern and Rural Health,
NOSM

"They absolutely have to be able to listen because hearing is only part of listening. To do so they have to understand the community and culture they're in," Dr. Lanphear maintains. The traditional medical school model has been to learn in teaching hospitals or health centres "which actually have a very limited range of clinical problems that are seen."

NOSM leans heavily on the Internet as a teaching tool. The curriculum will teach the students how to access knowledge, says Dr. Denton. "The whole curriculum is designed around the use of the Internet."

"For us the technology is a bit like oxygen. It's all around you. You know you need it to sustain you but you're not really aware of it," adds Dr. Strasser. "The high level use of electronic communications will allow students to continue their case-based learning even when they're dispersed."

"We're really providing a high quality medical education that is similar to any other medical school but is actually much more diverse. The students (are) learning in a different range of health service settings. It's not just acute hospitals, but also mental health services, long term care facilities, nursing stations out in the communities and so on."

Rural practitioners provide a wider range of services and carry a higher level of clinical responsibility in relative professional isolation, Dr. Strasser notes. "That's true whether you're talking of family physicians or specialists in medicine, nurses, pharmacists or any kind of health professional, really. It's about the context, about the whole community."

Most of what NOSM is doing is already going on in bits and pieces around the world. "But this particular packaging is the first time certainly in Canada," Dr. Strasser concludes. And it will place Northern Ontario in the forefront of the world in rural medical education. ▲

Themes and Threads

To imagine something as complex as a medical school curriculum, best look down at the carpet on the floor.

Dr. Joel Lanphear, Associate Dean, Undergraduate Medical Education, imagines the Northern Ontario School of Medicine curriculum as a tightly woven, multi-coloured rug. As the threads move in one direction, the themes move across the other way, securing a curriculum designed to hold fast the health care needs of Northern and rural Canadians. The five broad themes are like the warp of a carpet, he says, as they run through the four years of the curriculum.

The five themes of the NOSM curriculum:

Northern and Rural Health: part of the social accountability mandate and the *raison d'être* for NOSM. This thread entails understanding life in Northern and rural Ontario and what made life, as Northerners know it today - particularly for First Nations and Francophones. Part of doing that involves placements, with three over two years. It's hoped students will become advocates for the needs of the North, Dr. Lanphear says: "Physicians need to take a leadership role for the way life is in a community. It's a huge job."

Personal and Professional Aspects of Medical Practice: Basically, it's the ethics of medical practice in a diverse community. How do physicians communicate with their patients and what are the responsibilities? As well, they must learn to understand and appraise research, use technology and embrace the idea of being a lifelong learner, something that is a curriculum-wide notion, Dr. Lanphear says.

Social and Population Health: The focus in this thread is research and how to analyse data. For example, is a project designed correctly? Are its findings consistent with the population? It's all about understanding how health is determined; how the North is similar to, yet different than, the rest of Ontario, when factoring in issues like alcoholism, substance abuse, cancer rates and environmental factors.

Foundations of Medicine: "The good old basic medical science. The 'ologies,'" explains Dr. Lanphear. The anatomy, pathology, biology of "classic medicine." While these sciences explain what is happening in the body, doctors need to understand how science explains what they are seeing. "You don't have to be a scientist first to be a doctor. You have to understand how the sciences you are learning relate to the patient you're taking care of."

Clinical Skills In Health Care: Commu-

nication 101. This critical component involves taking patient history, conducting physical exams and communicating with the person in the doctor's office. It's all about communicating in a patient-centred model of care.

The threads are the woof of the NOSM curriculum fabric and cover a host of subjects ranging from Aboriginal Health to Workplace Safety Insurance Board issues and Patient Safety.

Some highlights:

Inter-professional Education and Work: Here students spend several sessions a week in

health care settings visiting nurses, labs, and nurse practitioners. It's an opportunity to explore the community and see that medicine "is not just physicians. Health care is much broader than that," Dr. Lanphear notes.

Health Effects of Social Problems: Students will learn about the health effects of various societal problems, such as diet, or a child born with an addiction.

"There are lots more," Dr. Lanphear notes in closing. "I'm contacted often by organizations that want an emphasis on what they do." ▲

Standardized Patient

Remember the line in the old TV commercial where the actor in a white lab coat looks earnestly into the camera and says, "I'm not really a doctor, but I play one on TV?" Canada's newest Medical School is using a variation on that theme as a critical component of its new curriculum.

The Standardized Patient and Volunteer Patient Program is the best way to teach medicine and skills in clinical thinking, according to Dr. Judy Baird, NOSM's Theme 5 Course Chair (Clinical Skills in Health Care).

The program involves two types of "patients": actors posing as patients who can often fool tutors; and people who actually have a disease. Dr. Baird appears to wince as she recalls how medical students of her generation learned to interview patients. They went on clinical rounds with their preceptor, speaking with whomever the preceptor was visiting that day. That learning process was far from ideal, and it hasn't improved over time either.

"Patients are sicker these days than when I trained. We are getting people out of hospital faster. We're not admitting people that aren't as sick. They're managing at home. When you go into the hospital, the acuteness of illness is higher than it used to be."

Patients who are even more ill are in a difficult position to help train medical students. There are more patient needs with fewer people around to help, she says.

"Patients don't want to be used in that way.



Dr. Judy Baird
Theme 5 Course Chair
(Clinical Skills in Health Care)

It's difficult for the students because they know the person is in pain, that there are other issues. It makes it hard for them to take the time they need to learn."

Instead, the volunteer patients will come to NOSM's classrooms and help the medical students learn in a less intimidating environment where the students will feel free to make mistakes and take their time. The "patients" will then have the chance to constructively critique their "doctors."

While there is a sense of simulation, using standardized patients does prevent gaps in learning, Baird says. In the past, a student doctor saw only what the preceptor happened to see that day. This way all the students will see all types of cases.

What's more, the patient cases will reflect the reality and medical problems most common in Northern Ontario, such as heart disease, diabetes, and obesity. "There will be (volunteer patients) with occupational injuries; people with the same kind of cultural influences as the people of Northern Ontario."

Another unique aspect of this program is the sheer distance involved, with the classes distributed over campuses in Thunder Bay and Sudbury. "We have the extra challenge of making sure our students in Thunder Bay have the same experiences as our students in Sudbury. I think the program is well designed so that we can do that. With a little bit of travel for me," she laughs. ▲

Northern Ontario School of Medicine

Collaborators/Funders/Governance

The seed money for the School was the investment of \$95.3 million from the Ontario Ministries of Training Colleges and Universities and Health and Long-term Care. Of that total, \$62.4 million was designated as start-up funding to be disbursed over three years (2003-2005). The money was used to support the hiring of faculty and staff, build the medical library, develop curriculum and to build information technology and telecommunications infrastructure, upon which NOSM will rely so heavily. The balance of the funding, \$32.9 million, was earmarked for capital spending supporting the construction of the new NOSM buildings in Sudbury and Thunder Bay.

The Northern Ontario School of Medicine is a not-for-profit corporation with its own budget, administration, and Board of Directors. The Board has 35 directors from across Northern Ontario. The Board is in charge of overall governance and defines long-term policies. The Board of Directors reflects the geographic, cultural, linguistic and racial diversity of Northern Ontario. The Board includes appointees from, or by, Laurentian and Lakehead Universities, the City Councils of Thunder Bay and Greater Sudbury, the Ontario Minister of Training, Colleges and Universities, the Northwestern Ontario Municipal Association, the Federation of Northern Ontario Municipalities, the Nishnawbe Aski Nation, Grand Council Treaty 3 and the Union of Ontario Indians. Five seats on the Board have been designated for individuals of Aboriginal descent and three seats have been reserved for Franco-Ontarians. Two medical students, two post-graduate medical students and two faculty members will also serve on the Board. Dr. Fred Gilbert, President of Lakehead University, is the first Chair of the Board, and Dr. Judith Woodsworth, President of Laurentian University, is the first Vice-Chair. The positions will be exchanged at the end of three years and will continue to rotate in perpetuity.

Links to the Aboriginal community are key to NOSM. An Aboriginal Reference Group was established in 2005 as a primary resource for the School in order to fulfill its mandate in Aboriginal initiatives, including research, administration and education. Represented on the Aboriginal Reference Group are: the Nishnawbe Aski Nation, the Union of Ontario Indians, Grand Council Treaty 3, Ontario Metis Aboriginal Association, Ontario Federation of Indian Friendship Centres, Ontario Native Women's Association, Independent First Nations, Metis First Nations of Ontario, and an Aboriginal student from each of the two campuses, and an Aboriginal youth delegate.

FedNor, the federal government's economic development initiative for Northern Ontario, announced a \$6-million grant to NOSM in March 2005. The funds cover construction costs for labs at Lakehead and Laurentian Universities, and support for the state-of-the-art technical systems used to keep NOSM connected with the rest of Northern Ontario. In addition, FedNor has funded several smaller projects: \$340,000 to support the joint project team that developed the strategic plan for NOSM; \$150,000 for the curriculum development workshop, held in Sault Ste. Marie in January, 2003; and \$85,000 for a health research and innovation study.



Northern Ontario School of Medicine

The Ontario government's Northern Ontario Heritage Fund Corporation has offered to match donations to the Northern Ontario School of Medicine Bursary Fund up to a total of \$5 million. As well, the fund paid for a \$375,000 study on health resources infrastructure.

NOSM's Executive Group, which includes the Founding Dean, two Vice Deans and the Chief Administrative Officer manages NOSM's day-to-day affairs. The Founding Dean reports directly to the Board and is responsible for all aspects of the School's direction except for those assigned to the Board itself.

Northern Ontario School of Medicine

Collaborators/Funders/Governance

The Northern Ontario School of Medicine (NOSM) owes a great deal to The Northwestern Ontario Medical Program (NOMP) and the Northeastern Ontario Medical Education Corporation (NOMECE). NOMP, affiliated with the MacMaster University School of Medicine, and NOMECE, an extension of the University of Ottawa Faculty of Medicine, are operated from the campuses of Lakehead and Laurentian Universities, respectively. These well-established residency programs have developed preceptor networks of practising clinicians across Northern Ontario. These physicians will bring invaluable pedagogical and practical experience to NOSM and its students. The NOMP and NOMECE residency programs will eventually become integral parts of NOSM.

The Medical School's academic affairs are governed by an Academic Council which answers to the Senates of the partner universities.

The Francophone Reference Group: The Francophone population of Northern Ontario plays a key role at the School. NOSM has encouraged Franco-Ontarian admissions and is working with the French-language medical schools at the Universities of Ottawa and Sherbrooke in Quebec. Franco-Ontarians have three seats on the NOSM Board.

NORTH Network is a dynamic telemedicine provider that uses two-way video technology to provide clinical consultations and educational offerings to health care professionals across Northern Ontario. One of the world's leading telemedicine networks, NORTH will play a vital role in delivering NOSM's curriculum to rural and remote sites across the North.

Board Members



Seated (L to R): Debbie Lipscombe, Leona Nahwegahbow, Roger Strasser, Judith Woodsworth, Fred Gilbert, Maureen Lacroix, Sheila Hardy.
Standing (L to R): Mariette Carrier-Fraser, Donald V. Génier, Helen Cromarty, Ian Young, Geraldine Govender, Hermann Falter, Sarah Williams, James Gordon, Adam Spencer, Brian Walmark, Peter Hutten-Czapski, John Augustine, Carl White, John Whitfield, Liliane Beauchamp, Gerry Loughheed Jr., Seppo Paivalainen, Jean Anawati, Bill McMullen, Dermot McLoughlin, Ron Chrysler, Neil McLeod, Goyce Kakegamic

Missing: Richard Adams, Elizabeth Dougall, Kenji Miyata, Ron Nelson, Lynn Peterson

Be Part of History

Contribute To The Future

Medical students face many challenges on the path to becoming full physicians. There are the academic pressures, the clinical and research work, and the constant need to remain balanced and focused on the tasks at hand.

Unfortunately another one of the very real challenges all students face is the financial one. Medical education is expensive, and financial stresses can add to the already heavy load carried by NOSM students. The Northern Ontario School of Medicine Bursary Fund is an essential service to help NOSM's students alleviate some of these stresses.

The Bursary Fund Campaign is being led by two eminent Northern Ontarians: Greg Pilot in the Northwest and Gerry Lougheed Jr. in the Northeast. Both say the response from Northerners has been excellent.

"The campaign is going really well," said Pilot. "The support and enthusiasm for NOSM is simply tremendous, and we are really starting to see people come on board with pledges, donations and long-term commitments to the fund. It's a thrill to see this level of enthusiasm from these donors."

Lougheed echoed these remarks. "I have never seen such an overwhelming response to a fundraising effort. We are more than 1/2 way to our goal and I have yet to have anyone say 'no' when asked to donate."

The goal for the Bursary Fund Campaign is \$5 million from the private sector, a level both Pilot and Lougheed expect to meet and even exceed. The Ontario government has committed to match each dollar raised, up to a total of \$5 million, thereby doubling the impact of each donation.

"We have a lot of talented Northern students who will end up moving south to attend some of the other medical schools if we can't find ways to support them here," said Pilot. "A medical education could cost students up to \$100,000 or more. A strong bursary fund is our way of helping Northern medical students stay in the North."

In fact, Lougheed, who also sits on the NOSM Board of Directors, said the School has gone even further. "The Board has made it a policy that finances will not be a barrier for any qualified student," he explained. "We want to ensure every student accepted into NOSM will get the financial support they need. A strong endowment fund will do just that."



GREG PILOT

The Northern Ontario School of Medicine Bursary Fund is a collaborative effort between Lakehead and Laurentian Universities, the School of Medicine, and donors. Donations to NOSM medical student bursaries are received by Lakehead and Laurentian Universities to benefit students of the School of Medicine.

There are a number of different types of donor-funded awards. These include:

Non-Endowed Bursary

The creation of a non-endowed bursary requires a yearly minimum donation of \$500 for four years. The award value may be increased at any time during the funding period. Non-endowed bursaries are totally distributed and do not live on in perpetuity.

General Bursary Fund

Contributions of any size are graciously welcomed and will be combined to create a general endowment account. This fund is designated for medical students in the most pressing financial need.

Endowed Bursary

Endowed bursaries are established with a minimum investment of \$10,000. A donor may choose to pledge the \$10,000 required for endowment over five years until the total is reached. Endowed bursaries are awarded one year after the minimum contribution is reached, as interest earned on the capital will be used to pay out the annual award in perpetuity. ▲



GERRY LOUGHEED JR.

People are encouraged to visit the Northern Ontario School of Medicine website at www.normed.ca. Go to the "Support Us" section for more information, or contact the Development Offices at:

Office of Development
Lakehead University
(807) 343-8300
email: development@lakeheadu.ca

Office of Development
Laurentian University
(705) 675-1151 ext. 3443
email: development@laurentian.ca

Congratulations

to board members, faculty, staff, supporters and students on the opening of the Northern Ontario School of Medicine (NOSM).

Northern Ontario Business is proud to be a part of this historical inaugural year celebration, as project managers of the Grand Opening events in Sudbury and Thunder Bay, and publishers of this commemorative souvenir magazine.

Thank you to the many exceptional people who shared their talents and experiences, including: Oryst Sawchuck for the artwork of the east and west campuses, members of the NOSM Events Planning Group, and Lakeside Communications for coordinating the magazine's editorial and photographic contents.

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Communications Inc.



Northern Ontario
School of Medicine

West Campus Lakehead University

955 Oliver Road ▲ Thunder Bay, ON P7B 5E1 ▲ Tel: (807) 766 7300 Fax: (807) 766 7370

East Campus Laurentian University

935 Ramsey Lake Road ▼ Sudbury, ON P3E 2C6 ▼ Tel: (705) 675 4883 Fax: (705) 675 4858

www.normed.ca

