S.07-53

SIMON FRASER UNIVERSITY

Senate Committee on University Priorities
Memorandum

TO: Senate

FROM: John Waterhouse
Chair, SCUP
Vice President, Academic

RE: Nanomed Canada Research Network (SCUP 07-23)

DATE: March 9, 2007

At its March 7, 2007 meeting SCUP reviewed and approved the proposal for the creation of the Nanomed Canada Research Network. This will be a Schedule B Centre reporting to the Vice President Research, under Policy R40.01.

Motion

That Senate approve and recommend to the Board of Governors the creation of the Nanomed Canada Research Network (NANOMED Canada) as a Schedule B Centre reporting to the Vice President Research.

encl.

c: N. Branda

SIMON FRASER UNIVERSITY

MEMORANDUM
OFFICE OF VICE-PRESIDENT, RESEARCH

TO: Sarah Dench, Secretary
Senate Committee on University Planning (SCUP)

FROM: B. Mario Pinto
Vice-President, Research

RE: Nanomed Canada Research Network (NANOMED CANADA)

DATE: March 2, 2007

Attached is a proposal from Dr. Neil Branda, Department of Chemistry, for the establishment of the Nanomed Canada Research Network (NANOMED CANADA) as a Schedule B Centre.

The Governing Committee for Centres and Institutes recommends that the Centre be granted approval by SCUP. Once approved by SCUP, the proposal is to be forwarded to Senate, followed by submission to the Board of Governors.

Governing Committee:

Dr. John H. Waterhouse
Vice-President, Academic and Provost

Dr. B. Mario Pinto
Vice-President, Research

Attachment

C: Dr. Neil Branda, Department of Chemistry

Nanomed Canada Research Network

SIMON FRASER UNIVERSITY

APPLICATION FOR UNIVERSITY CENTRE STATUS

Health care is a highly visible and growing concern for governments, taxpayers and the general population. With many countries including Canada facing an increasingly aging society, along with higher costs for medication and hospital care, the need for new solutions is vast. There are signs that we are in the midst of an explosion of new health-related technologies. ... traditional sciences and technology are undergoing significant changes that could have a far-reaching impact on all aspects of scientific research, including health. This change is being brought on by the recent ability to measure, manipulate and organize matter at the nanoscale, where biology, chemistry, physics, engineering and material science converge towards the same principals and tools. As a result, progress in scientific research including health can be greatly accelerated leading to new discoveries never before imagined.

Nanomedicine Taxonomy prepared for the Canadian Institutes of Health Research, February 2003

I. STATEMENT OF SPECIAL PURPOSE

The Nanomed Canada Research Network (NANOMED CANADA) is a growing community of nanotechnology researchers (chemists, physicists, mathematicians and engineers), medical researchers (clinicians, biotechnologists, pharmacologists and geneticists), medical institutes, pharmaceutical and diagnostic companies and government organizations committed to sharing knowledge and working collaboratively to advance medical diagnostics and therapeutics. NANOMED CANADA's initial focus will be on cancer, cardiovascular disease and central nervous system disorders.

Canada has demonstrated research leadership in both the nano and applied side of this equation; however, the two groups rarely have the opportunity to cross paths and share knowledge. While all network members see tremendous opportunity for collaboration, their busy schedules make it difficult to find time to move out of their day-to-day commitments to build new relationships in areas that they might not completely understand – where results can be important, but might take a long time to achieve.

With this in mind, NANOMED CANADA is using the power of the internet to create a virtual community, where information can be exchanged and accessed anywhere and anytime. Specific features will include on-going discussions through forum posts, weekly on-line presentations that will be archived for viewing at any time, a membership directory, a catalogue of relevant research facilities and appropriate contacts across Canada, private collaborative workrooms and social networking technologies

aimed at facilitating valuable information exchange. NANOMED CANADA will host quarterly topically-focused meetings aimed at developing collaborative research projects around topics that will advance nanomedicine. Network members who cannot attend the face-to-face meetings will be able to access relevant presentations and summary papers through the virtual network.

Once this virtual community is in place and is noted for providing value to the community, it is anticipated that the network will grow and stimulate more and more collaboration among academic, government and industry members. NANOMED CANADA will have a public face with several open-participation events and presentations. These will be promoted to non-members, with the goal of attracting appropriate new members to the network.

NANOMED CANADA will become known as a warehouse of information on Canada's nanomedicine industry. This will enable it to play a matchmaking role between companies and researchers, which will facilitate technology transfer. It is anticipated that companies would contact NANOMED CANADA for recommendations on obtaining certain types of expertise from universities, and university researchers would contact NANOMED CANADA to get a list of companies that would be interested in a particular technology that they have patented.

NANOMED CANADA members appreciate that implementing new technologies can have a profound effect on public health. A secondary benefit of the network will be its relevant expertise to help policy makers and regulatory agencies evaluate the scientific and ethical impact of new nanomedicine technologies.

Specific features of NANOMED CANADA's internet environment will include:

- A public face with profiles of the researchers and organizations involved in NANOMED CANADA, a listing of Canadian research facilities with contact information, availability and costs to access each, links to nanomedicine related news stories automatically updated daily from the wire, upcoming nanomedicine events and monthly highlights that promote the progress, successes, programs and researchers of NANOMED CANADA. Anyone will be able to subscribe to have these highlights delivered to their desktop as a newsletter, receiving just the headlines and lead sentences with links back to the website. The public site will also enable any person to request membership on-line; however, membership will need to be approved by NANOMED CANADA management to ensure that the community maintains a high level of valuable interaction.

- A members-only site aimed at sharing information and collaborating on-line. NANOMED CANADA has contracted Donat Group Enterprises to apply the company's technological innovation aimed at leveraging social networks to mine or filter large aggregations of content. This innovative platform technology was created in partnership with SFU and Genome BC. The new technology, originally developed in Vancouver for the music and e-learning communities with support from the National Research Council Industrial Research Assistance Program (NRC-

IRAP), works in the background to weigh the value of incoming information to a user based on previous interactions with members of a community. The technology improves the value of interactions for all members of a large group and helps to accelerate information sharing. The collaborative site will incorporate features such as discussion forums, self organized workgroups (closed or open), document archiving and the ability to self-post upcoming events, news items, biographical information and specifications on new facilities.

- Regular on-line members-only presentations from graduate students or other researchers initiated from anywhere in Canada or internationally. These presentations will be conducted through a collaborative voice over internet protocol (VoIP) and whiteboard application called Marratech, so that interactive dialogue and idea exchange can begin immediately. Marratech allows viewers to pose questions by accessing and writing on a whiteboard directly from their own PC, Mac or Linux workstations. NANOMED CANADA has test driven the Marratech platform. It was easy to use and had no barriers to entry for participants from industry, university or government. Presentations and collaborative discussions will be archived for later viewing to accommodate researchers' busy schedules. These can be searched by date, topic, presenter, supervisor or other key words.

- While the internet will provide ongoing dialogue and information exchange among users, it cannot deliver all of NANOMED CANADA's goals without complementary activities that drive researchers to the website. Face-to-face meetings are necessary to initiate new relationships and explore topics in deeper, more-focused environments. NANOMED CANADA will host quarterly research symposia, from different locations throughout Canada, around specific issues and research problems. One topic example might be, "How do we integrate new nanomaterials with living tissue?" Topics will be selected by NANOMED CANADA's Management Committee, which will be comprised of representatives from industry, university and government. Prior to selecting topics, the Management Committee will seek input from the larger membership through an internet forum. Then topics will be posted on NANOMED CANADA's website asking members to supply and review relevant background material and provide initial thoughts. Partial funding has been secured from the Vancouver Coastal Health Research Institute to support meetings and workshops for the first 5 years of the Network's program.

II. PROVISION FOR THE APPOINTMENT OF A DIRECTOR

Dr. Neil Branda is the founder and current Director. He will continue as Director and will report to the university through the appropriate Administrative Director according to the University Policy Policy (R 40.01) set forward for University Centres and Institutes.

As a 2005 NSERC Steacie Fellowship winner and a Canada Research Chair in Materials Science, Neil Branda has been recognized as one of Canada's leading young scientists. Dr. Branda is currently a Professor of Chemistry at Simon Fraser University and Director of Molecular Systems at 4D LABS, Simon Fraser University's new $35 million

research facility for new materials and nanoscale devices. He also represents Simon Fraser University as a Steering Committee Member of the BC Nanotechnology Alliance.

III. IDENTIFICATION OF THE APPLICABLE SCHEDULE

NANOMED CANADA is not intended to replace existing programs, but rather to provide a mechanism for expanding participation in those that exist and for creating new ones. The goal of NANOMED CANADA is to be a backbone network that connects a series of subnetworks across Canada and internationally. Members will act as relay points on the network, providing relevant info to their own subnetworks and encouraging participation in NANOMED CANADA.

Given the trans-disciplinary scope of the network's interests, Schedule B is the most appropriate for ongoing activities, with the Network's Administrative Director being SFU's Vice President of Research.

IV. STATEMENT THAT RECOGNIZES THE CENTRE'S OBLIGATION TO CONDUCT ITS ACTIVITIES IN ACCORDANCE WITH THE UNIVERSITY POLICIES

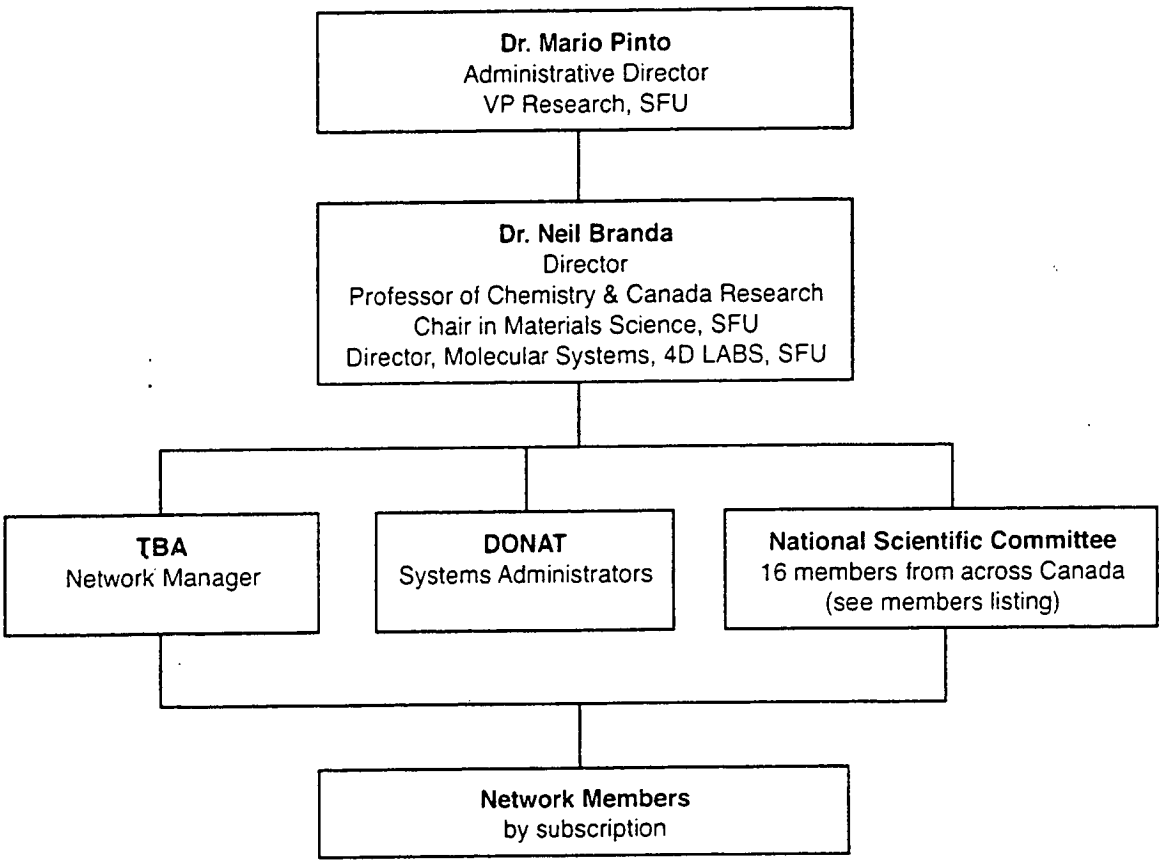
The Nanomed Canada Research Network recognizes its obligation to conduct is activities in accordance with university policies.

V. BUDGET IMPLICATIONS / LIBRARY NEEDS

Ongoing funding development is required to secure additional partnerships and provide financial support for the Network's activities. / One of the goals of the Network is to build content based on the actions of the users. Library support is, therefore minimal.

VI. STATEMENT OF INTERNAL GOVERNING PROCEDURE

The network will be administered by Simon Fraser University and will take full advantage of the expertise and contacts already developed by SFU's new $35 million research institute for new materials and nanoscale devices – 4D LABS. The following chart outlines the Management Structure.



The Network Director will report to SFU's Vice President of Research as Administrative Director. This will ensure that NANOMED CANADA operates within the guidelines of the University. The Administrative Director will report to the University's Governing Committee for Centres.

The Network Director will also chair NANOMED CANADA's Network Steering Committee. It is anticipated that a portion of the Director's time will be dedicated to international travel, promoting NANOMED CANADA and building international partnerships. The remainder of his time will be reserved duties for operational issues and to participate as a member of the NANOMED CANADA Network Steering Committee.

Network Steering Committee

The NANOMED CANADA Network Steering Committee consists of a sub-group of the network members with representation from both the researcher and receptor side. It currently has sixteen members, with a mix of research expertise from fundamental nanoscience through to medical applications development. Initial members were selected by the Network Director based on their fit into this mix and their willingness and

ability to commit to the responsibilities of the Committee. The Network Steering Committee will provide overall strategic direction, with an emphasis on the following activities:

1. selecting topics for face-to-face meetings
2. setting the criteria for NANOMED CANADA membership
3. encouraging graduate students and PDFs to deliver weekly on-line presentations
4. recruiting new members from their subnetworks
5. advising on the effective use of NANOMED CANADA resources
6. providing feedback on the quality of NANOMED CANADA activities
7. annually reviewing the NANOMED CANADA vision and performance and making recommendations for change or improvement

This multidisciplinary group includes expertise in a wide range of areas that NANOMED CANADA requires to advance interesting collaborative projects. And, since each researcher has built industry-university-government networks of their own, in Canada and internationally, NANOMED CANADA has a strong and diverse base for rapid growth in membership. It will soon include all of knowledge and expertise needed to make a difference, working collaboratively toward common goals.

Jillian Buriak – Canada Research Chair in Inorganic and Nanoscale Materials, Professor of Chemistry, University of Alberta, and Senior Research Officer, NINT

Warren Chan – Assistant Professor, Institute of Biomaterials & Biomedical Engineering, University of Toronto

David Colman – Penfield Professor and Director, Montreal Neurological Institute and Hospital

Michael Freund –Canada Research Chair in Conducting Polymers and Electronic Materials, Professor of Chemistry, University of Manitoba

Jack Gauldie – Director, Centre for Gene Therapeutics and Professor of Pathology and Molecular Medicine, McMaster University

Larry Goldenberg – Director , The Prostate Centre at Vancouver General Hospital

Jed Harrison – Professor of Chemistry, University of Alberta

Bruce Lennox – Professor and Chair of Chemistry, McGill University

Roderick Melnik – Canada Research Chair in Mathematical Modelling, Professor of Mathematics, Wilfred Laurier University

Linda Pilarski – Canada Research Chair in Biomedical Nanotechnology, Professor and Senior Scientist, Department of Oncology, Cross Cancer Institute and University of Alberta

Peter Singer – Director, Joint Centre for Bioethics, University of Toronto

John Steeves – John & Penny Ryan BC Leadership Chair, Professor and Director of ICORD

Joel Teichman – Head of Urology, Providence Health Care

Glen Tibbits – Canada Research Chair in Molecular Cardiac Physiology, Director of Cardiovascular Science, BC Research Institute for Children's & Women's Health

Dan Wayner – Director General, Steacie Institute for Molecular Science, NRC

Chris Yip – Canada Research Chair in Molecular Imaging, Associate Professor, Department of Chemical Engineering and Applied Chemistry, Department of Biochemistry, Institute of Biomaterials and Biomedical Engineering, University of Toronto

Network Manager

The Network Manager will report the Network Steering Committee. The Manager will be responsible for all day-to-day operations and project management activities as follows:

1. executing all decisions made by the NANOMED CANADA Management Committee
2. implementation and ongoing quality control of the collaborative website
3. writing and uploading fresh content to the website on a weekly basis
4. developing and implementing a communications strategy aimed at recruiting NANOMED CANADA members here and abroad and at communicating success stories to the general public
5. coordinating workshops and weekly on-line presentations
6. budgeting and financial reporting
7. documenting and disseminating summaries of network meetings through the NANOMED CANADA website
8. managing all outside contractors, including web developers, designers and writers
9. promoting network member research activities to the receptor community and linking receptors with the appropriate researchers

Appendix A – Details on the Network Steering Committee Members

Neil Branda – Canada Research Chair in Materials Science, Director of Molecular Systems, 4D LABS, and Professor of Chemistry, Simon Fraser University – Dr. Branda will be the Network Director of NANOMED CANADA. As winner of a 2005 NSERC Steacie Fellowship, he has been given two years of teaching and administrative relief to focus on collaborative research that lies at the interface of advanced materials and medicine. This project is aligned with the goals set out in his Steacie Fellowship application. Dr. Branda is an organic chemist with expertise in molecular switching – designing molecules that change their shape and function when exposed to light, electricity or other stimuli. This switching is important for controlling when and where diagnostics and therapeutics can react with medical targets and for creating new advances in photodynamic therapy. Dr. Branda will also link NANOMED CANADA activities with those of 4D LABS and other Simon Fraser University faculties.

Jillian Buriak – Canada Research Chair in Inorganic and Nanoscale Materials, Professor of Chemistry, University of Alberta and Senior Research Officer, National Institute of Nanotechnology (NINT) – Dr. Buriak is an inorganic materials chemist who is internationally recognized for her work in the chemistry of semiconductor surface chemistry, and nanolithography, and for breaking new ground in the development of new classes of soluble metal catalysts for the organic synthesis. Her research is critical for the integration of molecular and nanoparticle materials in device applications. Dr. Buriak will also be able to link NANOMED CANADA activities with those of University of Alberta and those of the National Institute of Nanotechnology (NINT) and other institutes throughout the National Research Council of Canada (NRC) network.

Warren Chan – Assistant Professor, Institute of Biomaterials & Biomedical Engineering, University of Toronto – Dr. Chan is a biomedical engineeer interested in applying nanotechnology, microtechnology, molecular engineering and instrumentation design to address biological questions that will lead to novel diagnostic schemes and therapeutic strategies. He is internationally recognized for his research into using nanosized quantum dots for tagging and tracking disease processes. He will also play a critical role in linking NANOMED CANADA with the University of Toronto's Institute of Biomaterials and Biomedical Engineering, which has 35 faculty members and three faculties – Applied Science and Engineering, Dentistry and Medicine.

David Colman – Penfield Professor and Director, Montreal Neurological Institute and Hospital – Dr. Colman is a neuroscientist who studies the interaction between cell adhesion molecules. He uses in vitro and in vivo biochemical and molecular approaches to study the myelination process and adhesion mechanisms by which intercellular junctions, in particular the pre- and post-synaptic membranes in the CNS, are held together. As Director of the Montreal Neurological Institute, he will play an important role connecting the network to the medical research community in Quebec.

Michael Freund – Canada Research Chair in Conducting Polymers and Electronic Materials, Professor of Chemistry, Associate Professor of Chemistry, University of Mani-

toba, Manitoba Regional Materials and Surface Characterization Facility – Dr. Freund is an analytical chemist engaged in developing a range of synthetic approaches capable of tailoring the properties of conducting polymers for a range of applications, from electronics to medical diagnostics. In addition, his research focuses on developing new sensing strategies including artificial olfaction. Dr. Freund will play an active role in linking network activities with those in Manitoba and Saskatchewan.

Jack Gauldie – Director, Centre for Gene Therapeutics, Professor of Pathology and Molecular Medicine, McMaster University, Fellow of the Royal Society of Canada – Dr. Gauldie is recognized internationally for his work in defining the molecular regulation of the acute phase inflammatory response and is a world expert in the areas of cytokine biology and the molecular regulation of inflammation and immunity. As the Director of McMaster University's Centre for Gene Therapeutics, Dr. Gauldie will link the activities of NANOMED CANADA will Canada's immunology and genetics communities.

Larry Goldenberg – Director of The Prostate Centre at Vancouver General Hospital, Professor and Head of the Division of Urology/ Surgery at University of British Columbia, Research Consultant at the British Columbia Cancer Agency and Consultant Urologist at the University of Washington – Dr. Goldenberg is a medical doctor involved in studying diagnostics, education and novel treatment approaches of prostate cancer. He is involved in research of MRI and 'point of care" diagnostics as well the study of the natural biological history of prostate disease. As a clinician-scientist and Head of the Division of Urology at University of British Columbia, Dr. Goldenberg has been involved in strong translational research initiatives for many years, with his largest research group studying the paradigm of advanced prostate cancer. Over the past 6 years, the Division of Urology has accumulated over $100M in peer-reviewed research and philanthropic dollars to support its current infrastructure, research scientists, clinician-scientists, nurses and surgeons. He will play a critical role in communicating the issues that nanotechnology can address in cancer diagnosis and treatment, and will link NANOMED CANADA to an international network of leading urologists, medical/ radiation oncologists and surgeon-scientists.

Jed Harrison – Professor of Chemistry, University of Alberta, Fellow of the Royal Society of Canada – Dr. Harrison is an analytical chemist, internationally known for his pioneering research into lab-on-a-chip technologies. His expertise in microfluidics will help turn novel research into functioning devices. Dr. Harrision will also play a role in connecting NANOMED CANADA to other relevant faculty members at University of Alberta and to the worldwide microfabrication community.

Bruce Lennox – Professor of Chemistry, McGill University, Member of the Scientific Affairs Committee, NanoQuebec and Member of the Advisory Committee , NSERC Nano Innovation Platform (NanoIP) - Dr. Lennox is a physical organic chemist with expertise in self-assembly, who is involved in the synthesis and application of gold and platinum nanoparticles in drug delivery and biorecognition schemes. He is also involved in the development of ion-channel based electrochemical biosensors. Through his committee positions at NanoQuebec and NanoIP, Dr. Lennox will play an important

role in linking NANOMED CANADA with some of Canada's most important nanotechnology networks.

Roderick Melnik – Canada Research Chair in Mathematical Modelling, Professor of Mathematics, Wilfrid LaurierUniversity - Dr. Melnik is a mathematician whose research into coupled effects and the dynamics of coupled systems will lead to new mathematical and computational tools for the analysis of systems and effects. Over the recent years, together with his collaborators in Europe and the USA, he has contributed extensively to the development of new models for studying properties of nanostructures .His expertise will help to provide insight into the potential directions that new collaborative projects may take. He will also play a role in linking NANOMED CANADA with researchers in the Waterloo/Guelph region.

Linda Pilarski – Canada Research Chair in Biomedical Nanotechnology, Professor and Senior Scientist, Department of Oncology, Cross Cancer Institute and University of Alberta – Dr. Pilarski conducts translational research focused on understanding the genetic events that underlie human cancer, working with clinicians to better define the disease as it occurs in patients. Through close collaborations with engineers to develop novel high throughput technology to detect and monitor cancer cells as the disease progresses, she is also facilitating the design of therapy customized to target the vulnerabilities of each patient's malignant clone. Her experience working with ex-vivo human cancer cells at the molecular level will be integral to the success of NANOMED CANADA. She is scientific director of two cross disciplinary research teams, a CIHR New Emerging Team and the Alberta Cancer Diagnostics Consortium, dedicated to using nanoscience and microfluidics to adapt cancer diagnosis and monitoring tests to a portable, point of care platform. She will also play an important role connecting the network's activities to those of the medical community in Alberta.

Peter Singer – Sun Life Financial Chair in Bioethics, Director of the University of Toronto Joint Centre for Bioethics, Professor of Medicine at the University of Toronto and University Health Network, Director of the World Health Organization Collaborating Centre for Bioethics and Director of the Canadian Program on Genomics and Global Health at the University of Toronto – Dr. Singer's current research focus is on global health, in particular, harnessing genomics and nanotechnology to improve health in developing countries. He will help NANOMED CANADA evaluate the ethical implications of nanomedicine and look for opportunities to apply new technologies to global health issues.

John Steeves – John & Penny Ryan BC Leadership Chair, Professor and Director of ICORD, Director of the Rick Hansen Spinal Cord Injury Network, Chair of the Clinical Trials Workshop of the International Campaign for Cures for Spinal Cord Injury Paralysis - Dr. Steeves is a pioneer in creating an environment that fosters successful collaborative research. He founded CORD (Collaboration On Repair Discoveries) as the first interdepartmental research group at University of British Columbia focused on clinical and discovery research directed to spinal cord injuries. It has now evolved into the multi-institutional ICORD (International Collaboration On Repair Discoveries), which

involves hundreds of investigators from across Canada and around the world. Dr. Steeves has also been the President or Board Director of several Biotechnology companies and remains active as a consultant on the development of novel therapeutic interventions to various venture capital funds, pharmaceutical and biotech companies. Dr. Steeves will contribute his knowledge of what it will take to cure spinal cord injuries, and will connect NANOMED CANADA to the worldwide network of spinal cord injury researchers.

Joel Teichman – Head of Urology, Providence Health Care and Associate Professor of Surgery/Urology, University of British Columbia – Dr. Teichman has internationally recognized expertise in interstitial cystitis and nephrolithiasis. He is currently developing and will lead a transdisciplinary biophotonics program at St. Paul's Hospital. This Centre of Excellence will provide a productive and efficient intellectual environment for research, development, clinical trials, and commercialization of technologies based on the integration of optical devices, bio- and photochemistry, molecular engineering, micromachining and microelectronics for applications in healthcare. Dr. Teichman will play an important role integrating the work of the biophotonics program with the activities of NANOMED CANADA.

Glen Tibbits – Canada Research Chair in Molecular Cardiac Physiology, Director of Cardiovascular Science, BC Research Institute for Children's & Women's Health - Dr. Tibbits' Cardiac Membrane Research Lab investigates the cellular and molecular mechanisms that enable the heart to adapt to environmental and pathological changes. The research team is focusing on the factors controlling calcium ion concentrations in cardiac muscle cells, and how these ions in turn regulate cardiac muscle contraction. Working with the BC Institute for Children's and Women's Health, Dr. Tibbits also studies congenital heart disease, and the phylogeny of cardiac contractility regulatory mechanisms. Dr. Tibbits has well-established connections with cardiologists and cardiac physiologists regionally and worldwide. He will help link NANOMED CANADA to this important group of clinical researchers.

Dan Wayner – Director General, Steacie Institute for Molecular Science, National Research Council Canada (NRC), Member NSERC Nano Innovation Platform Advisory Board, Member, Editorial Advisory Board, Journal of the American Chemical Society, Rutherford Medal Winner, Fellow of the Royal Society of Canada – Dr. Wayner is an organic chemist interested in surface organic chemistry of semiconductors, antibody-antigen interactions at interfaces, DNA and protein biochip technologies, molecular/biomolecular devices, mechanistic organic chemistry and thermochemistry and kinetics of dissociative electron transfer, homolytic and heterolytic processes. As Director General of an NRC institute, Dr. Wayner will play an important role linking NANOMED CANADA activities to those of the vast NRC network and to those of the Government of Canada's ad-hoc committee that is working to develop a national nanotechnology strategy.

Chris Yip – Canada Research Chair in Molecular Imaging, Associate Professor, Department of Chemical Engineering and Applied Chemistry, Department of Biochemistry,

Institute of Biomaterials and Biomedical Engineering, Terrence Donnelly Centre for Cellular and Biomolecular Research, University of Toronto – Dr. Yip is a biomedical engineer who is developing techniques for imaging that will make it possible to see molecular events as they are occurring. His research focus on single molecule biophysics encompasses the development of novel approaches to correlated functional imaging of real-time processes and dynamics on molecular length scales and computational simulations of molecular self-assembly. He is particularly interested in membrane proteins and molecular self- assembly at interfaces. His work has clear implications for understanding and possibly controlling processes ranging from the crystallization of biomolecules and pharmaceuticals to the formation of protein complexes and the interaction of protein and drug molecules with cellular membranes and biomimetic substrates. His research will help the other NANOMED CANADA researchers understand the meaning of many processes at the molecular scale and how they could be applied to the design of new pharmaceutics and materials.

SFU SIMON FRASER UNIVERSITY LIBRARY

Library Course Assessments

The Library participates in the course approval process for new courses at both the undergraduate and graduate levels. By Senate motion (S.93-11) "no new course should be approved by Senate until funding has been committed for necessary library materials." A Library review should be conducted after new course proposals have been approved by the department or school curriculum committee, before being considered by the Faculty curriculum committee. New courses will not be approved at the Senate Committee on Undergraduate Studies (SCUS) or Senate Graduate Studies Committee (SGSC) until a Library review has been completed. Even if the department states that no new library resources are required, a report from the Library is required to confirm this view.

To submit course proposals for review by the Library, forward the following materials to Gwen Bird, Associate University Librarian, Collections Services:

- course proposal forms
- complete course outline
- reading list created for the course, if any
- date of Faculty curriculum committee meeting (or other deadline for library report)

An assessment will be done to evaluate whether the Library's holdings and present collection development activities are adequate to support the new course. If no new library resources are required, the course will be added to the appropriate list below indicating the library is adequately resourced to support the course.

If additional library resources are required, a full report will be created and linked below, and the associated costs will be identified. The costs may be one-time, to fill gaps in holdings, or ongoing, for example, to start new journal subscriptions, or sustain book collecting in areas not now included in the Library's collection scope. If costs are attached, the department or school is asked to transfer the required funds to the Library's materials budget. Questions about the process can be directed to Gwen Bird.

No Additional Library Resources Required

Unless otherwise indicated, these courses require no additional library resources based on a course location of SFU Burnaby. In many cases, if the courses were to be offered at SFU Surrey or Vancouver or as off-campus courses, additional Library costs might be involved. Please contact Gwen Bird for details.

Behavourial and Cognitive Neuroscience Institute (BCNI)

CIBC Centre for Corporate Governance and Risk Management

Centre for Studies in Print and Media Cultures

Centre for Imaginative Education

Centre for Studies in Wealth Management

David Wheeler Institute for Research In Mathematics Education

Nanomed Canada Research Network

BISC 357, 418, 497

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