

A G E N D A

I MATTERS TO BE CONSIDERED IN CLOSED SESSION -None

II MATTERS RECOMMENDED FOR CONCURRENCE WITHOUT DEBATE -None

III MATTERS FORWARDED FOR INFORMATION

1. Correspondence from the University
 Secretary re: Senate Orientation

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IV REPORT OF THE PRESIDENT

V QUESTION PERIOD

Senators are reminded that questions shall normally be submitted in writing to the University Secretary no later than 10:00 a.m. of the day preceding the meeting.

**VI CONSIDERATION OF THE MINUTES
OF THE MEETING OF JUNE 18, 2003**

VII BUSINESS ARISING FROM THE MINUTES

**VIII REPORTS OF THE SENATE EXECUTIVE COMMITTEE
AND THE SENATE PLANNING AND PRIORITIES COMMITTEE**

1. Report of the Senate Executive Committee

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2. Report of the Senate
 Planning and Priorities Committee

- a) Review of Committee Composition

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- b) The Chair will make an oral report on the Committee's activities.

**IX REPORTS OF OTHER COMMITTEES OF SENATE,
FACULTY AND SCHOOL COUNCILS**

1. Proposal to Establish a Professorship in
 Strategic Financial Management

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2. Proposal to Establish a Professorship in
 Corporate Finance

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3.	<u>Proposal to Establish a Spinal Cord Research Centre</u>	Page 26
a)	<u>Report of the Senate Committee on University Research</u>	Page 47
b)	<u>Report of the Senate Planning and Priorities Committee</u>	Page 50
4.	Report of the Faculty of Graduate Studies on a proposal <u>to introduce a M.Sc. and a Graduate Diploma in Pediatric Dentistry</u>	Page 51
a)	<u>Report of the Senate Planning and Priorities Committee</u>	Page 86
5.	Report of the Senate Committee on University Research on the <u>Periodic Review of the Institute for the Humanities</u>	Page 90

X ADDITIONAL BUSINESS

XI ADJOURNMENT

Please Call Regrets to 474-6167.

/jml



UNIVERSITY
OF MANITOBA

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Office of the University Secretary

312 Administration Building
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9593
Fax (204) 474-7511

Date: July 8, 2003
To: All Members of Senate
University of Manitoba
From: Beverly M.M. Sawicki,
University Secretary

Subject: ***Senate Orientation***

NOTICE

Please be advised that Senate Orientation has been scheduled for:

Wednesday, September 3, 2003
9:00 a.m. - 12:00 noon
Senate Chamber, Room 245, Engineering Building

This session will be of particular interest to new Senators; however, members who have been serving on Senate for some time are encouraged to attend as well.

You are respectfully requested to RSVP to the Office of the University Secretary, 474-6167 by August 22, 2003 if you plan to attend. This will enable us to prepare adequate copies of printed material for attendees. Nonetheless, don't let the fact that you didn't RSVP keep you away!

Thank you for your assistance.

/jml

July 30, 2003

Report of the Senate Executive Committee

Preamble

1. The terms of reference for the Senate Executive Committee are found in Section 7.2 of the *Senate Handbook* (revised 2000).
2. The Senate Executive Committee held its regular meeting on July 30, 2003.

Observations

1. **Speaker for the Senate Executive Committee**

Professor Richard Sparling will be the Speaker for the Executive Committee for the August meeting of Senate.

2. **Comments of the Senate Executive Committee**

Other comments of the Executive Committee accompany the report on which they are made.

Respectfully submitted,

Dr. Emőke Szathmáry, Chair
Senate Executive Committee

Terms of Reference: *Senate Handbook* (revised 2000), Section 7.

/jml

Report of the Senate Planning and Priorities Committee on the Review of its Terms of Reference and Composition

Preamble

1. The terms of reference for the Senate Planning and Priorities Committee (SPPC) are found in Section 8.32 of the *Senate Handbook*.
2. Over the last number of months, the Senate Planning and Priorities Committee has conducted a review of its terms of reference and composition.

Observations

1. The terms of reference essentially reflect how SPPC has been working. We believe the terms of reference achieve a balance between providing general guidance in keeping with a broad mandate and focus in specific areas (finance, space planning and academic programming) to address in recommendations to Senate.
2. The Committee agreed that the composition of the Committee needs to be revised to account for changes in the operation of the University and ensure continuity and efficacy within SPPC.
3. The first recommendation involves adding the Vice-President (Research) (or designate) to SPPC's composition. The University of Manitoba is the Province's principal research resource in terms of expertise, technical capability and analytical instrumentation. We represent a tremendous investment and commitment in terms of dollars and human resources. In recent years the Federal and Provincial Governments have created new programs such as Canada Foundation for Innovation and the Canada Research Chair program to add to our research and innovation capacity. In addition we have seen restructuring and reallocation within the major granting councils. The University of Manitoba has been successful in these new programs and we are seeing the results in our everyday teaching and research. This "re-tooling" we are experiencing is changing the framework within which we allocate resources and space in the University.

In recent years SPPC has considered space proposals that have been driven directly by the requirements of the CFI program. Annually, as part of the Budget Advisory Committee, the Finance sub-committee advises on the budget allocations process. This includes funds allocated in support for Research which is distributed in a variety of ways including start up support for new faculty and as funds to lever CFI future support.

The Senate Committee on University Research (SCUR) "provides advice and recommendations to Senate and the University Administration on all matters related to research at the University including: a) policies concerning research development and administration, reviewing such policies regularly and recommending revisions as appropriate; b) mechanisms for promoting the research mission of the University and recognizing research excellence; c) strategies for enhancing research performance and competitiveness; research strategy and policy for the University." SPPC "makes recommendations to Senate regarding the following: a) the general allocation of University resources with respect to their desirability and efficiency; b) proposed academic programs and physical plant development". We note also that the Vice-President (Academic) and the Vice-President (Administration) (or their designates) are represented on SPPC. SPPC

believes it would be helpful to be kept informed and advised in a timely way regarding research initiatives. Given we are the Province's research university, SPPC believes it is reasonable to allocate resources within the University to research.

4. The next change to composition involves student representation on SPPC. Historically three students have been appointed to SPPC. The reality of the last three to four years is that student participation on SPPC has been sporadic. The pressures of academic life are felt by all, particularly by the students. We need to find a mechanism that ensures more regular and substantial participation by the students particularly as SPPC "makes recommendations to Senate regarding the following: a) the general allocation of University resources with respect to their desirability and efficiency".
5. The third recommended change is to expand the faculty representation on the Committee. Over and above the normal annual business of program consideration, budget process and space considerations, SPPC is called upon to review and recommend on a wide range of issues. We have 8 members of the academic staff on SPPC who bring with them various levels of University experience and various expertises. We have some 19 Faculties at the University of Manitoba spanning diverse disciplines. While some Faculties may be broadly grouped in a general way, we are finding that expertise in very specific fields is often called upon to lead discussions, an example in the previous year would have been the need to report on the IT requirements of the institution. We could call upon the expertise in an *ad hoc* way, however, the Committee also needs the advice to be in the context of and at the level of the University rather than a specific discipline. Our experience is that it takes a few years of Senate and Senate committee experience to obtain a University wide perspective. In addition, having more faculty members on the Committee would allow for more succession planning ability within SPPC's leadership roles (Chair, Vice-Chair and sub-committee Chairs).

Recommendations

The Senate Planning and Priorities Committee recommends that Senate amend the composition of the Senate Planning and Priorities Committee by:

1. the addition of Vice-President Research (or designate) to the Senate Planning and Priorities Committee;
2. the addition of two members of the faculty to the Senate Planning and Priorities Committee along with the requirement that at least one of the faculty members be from the Bannatyne Campus. This change will assist with obtaining a broad representation of expertise representative of the University and in time to assist with succession planning in terms of experience;
3. requiring that the three student members appointed to SPPC be the President of UMSU (or designate), one graduate student and one undergraduate student.

Respectfully submitted,

Juris P. Svenne, Acting Chair
Senate Planning and Priorities Committee

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the report to Senate.

/jml

NOTE: In accordance with the *Senate Handbook*, the Senate Committee on Rules and Procedures vetted this proposal and concurs with it.

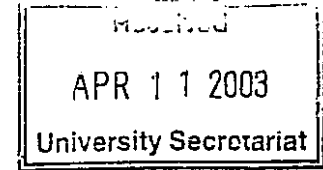


202 Administration Building
Winnipeg, Manitoba
Canada R3T 2N2
Fax (204) 261-1318

UNIVERSITY
OF MANITOBA

Office of the President

April 9, 2003



TO: Ms. Bev Sawicki, University Secretary
FROM: Dr. Robert Kerr, Vice-President (Academic) & Provost
SUBJECT: Professorship in Strategic Financial Management

Enclosed please find a proposal to establish a Professorship in Strategic Financial Management in the I.H.Asper School of Business. I reviewed the original proposal which was recommended to me by the Dean of the Asper School of Business and determined that it was not primarily intended to enhance the University's research programs. I therefore recommend the attached proposal for approval.

I understand that the Senate Committee on Honorary Degrees will consider the naming of the Professorship.

encls.

cc. Dr.J.Keselman
Dr.J.Gray

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses
the report to Senate.

Proposal to Establish a Professorship in Strategic Financial Management
in

The I.H. Asper School of Business

As required in Policy 428 (2.1), this is a proposal to establish a Professorship in the I.H. Asper School of Business.

<u>Type of Appointment:</u>	Professorship - Honorary
<u>Name of Professorship:</u>	Professorship in Strategic Financial Management
<u>Purpose of the Professorship</u>	The purpose of the proposed professorship is to recognize and promote the study of strategic financial management in the I.H. Asper School of Business.
<u>Relationship to the Goals of The Unit:</u>	Financial strategy is one of the several important areas that are core to the finance curriculum at the graduate and undergraduate levels. In addition, the Professorship will increase the visibility of the study of strategic financial management.
<u>Funding:</u>	The Professorship is being established in recognition of the Certified Management Accountants' gift of \$500,000 to the Asper School of Business capital campaign. The funds have been placed in the School's general endowment and will not be used to directly support the Professorship.
<u>Qualifications:</u>	The Professorship will be permanently attached to the position of Head, Department of Accounting and Finance. The individual holding the Professorship will normally hold a tenured or tenurable appointment in the I.H. Asper School of Business at the Associate Professor or Professor level. Normally, the individual will have a Ph.D. in Finance or Accounting or a related discipline within the Department, and will have an accomplished research and teaching record in the field of strategic financial management or related area within the Department.
<u>Term of Appointment:</u>	The Professorship will be awarded for the period that the incumbent occupies the Head's position. Acting or Interim Heads will not be eligible for the Professorship.

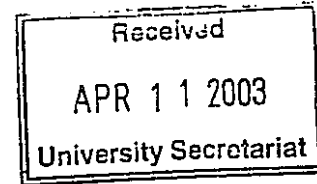
April 8, 2003



UNIVERSITY
OF MANITOBA

Office of the President

202 Administration Building
Winnipeg, Manitoba
Canada R3T 2N2
Fax (204) 261-1318



April 9, 2003

TO: Ms. Bev Sawicki, University Secretary
FROM: Dr. Robert Kerr, Vice-President (Academic) & Provost
SUBJECT: Professorship in Corporate finance

Enclosed please find a proposal to establish a Professorship in Corporate Finance in the I. H. Asper School of Business. I reviewed the original proposal which was recommended to me by the Dean of the Asper School of Business and determined that it was not primarily intended to enhance the University's research programs. I therefore recommend the attached proposal for approval.

I understand that the Senate Committee on Honorary Degrees will consider the naming of the Professorship.

encl.

cc. Dr.J.Keselman
Dr.J.Gray

Proposal to Establish a Professorship in Corporate Finance

in

The I.H. Asper School of Business

As required in Policy 428 (2.1), this is a proposal to establish a Professorship in the I.H. Asper School of Business.

<u>Type of Appointment:</u>	Professorship
<u>Name of Professorship:</u>	Professorship in Corporate Finance
<u>Purpose of the Professorship</u>	The purpose of the proposed professorship is to enhance the study of corporate finance, which is a major area of research and teaching in the I.H. Asper School of Business. The Professorship will allow the School to recognize outstanding scholarship in this important area, and hire or retain an outstanding scholar in corporate finance.
<u>Relationship to the Goals of The unit:</u>	Corporate finance is core to the finance curriculum at both the graduate and undergraduate levels. With the difficulty in recruiting and retaining faculty members in this area, the Professorship will make our School more attractive. In addition, the Professorship will provide support for our goal of increasing the research output of the finance area.
<u>Funding:</u>	The Professorship will be funded by an endowment of \$500,000. The funds are being raised by alumni and members of the corporate finance community. Approximately \$400,000 has already been raised and the remaining amount is expected to be raised over the next six months.
<u>Qualifications:</u>	The individual holding the Professorship will normally hold a tenured or tenure-track appointment in the I.H. Asper School of Business at the Associate Professor or Professor level. Normally, the individual will have a Ph.D. in Finance and will have an accomplished research and teaching record in the field of corporate finance appropriate for an endowed Professorship
<u>Term of Appointment:</u>	The Professorship will be awarded on a competitive basis for a five-year period.

Selection Committee:

The Selection Committee will consist of the Dean (or designate), the Associate Dean (Research), one Full Professor in Finance appointed by the Head of the Department of Accounting and Finance, and one Full Professor from the I.H. Asper School of Business appointed by the Dean.

April 1, 2003



PROPOSAL TO ESTABLISH SPINAL CORD RESEARCH CENTRE

Submitted to

Faculty of Medicine Executive Council
c/o
Dr. Brian Hennen, Dean
Dr. Pat Choy, Associate Dean (Research)

May 17, 2002

for

University Research Committee of Senate
c/o
Dr. Joanne Keselman, Chair (URCS)
Vice-President (Research and External Programs)
University of Manitoba

Prepared by

Dr. David McCrea
Acting/Director, SCRC
Professor, Department of Physiology
for
Dr. Larry Jordan
Director, SCRC
Professor, Department of Physiology
(currently on medical leave)

Spinal Cord Research Centre
Administration Office
Room 436, Basic Medical Sciences Building
Bannatyne Campus
Tel 789-3761, Fax 789-3930
Email info@scrc.umanitoba.ca

Comments of the Senate Executive Committee:

The Senate Executive Committee endorses
the report to Senate.



Summary of the Application for Research Centre Status for the Spinal Cord Research Centre

The **mission** of the Spinal Cord Research Centre of Winnipeg is to provide an environment for world-class research concerning the mechanisms controlling movement, bowel and bladder function, and the effects of training on the nervous system. The **objectives** are to:

- 1) provide graduate and fellowship training programs through interactions with multiple laboratories;
- 2) consolidate technical support and development of new research tools;
- 3) maximize efficiencies by sharing technical and support resources wherever possible;
- 4) provide administrative support and encouragement for cooperative (inter-laboratory) research initiatives.

These research efforts will contribute to the care and rehabilitation of spinal cord injured patients and provide opportunities for developments with industry and the private sector.

Beginning in 1987, the SCRC was set up for the recruitment of new clinical and basic science faculty and the establishment of new laboratories in which independently funded research could flourish. To a large extent these goals have been met. Several nationally and internationally funded laboratories have been set up; there is an active graduate training program; and there has been international recognition of the work carried out at the Centre. The SCRC and its members have grown to become recognized as a leading international research centre of excellence in the field of spinal cord research, comparable to leading international counterparts. The SCRC is clearly in harmony with the University of Manitoba's strategic plan for research, as articulated in The Task Force Report, *Building on Strengths*.

Currently, the SCRC has six core members providing a financial contribution to the Centre. Between Drs. Fedirchuk, Jordan, McCrea and Shefchyk (Physiology), Dr. Schmidt (Internal medicine, adjunct in Physiology) and Dr. Gardiner (Physical Education, adjunct in Physiology), research grants (5 CIHR operating, 2 NIH R-01, 1 CIHR group) were approximately \$1,305,680 for 2001-2002 and will be higher for 2002-2003. There are 12 secondary members of the SCRC with an interest in spinal cord research from within the University of Manitoba or other institutions.

Approval of this application for Research Centre status is sought to bring formal recognition of the existing relationship between the SCRC and the University. Centre status can occur without financial obligation to the University. The academic salaries of all investigators are covered by tenured or GFT appointments, and research funds are covered from the individual and group grants of the core members. Existing space, primarily in the Department of Physiology, is adequate at this time. In addition, the SCRC has a long history of attracting external national and local funding. More information on the organization and accomplishments of the SCRC can be found in the full application for Centre status.



1. **Name of Research Centre:** Spinal Cord Research Centre
2. **Description and Justification:** This shall include:
 - ☐ (a) a concise statement of the mission and objectives of the proposed research centre/institute and their relationship to the strategic plan of the University;
 - ☐ (b) an identification of the scope of activities envisaged; and
 - ☐ (c) a description of the research benefits and opportunities likely to result from the establishment of the research centre/institute, including an indication of how the proposed research centre/institute would facilitate research among scholars within the University and in the wider community.

A. Mission

The mission of the Spinal Cord Research Centre of Winnipeg is to conduct research into the mechanisms controlling major functional systems in the brain and spinal cord, and to develop this knowledge to provide new clinical tools for the treatment of injury and disease affecting these functional systems. In particular, the SCRC is an environment for world-class spinal cord research.

B. Functions (Objectives)

The SCRC was setup for the recruitment of new clinical and basic science faculty and the establishment of new laboratories in which independently funded research could flourish within the Faculty of Medicine. To a large extent these goals have been met. Several nationally and internationally funded laboratories have been setup, there is an active graduate training program and there has been international recognition of the work carried out at the Centre. With the maturation of SCRC emphasis has changed from growth to continuance.

There are several unique functions of the SCRC that are outside the scope of responsibilities of other University or Hospital departments or groups. These include:

- 1) The promotion of research interactions within the spinal cord group and the larger neuroscience community. This is achieved through weekly seminar and journal club meetings, a visiting scientist program and events to promote public awareness of neuroscience research.
- 2) The maintenance of core technical facilities including software development and electronic equipment design and manufacture. These are now critical functions of the SCRC because the University has closed the faculty electronics support service and the Department of Physiology has discontinued its electronics technician position.



- 3) A spinal cord training program. This includes the training of graduates students using projects spanning more than one laboratory and extensive co-supervision. In addition courses have been developed specifically for the trainees. An example is computational neuroscience taught by Dr. Bashor, University of North Carolina at Charlotte. Dr. Bashor was an SCRC funded visiting scientist and continues to collaborate with members of the group. In addition Dr. McCrea has developed two electronics instrumentation courses (90:731, 90:732) tailored to the needs of spinal cord investigators. These courses are also attended by visiting scientists and post doctoral fellows.
- 4) A coordinating central office with one administrative assistant for the promotion of lectures, arranging visiting scientists, administration of shared CIHR Group Grant and NIH grants, maintenance of information systems.

C. Program Administration

Under the direction of the SCRC Director, the central office provides secretarial support to the faculty, staff and trainees of SCRC, and to the Neuroscience Research Group. Duties include planning, organizing, controlling and ensuring completion of routine administrative functions in the areas of project, finance, office, external and internal academic service, and information services.

See Position Description of the SCRC Administrative Secretary

Appendix F

- ☐ 3. **Constitution**. This shall include a description of:
- ☐ (a) the organization structure of the proposed research centre/institute, including the roles and responsibilities of its various committees;
 - ☐ (b) the categories of membership and the criteria of each of these categories;
 - ☐ (c) procedures whereby appointments will be made for each membership category; and
 - ☐ (d) the privileges and responsibilities of membership.

1. LOCATION OF RESEARCH GROUP

University of Manitoba
Admin Office: 730 William Avenue, BMSB 436,
Winnipeg, Canada R3E 3J7

Telephone: (204) 789-3761 Facsimile (204) 789-3930
E-mail: info@scrc.umanitoba.ca
Website: <http://www.scrc.umanitoba.ca>

2. TYPE: INTER-INSTITUTIONAL (TYPE III)

University of Manitoba (Faculty of Medicine and Faculty of Physical Education)
Health Sciences Centre (Winnipeg)
Dalhousie University (Halifax)
National Research Council - Institute of Biodiagnostics (Winnipeg)

3. PERSON REPORTING

Dr. David McCrea, Professor, Department of Physiology; Member, SCRC



4. DIRECTOR

Dr. Larry M. Jordan, Professor and Chair, Department of Physiology

5. PERSONNEL

5.1 Faculty members:	11 Full Members (5 Primary, 6 Secondary) and 6 Associate Members	Page 2
5.2 Research Associates:	5 post-PhD, 1 RN	(Statistics for full members only)
5.3 Postdoctoral Fellows:	2	"
5.4 Ph.D. Students:	7	"
5.5 Masters Students:	11	"
5.6 Technical Support Staff:	11	"
5.7 Admin/Secretarial Staff:	1	"

- ☐ 4. **Management.** This should identify the University officer to whom the proposed research centre/institute reports and in whom financial responsibility is vested.
- ☐ 5. **Proposed Membership.** This shall include a listing of the proposed membership of the research centre/institute broken down by the various membership categories, where applicable. For each proposed member, an abbreviated curriculum vitae shall be provided which details the following information: degree held, employment experience, professional activities, research interests, research funding record (last five years), and record of research achievements (last five years).
- ☐ 6. **Physical Resources.** This shall include:
- ☐ (a) a listing of available research facilities (e.g. library holdings, laboratories, space, equipment), including an indication of current strengths and weaknesses; and
 - ☐ (b) an indication of future requirements, including a proposed strategy for obtaining these resources.
- ☐ 7. **Financial Resources.** This shall include a detailed budget proposal for the first three to five years which includes the anticipated revenue from all sources (i.e. University, government, industry, recovery of indirect costs, royalties, etc.) and proposed annual operation costs, as well as plans for achieving financial self-sufficiency through external cost recovery.
- ☐ 8. **Statements of Support and Commitment.** Letters of support and commitment should be signed by the appropriate University officer(s) (i.e. department head, dean/director, the Vice-President (Research)). Any commitments or agreements to provide space, teaching release time or other resources, including the recovery of indirect costs from contract research, should be documented and signed by those authorized to make such commitments. In the absence of such statements, it will be assumed that no such commitments or agreements have been made.



1. Name of Research Centre:

Spinal Cord Research Centre

2. Description and Justification:

2.1 Mission

The mission of the Spinal Cord Research Centre of Winnipeg is to provide an environment for world-class spinal cord research and training. Emphasis is on research into the mechanisms controlling movement, bowel and bladder function, and the effects of training on the nervous system. This knowledge will also provide new clinical tools for the treatment of injury and disease affecting these functional systems.

Objectives

Within the broad scope of spinal cord research:

- broaden the scope of graduate and fellowship training programs through formal and informal interactions with several faculty and laboratories
- consolidate technical support and development of new research tools
- maximize efficiencies by sharing technical and support resources wherever possible
- provide administrative support and encouragement for cooperative (inter-laboratory) research initiatives

Historical overview:

Over a period of 10 years the Health Science Research Foundation provided substantial funds for faculty salaries and recruitment. About \$1,722,000 was spent on academic salaries, \$692,000 on startup equipment for 7 new laboratories and about \$200,000 was spent on renovations (*Appendix D, Table 2*). The remaining monies funded core technical and administrative services. In addition, contributions to academic salaries for the preceding 12 years to 2001 were made by the Manitoba Paraplegic Foundation (\$335,000, *Appendix D, Table 2*) and various other scholarships and awards, including Manitoba Health (\$888,000, *Appendix D, Table 3*). In round figures, the extramural funding for academic salaries and start-up costs secured by the SCRC was about \$3,777,000.

Clearly over the years the SCRC has identified and recruited a very strong group of scientists and clinicians. The individual members are internationally competitive and well funded (*Appendix B*).

All of the recruited faculty are now integrated as full time members into clinical or basic science departments. They thus fulfill University academic and clinical duties as well as being engaged in spinal cord research. The University has benefited from the services of these individuals without having to pay initial salary and establishment expenses. As indicated on the list of members (section 5.1), all SCRC members now have University budget line positions as tenure-track faculty or GFTs.



2.2 Scope of Activities Envisaged

The SCRC was set up for the recruitment of new clinical and basic science faculty and the establishment of new laboratories in which independently funded research could flourish within the Faculty of Medicine. To a large extent these goals have been met. Several nationally and internationally funded laboratories have been set up. There is an active graduate training program, and there has been international recognition of the work carried out at the Centre. With the maturation of SCRC, emphasis has shifted from growth to continuance.

Functions

There are several unique functions of the SCRC that are outside the scope of responsibilities of other University or Hospital departments or groups. These include:

- 3) The promotion of research interactions within the spinal cord group and the larger neuroscience community. This is achieved through
 - (a) weekly seminar and journal club meetings,
 - (b) a visiting scientist program, and
 - (c) events to promote public awareness of neuroscience research.
- 4) The maintenance of core technical facilities including software development and electronic equipment design and manufacture. These are now critical functions of the SCRC because the University has closed the faculty electronics support service and the Department of Physiology has discontinued its electronics technician position. The software for the analysis of electrophysiology data, which was developed by SCRC staff (used in 7 labs), has been a small source of income from sale of this software to investigators in other institutions. Therefore, software upgrade and maintenance is an ongoing function with broader implications.
- 5) A spinal cord training program. This includes the training of graduate students within projects spanning more than one laboratory and with extensive co-supervision. In addition, courses have been developed specifically for the trainees. An example is computational neuroscience taught by Dr. Bashor, University of North Carolina at Charlotte. Dr. Bashor was an SCRC funded visiting scientist and continues to collaborate with members of the group. In addition, Dr. McCrea has developed two electronics instrumentation courses (90:731, 90:732) tailored to the needs of spinal cord investigators. These courses are also attended by visiting scientists and post doctoral fellows.
- 6) A coordinating central office with one administrative assistant for the promotion of lectures, arranging visiting scientists, administration of shared CIHR Group Grant and NIH grants, maintenance of information systems, providing secretarial support to the faculty, staff and trainees of SCRC, and to the Neuroscience Research Group.



2.3 Future Growth of the Centre

Currently, the primary/core members hold positions and research labs in the Department of Physiology. Future growth will likely expand outside the confines of Physiology, and the Faculty of Medicine. For example, Drs. Karen Ethans (Section of Rehabilitation Medicine), Michelle Porter and Phillip Gardiner (Faculty of Physical Education and Leisure Studies) are new members with primary academic appointments outside of Physiology.

Dr. Porter heads up the Neuromuscular Performance and Aging Laboratory at the Health, Human Leisure and Performance Research Institute located at the Fort Garry Campus. Dr. Gardiner, who begins his appointment July 1, 2002, as the Director and Canada Research Chair of the HHLP Research Institute, has been given an adjunct appointment with no teaching commitments in the Department of Physiology to set up a new state-of-the art Neuromuscular (spinal cord) Physiology Laboratory, conjoining with the SCRC group. His lab will be located in Physiology.

Dr. Fedirchuk, who was hired in a tenure track position in July 2000 in Physiology, is the newest recipient of a CFI grant to set up a Neural-Imaging, Electrophysiology, and Cellular-Perfusion Facility. Some of this equipment will be integrated into the shared SCRC histology/imaging facility (Room 418 BMSB).

The primary core members of the SCRC are responsible for much of the basic neuroscience teaching in medicine. Thus in addition to their graduate training responsibilities, McCrea, Shefchyk, Jordan, Schmidt and Fedirchuk are key to the delivery of the medical curriculum. The recent 25% increase in medical class size creates a significant pressure and negative influence on spinal cord research activities. Without recruitment, research programs within the SCRC will suffer. The two positions that urgently need filling are a basic scientist interested in spinal cord development and regeneration, and a clinician scientist (preferably a neurosurgeon) to take research developments into the clinic. We expect that these individuals would be recruited directly into existing University departments. We would hope that members of the SCRC would be called upon to identify suitable applicants and assist with their integration into research programs within the SCRC.

2.4 Research Benefits

- The SCRC will help to identify and recruit new researchers to the University of Manitoba (eg. Dr. Phillip Gardiner, 2002)
- The SCRC will facilitate obtaining new funding opportunities through formal collaborations, e.g. SCRC members currently hold NIH and CIHR group grants (2000, 2001)
- The scope of spinal cord research at the University of Manitoba involves members of Rehabilitation Medicine, Neurology, Physiology, Physical Education, as well as the National Research Council (Institute of Biodiagnostics). The SCRC helps to bring these disciplines and individuals together.



2.5 Relationship to the strategic plan of the University

Since 1987, the SCRC and its members have grown to become recognized as a leading international research centre of excellence in the field of spinal cord research, comparable to leading international counterparts. The SCRC is clearly in harmony with the University of Manitoba's strategic plan for research, as articulated in the Task Force report, *Building on Strengths*:

1. **Centre recognition.** The Spinal Cord Research Centre is one of only a handful of full-scale spinal cord research centres in the world. It includes clinician-scientists in neurology, neurosurgery, pathology, and medical rehabilitation, as well as basic scientists in essential related fields. It holds a unique place among these international centres, because it includes a high proportion of both clinicians and basic scientists who are making contributions to the core knowledge required for restoration of function after injury.
2. **Success of SCRC Core Members in CIHR, NIH and CFI competitions**
Total funding held by the Primary (Core) Members has increased from \$688,871 in 2000/2001 to \$1,305,680 in 2001/2002 with the addition of the two NIH grants awarded to McCrea/Shefchyk and Jordan/Brownstone/Schmidt/Duckworth (2001-2004) and renewal of a CIHR Group grant (Jordan/McCrea/Shefchyk/Schmidt) (2000-2005) awarded to support SCRC Core research personnel salaries of Programmer/Systems Analyst, Electronics Technician, Graphics Technician, Histology Tech. The two newest primary members, Drs. Fedrichuk and Gardiner, each received a CFI grant awarded January 2002.
3. **International competitiveness of SCRC** is indicated by the Sources of Funding (*Appendix B*) which include the U.S. National Institutes of Health, among many others. Overall, eleven SCRC members hold CIHR grants, one CIHR group grant is held by the Core members, and four NIH grants have been awarded, of which two are held by the Core members.
4. **Respect and recognition earned by members of the SCRC.** Indicated by their selection for membership in and leadership of national and international grant review committees, by their selection for membership on the Editorial Boards of important neuroscience journals, and by the fact that their expertise is sought in the manuscript review process of major neuroscience journals.
5. **The SCRC labs have attracted collaborations and visiting scientists** for joint research efforts from across Canada, eg. Edmonton, Halifax, Montreal; and internationally, from , Australia, Britain, Denmark, France, Japan, Mexico, Sweden and the United States. Most of the collaborators are established, leading scientists in their area of expertise.



6. **Members of the SCRC constantly pursued by other institutions as potential recruits.** This is a very clear indication of the recognition that SCRC members have achieved. Recent losses in 1999 have been Dr. Shawn Hochman (recruited to Emory University, Atlanta, Georgia) and Dr. Patricia Nance (recruited to Veterans Affairs Medical Centre, Long Beach, California), and in 2000, Dr. Rob Brownstone (recruited to Dalhousie University); the latter two have retained External Adjunct appointments in the Department of Physiology to continue ongoing research collaborations with SCRC.
7. **National and international recognition indicated by over 100 invitations** to SCRC members to speak at symposia and to lecture at other institutions (1996-2001), 22 in 2000-2001.
8. **International symposia and national meetings.** SCRC members were key figures in the organization of six international symposia and two national meetings in the last 5 years.
9. **Publication record.** SCRC Full Members have published a total of 159 refereed papers during the period from 1996-2001 and most of these have appeared in some of the top journals in the field.
10. **Patents.** Several members of the SCRC have been successful in the development of intellectual property (Cheng, Nagy, D Nance), software (Jordan, Kriellaars) and devices for rehabilitation (Kriellaars, P Nance).
11. **Trainees and alumni of the SCRC** have been recruited to some of the top academic institutions in the world, including the University of Miami, University of Louisville, University of British Columbia, Emory University, University of North Dakota, University College London, and well as the University of Manitoba.



3. Constitution

3.1 Organization structure

3.1.1 Facility

Faculty: Medicine

Primary/Core member laboratories and appointments: Department of Physiology

Location: 4th Floor, Basic Medical Sciences Building, Bannatyne Campus

3.1.2 Administrative Unit

University of Manitoba
Department of Physiology
730 William Avenue, BMSB 436
Winnipeg, Canada R3E 3J7

Telephone: (204) 789-3761
Facsimile: (204) 789-3930
E-mail: info@scrc.umanitoba.ca
Website: <http://www.scrc.umanitoba.ca>

3.1.3 Personnel

Director:	Dr. Larry M. Jordan, Professor, Dept. of Physiology
Acting Director:	Dr. David A. McCrea, Professor, Dept. of Physiology
Faculty members:	12 Full Members (6 Primary, 6 Secondary) and 6 Associate Members
Research Associates:	5 post-PhD, 1 RN (<i>Statistics for full members only</i>)
Postdoctoral Fellows:	2 “
Ph.D. Students:	7 “
Masters Students:	11 “
Technical Support Staff:	11 “
Admin/Secretarial Staff:	1 “

3.1.4 Role of Director

The Director shall be administratively responsible for the research unit, providing direction and general supervision over the operation of the unit and its research and training programs, including preparation of annual/progress reports, holding information and planning meetings with any or all members and staff, the Dean of Medicine, Office of Research Services, Public Affairs, government, funding agencies and the general media, as required. The current incumbent is Dr. Larry Jordan. A change in director would be appointed by consensus of the SCRC members with approval by the Dean of Medicine.

3.1.5 Committees

Internal Advisory - the primary/core members shall share in the responsibility of supervising and directing core staff in the shared facilities and participate in budget planning and decision-making in overall direction of the SCRC operation, programs and services.



External Advisory - to be reinstated with representatives from parties that have a vested interest in the research unit. Inactive since 1999 after withdrawal of Health Sciences Centre Foundation funding to establish and develop the Neuroscience Research Program, including the Spinal Cord Research Centre, at the University of Manitoba and Health Sciences Centre. Members were 1) Dean of Medicine, 2) Executive Director of Canadian Paraplegic Association (MB), 3) Board member of Manitoba Paraplegia Foundation, 4) Head of Section of Rehab Medicine, 5) Director of Research, HSC, and 6) Exec Dir of HSCF.

SCRC Visiting Scientist Program - to be reinstated. Inactive since 1999 due to lack of SCRC discretionary funds; however, several lectures over the years have been co-sponsored with the Winnipeg Chapter of the Society for Neuroscience and the Society for Neuroscience Grass Travelling Scientist Program. Co-ordinated by the Director.

SCRC Journal Club - ongoing weekly. Currently coordinated by Dr. B. Fedirchuk.

Neuroscience Seminar Series (Resident speaker program) - resuming Fall 2002. Currently coordinated by Dr. S. Shefchyk.

3.2 Categories of Membership

A. Full Members

Full Members are defined as either (i) "Primary/Core" or (ii) "Secondary" as follows:

- i. "Primary/Core Members" contribute substantial effort to SCRC research and contribute to the SCRC program from their operating grants.
- ii. "Secondary Members" contribute substantial effort to SCRC research but provide no financial support of overall program.

B. Associate Members

An Associate is a faculty member, including external adjunct, who is interested in spinal cord research, but whose primary research effort is in another neuroscience discipline (i.e. NDRG) or is performed at an external institution (i.e. Dr. Brownstone at Dalhousie U.)

2 External Adjuncts: formerly full members who have been recruited elsewhere but continue research collaborations with SCRC members

4 NDRG Members: primary research effort is in Neurodegenerative Disease Research but conduct research collaborations with SCRC members

3.3 Procedures for appointments

The selection of faculty appointees for membership in the Centre is decided by verbal consensus of the primary/core members. The suggestion for membership may come from an SCRC member or an external party, the invitation from the Director.



3.4 Privileges and responsibilities of membership

- All members must hold an academic appointment at the University of Manitoba and be actively conducting and/or supporting basic research and/or clinical studies on functional systems of the spinal cord.
- All members shall benefit from the visiting speaker program, journal club and resident seminars, and information network systems coordinated by the administrative unit office
- Primary/core members who contribute financially from their external grants to the SCRC program shall have access to shared personnel and research facilities.
- Members shall participate in regular informal meetings to review progress on individual and group projects and plan future endeavours.
- Members shall participate in fundraising, public relations and media events for the benefit of the overall SCRC program

4. Management

The Dean of the Faculty of Medicine would be the appropriate University officer to whom the Director of the proposed research centre reports.

5. Proposed Membership

5.1 Listing by category

The following two pages list the current members by category, indicating degree(s) and position(s) held, department affiliation, percentage of research time devoted to spinal cord research, and area of expertise.

5.2 Curriculum vitae of members

Introductory data on each member is provided on the following two pages as noted above. Information on funding and activities of each member during 2000/2001 is grouped together into the following sections:

- A. Professional Activities *Appendix A - Member Activities*
 - A.1 Students Graduated in 2000/2001
 - A.2 Honors and Awards
 - A.3 Symposia/Workshops Organized/Chaired
 - A.4 Invited Talks (External)
 - A.5 Visiting Scientists/Lectures Hosted
 - A.6 Committee Service
 - A.7 Courses Coordinated/Instructed
- B. Research Funding (currently held) *Appendix B - Member Funding*
 - Detailed listing for each investigator,
 - plus 2 tables grouping funds by source
- C. Research Achievements (1996-2001) *Appendix C - Member Publications*



Full Members - Primary (Core)

Brent Fedirchuk, PhD	100%	David A. McCrea, PhD	100%
Assistant Professor, Physiology		Professor, Physiology	
<i>Electrical properties of motoneurons, modulation during locomotion, spinal motor circuitry</i>		<i>Spinal cord electrophysiology, spinal motor circuitry, pre- and postsynaptic control mechanisms</i>	
Phillip F. Gardiner, PhD	40%	Brian J. Schmidt, MD, FRCPC	100%
Professor, Faculty of Physical Education		Associate Prof, Internal Med (Neurol)	
Director and Canada Research Chair, HLHP Research Institute		Adjunct, Physiology	
Adjunct Professor, Physiology		<i>In vitro electrophysiology and neuropharmacology, studies of spinal cord motor pattern generation</i>	
<i>Adaptations in spinal cord, neuromuscular junction and muscle to alterations in chronic activity levels; adaptability of biophysical, neurochemical and morphological properties of motoneurons</i>		Susan J. Shefchyk, PhD	100%
Larry M. Jordan, PhD	100%	Professor, Physiology	
Professor Head, Physiology		<i>In vivo and in vitro electrophysiology, neural control of bladder function, reflex mechanisms in the spinal cord, presynaptic inhibition, spinal lesion studies, immunohistochemistry</i>	
<i>Spinal cord electrophysiology, neuropharmacology, regeneration studies, neural tissue culture, neural stem cells</i>			

Full Members - Secondary

K.W. Gavin Cheng, PhD	25%	Dwight M. Nance, PhD	20%
Associate Professor, Physiology		Professor, Pathology (.2 appointment);	
<i>Protein chemistry, monoclonal antibodies, neural tissue culture, neural trophic factors, in vitro models for regeneration</i>		Adjunct, Physiol; Assoc Member, NDRG;	
Karen Ethans, MD, FRCPC	25%	U. California, Irvine (.8) Prof, Physical Med Rehab	
Assistant Professor, Internal Medicine		<i>Neuroimmunology, immunohistochemistry, models of spinal cord injury, activity-dependent labelling, neuroendocrinology</i>	
Director, SCIU, Physical Med & Rehab		Michelle M. Porter, PhD	25%
<i>Clinical specialist in medical rehabilitation, neuropharmacology, pain, spasticity, neurogenic bladder</i>		Assistant Professor, Faculty of Physical Education and Recreation Studies; Director, Neuromuscular Lab (FG Campus)	
Dean J. Kriellaars, PhD	25%	<i>Physical activity and aging, adaptations of the neuromuscular system with aging and strength training, contactile and electrical properties of human motor units</i>	
Associate Professor, Schl Med Rehab		Patrick W. Stroman, PhD	100%
Director, Human Performance Lab		Adjunct Professor, Physiology	
<i>Human movement studies, bone density studies, inventor of several devices for use in rehabilitation, development of numerous software packages for rehabilitation research and clinical purposes.</i>		Scientific Officer, NRC IBD (MR Tech)	
		<i>Medical and diagnostic imaging, magnetic resonance imaging (MRI), relaxometry,</i>	



Associate Members - External Adjuncts (formerly Full Members of SCRC)

Robert M. Brownstone, MD, PhD, FRCSC 30% UM External Adjunct Prof, Physiology August 2000, appointed Associate Prof, Dalhousie Univ., Div of Neurosurgery <i>Neurosurgeon, in vivo and in vitro spinal cord electrophysiology, transplantation, intrathecal drugs, spinal stimulation</i>	Patricia Nance, MD 10% UM External Adjunct Prof, Physiology December 1999, appointed Director, Rehab Services, Veterans Affairs Medical Centre, Long Beach, Cal. <i>Clinical specialist in medical rehabilitation, intrathecal drug studies, neuropharmacology, pain, human movement control, clinical studies on spasticity</i>
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Associate Members - Neurodegenerative Disease Research Group Members

Marc Del Bigio, MD, PhD, FRCPC 5% Associate Professor, Pathology; Full Member NDRG <i>Histopathological assessment of brain, immunohistochemistry, in situ hybridization, electron microscopy, immunoelectron microscopy, brain water assessment (hydrocephalus), cerebral ischemia.</i>	Gordon Glazner, Ph.D. 5% Assistant Professor, Pharmacology & Therapeutics; Full Member, NDRG <i>Excitotoxicity, Alzheimer disease, stroke, aging, neuro-protection, signal transduction, gene expression, neurotrophic factors, apoptosis and necrosis.</i>
Jonathan Geiger, PhD 5% Professor, Pharmacology & Therapeutics Director, NDRG <i>Neuropharmacology, adenosine mechanisms for neuro-protection, receptor binding, calcium imaging, other standard neurochemical techniques, neural tissue culture, stroke and other models of neuronal injury, AIDS dementia.</i>	James I. Nagy, PhD 15% Associate Professor, Physiology, Full Member, NDRG <i>Neurochemistry, neuroanatomy, biochemistry, cell biology, immunohistochemistry, models of spinal cord and brain injury, gap junction structure and function, CNS inflammatory mechanisms</i>



6. Physical Resources.

6.1 Listing of available research facilities

<u>Name</u>	<u>Dept</u>	<u>Location</u>	<u>Space (M²)</u>	<u>Equipment Description</u>
Full Members - Primary (Core)				
Fedirchuk, B.	Physiology	BMSB 410	63.0	electrophysiology rigs
Gardiner, P.	Physiology	BMSB 404	54.4	electrophysiology rig
Jordan, L.	Physiology	BMSB 425	91.5	electrophysiology rigs
McCrea, D.	Physiology	BMSB 409	90.3	electrophysiology rigs
Schmidt, B.	Physiology	BMSB 406	55.7	electrophysiology rigs
Shefchyk, S.	Physiology	BMSB 405	89.8	electrophysiology rigs
<i>Shared space</i>	Physiology	BMSB 418	37	histology lab, cryostats, fume hood, microtome, dissecting scope, perfusion, centrifuge, histo-oven, shaker, freezer
	Physiology	BMSB 418A	9.3	3 microscopes with fluorescence and imaging systems
	Physiology	BMSB 410A	9.2	electrophysiology prep room
	Physiology	BMSB 402	9.8	computer programming & imaging svcs
	Physiology	BMSB 416	26.0	electronics shop, fabrication equipment
<i>Admin Office</i>	Physiology	BMSB 436	9.3	fax machine, typewriter
Total UM Space - Primary/Core			545.3	includes computers in all facilities
Full Members - Secondary				
Cheng, G.	Physiology	BMSB 415	39.3	
Ethans, K.	Int Med (Rehab)	RR139 Rehab Hosp	---	Spinal Cord Injury Unit
Kriellaars, D.	Sch Med Rehab	RR311 Rehab Hosp	55.0	Human Performance Lab
Nance, D	Pathology	P216/220 Pathol	186.0	confocal microscope
Porter	Fac Phys Ed	207 Max Bell	135.0	Neuromuscular Lab
Stroman	Physiology	1. NRC-IBD	---	MR Technology Lab
		2. HSC MRI Suite	---	shared clinical research facilities
Total UM/HSC Space - Secondary			415.3	
TOTAL ALL			960.6	

6.2 Library holdings

(a) Journals owned by Neuroscience faculty in Dept. of Physiology (*P* = *print*, *O* = *on-line*):

Can J Physiol & Pharmacol	(P&O)	J Physiology	(P)
Cell	(P&O)	Nature	(P&O)
Curr Opin Neurobiol	(P&O)	Nature Neuroscience	(P&O)
Experimental Brain Res	(P)	Nature Rev Neurosci	(P&O)
J Comp Neurol	(P)	Neuron	(P&O)
J Neurophysiol	(P&O)	Science	(P&O)
J Neurosci	(P&O)	Trends in Neurosci	(P&O)
J Neurotrauma	(P&O)		

(b) NJML Adopt-a-Journal program:

Eur J Neurosci	(P&O)
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6.3 Current strengths and weaknesses

Facilities and space in the Department of Physiology are currently adequate. Currently, there are 5 electrophysiology labs on the 4th floor of the Basic Medical Sciences Building in the Department of Physiology, employing 6 research associates, 11 technical support staff, and 18 graduate students. Come July, 2002, Dr. Gardiner heads up the 6th lab in Physiology and is well funded (see Appendix B).

6.4 Future requirements

Any future recruitment would require additional space.

7. Financial Resources.

7.1 Budget proposal for the first three to five years

- a) Academic salaries - no requirement from University sources. All investigators hold tenure track or GFT appointments with the University of Manitoba.
- b) Research funds - no requirement from University sources. All investigators are well funded (see Appendix B)
- c) External funding - no requirements from University sources. See 7.2.1 below.

7.2 Revenue from all sources

7.2.1 Past History

The Centre, established in January 1987, received the following funding support to establish, develop and maintain the Neuroscience Research Program, including the Spinal Cord Research Centre, at the University of Manitoba and Health Sciences Centre:

1987 - 1999 \$4,848,854 from the Health Sciences Centre Foundation. Most of these funds were for the purpose of recruiting new neuroscience faculty over a seven-year period, of which three positions are now fully funded by university and/or HSC. These funds also covered major equipment, renovations and the operation of the SCRC.

1987 - 2001 \$335,000 from the Manitoba Paraplegia Foundation and the Will to Win Scholarship fund which MPF administers for academic salary support.

1999/2001 \$406,000 bridge funding from The Province of Manitoba (Health)

2000/2001 \$95,000 from the University of Manitoba President and Dean of Medicine to support two key personnel - Research Associate (Jordan Lab) and SCRC administrative secretary (OA5) - which had been previously funded under the HSCF contract agreement.

See Table 2 - History of SCRC Program Funding 1987-present Appendix D



7.2.2 Current

The SCRC program has attracted and established leading investigators in spinal cord research. The incorporation of these individuals into University departments and their emergence as leaders within the faculty is but one example of the positive benefits of the SCRC to the University. Another is the more than \$2,885,000 contributed to academic salaries and faculty establishment from external sources (*see Appendix D*).

- **External Funding**

See Appendix B, Table 1B, which lists currently held funds by investigator and source (CIHR, NIH, other) from April 2000 through September 2005. As at April 1, 2002, the total annual amount held by Primary/Core members for the current operating year (2002/2003) is \$1,320,729.

- **Manitoba Paraplegia Foundation**

As indicated in 7.2.1, MPF have provided an annual scholarship award since 1987 through the Will to Win Annual Golf Classic fundraiser, whose mandate it is to provide scholarship support for an SCRC investigator who holds an academic appointment, preferably a new recruit, or other suitable member as named by the SCRC director. Funds in the amount of \$30,000 have been approved for the current term 2002-2003 and awarded to Research Associate, Dr. Kris Cowley. These funds had been formerly used to supplement academic salary appointments, and are now used for special academic appointments (eg. research associate).

- **Private Funding**

The University of Manitoba "Spinal Cord Research" donations account (364-3135-02) which was set up in March, 1999, holds funds received to date in the amount of \$6,503 from **private donations** made in the memorial category, a few from all-charities campaigns run annually by corporations or employee organizations. Dr. Jordan has responded to over 100 donors with a personal thank you letter which the Private Funding Office forwards along with the tax donation receipt and acknowledgement card from the UM.

- **Software Sales Income**

The Software Income Account (389-3135-05) was set up in January 1997 to collect income from the sale of the Data Capture and Analysis Software developed at the Spinal Cord Research Centre. This software for nervous system data capture and analysis has a sale value of CAD 7,000 for Linux users. Copies have been sold to researchers in Denmark, Sweden, USA, Japan, and Canada, with the most recent sale made in April 2001. The funds held in this account are used to subsidize development and maintenance of the software. Current funds available at the time of this report are \$13,630.



7.2.3 Future

The likelihood of attracting future external funding is very high, based on the proven track record of the SCRC members. Some of the important factors are listed below:

A. Salary support

- All academic members hold tenure track or GFT appointments
- Technical staff have been continuously supported from external grant funds over a 15-year period, and are currently funded through to 2004/2005

B. Research grant funding

- A 15+-year history of successful grant funding and publication record of the primary/core members and other SCRC members, not only for individual operating grants but group grants as well, of which the CIHR's are in the renewable category
- See also Appendix B (Member Funding currently held through to 2005)

C. MPF (WTW)

- Likely renewable
- MPF and the Canadian Paraplegia Association (Manitoba Division) have been a funding partner of SCRC since its inception and are committed to continuing its support in the form of an annual scholarship award (WTW) to a named SCRC investigator

D. Private Funding - UM-SCRC account 364-3135-02

- There is definitely the potential for increase in receipt of private donations, which could be further developed under the guidance of the UM Public Relations Office, by promoting awareness of the SCRC research program through advertising to business corporations and employee organizations, and on the UM/SCRC website.

E. Software Sales Income

- The software for the analysis of electrophysiology data that SCRC has developed is in use in 7 laboratories in Winnipeg and has been sold to 7 other investigators in 5 countries. Software development (programmer-analysts salary) was funded through general SCRC funds and is a continuing effort. Thus this individual fulfills a function broader than the maintenance of grant-related software. It is hoped that future software sales can contribute to the programmer salary.



THE UNIVERSITY OF MANITOBA

FACULTY OF MEDICINE
Department of Physiology
Professor and Head

45

Basic Medical Sciences Building
730 William Avenue
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Canada R3E 3J7

Tel: (204) 789-3694
Fax: (204) 789-3934

May 9, 2002

Dr. Brian Hennen
Dean of Medicine
A101 Chown Building

Dear Dean Hennen:

This is written to support the SCRC proposal for "Centre" status at the University of Manitoba.

As their appended documentation demonstrates, the academic strength of the membership, the scope of training provided, track record of research and scholarship, extramural support, range of research networking and international status they have achieved is fully consistent with the status requested.

This proposal has my full and enthusiastic support.

Sincerely,

A handwritten signature in black ink, appearing to read 'Edwin A. Kroeger', written over a horizontal line.

Edwin A. Kroeger, PhD
Professor and Acting Head

/gem

**MPF MANITOBA
PARAPLEGIA
FOUNDATION INC.**

825 Sherbrook Street, Winnipeg, Manitoba R3A 1M5 Telephone (204) 786-4753 Fax (204) 786-1140

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George Dyck

Dr. Lindsay Nicolle

May 13, 2002

Dr. Brian Hennen
Dean of the Faculty of Medicine
University of Manitoba
Bannatyne Campus
Winnipeg MB R3E 0W6

Dear Dr. Hennen:

This letter will confirm that the Manitoba Paraplegia Foundation Inc. supports and encourages the University of Manitoba to approve the establishment of the Spinal Cord Research Centre as a formally structured organizational unit of the University.

The Manitoba Paraplegia Foundation Inc. have supported the Spinal Cord Research Centre in the past through funding of a "Will to Win Scholar" since 1988.

Sincerely,

Doug Finkbeiner
President

DF/ac



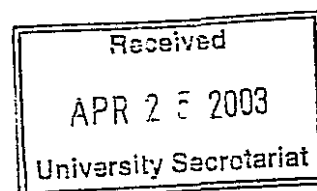
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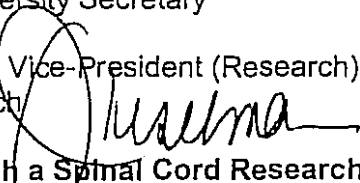
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April 24, 2003



TO: Ms Bev Sawicki, University Secretary

FROM: Joanne C. Keselman, Vice-President (Research) and Chair, Senate Committee on University Research 

RE: Proposal to Establish a Spinal Cord Research Centre

At the March 2003 meeting of the Senate Committee on University Research, a motion was passed to recommend to Senate that the Spinal Cord Research Centre be established, for an initial period of five years, as an official research centre of the University of Manitoba. If approved, continuation of the Centre as an research centre of the University beyond the initial five years would be subject to review and recommendation by the Senate Committee on University Research, in accordance with Policy 1405, *Research Centres, Institutes and Groups*.

Preamble:

1. On behalf of the Faculty of Medicine, the Dean of Medicine forwarded to the Senate Committee on University Research (SCUR) a proposal to establish the Spinal Cord Research Centre.
2. Policy 1405 (*Research Centres, Institutes and Groups*) articulates procedures for the establishment of Research Centres at the University of Manitoba. In accordance with these procedures, a sub-committee of SCUR was struck to review the establishment proposal. The review sub-committee consisted of Dr. Jim Davie, Professor of Biochemistry and Medical Genetics and Margaret Sellers Chair and Director, Manitoba Institute of Cell Biology (Chair); Dr. Harry Duckworth, Head, Department of Chemistry; and Dr. Harold Bjarnason, Dean, Faculty of Agricultural and Food Sciences.

Observations:

1. The Spinal Cord Research Centre was established in 1987 to assist in the recruitment of new clinical and basic science faculty members and the establishment of new laboratories in which externally-funded research programs could develop and flourish. Since its inception, the Centre has operated in close affiliation with the University, however, it has not sought recognition by the University as one of its formally approved centres. The establishment proposal seeks this recognition.

2. The mission of the Spinal Cord Research Centre (SCRC) is to provide an environment for world-class spinal cord research and training, with an emphasis on research into the mechanisms controlling movement, bowel and bladder function, and the effects of training on the nervous system. Specific objectives include: broadening the scope of graduate and fellowship training programs through formal and informal interactions with several faculty and laboratories; consolidation of technical support and development of new research tools; maximizing efficiencies by sharing technical and support resources for spinal cord research and training; and supporting and encouraging cooperative initiatives in spinal cord research between laboratories and research groups.
3. Since its inception, the SCRC and its members have grown to become recognized as a leading international centre in the field of spinal cord research, generating over \$4M in external research support during this time frame. The SCRC has 12 full members, and six associate members, four of whom are members of the Neurodegenerative Disease Research Group. The majority of the full members are members of the department of physiology; other departments and faculties/schools represented through full or associate members include: internal medicine, pathology, pharmacology and therapeutics, physical education and recreation studies and medical rehabilitation. SCRC members hold national and international grants, publish in high quality journals and have a presence and respected placement on the international scene. The primary laboratory space of the SCRC is located in the Physiology Department (4th floor of the Basic Medical Sciences Building).
4. The organizational structure of the SCRC includes a Director, who is appointed by the Dean of Medicine on the recommendation of the members of the SCRC. The Director is administratively responsible for the SCRC, providing direction and general supervision of the Centre's activities and the preparation of an annual report. The Director is assisted by an Internal Advisory Committee, consisting of the 'core' full members, that shares in the supervision and direction of staff in the shared facilities and in budget planning and decision-making regarding the overall direction of the SCRC operations, programs and services. The SCUR review sub-Committee recommends that the Internal Advisory Committee include the Head of the Department of Physiology. An External Advisory Committee representing key external stakeholders will be re-activated.
5. All full members of the SCRC have probationary, tenured or GFT appointments at the University of Manitoba. The research programs of the SCRC are fully supported by external research grants and contracts. The SCUR review sub-committee noted the reference in the recent Federal budget to funding for spinal cord research and commented on the timeliness of this establishment proposal request.
6. The Centre has the strong support of the Department of Physiology, the Faculty of Medicine and the Manitoba Paraplegic Association.

Recommendation:

The review sub-committee charged with reviewing the establishment proposal recommended to SCUR that the Spinal Cord Research Centre be established, for an initial period of five years, as an official research centre of the University of Manitoba. At its March meeting, SCUR accepted this recommendation. In the opinion of SCUR, the Centre represents a highly productive research group whose research and training achievements have and will continue to bring national and international attention to the University. It was noted that members of the SCRC also have an exemplary record of contribution to the development and delivery of the undergraduate medical curriculum.

Accordingly and on behalf of the Senate Committee on University Research, I am recommending that the University establish a Spinal Cord Research Centre for an initial five-year period, beginning July 1, 2003.

I would appreciate it if you would forward this recommendation and the associated proposal to the appropriate committees of Senate for their consideration. Both a hard copy and an electronic version of this proposal are enclosed.

JCK/tt
Encl.

Report of the Senate Planning and Priorities Committee on the Proposal to Establish a Spinal Cord Research Centre

Preamble

1. The Terms of Reference of the Senate Planning and Priorities Committee (SPPC) are found in section 8.32 of the *Senate Handbook*. SPPC is charged to make recommendations to Senate "on any such studies, proposals or reports that it may initiate within itself, have referred to it by Senate, other Councils, Committees or Bodies, formal or otherwise".
2. The Senate Committee on University Research forwarded a proposal for the establishment of a Spinal Cord Research Centre to SPPC pursuant to section 3.1.1 of Policy 1405 Research Centres, Institutes and Groups.

Observations

1. The Spinal Cord Research Centre has been in operation since 1987, and has been closely linked with the University of Manitoba, but has not sought official affiliation until now.
2. The Spinal Cord Research Centre is a leading centre in the field of spinal cord research, generating significant research results and external funding since its inception. The Centre currently has 11 full members, six associate members, two postdoctoral fellows, seven Ph.D., and 11 masters students.
3. All investigators in the Centre hold tenure track or GFT appointments from the University of Manitoba. Accordingly, no new University resources are required for academic salaries. With regard to research funding, no new University resources are required as the Centre's investigators are well funded, to the tune of \$1,320,729 in the 2002-2003 operating year.
4. The proposal has the support of the Department of Physiology, the Faculty of Medicine, the Manitoba Paraplegia Foundation and the Senate Committee on University Research.

Recommendation

The Senate Planning and Priorities Committee recommends that Senate approve and recommend that the Board of Governors approve the establishment of a Spinal Cord Research Centre for an initial five year period beginning July 1, 2003.

Respectfully submitted,

Norman Halden, Chair, Senate Planning and Priorities Committee

/jml

Report of the Programs and Planning Committee of the Faculty of Graduate Studies on graduate program proposals.

Preamble

The Programs and Planning Committee (PPC) of the Faculty of Graduate Studies (FGS) has the responsibility of reviewing new graduate programs and makes recommendations to FGS Council. PPC met on January 27, 2003 and made the following recommendation regarding the proposal of a Master of Science/Diploma program in Pediatric Dentistry.

Observations

1. The Master of Science/Diploma program in Pediatric Dentistry would be the second program of its kind in English Speaking Canada that addresses the concern of there being an insufficient number of specialists to meet the demands of over 5 million young Canadians.
2. The program will focus on the development of a critical and inquiring attitude that is necessary for the advancement of practice, research and teaching in Pediatric Dentistry. It will train individuals to provide services in institutional, private or public health settings and to work in coordination with members of other health care and social disciplines.
3. The external review committee endorsed the proposed program, concluding that the program would meet the demand for Pediatric services in the area and would be a valuable addition to its current programs. The external review committee reports and the unit response to the reports are included with the proposal.
4. The Library Support Statement indicated that the Libraries would have "no difficulty in supporting the program".
5. The proposal received support statements from The Faculty of Dentistry, Student Records, IST, units delivering courses outside of the program and, Manitoba groups, agencies and organizations associated with the program.

Recommendation

The Programs and Planning Committee of the Faculty of Graduate Studies recommends that the Faculty Council of Graduate Studies approve the Master of Science/Diploma Program in Pediatric Dentistry proposal.

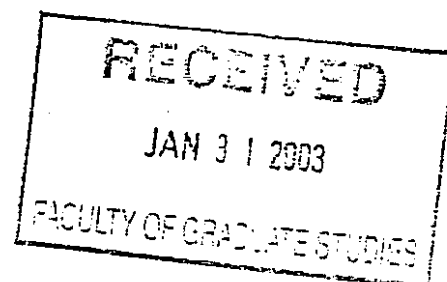
Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the report to Senate.

Approved by the Faculty Council of Graduate Studies February 26, 2003.

Proposal for
DIPLOMA/M.Sc. PROGRAM
IN
PEDIATRIC DENTISTRY

Faculty of Dentistry
The University of Manitoba

January, 2003



EXECUTIVE SUMMARY

This document proposes the establishment of a Diploma/M.Sc. Program in pediatric dentistry within the Department of Preventive Dental Science at the Faculty of Dentistry, University of Manitoba. The purpose of this Diploma/M.Sc. Program is to provide an opportunity for dentists to pursue higher education and research in the field of pediatric dentistry. This specialty diploma/master's degree will build on the firm foundation of knowledge and skills developed during undergraduate studies in dentistry. The main purpose of an advanced education program in Pediatric Dentistry is to prepare a specialist who is proficient in providing both primary and comprehensive preventive and therapeutic oral health care for infants and children through adolescence, including those with special health care needs. This individual will be trained to provide services in institutional, private, or public health settings and to work in coordination with members of other health care and social disciplines. The program will encourage the development of a critical and inquiring attitude that is necessary for the advancement of practice, research, and teaching in Pediatric Dentistry. The diploma program will be 24 months in duration, whereas if the student decides to enroll a M.Sc. program this will be 36 months in duration.

This proposal presents an historical perspective as well as highlighting the development of pediatric dentistry in Manitoba and Canada and describes the need and expressed demand for opportunities for advanced study in this field. It includes a description of the proposed program and the resources applied to the program as well as the supplementary material that supports the establishment of a Diploma/M.Sc. program in pediatric dentistry. It is expected that the new program will commence by August 2004, pending the building and the completion of the new graduate clinic.

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A. PROGRAM DESCRIPTION

I. OBJECTIVES AND FEATURES

Objectives

The goal of this proposal is to establish a Diploma/M.Sc. program in pediatric dentistry at the University of Manitoba. The two-year Diploma Program will prepare students to become proficient in providing both primary and comprehensive preventive and therapeutic oral health care for infants and children through adolescence, including those with special health care needs. The program also proposes the possibility for students to pursue a M.Sc. degree. However this will require an additional year of study (see teaching curriculum).

The objectives of the Diploma/M.Sc. program in pediatric dentistry are as follows:

1. To establish only the second in English-speaking Canada, advanced educational specialty program in pediatric dentistry, to train pediatric dentists for Manitoba, Canada, North America and worldwide.
2. To integrate and enrich the current teaching programs and establish new ones, for the vulnerable child portion of the population and with 6-9 students double the existing provision of services to underserved children and adolescents in Manitoba.
3. To improve dental health and reduce by 50% the prevalence dental diseases in the child populations of northern communities in the province of Manitoba.
4. To strengthen the Faculty of Dentistry and the University of Manitoba by having a program that will become unique in Canada and worldwide through its outreach programs.
5. To foster and stimulate collaborative research interests in Pediatric and other aspects of Public Health Dentistry, which collectively provide the knowledge and expertise to improve the Dental Health of the communities we serve.
6. To facilitate integration and collaboration with other relevant clinical programs in the Faculty of Dentistry, University of Manitoba.

Novel and Innovative Features

This proposal is based on Canadian Dental Association Standards as well as the Standards of the American Academy of Pediatric Dentistry (1,2).

This proposal for an advanced pediatric dentistry program is created in response to needs and demands, and is designed to promote and conduct research, education and provide adequate clinical training for future specialists. Institutional facilities and the resources involved will have to be adequate to provide the educational experiences and opportunities required to fulfill the needs of the program as specified by the educational standards (1,2). In the process of developing parameters for this program, the proposer has had several consultations with the members of the profession, professional organizations, academics, and the University administration (see Appendixes).

The essence of the Diploma/M.Sc. program in pediatric dentistry is the development of a specialty training that will be meaningful to society, have high academic standards and integrity, and serve to prepare future specialists to be proficient in providing both primary and comprehensive preventive and therapeutic oral health care for infants and children, including those with special health care needs. Professional organizations have concurred that there is a need for a diploma program in pediatric dentistry particularly as this would be only the second pediatric dentistry program in English-speaking Canada, given that dental diseases are highly prevalent in a number of children from Manitoba and countrywide (see Appendixes).

How does this program contribute to pediatric dentistry as a discipline?

The establishment of this Diploma/M.Sc. program would allow the University of Manitoba to contribute to the emerging discipline referred to as pediatric dentistry. Pediatric dentistry is synonymous with dentistry for children and is gaining momentum and broader visibility throughout the North American continent (3). It is expected that this program will result in an increased number of providers, better provision of dental care and an overall improvement in the oral health status of the most vulnerable child population group. At the same time, formation of a Diploma/Master's program in pediatric dentistry would strengthen the Faculty of Dentistry at the University of Manitoba as well as open doors to many opportunities that support the mission and vision of our University.

1. Commission on Dental Accreditation of Canada (November 1997). Pediatric Dentistry Program, The Accreditation Process and Education Requirements, Ottawa, 66 pages.

2. Accreditation Standards for Advanced Specialty Education Programs in Pediatric Dentistry. Commission on Dental Accreditation of the American Dental Association, Chicago, IL, www.ada.org, 2000.

3. Nowak, A.J., Casamassimo, P.S. Using anticipatory guidance to provide early dental intervention, J. Amer. Dent. Assoc. 126: 1156-63, 1995.

The Diploma/M.Sc. program in pediatric dentistry will promote novel approaches for the majority of dental needs of the children of the Province of Manitoba. These approaches include specific preventive techniques, growth and development, dental restorative techniques, treatment of caries complications, dental infections, as well as the surgical treatment of a child dental patient. Further research and improved understanding of nutrition, oral hygiene and the use of fluorides will be essential in the development of preventive strategies for the child patient. Understanding growth and development will provide the basis for improved diagnostic, preventive and treatment outcomes of occlusal problems. Clinical implementation of new dental restorative techniques, including the use of new resin-sealant materials and methods, will further improve provision of dental care. Special emphasis will be placed on improving dental care for the disabled and other patients with special needs. This knowledge will foster and stimulate collaborative research interests in pediatric and other aspects of public health dentistry, which provide the knowledge and expertise to develop and improve the dental health of the community we serve, in particular those that need help the most (4).

In English-speaking Canadian Universities a pediatric dentistry graduate program is offered only at the University of Toronto, thus providing an insufficient number of specialists to meet the demands of over 5,000,000 young Canadians (age 0-18). Indeed, Manitoba and Canada are at present left without an adequate opportunity to educate and recruit sufficient numbers of pediatric dentists who will work with children. As a consequence, the prevalence of dental diseases in certain population groups (i.e. the working poor, First Nations) remains very high and is on the level of the developing world (3). The University of Manitoba has recognized this problem and in the early 1970's (1970-73) provided a graduate pediatric dentistry program. Unfortunately, because of staffing problems this program lasted for only three years. However, in the United States more than 30 Universities are offering specialty programs in pediatric dentistry. Although enrollment in these programs is an option for Canadian students, not all graduates return to Canada, where the shortage of specialists remains a problem. Further, a current shortage of pediatric dentists in the United States has resulted in a decreased acceptance of foreign students into the programs. Clearly, pediatric dentistry is an important clinical discipline and the University of Manitoba has again the opportunity to become a leading institution in facilitating the development of this program.

4. Loevy, H.T. Dental management of the child patient. Quintessence Publishing, Chicago, IL, p. 21-30, 1981.

Interdisciplinarity

The proposed Diploma/M.Sc. program in pediatric dentistry will allow the pursuit of interdisciplinary graduate education in this area. It will avail students with the opportunity to work with members of other departments, faculties and professions who are interested in enhancing their knowledge in the field. The program will present a core body of courses in the field of pediatric dentistry, while at the same time providing a broad complement of discipline-specific electives in other departments and faculties (see section: teaching curriculum). There is a diverse group of faculty members at the University of Manitoba and beyond the University with expertise that relates to pediatric dentistry. They are in Orthodontics, Community Dentistry, Dental Hygiene, Restorative Dentistry, Endodontics, Periodontology, Oral Surgery, Hospital Dentistry, Oral Biology, Pediatrics, Anesthesia, Community Health Sciences, Psychology, Nursing, Speech Therapy, Education, Social Work, Family Studies and Genetics.

The interdisciplinary character of the proposed program is congruent with the University of Manitoba's publicly stated commitment to develop more multi- and inter-disciplinary research and programs (see the Roblin Commission Submission). This was reiterated by the University of Manitoba's Task Force on Strategic Planning which noted that, "As department complements shrink, and as interdisciplinary approaches to problem-solving gain ascendancy in many fields of study, we can expect to receive applications from individuals who seek to be appointed or affiliated with people from more than one department or Faculty (5)."

Most importantly, the proposed diploma program in pediatric dentistry offers students the opportunity to complete the advanced study of issues relating to children with oral health problems within the framework and support of a broad base of disciplines and faculties, and in a manner that reflects their commitment to the well being of the community and sensitivity for the future of the most vulnerable section of its population.

Advantages of interdisciplinarity in a pediatric dentistry diploma program

As discussed above, pediatric dentistry is a recognized academic and specialty discipline and represents a growing field of study in several universities in North America and Europe. There are many reasons why an interdisciplinary program is preferable when educating future specialists in pediatric dentistry.

5. Building on Strengths: Final Report of the Task Force on Strategic Planning, (The University of Manitoba, February, 1998), p. 66.

Rigor and Consistency:

A Diploma/M.Sc. program in pediatric dentistry, with the very broad clinical training, variety of courses offered, and proposed guidelines, will serve to guarantee academic integrity, consistency and rigor. The interdisciplinary approach of the program is designed to enrich students' interest and promote research involvement. However, at the present time there is no attempt, beyond the minimum regulations for the Faculty of Graduate Studies, to develop coherence within the interdisciplinary programs. For this reason we are proposing an interdisciplinary program that will establish consistency across the teaching curriculum.

Collaborative Research and Funding:

Interdisciplinary programs offer opportunities for faculty members and students to participate in collaborative research projects. Collaborative research and interdisciplinary perspectives are both receiving increased funding and attention from national funding agencies. These programs will further permit the University of Manitoba faculty and graduate students to work together collaboratively, leading to the possibility of increased funding opportunities.

Reputation:

An interdisciplinary Diploma/M.Sc. program in pediatric dentistry would give the University of Manitoba an opportunity to develop a reputation in the field. At present, there is only one specialty and Master's degree-granting pediatric dentistry program in English-speaking Canada. However, in the United States, Europe and elsewhere several universities grant graduate degrees in this field; and it is significant to note that all of these programs are interdisciplinary in scope. Thus, the University of Manitoba has again a window of opportunity to develop a reputation in this important aspect of human well-being.

Community and Public Health Aspects of the Program:

An interdisciplinary Diploma/M.Sc. program in pediatric dentistry will allow the University of Manitoba to demonstrate in a concrete way its commitment to the community and to public health matters. The availability of such a program will allow the University to reach out and improve the provision of dental care for all, particularly the underserved children, and at the same time promote community research.

Marketability:

Increased interest in North America and around the world for graduate studies in pediatric dentistry will assure the University of Manitoba, that the re-opening of this program (see page 3), will be welcomed by the profession (see attachments). A community and public health approach within this program, as well as the opportunity to obtain a Master's degree should also be attractive to foreign students. This will yield international reputation and recognition of the program.

II. CONTEXT

Needs in Manitoba and Canada for Pediatric Dentistry Program

Historical Perspective

In 1875 a Dental Cosmos article by E.H. Raymond (6) encouraged dentists to treat children and suggested ways to minimize management problems. Ever since, the genesis of dentistry for children has encompassed problems related to tooth decay, complications of tooth decay and the inflammation and pain associated with these complications. From its extraction-oriented beginnings, pediatric dentistry phased into an interception era, that also featured heavy emphasis on diagnostic procedures. Restorative dentistry was the main theme of this era and to some extent this era has not passed. Tooth decay still exists, although its incidence is significantly less in certain areas of Canada (7). However, rural communities as well as the underserved part of the population are still experiencing high tooth decay rates (8). With improved provision of dental care an increased number of younger children has received treatment. As children relate differently to the adult world, strategies needed to be developed to help children cope with their apprehension concerning dental procedures. Over time, management of a child patient has become the art of pediatric dentistry, making it distinct from all other clinical disciplines. Proper management of a child patient permits dental treatment to be performed in an effective and efficient manner and the development of a positive dental attitude in the child patient (9). Building a relationship with the child and their parents as well as increasing the awareness for the lifetime care of the child's teeth are the most important tasks of pediatric dentistry today. Another important change in current pediatric dentistry is the emphasis on prevention. This emphasis on prevention, when paired with better understanding about home care and motivating parents to take care of their child's teeth, has brought about a large number of cavity-free children. An important task ahead of us and of the new pediatric dentistry program is to ensure that all children, including the underserved part of the population, will experience the benefits of a cavity-free and pain-free childhood.

6. Raymond, E.H. Children as patients. Dent. Cosmos 17: 54-56, 1875.

7. Lewis, D.W. Dental manpower supply and demand projections and changing demography and dental disease. J. Canad. Dent. Assoc 53: 33-44, 1986.

8. Cooney, P.V., Hassard, T.H., Malazdrewicz, V.K. Comparison of the dental health status of six-year-old children in Manitoba. J. Canad. Dent Assoc. 59: 544-548, 1993.

9. Cross, H., Lekic, P.C. The Handbook of Pediatric Dentistry. The University of Manitoba p. 1-10, 2001.

Demographic Trends of Dental Diseases

Tooth decay is still the single most common disease of childhood. Studies indicate that 60% of children have decayed primary teeth and 85% of teenagers have experienced more than one cavity in their permanent dentition (10). It disproportionately affects a majority of children from low-income families. This small group, 20-25% of the population, experiences >80% of all dental cavities (11). Poverty presents numerous obstacles to dental care. Access to care and the availability of providers present an additional barrier, further expanding the disproportionate disease burden of Canada's poor. This disease distribution pattern is even more evident in a rampant form of early childhood caries occurring in children ≤ 2 years old. Nationally, the incidence of early childhood caries is 5%. However, some groups are known to experience disproportionate amounts of disease. Examination of aboriginal children demonstrated the prevalence of early childhood caries of over 50% (12). Treatment of these children is difficult and costly, requiring a hospital setting and management under general anesthesia. More than anything, intervention strategies are needed that will identify problems in its earliest stages and educate families on the importance of disease prevention and oral health promotion. Pediatric dentists comprise the body of the work force that provides preventive and early treatment care for this and other forms of childhood caries. However, the existence of only one pediatric dentistry graduate program in English-speaking Canada creates for Manitoba, and the rest of Canada, great difficulties in recruiting an adequate number of specialists to work with the most vulnerable population group.

Contribution of the Program to the Well-being of Children from Winnipeg and Manitoba

The field of dentistry for children is important considering the age and the number of children that experience dental problems as well as the socio-demographic milieu of the children affected (see studies above). According to data from the Winnipeg Regional Health Authority (2000-2001), almost 27% of Winnipeg's children (age 4-12) have over 98% of overall tooth decay rates for that age group (data not published). Strikingly, preschool children from this group have on average more than 5 decayed, extracted or filled teeth. Unfortunately, the majority of them are from working poor families or are aboriginal children in whom current preventive measures have proven to be inadequate. A direct consequence of this is an increase in the number of children waiting for treatment under general anesthesia. In Manitoba alone over 1,500 children are presently on the waiting list for this type of treatment. These children are ≤ 4 years of age and the waiting time for the treatment is 3-15 months.

10. Gilcrest, J., Collier, D., Wade, G. Dental caries and sealant prevalence in schoolchildren in Tennessee. *J. Public Health Dent.* 52: 69-74, 1992.

11. White, B. toward improving the oral health of Americans: an overview of oral health status, resources, and care delivery. *Public Health Reports* 108: 657-72, 1993

12. Brice, D., Blum, J., Steinberg, B. The etiology, treatment and prevention of nursing caries. *Compendium* 17: 92-103, 1996.

The large number of children with dental problems and the vast numbers of dollars spent on rehabilitation and support services make this an important area for clinical work, teaching and research. Research opportunities and the fact that it would offer a Master's Degree in pediatric dentistry, should attract many potential students from Canada and other countries to apply for this program. At the same time the use of other innovative course delivery systems such as electronic, teleconference, field and distance courses may become available to both in- and out-reach clinical activities, thus further enriching the teaching component of the program. Collectively, educating increased numbers of specialists will provide the work force that will bring the existing caries rates under control after which more time could be spent in educating children and their parents. It is therefore expected that graduates from this program will make an important contribution to the improvement of oral health for the children of Manitoba, Canada and internationally.

Employment Forecasts

Graduates of this program will be able to work in two major areas: public health programs and private practice. The work prospects and employment situations for graduates in pediatric dentistry are very encouraging. This employment prospective is the result of an insufficient number of pediatric dentists. For example, in the province of Manitoba (~500,000 children age 0-18) there is a shortage of pediatric dentist (7 in total), which creates an unfavorable ratio of 1 pediatric dentist: 70,000 children. All seven are located in Winnipeg, creating a void for the rest of the province. Also, recruitment of pediatric dentists is a very difficult, if not an impossible, task. The reason for this is a vast shortage of pediatric dentists throughout the country. This is clearly seen in Saskatchewan where there is only one pediatric dentist in the entire province.

This work of pediatric dentists in public health will include the provision of dental care, research, program planning, senior administration, as well as work in the fields of education, and health management. As the diploma program in pediatric dentistry will have a strong outreach component (see teaching curriculum) it will prepare graduates to work in rural and northern communities. This orientation toward community services will provide our students with public health perspectives, opening the opportunities for their involvement in these programs. Only an increased number of specialists trained and involved in preventive and early treatment programs will make the difference for all children, particularly those currently underserved.

Strengths of the Program

A graduate program in pediatric dentistry will further expand the scope of the University of Manitoba's involvement in this aspect of child health, which has a broad professional and academic base locally, nationally and internationally. At present, the undergraduate pediatric dentistry program at the University of Manitoba has a strong community commitment serving the children of Winnipeg and rural Manitoba (13). We believe that our graduate program will

13. Lekic PC, Schroth R, Odium O, deVries J, Singer D: A program to ensure adequate clinical experience in undergraduate pediatric dentistry. J. Dent. Educ. 64:440-444, 2000.

further strengthen our in- and out-reach commitments (i.e. Norway House), thus improving learning experiences for our students and provide an important role for the University of Manitoba in our community.

Many undergraduate pediatric dentistry programs nationwide have clearly identified the need for a specialty/Master's program in this field. A number of other Canadian universities offer continuing education courses, workshops, seminars and other modules. However, no formal graduate degrees (other than the Universities of Toronto and Montreal) are currently awarded. By adopting this program the University of Manitoba would join the ranks of the top Canadian, American, European and other universities, currently offering graduate education in pediatric dentistry.

Use of Existing Programs at the University of Manitoba

The interdisciplinary nature of the proposed program requires that some of the existing resources of the University will be used in delivering this program. As outlined above, there are a large number of courses already existing in specific disciplinary areas such as Orthodontics, Community Dentistry, Dental Hygiene, Restorative Dentistry, Endodontics, Periodontology, Oral Surgery, Hospital Dentistry, Oral Biology, Pediatrics, Anesthesia, Community Health Sciences, Psychology, Nursing, Speech Therapy, Education, Social Work, and Family Studies. These courses, and the expertise within the Faculty of Dentistry will serve as a strong foundation for the program.

This proposed graduate degree program does not overlap or duplicate any existing graduate degree program at the University of Manitoba. The unique contribution of this program will lie in the opportunity that it will provide students to explore and apply oral health perspectives to children throughout their course work and research.

This proposed program will have a close relationship with other disciplines within the Faculty of Science, the Faculty of Education, the Faculty of Medicine, the School of Dental Hygiene, the Faculty of Social Work, the Faculty of Nursing, and the Faculty of Management. Heads of these units have stated their support of this initiative (see Appendixes). Departments have readily agree to provide students with access to their graduate and undergraduate-level courses.

Enhancing the University of Manitoba's National and International Reputation

This proposed graduate program in pediatric dentistry addresses many of the central themes in the mission of the University of Manitoba. The University has publicly committed itself to maintaining accessibility and strengthening its commitment to child health and to strengthening its relationship with the community.

Students from Canadian Faculties of Dentistry and other faculties which offer courses related to child health may wish to take the courses which would be available at the University of Manitoba. This will also be an opportunity for students from developing countries to apply for the program, as conditions in some Canadian communities may resemble the conditions and the

prevalence of dental diseases in countries from which they come. This will establish the credibility and high profile of the program, thus providing international recognition.

Graduates from this program will be able to pursue doctoral work in various fields of dentistry or medicine. With the rapid expansion and development of this field, doctoral degrees in pediatric dentistry at the University of Manitoba and at other universities in North America will undoubtedly be implemented in the fairly near future.

How the Proposed Program Complements and Strengthens Other Programs at the University of Manitoba

Students enrolled in other specialty and Master's degree programs who wish to acquire additional background in pediatric dentistry will be able to incorporate some of our courses into their degree work. The pediatric dentistry program will also complement other programs, particularly those that are more clinical in nature (such as Dental Hygiene, Social Work, Community Health Science, Psychology, Orthodontics) by providing a perspective or context within which these practical skills can be applied.

III. SPECIFICS

Administration of the Program

The director of the diploma/M.Sc. program in pediatric dentistry will administer the program. The program director will hold a full-time academic appointment at the University of Manitoba and will be responsible for the teaching, research and clinical aspects of the program. This responsibility includes appointing instructors, assigning advisors for students, as well as selecting research and admission committee members. In addition, the program director will have signing authority for program matters and responsibility for the day-to-day administration of the program.

The program director will be responsible for the administration of the program together with the Pediatric Dentistry Graduate Program Committee (PDGPC). This committee will be comprised as follows:

- One representative from the Department of Preventive Dental Science
- One representative from the Faculty of Dentistry,
- One representative from the Faculty of Medicine,
- One representative from the School of Dental Hygiene,
- One representative from the Center for Community and Oral Health
- One representative from the Manitoba Dental Association
- One part-time staff member employed to teach in the program
- One pediatric dentistry graduate student representative

The committee will report to the Department Head and the Dean of the Faculty of Dentistry on

all academic matters. The length of term for committee representatives will be staggered initially ($\frac{1}{2}$ for one year and $\frac{1}{2}$ for two years), and then will be regularized into two-year terms as positions become available.

The Pediatric Dentistry Graduate Program Committee will be responsible for changes to curriculum and student standing. This includes, for example academic advising, appeals, reviewing student progress and will be conducted in accordance with the Faculty of Graduate Studies regulations.

Admission Requirements

Admission will conform to existing Faculty of Graduate Studies minimum regulations. It will be based on specific and well-defined selection criteria and should be readily available to advisors and applicants (see below). Academic performance will not be the sole criterion and non-academic criteria will also be considered in the overall assessment of applicants for admission:

Selection criteria:

- a. Academic records including dental school cumulative rank, graduating year rank, awards, scholarships, dental school cumulative grade point (minimum B), and other degrees, research and publication record (30%).
- b. Clinical experience such as: hospital pediatric dentistry residency (minimum one year), general practice residency (minimum one year), general practice experience (minimum one year), part-time faculty (at dental school), clinical awards (30%).
- c. Other: interview evaluation, letters of recommendation, personal statement, student-based research and presentation experience, and proficiency in English if required (40%).

Candidates for admission should be graduates from accredited dental schools in Canada or the United States or possess an equivalent educational background. The applicant's academic standing must be such that it gives reasonable assurance of the successful completion of the program. It is suggested that several means be used to evaluate the applicant's qualifications. Among these are personal recommendations, interviews, national board results, academic records and experience in pediatric dentistry, hospital residency or general practice. In the case of graduates whose primary language is not English, a language proficiency examination should be considered.

It is recognized that students may transfer, with credit, from one accredited program to another. An accredited program accepting such a transfer student must also clearly recognize an obligation to ensure that the students complete the overall didactic and clinical preparation required. Logistically, it should be possible to accept such a transfer student.

Students will be encouraged to take immunization against infectious diseases such as mumps, measles, rubella, and hepatitis B, prior to contact with patients and/or potentially infectious objects or materials. This is to be done in an effort to minimize risk of infection to patients and dental personnel. Students should be certified in basic life support and pediatric advanced life

support.

Admission Procedure

Members of the Selection Committee will review applications for admission. The committee will be appointed by the program director and will have one pediatric dentistry graduate student, 2 dental academics and a pediatric dentistry specialist. A \$ 50.00 charge for the Faculty of Graduate Studies and a \$ 50.00 for pediatric dentistry should accompany each application. Pediatric dentistry will use its \$ 50.00 fee toward interviewing expenses. Following the deadline for applications, a provisional short-list will be produced, re-reviewed, and a final short-list of 10-12 applicants prepared. These candidates will be interviewed at their own expense.

An extended interview process will be used to evaluate more objectively the candidate, using individual interviews as well as formal committee interviews. The committee members will conduct the formal interview to obtain a global view of the candidate's overall performance. The formal interview will include library assignments as well as an oral presentation to evaluate the applicant's ability to evaluate and present scientific literature.

The final list will be drawn up after the interviews and the positions will be offered to the top three candidates. These candidates will be given two weeks to respond to the offer and if they accept the position a \$ 1,000 acceptance deposit will be required. This deposit will be credited toward first year tuition fees if the candidate starts the program. If the candidate does not honor his/her acceptance, the Department of Preventive Dental Science will retain the deposit on a 30:70 split with pediatric dentistry and this money will revert to "general funds".

Course Requirements

The proposed program consists of two foci: Diploma program in pediatric dentistry (specialty diploma in pediatric dentistry) and a Master's degree in pediatric dentistry (M.Sc. in pediatric dentistry). All students' academic programs must be approved by the PDGPC. This is normally done on the recommendation from the program director, student's advisor and/or Advisory Committee following consultation with the student. During the first year students from diploma or master program, will be given the opportunity to move into the other program (master or diploma), pending on the approval of PDGPC. Note that there will be an administrative \$100.00 fee for the change from one to another program.

100.7XX Diploma program

This would allow students to focus on specialty training in pediatric dentistry. Students would be required to take twenty-seven credit hours of biomedical and clinical science courses (see teaching curriculum) as well as to complete and defend a diploma research project.

100.7XX M.Sc. program

The Master's degree requirements will consist of thirty three credit hours: twenty-seven credit hours from the required specialty training (see paragraph above), six hours of additional course credits, plus a thesis. The additional six credit hours can be taken from courses offered at the biomedical and clinical science level (courses 036.709, 93.736, 93.752, 101.700, Biology of Periodontal Tissues, Preventive Programs in Pediatric Dentistry; see teaching curriculum). To complete the program successfully students will be required to maintain a minimum GPA of 3.0 and no individual course grade below a C+.

Students' proposed course work, research progress and thesis topic will be examined and recommended for approval by the program director and research advisor. The Pediatric Dentistry Graduate Program Committee (PDGPC) will approve recommendations. PDGPC will also identify the type of program: being a Master's specialty (3 years in duration) or only diploma specialty program (2 years in duration). The decision as to which program the student is to pursue will be made prior to student's enrollment and will be based on student's expressed interest and his/her credentials.

Note: If a pediatric dentistry diploma graduate from the University of Manitoba would like to obtain a Master's degree it will be necessary to enroll additional two-years, obtain 12 credit hours (see above: additional/optional credit hours) and complete and defend a Master's thesis (see after: Master's thesis regulations).

Teaching curriculum

The diploma program in pediatric dentistry will provide the opportunity to extend the student's diagnostic ability, basic and advanced clinical knowledge and skills, and critical judgment. It also offers experience in closely related areas to ensure that students become proficient in comprehensive care.

The core portion of the curriculum will include subject matter necessary for the development of a pediatric dentist. A supporting portion of the curriculum extends the student's educational experience and enhances his/her ability to think critically and independently and to communicate information clearly, effectively and accurately.

List of Courses Offering Credit Hours

Mandatory courses for both Diploma/M.Sc. program

- | | |
|----------------|--|
| 080.706 | Advanced Human Macroscopic (Gross) Anatomy (6 credit hours) |
| 093.747 | Biostatistics 1 (3 credit hours) |
| 101.704 | Clinical Craniofacial Growth and Development (3 credit hours) |
| 101.723 | Advanced Oral Pathology (3 credit hours) |

- 101.XXX Management and Restorative Treatment of Pediatric Dental Patients (3 credit hours)**
- 101.XXX Patients with Special Health Care Needs and Emergency Care in a Pediatric Dental Patient (3 credit hours)**
- 101.XXX Hospital Pediatric Dentistry (3 credit hours)**
- 101.XXX Preventive and Community Pediatric Dentistry (3 credit hours)**

Additional/Optional courses only for M.Sc. program

- 036.709 Cell Biology (6 credit hours)**
- 93.736 Clinical trials (3 credit hours)**
- 93.752 Principles of Epidemiology 1 (3 credit hours)**
- 101.700 Neural Basis of Oropharyngeal Function (3 credit hours)**
- 100.XXX Biology of Periodontal Tissues (3 credit hours)**
- 101.XXX Preventive Programs in Pediatric Dentistry (3 credit hours)**

Note: Twenty-seven credit hours are required for the diploma program and they include all courses offered for the Diploma/M.Sc. program (see above: credit hours). Students in Master's program will, with advisor's approval, select and complete an additional 6 credit hours for the combined M.Sc. + specialty training (see above: additional/optional M.Sc. credit hours).

Course Descriptions:

- 036.709 Cell Biology (6 additional/optional credit hours only for M.Sc. Program)**

Comprehensive introduction to the structure and function of cells. *Dr. R. Shiu is the Director for this course (see University of Manitoba graduate calendar).*

- 080.706 Advanced Human Macroscopic (Gross) Anatomy (6 credit hours for Diploma/M.Sc. Program)**

Dissection with special emphasis on regions relative to the research projects and interests of students concerned. This course includes a review of general anatomy and head and neck anatomy particularly on the growing child. *Dr. E. Scott is the Director for this course (see University of Manitoba graduate calendar).*

093.747 Biostatistics 1 (3 credit hours for Diploma/M.Sc. Program)

This course will include the description of clinical data, patterns in data, the normal binomial and Poisson distributions, principles of estimation, principle of hypothesis testing, as well as the major statistical tests (Student t test, analysis of variance, chi squared test, correlation and regression). *Dr. T. Hassard is the Director for this course (see University of Manitoba graduate calendar).*

093.736 Clinical trials (3 additional/optional credit hours only for M.Sc. Program)

This course teaches that the randomized clinical trial is the only true experiment in clinical research. It is intended to give students a detailed knowledge of the design and implementation of randomized clinical trials. Students will participate in a systematic review and meta-analysis of randomized clinical trials. *Drs. S. Taback is the Director for this course (see University of Manitoba graduate calendar).*

093.752 Principles of Epidemiology 1 (3 additional/optional credit hours only for M.Sc. Program)

For the M.Sc. Program, students will take an additional course that will introduce the basic concepts of epidemiology, including the definition and measurement of health status health determinants in population, assessing health risks and inferring causation, and issues in the design and analysis of population health studies. *Drs. T. Hassard is the Acting Director for this course (see University of Manitoba graduate calendar).*

101.700 Neural Basis of Oropharyngeal Function (3 additional/optional credit hours only for M.Sc. Program)

A program of problem-oriented seminars on the sensory and reflex mechanisms affecting the respiratory and alimentary functions of the mouth and pharynx, mandibular posture and movement and respective application to oropharyngeal dysfunction and orthodontic therapy. *Dr. C. Lavelle will conduct this course through 30 seminars.*

101.704 Clinical Craniofacial Growth and Development (3 credit hours for Diploma/M.Sc. Program)

A program of student based seminars on morphogenesis of craniofacial structures and their significance to clinical problems. Embryology and genetics is also offered in this course including the principles of embryology with a focus on the developing head and neck; craniofacial anomalies and diseases; human chromosomes, laboratory evaluation methods, management of genetic diseases. This course should enable students to diagnose, consult with and/or refer to other specialists, problems affecting orofacial esthetics, form or function. This includes, but is not limited to: theories of growth mechanisms; principles of comprehensive diagnosis and treatment planning to identify normal and abnormal dentofacial growth and

development; and indications and contraindications for extraction and non-extraction therapy, growth modification, dental compensation for skeletal problems, growth prediction as well as the correction of biomechanical abnormalities. This course also includes normal language development; the anatomy and physiology of articulation and normal articulation development; causes of defective articulation with emphasis on oral anomalies, craniofacial anomalies, dental or occlusal abnormalities, velopharyngeal insufficiency (VPI), history of cleft lip/palate and normal velopharyngeal function and the effect of VPI on resonance. *Drs. C. Birek, W. Wiltshire, R. Baker, C. Lavelle, H. Cross and C. Lekic will conduct this course through 10 lectures and 20 seminars.*

101.723 Advanced Oral Pathology (3 credit hours for Diploma/M.Sc. Program)

The four major etiopathogenic categories of diseases affecting the oral and paraoral structures are discussed with emphasis on common conditions and entities significant to various dental specialties. Lectures cover epidemiology, clinical and laboratory features and management principles with supplementation by seminars and laboratories. *Drs. J. Perry, S. Ahing and C. Birek will conduct this course through 10 lectures and 15 seminars.*

100.7XX Biology of Periodontal Tissues (3 additional/optional credit hours only for M.Sc. Program)

This course will improve student's understanding of basic periodontal tissues phenomena. It will highlight the role of cellular signaling processes during tooth movement, tooth eruption, and wound repair/regeneration processes. Students will obtain basic knowledge of cell structure, cell function, regulation of gene expression and recombinant DNA technology. The lectures will be provided on the role of G-proteins and bone morphogenic proteins in cell signaling, growth and bone remodeling. *Drs. R. Bhullar, D. Scott and C. Lekic will conduct this course through 10 lectures and 16 seminars.*

101.7XX Management and Restorative Treatment of Pediatric Dental Patients (3 credit hours for Diploma/M.Sc. Program)

This course includes the principles and theories of child development and the age-appropriate behavior responses in the dental setting. It also teaches child management in the dental setting and the objectives of various management methods as well as communication skills, physical restraints and pharmacological techniques, including the descriptions of and recommendations for the use of specific techniques. Principles of informed consent are also included, relative to behavior management and treatment options. It covers the principles and objectives of anxiety and pain control, conscious sedation, deep sedation and general anesthesia as behavior management techniques, including indications and contraindications for their use. This course also includes radiology and radiation hygiene, taking, processing and interpreting radiographs and obtaining and presenting comprehensive treatment plans. Students will obtain knowledge in restorative and prosthetic techniques and materials for the primary, mixed and permanent dentitions and will have to complete comprehensive treatment for 60 patients in first and 80 in their second year. Pulp histology and pathology in primary and young permanent teeth

will be addressed in this course, as well as the indications and rationale for various types of indirect and direct pulp therapies, pulpotomies, root canal treatments and apexification methods. First and second year students are to be involved in management of comprehensive restorative and prosthetic care for pediatric patients as well as management of pulpal and periradicular tissues in the primary and developing permanent dentition. Second year students will also provide teaching of predoctoral students in a patient care setting. This course will also include: the design, implementation and management of a contemporary practice of pediatric dentistry, emphasizing business skills for proper and efficient practice, jurisprudence and risk management, use of computers in didactic, clinical and research endeavors, as well as in practice management and biomedical ethics. *Drs. C. Birek, P. Williams, M. Vodrey, A. McNeil, J. Stockton, H. Cross and C. Lekic will conduct this course through 20 lectures, 40 case presentations and 20 seminars.*

101.7XX Patients with Special Health Care Needs and Emergency Care in a Pediatric Dental Patient (3 credit hours for Diploma/M.Sc Program)

This course includes management of the oral health of patients with special health care needs and will involve multidisciplinary team service. In first year students will acquire knowledge of commonly used drugs in pediatric dentistry, their side effects, and their interaction. Student will diagnose and treat traumatic injuries of the oral and perioral structures including: evaluation and treatment of traumatic injuries to the primary, mixed and permanent dentitions, such as repositioning, replantation and stabilization of intruded, extruded, luxated, and avulsed teeth; evaluation, diagnosis, and management of the pulpal, periodontal and associated soft tissues traumatic injuries; recognition of injuries including fractures of the maxilla and mandible and referral for treatment by the appropriate specialist. Both in first and second year students are scheduled regularly for pediatric dental emergency services that offer sufficient clinical experiences to enable them to achieve competency in the assessment and management of orofacial trauma, dental pain and infections. Recognition, referral and treatment of child abuse and neglect as well as periodontal diseases of childhood and adolescence will also be discussed. *Drs. A. McNicol, H. Cross, V. Pruthi, D. Singer A. Stoykewych, R. Boyar, H. Cross and C. Lekic will conduct this course through 20 lectures, 20 case presentations and 20 seminars.*

101.7XX Hospital Pediatric Dentistry (3 credit hours for Diploma/M.Sc. Program)

A review of pediatric patients with developmental disabilities, language delays/disorders, genetic/metabolic disorders, infectious disease, pediatric oncology and sensory impairments. Prevention and management of medical emergencies in the dental setting will be included as well as the medical conditions and the alternatives in the delivery of dental care that those conditions might require. Students will also participate in a pediatric medicine rotation of at two weeks in duration and this will be the student's principal activity during the scheduled period. Students will be part of a four (4) weeks rotation in the Emergency Department as an experience beyond regular dental emergency duties. This course will also provide experiences on dental care in the hospital-based operating room setting. Students will participate in the treatment of at least twenty (20) pediatric patients under general anesthesia at the University clinics and twenty (20) at the extramural locations (Norway House). To enable exposure to rare medical conditions and

diseases students will also be part of a 4 week rotation at the Hospital for Sick Children (University of Toronto). Students are to provide the pre-operative workup and assessment, medical risk assessment, admitting procedures, informed consent, and intra-operative management including completion of the dental procedures, post-operative care, discharge and follow up and completion of the medical records. Students are also to complete a four-week rotation through the hospital's anesthesiology department. This rotation is structured to provide the knowledge and experience in the management of children and adolescents undergoing general anesthesia, and includes pre-operative evaluation, risk assessment, assessing the effects of pharmacologic agents, venipuncture techniques, airway management, general anesthetic induction and intubation, administration of anesthetic agents, patient monitoring, prevention and management of anesthetic emergencies, recovery room management, postoperative appraisal and follow up. *Drs. R. Boyar, M. Moffatt, A. McNeil, M. Tenenbein, H. Cross, and C. Lekic will conduct this course through 30 lectures and 20 seminars.*

101.7XX Preventive and Community Pediatric Dentistry (3 credit hours for Diploma/M.Sc. Program)

First year students will acquire basic knowledge in virology, immunology and cariology. Students will be given scientific insights on prevention and treatment of dental caries, periodontal and pulpal diseases, traumatic injuries, and developmental anomalies, especially in the following areas: prenatal and neonatal care, infant oral health care, the effects of proper nutrition, fluoride therapy and sealants in the prevention of oral disease. This course will include application of preventive methods particularly principles, techniques and treatment planning for the prevention of oral diseases. As part of preparing future specialists for a role in the community, first year students will obtain experience in providing services at the community level. In particular students will learn intervention strategies needed to identify problems in their earliest stages and educate families, especially in Northern communities, on the importance of disease prevention and oral health promotion. *Drs. N. Fleming, D. Brothwell, J. de Vries, S. Gelskey, M.J. McCallum, O. Odum and C. Lekic will conduct this course through 20 lectures and 20 seminars.*

101.7XX Preventive Programs in Pediatric Dentistry (3 additional credit hours only for M.Sc. Program)

For the Master's Program students will take two additional courses to broaden their knowledge in scholarly activity. Each student will be involved in examinations, data collection and analysis of children's oral health. Using scientific methods students are to design a comprehensive children's oral-health care program for the assigned region. This program will be presented to the health care forum and at scientific meetings. This project is to be completed as a research paper. *Prof. L. MacDonald, Drs. D. Brothwell, S. Gelskey, M.J. McCallum, O. Odum and C. Lekic will conduct this course through 20 lectures and 30 seminars.*

Note that each student will:

- a) Have an independent project. Several students may work simultaneously on different parts of a larger project, but students may not have the same project.

- b) Be involved in undergraduate teaching (one clinical session/week)

Teaching staff

Instructors from the University of Manitoba will teach the majority of courses (by departmental membership, adjunct membership or recommendation of the program director). However, the program director may recommend inviting lecturers from other universities to teach some parts of the program.

Graduate Seminars

Seminars will be used as a valuable teaching format. They are to promote group discussions and will be used on a regular basis particularly for research and clinical presentations. They will provide students with additional opportunities to develop speaking skills and to explore methodology and issues with their colleagues and faculty members involved in the proposed program. They will also provide students with an opportunity to build mentor relationships with faculty members and strengthen relationships with their colleagues in the program.

Evaluation Procedures

A system of ongoing evaluation and advancement **must** be conducted through the program director and results approved by the Pediatric Dentistry Graduate Program Committee. This is to include:

1.
 - a. Periodical, but at least semiannual, evaluation of the knowledge, skills and professional growth of students, using appropriate written criteria and procedures (i.e. exams)
 - b. Providing, at least semiannually, students with an assessment of their clinical competencies
 - c. Permitting student advances on the basis of an evaluation of their readiness for advancement
 - d. Maintaining a personal record of evaluation for each student, which is accessible to the student and available for review.

2.

An external examiner is scheduled to assess the progress of the second-year students and, thus, indirectly the program. A three hour clinical session is to be allotted to each graduate student during which time several of their patients will be appointed. External examiners are to provide an independent assessment of the student's overall ability and what the program is offering the students.

Note: The intent is that the student evaluations are recorded and available in written form. This evaluation should be documented in writing and shared with the student.

Student Affairs

Students are encouraged to express their concerns to the program director with regard to academic and general matters and to the graduate clinic supervisor. The program director will

remain an open door policy with regard to the students. Program Director will maintain record of comments and/or complaints and advise students how to assess potential appeal procedure through the Faculty of Graduate Studies.

There will be counseling services available through the Faculty of Graduate Studies, the Graduate Student Association Office and through the Student Mental Health Services.

Diploma/Master's Thesis Regulations

Diploma/ Research Project Regulations

Purpose. The research project should provide students with experience in designing and undertaking a research project, or secondarily, a review of the literature. This type of experience will give students the opportunity to use skills which will benefit them in future evaluation of the scientific literature, further development of research interests and aid clinical decision-making by giving them the experience in, and appreciation for, such matters as literature searching, hypothesis setting, experimental design, methodical limitations, laboratory practice, and writing a paper for publication. Collectively, the requirements for this course can be met by undertaking a research project in the form of a review article.

Diploma/Research Project Proposal. The student must submit the research project proposal for approval by the program director on recommendation from the advisor. Major changes to the initial proposal should be approved in a similar way.

Style and Format. The research project will involve the collection and analysis of data, or analysis of already collected data, related to the discipline. It will take the form of a research paper using the format of the Journal of Dental Research or, if more suitable, some other peer-reviewed journal. In either case, the expected outcome is a paper in a format suitable for publication. The research project must be written according to a standard style acknowledged by a particular field of study and recommended by the program director, be lucid and well-written. A well-prepared copy should be reproduced by any method acceptable to the Pediatric Dentistry Graduate Program Committee.

Supervision. Each student will require a faculty member who will act as supervisor for their project. It will be incumbent upon the students to arrange for the supervisor who will be appropriate for the particular project/essay. The supervisor will provide the student ongoing supervision and advice about the particular project.

Research Project Submission. The Academic Schedule in the Graduate Calendar should be consulted regarding dates by which the research project must be submitted. The completed research project must be defended before an examination committee (see below).

Examining Committee. The student's advisor will recommend a research project examining committee to the Department Head for approval. The committee must comprise at least four voting members, and will include the student's supervisor(s) and the Head of the Department, or

a designate. At least one of the committee members must be a member of another department or from another Faculty or University. All members of the committee will have a vote.

Distribution and Research Project Evaluation. The program director will arrange for the distribution of the research project to the examiners, and will notify the Head of Preventive Dental Science at the time that the research project has been distributed for examination. It is the duty of all examiners to read the diploma research project and report on its merits according to the following categories:

- Acceptable without modification or with minor revision(s)
- Acceptable subject to modification and/or revision(s)
- Not acceptable

Examination Process. The completed research project must be defended before an examination committee. These examinations will normally be held in the spring of the final year of the program and will be chaired by the Associate Dean (Research), or his/her designate. The research project defense shall be open to all members of the University of Manitoba community.

Final Approval/Rejection. Following completion of the research project defense, the examiners will consider their report on the defense and on the written research project and will also determine the nature of and procedures for approval of any revisions that will be required prior to submission of the research project to the Department Head. The advisor is normally responsible for ensuring that revisions are completed according to the instructions from the examining committee. Final verdicts must be unanimous and each examiner must indicate, by his/her signature, concurrence with the verdict.

Submission of Final Copies. Following the approval of the research project by the examining committee and the completion of any revisions required by that committee, two copies must be submitted to the program director.

Master's Thesis Regulations

Purpose. The thesis should show that students have mastery of the field in which they present themselves and are fully conversant with the relevant literature.

Thesis Proposal. The student must submit a thesis proposal for approval by the program director on recommendation from the advisor. The proposal must be approved before substantial progress is made in the thesis research project. Significant deviations subsequent to the initial proposal must be similarly approved.

Style and Format. The thesis must be written according to a standard style acknowledged by a particular field of study and recommended by the program director, be lucid, well-written, and publication of findings will be encouraged.

Copies of the thesis will have to be clearly legible, and should be reproduced by any method acceptable to the Faculty of Graduate Studies.

Deadlines for Submission. The Academic Schedule in the Graduate Calendar should be consulted regarding dates by which theses must be submitted to the Faculty of Graduate Studies.

Submission of Final Copies. Following the approval of the thesis by the examining committee and the completion of any revisions required by that committee, two copies must be submitted to the Graduate Studies Office in unbound form, enclosed in an envelope or folder. These copies are required for the University Library and remain the property of the University of Manitoba.

Examining Committee. The student's advisor will recommend a thesis examining committee to the Department Head for approval, which should then be reported to the Graduate Studies Office on the "Thesis/Practicum Title and Appointment of Examiners" form. This committee must consist of a minimum of three persons, representing at least two different disciplines. At least two examiners must be members of the Faculty of Graduate Studies at the University of Manitoba. The third member must be an individual the Advisor and Department Head deem qualified for the assignment, is external to the Department, and is willing to serve. In exceptional cases, on recommendation from the program director, the Dean of the Faculty of Graduate Studies may appoint an examiner from outside the University of Manitoba. Prior to this recommendation the program director should ensure that the proposed external examiner is willing to serve on the committee.

Distribution and Examination. The program director will arrange for the distribution of the thesis to the examiners, and will notify the Graduate Studies general office at the time that the thesis has been distributed for examination. It is the duty of all examiners to read the thesis and report on its merits according to the following categories:

- Acceptable without modification or with minor revision(s)
- Acceptable subject to modification and/or revision(s)
- Not acceptable

Thesis Defense. Normally, students must present their thesis and be prepared for oral examination on the subject of the thesis and matters relating thereto. The thesis defense shall be open to all members of the University of Manitoba community.

Final Approval/Rejection. Following completion of the defense of the thesis, the examiners will consider their report on the defense and on the written thesis and will also determine the nature of and procedures for approval of any revisions that will be required prior to submission of the thesis to the Faculty of Graduate Studies. The advisor is normally responsible for ensuring that revisions are completed according to the instructions from the examining committee. The Faculty of Graduate Studies will accept the thesis if submitted with a signed statement from the advisor that the required revision has been completed.

Final Report. The judgment of the examiners shall be reported to the Faculty of Graduate Studies in the qualitative terms "approved" or "not approved" on the "Master's Thesis/Practicum Final Report Form". Such verdicts must be unanimous and each examiner must indicate, by his/her signature, concurrence with the verdict. Anything less than unanimity shall be considered a failure. The candidate will be recommended for the Master's degree upon the receipt by the

Faculty of Graduate Studies of the favorable results of the thesis committee and when the corrected copies of the thesis are submitted to the Faculty of Graduate Studies, assuming all other program requirements have been met.

Ability to Transfer Courses to the Program

The Pediatric Dentistry Graduate Program Committee will consider on a case-by-case basis the appropriateness of transferring credits from previous graduate courses to this program (see Admission Requirements).

Completion of the Fellowship Exam

Students will be encouraged to proceed with the Fellowship Exam from the Royal College of Dentists of Canada and/or the American Board of Pediatric Dentistry Exam.

Credentials

Graduates of a diploma program will be granted a specialty diploma in pediatric dentistry. Students from a Master's program will be granted a Master of Science.

IV. PROJECTIONS AND IMPLEMENTATION

Program Listings

Table 1	Diploma program in pediatric dentistry	Master's and specialty program
Year 1	Fifteen credit hours Dissertation research Elective	Fifteen credit hours Thesis research Elective
Year 2	Twelve credit hours Dissertation defense	Twelve credit hours Thesis research
Year 3		Elective six credit hours Thesis defense

Projected Enrolment

Enrolment for the diploma/master's program in pediatric dentistry will be three full-time students per year.

Students will have a time limit of three years for the diploma program and four years for the combined Master and specialty program to complete all requirements. Students will normally complete these proposed programs in two years or three years, respectively. Students requiring additional time will be expected to comply with extension policies outlined in the Faculty of Graduate Studies regulations.

Distance Education

There is no intent to offer courses through distance education at this time although it is anticipated that alternative means of course delivery may be available in the future.

Schedule for Implementation

It is intended that the program will commence in August 2004.

B. HUMAN RESOURCES

There is a wealth of resources available within the University that is directly or indirectly related to the study of pediatric dentistry. The majority of the courses from the proposed teaching curriculum already exist within different graduate programs at the University of Manitoba. In terms of research, a number of studies have been conducted in various areas of child oral health. Overall there is a tremendous expertise in terms of human resources and in the delivery of programs, which focus on pediatric dentistry. For this reason the proposed comprehensive program in pediatric dentistry will tap into the rich pool of resources in the university and the community.

I. FACULTY

There are a significant number of faculty members in various departments who have a specific interest in some aspect of child health. These faculty members have experience as thesis advisors or committee members for students in a wide variety of disciplines including: Orthodontics, Community Dentistry, Restorative Dentistry, Endodontics, Periodontology, Oral Surgery, Hospital Dentistry, Oral Biology. They are also engaged in research closely related to pediatric dentistry and this work has been published in many Canadian, American and international journals.

The following list identifies those faculty members who will undertake various roles in the pediatric dentistry graduate program, including teaching core courses and advising students.

Faculty Member	Thesis Advisor	Thesis Committee Member	Course Instructor
Dr. Steve Ahing		X	X
Dr. Robert Baker			X
Dr. Raj Bhullar	X	X	X
Dr. Catalina Birek	X	X	
Dr. Ron Boyar		X	X
Dr. Doug Brothwell	X	X	X
Dr. Howard Cross		X	X
Dr. James Davie			X
Dr. Johann deVries		X	X
Dr. Norm Fleming	X	X	X
Dr. Shirley Gelskey	X	X	X
Dr. Thomas Hassard			X
Dr. Chris Lavelle	X	X	X
Dr. Charles Lekic	X	X	X
Prof. Laura MacDonald		X	X
Dr. Ann McNeill			X
Dr. Archibald McNicol		X	X

Dr. Michael Moffatt			X
Dr. Mary Jane McCallum			X
Dr. Olva Odium		X	X
Dr John Perry		X	X
Dr. Vijay Pruthi		X	X
Dr. Elliott Scott		X	X
Dr. David Singer	X	X	X
Dr. Andrew Stoykewych			X
Dr. Mike Suzuki	X	X	X
Dr. Milton Tenenbein		X	X
Dr. Mitch Vodrey			X
Dr. Peter Williams		X	X
Dr. William Wiltshire	X	X	X

Faculty members' experience in research and experience on other thesis committees will provide students in the interdisciplinary graduate program in pediatric dentistry with excellent support systems and opportunities. In addition, many faculty members from other departments may be interested in serving on thesis committees in order to help supplement experience in graduate student supervision and to enrich the interdisciplinary aspects of the program.

To operate effectively, this program will require the following human resources: 2.5 full-time-equivalent academics of which at least one is to be eligible for the Fellowship Exam from the Royal College of Dentists of Canada and/or American Board Exam. These academics are to carry out teaching, coordinating and advising (0.3 full-time-equivalent for coordination, 1.7 full-time-equivalent for teaching and 0.5 full-time-equivalent for student thesis advising); and 4.5 full-time equivalent support staff (see below). Presently undergraduate pediatric dentistry, at the University of Manitoba has only one full time academic and one administrator. However, 2.5 new academic positions are necessary to provide supervision of graduate students:

- In graduate clinics (five-day a week)
- While on-call (24 hrs a day, 7 days a week)
- During the treatment under sedation
- To conduct didactic teaching
- For supervision of student research

Members from outside the Faculty of Dentistry will be recognized by home departments and faculties for their involvement as thesis advisors or committee members.

II. SUPPORT STAFF AND ADMINISTRATION

This program will require a 6.5 full-time-equivalent support staff (1 secretary, 3 dental assistants, 1 dental hygienist, 1 receptionist, ½ time sedation nurse). Support staff will be involved in realization of the clinical program, front deskwork, office management, admissions documentation and record keeping. Specifically, 2 dental assistants will provide chair-side

assistance in the graduate clinic, secretary will bring overall administrative support, ½ time nurse will provide continuity of the work in sedation clinic and the dental hygienist will be involved in restorative and preventive aspects of the clinical work. The receptionist will be the office manager and the half-time nurse will provide conscious sedation to patients.

The educational mission must not be compromised by a reliance on students to fulfill institutional services, teaching or research obligations. Resources and time must be provided for the proper achievement of educational objectives. At the same time the patient care mission must not be compromised by an over emphasis on unit treatment requirements and the educational program must demonstrate concern with the patient's overall dental health care needs.

III. A PROGRAM TO SUPPORT COMMUNITY COMMITMENTS

Winnipeg is a leader in child health care and is the birthplace and/or current home of many national and international organizations in this field. This vision and expertise has facilitated development of many aspects of child health including child oral health. In the province of Manitoba many programs and clinics have been designed to provide child dental care (Northern Programs, Winnipeg Regional Health Authority Children's Dental Program, Mt. Carmel Clinic, Action Centre). At the same time, the Faculty of Dentistry at the University of Manitoba has developed several in- and outreach programs providing care to the underserved children of Winnipeg and Manitoba. These programs have a strong community commitment and so far several hundred children have received dental care at no cost to parents or society. Undoubtedly, development of the graduate program will only strengthen the Faculty's in- and outreach commitments, thus improving the learning experiences for our students, while at the same time providing an important role for the University of Manitoba in health care in our community.

C. PHYSICAL RESOURCES

This graduate program in pediatric dentistry provides an opportunity to increase collaborative research and consultative interaction with other departments. In addition to the intellectual stimulation, this interaction increases the sharing of space, equipment, libraries and other facilities.

I. SPACE

Most of the clinical teaching will be conducted in the pediatric dentistry graduate clinic. The clinic will cover the space of 33 x 13 meters and will be built next to the existing orthodontic graduate clinic (see Appendixes). Facilities of the new clinic will be shared with other programs and will include:

- a. 6 operational units (box type facing one another)
- b. 1 research dental clinic
- c. 2 dental rooms for patient isolation
- d. 1 sedation room
- e. 1 preparatory and recovery room
- f. 1 lab unit
- g. 1 sterilization room
- h. 1 dispensary room
- i. 1 reception
- j. 1 waiting room
- k. 2 washrooms
- l. 1 seminar room
- m. 1 student room
- n. 4 staff offices

Some clinical teaching will be conducted at Children's Dental Clinic (671 William Ave). However, the space requirements for teaching outside the graduate pediatric dentistry clinic and /or Children's Dental Clinic will be negotiated with participating Departments. Clinical teaching has to be conducted in accordance to the Clinical Manual from the Faculty of Dentistry, University of Manitoba. This will include keeping records regarding patient comments and complaints as well as supervisor's or program director's response.

Note that students will have individual desk space in room D211B at the Faculty.

II. EQUIPMENT

Didactic Teaching

The program will use already-existing resources (e.g.. overhead, slide and video projectors), which are available for classroom use at the Faculty of Dentistry and the University at large.

Most of the didactic teaching will take place in the newly built graduate seminar room (see under **I. Space**). However, some didactic teaching will have to be conducted in lecture theatres at the Faculty of Dentistry and/or University at large. This may also include the use of tele-links to connect the program with the Hospital for Sick Children.

Clinical Teaching

Most of the clinical teaching will take place in the newly built graduate clinic (see under **I. Space**). To enable adequate clinical teaching and to be useful to other programs the following equipment will be needed:

- a. 10 fully equipped dental units
- b. 7 sets of dental instruments and materials
- c. 1 emergency equipment for dental surgeon
- d. 1 emergency equipment for advanced life support
- e. 1 inhalation sedation unit
- f. 1 equipment for inhalation sedation
- g. 2 sets of pulse oximeters, pressure cuffs and capnographies
- h. 1 recovery bed
- i. 1 sterilization unit
- j. 2 computers
- k. 2 slide projectors, 1 digital projector and 2 screens
- l. 1 monitor and VCR projector for the waiting room
- m. 1 video camera and a ceiling mounted microphone for the research clinic
- n. 1 ceiling mounted video and data recorder and speakers for the seminar room
- o. 8 telephone lines with voice mails and 4 computer connections for the staff

Note: Inhalation or oral type of sedation will be used only and in full accordance with the guidelines set by the Manitoba Dental Association.

Research

Students will utilize research facilities available to all students at the Faculty of Dentistry or at other faculties at the University of Manitoba.

III. COMPUTER RESOURCES

Students will utilize computer resources that are available to students of the Faculty of Dentistry as well as the two new computers, which will facilitate clinical work and research. Further, students will have access to computer facilities as all other graduate students at the University. Note that staff will require 4 computer connections, located in their offices (for information and

technology services see Appendixes).

IV. LIBRARY RESOURCES

The library is viewed as an important learning center for this program. Students will be using the library resources at the Neil John MacLean Health Sciences Library. This library supports the teaching, research and patient care requirements of the staff and students of the Faculties of Dentistry and Medicine, and Schools of Dental Hygiene and Medical Rehabilitation. It offers a range of access services, including circulation, document delivery, reference and technical services. The reading material will include topical outlines with selected references in the form of books and journal articles, as well as computer-based media. The Neil John Health Science Library is well prepared for the program and will not require any additional journal subscriptions (see Appendixes; note that in the letter of support from the library the numbers for new courses are just the one used to track them).

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D. FINANCIAL RESOURCES (Start Up)**Capital Start Up Costs**

Dental Equipment	\$590,000
Office Equipment	\$67,000
New Clinic Costs	\$2,162,500
Total	\$2,819,500

Like most clinical based health care programs, initial start-up funding is needed. The start-up funding can come from a number of sources such as Manitoba Health, Health Canada, Private Sponsors, Foundations and Fundraising. The operating budget is a projection of both revenue and expenses. By year five, the maximum number of students will be enrolled and projected revenue and expenses will be stable. The program would then need a baseline addition of approximately \$250,000. Dental clinic operations should be recognized by the University to be educational and cannot always be totally cost recovery. For years one to four, budget only funds would be added to operate. The baseline funds would be expected to be new funds from COPSE not existing funds from the University budget.

July 31, 2003

Report of the Senate Planning and Priorities Committee (SPPC) on the proposal for a Graduate Diploma and M.Sc. in Pediatric Dentistry

Preamble

1. The terms of reference for the Senate Planning and Priorities Committee are found in the Senate Handbook (Rev. 1993), pp. 10.21-22.
2. The Programs and Planning Committee (PPC) of the Faculty of Graduate Studies has the responsibility of reviewing new graduate programs and makes recommendations to Faculty of Graduate Studies Council.
3. The Faculty of Graduate Studies proposes to introduce a Graduate Diploma and an M.Sc. in Pediatric Dentistry to be offered by the Faculty of Dentistry.

Observations

1. The main purpose of advanced education programs in Pediatric Dentistry is to prepare a specialist who is proficient in providing both primary and comprehensive preventive and therapeutic oral health care for infants and children through adolescence, including those with special health care needs. Such individuals will be trained to provide services in institutional, private, or public health settings and to work in coordination with members of other health care and social disciplines. The programs will encourage the development of a critical and inquiring attitude that is necessary for the advancement of practice, research, and teaching in Pediatric Dentistry. The Graduate Diploma program will be 24 months in duration, the M.Sc. program will be 36 months in duration.
2. The Graduate Diploma and M.Sc. programs in pediatric dentistry will encourage integration and enrichment of current teaching programs as well as establishment of new programs addressing the vulnerable child portion of the population and provide services to underserved children and adolescents in Manitoba. The Faculty of Dentistry asserts that this proposal will improve dental health and reduce by 50% the prevalence dental diseases in the child populations of northern communities in the province of Manitoba. The programs will foster and stimulate collaborative research interests in Pediatric and other aspects of Public Health Dentistry and facilitate integration and collaboration with other relevant clinical programs in the Faculty of Dentistry, University of Manitoba.
3. The proposal is based on Canadian Dental Association Standards as well as the Standards of the American Academy of Pediatric Dentistry. Professional organizations have concurred that there is a need for a graduate diploma program in pediatric dentistry (focusing on prevention strategies rather than extractions) particularly as this would be only the second pediatric dentistry program in English-speaking Canada. Several consultations have been held with the members of the profession, professional organizations, academics, and the University administration.
4. The Federal Government bears the responsibility for non-insured health benefits such as would be needed for Pediatric dentistry. There has been some discussion of Provincial regulation or delivery of non-insured health benefits under a National umbrella. Such discussions could have a bearing on future funding of programs such as pediatric dentistry.

5. The establishment of this Graduate Diploma and M.Sc. programs would allow the University of Manitoba to contribute to the emerging discipline referred to as pediatric dentistry. Pediatric dentistry is synonymous with dentistry for children and is gaining momentum and broader visibility throughout the North American continent.
6. According to data from the Winnipeg Regional Health Authority (2000-2001), almost 27% of Winnipeg's children (age 4-12) have over 80% of overall tooth decay rates for that age group (data not published). Strikingly, preschool children from this group have on average more than 5 decayed, extracted or filled teeth. Unfortunately, the majority of them are from working poor families or are aboriginal children in whom current preventive measures have proven to be inadequate. A direct consequence of this is an increase in the number of children waiting for treatment under general anesthesia. In Manitoba alone over 1,500 children are presently on the waiting list for this type of treatment. These children are 4 years of age or less and the waiting time for the treatment is 3-15 months. However, it may be overly optimistic to expect, as the proposal suggests (p.8), that "only an increased number of specialists trained and involved in preventive and early treatment programs will make the difference for all children, particularly those currently underserved", and hence solve these problems quickly, in view of the expected intake of students in the two programs combined would be 3 per year, with a steady-state total enrolment of between 6 and 9.
7. On a day-to-day basis the programs will be administered by a Director of the Graduate Diploma/M.Sc. Programs in Pediatric Dentistry. The program director will hold a full-time academic appointment at the University of Manitoba and will be responsible for the teaching, research and clinical aspects of the program. The responsibilities will include appointing instructors, assigning advisors for students, as well as selecting research and admission committee members. The program director will be responsible for the administration of the program together with the Pediatric Dentistry Graduate Program Committee (PDGPC).
8. The Graduate Diploma program in pediatric dentistry (specialty diploma in pediatric dentistry) would allow students to focus on specialty training in pediatric dentistry. Students would be required to take twenty-seven credit hours of biomedical and clinical science courses as well as to complete and defend a diploma research project. We suggest that the two programs should be considered as two distinct programs, rather than one combined one. They do share some of the course requirements, but, it would appear, have goals distinct from each other. In addition, it is stated that anyone wishing to qualify for the M.Sc. after the diploma, would need to spend an additional 1 year and take an additional 12 credit hours of courses.
9. The Master's degree requirements will consist of thirty three credit hours: twenty-seven credit hours from the required specialty training and six hours of additional course credits, plus a thesis. The additional six credit hours can be taken from courses offered at the biomedical and clinical science level (courses 036.709, 93.736, 93.752, 101.700, Biology of Periodontal Tissues, Preventive Programs in Pediatric Dentistry). Students' proposed course work, research progress and thesis topic will be examined and recommended for approval by the program director and research advisor. The Pediatric Dentistry Graduate Program Committee (PDGPC) will approve recommendations. PDGPC will also identify the type of program: being a Master's specialty (3 years in duration) or only graduate diploma specialty program (2 years in duration). The decision as to which program the student is to pursue will be made prior to student's enrollment and will be based on student's expressed interest and his/her credentials.
10. Mandatory courses are 080.706: Advanced Human Macroscopic (Gross) Anatomy (6 credit hours); 093.747: Biostatistics 1(3 credit hours); 101.704: Clinical Craniofacial Growth and

Development (3 credit hours); 101.723: Advanced Oral Pathology (3 credit hours); 101.XXX: Management and Restorative Treatment of Pediatric Dental Patients (3 credit hours); 101.XXX: Patients with Special Health Care Needs and Emergency Care in a Pediatric Dental Patient (3 credit hours); 101.XXX: Hospital Pediatric Dentistry (3 credit hours); 101.XXX: Preventive and Community Pediatric Dentistry (3 credit hours). Additional/Optional courses only for M.Sc. program are 036.709: Cell Biology (6 credit hours); 93.736: Clinical trials (3 credit hours); 93.752: Principles of Epidemiology 1 (3 credit hours); 101.700: Neural Basis of Oropharyngeal Function (3 credit hours); 100.XXX: Biology of Periodontal Tissues (3 credit hours); 101.XXX: Preventive Programs in Pediatric Dentistry (3 credit hours) for a net increase of 18 credit hours.

11. To operate effectively, the programs will require 2.5 full-time-equivalent academics of which at least one is to be eligible for the Fellowship Exam from the Royal College of Dentists of Canada and/or American Board Exam. These academics are to carry out teaching, coordinating and advising (0.3 full-time-equivalent for coordination, 1.7 full-time-equivalent for teaching and 0.5 full-time-equivalent for student thesis advising) and 4.5 full-time equivalent support staff (see below). Presently, undergraduate pediatric dentistry at the University of Manitoba has only one full time academic and one administrator. However, 2.5 new academic positions are necessary to provide supervision of graduate students. The programs will require a 6.5 full-time-equivalent support staff (1 secretary, 3 dental assistants, 1 dental hygienist, 1 receptionist, 1/2-time sedation nurse). Support staff will be involved in realization of the clinical program, front deskwork, office management, admissions documentation and record keeping.
12. Most of the clinical teaching will be conducted in the pediatric dentistry graduate clinic. The clinic will cover the space of 33 x 13 meters and will be built next to the existing orthodontic graduate clinic. Facilities of the new clinic will be shared with other programs.
13. Like most clinical based health care programs, initial start-up funding is needed. It is anticipated the start-up funding can come from a number of sources such as Manitoba Health, Health Canada, Private Sponsors, Foundations and Fundraising. These start-up costs are anticipated to be around \$3-million.
14. External support for this proposal has come from the Aboriginal community. In addition there is some potential for collaborative arrangements with other Provincial jurisdictions.
15. An operating budget projects revenues and expenses until the Faculty reaches the maximum intake of students in 2008-2009. The Faculty of Dentistry will require in non-baseline funding \$483,085 (year 1), \$363,969 (year 2), \$318,322 (year 3), \$276,479 (year 4). In 2008-2009, the Faculty will require \$250,000 in baseline at which point the program will function on a cost recovery basis. Included in these plans is a commitment from the Vice-President (Administration) to allocate the Faculty 100% of tuition revenue for the first five years of the program, i.e., through to the 2008-2009 fiscal year.

Recommendations

The two programs proposed are sufficiently distinct that SPCC recommends:

1. That the programs be approved as two distinct programs: a Graduate Diploma in Pediatric Dentistry and an M.Sc. in Pediatric Dentistry, recognizing they may share courses and resources.

Further, since these programs require significant new resources, SPPC recommends:

2. That the Vice-President (Academic) and Provost not implement the programs until he is satisfied that sufficient new funding is in place to adequately fund the implementation and on-going operation of these programs.

Respectfully submitted,

Juris P. Svenne, Acting Chair, Senate Planning and Priorities Committee

/jml

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses
the report to Senate.

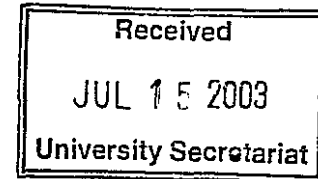


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July 10, 2003



TO: Ms. Beverly Sawicki, University Secretariat

FROM: Digvir S. Jayas, Acting Vice-President (Research),
Canada Research Chair in Stored-Grain Ecosystems and
Acting Chair, Senate Committee on University Research

SUBJECT: **Periodic Review of Research Centres and Institutes**

Attached please find a report which includes a recommendation relating to the review of the Institute for the Humanities which was conducted by SCUR, according to *Policy 1405, Research Centres and Institutes*.

I would ask that you place this recommendation on the next agenda of Senate. Please feel free to contact me should you require any further information.

Thank you.

DSJ/tt
attach.

**THE SENATE COMMITTEE ON UNIVERSITY RESEARCH
REPORT ON THE REVIEW OF
THE INSTITUTE FOR THE HUMANITIES**

Preamble:

1. Policy 1405, *Research Centres, Institutes and Groups*, stipulates that all research centres/institutes be reviewed by the Senate Committee on University Research (SCUR) on a periodic basis but not less than once every 5 years. Accordingly and following approval by Senate of Policy 1405, the Senate Committee on University Research established a schedule for the review of all research centres/institutes.
2. For each research centre/institute identified for review, a sub-committee of the Senate Committee on University Research was established. In accordance with Policy 1405, the task of each sub-committee was to recommend to SCUR on whether a formal, independent review committee should be struck to conduct a full review. If a sub-committee was of the view that a full review of a specific research centre/institute was not warranted, it was further charged with recommending to SCUR on the continuance or termination of the research centre/institute.

Observations:

1. The review process followed that which is outlined in section 3.3.1 of Policy 1405, and involved a review of annual reports of the Institute for the Humanities as well as a report prepared by the Institute Director, which contained:
 - A description of how and why the institute has achieved or revised its original objectives; a detailed listing of its research and training accomplishments; a current membership list, and a detailed financial statement;
 - A five-year plan which identifies future research directions and development strategies; letters indicating continued support for the research institute from appropriate department heads and faculty/school deans/directors; and
 - The names of individuals who could provide external assessments of the research institute.
2. The membership of the sub-committee charged with reviewing the Institute for the Humanities was as follows:

Dean Harold Bjarnason, Faculty of Agricultural and Food Sciences, Chair
Dean Douglas Ruth, Faculty of Engineering, and
Associate Dean Pawan Singal, Faculty of Graduate Studies

3. The assessment of the sub-committee was as follows:

The listing of the Institute's objectives were well-stated. Objectives have been realized through colloquia, workshops, a newsletter and the collaboration with organizations outside of the University of Manitoba. The UMIH Research Fellowship program has proven to be important for researchers by fostering interdisciplinary research and discussion, and important linkages have been established with others involved in the humanities within the City of Winnipeg, such as the Winnipeg Art Gallery.

Future goals, direction and development strategies were clearly identified. They include a continuation of what is now in place, partnering in the Summer Aboriginal Institute and increasing graduate student participation.

Although funding has declined since its inception, the UMIH has shown itself to be frugal and responsible in operating within its rather limited budget. It has used its modest resources judiciously and has covered all expenses. It is currently in a surplus position. It has set fundraising as a priority for the future by resurrecting its Board of Advisors and by establishing a large enough endowment to run its programs and offer time-release research awards for internal Faculty Associates on a competitive basis. The goal is to eventually offer one or two affiliate positions per year with stipends.

The term of the current Director has been extended by one year to June 30, 2004, and the Board of UMIH will be addressing the search for a new Director at its next meeting in June 2003.

Given its limited budget, the UMIH goals are ambitious, but the sub-committee is confident that they are appropriate and can be realized.

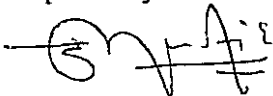
4. At the June 4, 2003 meeting of SCUR, the sub-committee recommended and SCUR approved the recommendation that a full review of the institute was not warranted and that the Institute for the Humanities should continue for a five-year period.

Recommendation:

On behalf of the Senate Committee on University Research, I am recommending to Senate:

That the University of Manitoba Institute for the Humanities continue for a five-year period, beginning July 1, 2003.

Respectfully submitted,



Comments of the Senate Executive Committee:

The Senate Executive Committee endorses the report to Senate.

Digvir S. Jayas, Ph.D., P.Eng., P.Ag.
Acting Vice-President (Research),
Canada Research Chair in Stored-Grain Ecosystems and
Acting Chair, Senate Committee on University Research