

FACULTY OF SCIENCE
Meeting of Faculty
Tuesday, 20 October, 2015
Leacock Council Room - L232

ATTENDANCE: As recorded in the Faculty Appendix Book

DOCUMENTS: S-15-4 to S-15-11

Dean Lennox welcomed members to the second Faculty of Science meeting of the year. The research presentations would be given by **Prof. Natalya Gomez**, Department of Earth and Planetary Sciences, and **Prof. Anna Weinberg**, Department of Psychology, two new hires in the Faculty of Science. Dean Lennox said that he was sure that research connections would be made as a result of the presentations.

After the presentations, Dean Lennox thanked Prof. Gomez and Prof. Weinberg for their interesting and informative talks.

1) ADOPTION OF AGENDA

Amendment of Agenda: Addition of Dean's Multidisciplinary Undergraduate Research List (DMURL) as item 7(d), Dean's Business.

Prof. Mucci **moved**, seconded by Prof. Harpp, that the amended Agenda be adopted.

The motion carried.

**2) RESOLUTION ON THE DEATH OF PROFESSOR ROBERT MARCHESSAULT,
DEPARTMENT OF CHEMISTRY**

202.1 Prof. David Harpp from the Department of Chemistry, read the resolution on the Death of Professor Robert Marchessault.

Dear colleagues of the Faculty,

It is with great sadness that we announce the passing of Professor Robert ('Bob') Marchessault, who died peacefully last month on September 16th, 2015, the day of his 87th birthday.

Bob was a true pioneer in many areas of polymer chemistry, an early champion of the 'new' concept of biodegradable commodity plastics, and was a key advocate in Canada and internationally of responsible development of the chemical industry, and in Green Chemistry and sustainability in particular. He was also one of the pioneers in the application of modern experimental methods to understand the structure and chemical derivatives of the most abundant polymer in the world- cellulose. He was widely considered to be one of the most influential pioneers and one of the key founders of the current worldwide research and development of bacterial polyesters ("bioplastics"), now both widely-used in basic scientific research, and in industrial applications.

Born in Montreal, Bob was educated at Loyola College, now Concordia University. He was an accomplished hockey player, in fact played for the Montreal Royals in the Quebec Hockey League in the 1948-50 seasons, at the

time when Jacques Plante was their goalie, and Jean Béliveau played for the rival Quebec Aces. But Bob's true passion was in research.

Bob earned a PhD from McGill in 1954, and after postdoctoral work at the University of Uppsala in Sweden, he spent several years as a research scientist at American Viscose Corporation, in Philadelphia, where his research was devoted to dissolving wood pulp and its conversion to cellulose xanthate and rayon fibers. From 1961 to 1969 he was Professor of Polymer Physical Chemistry in the College of Forestry at SUNY Syracuse, N.Y.

In 1969, Bob returned to Montreal as Professor and Director of the Department of Chemistry at Université de Montreal. From 1978 to 1987, Bob served as Vice President of the Xerox Research Centre of Canada, which was recognized as one of Canada's leading industrial R&D labs under his watch. Bob returned to Montreal to McGill in 1987, to take on an NSERC-Xerox Industrial Research Chair. In 1993, he was appointed to the prestigious E.B. Eddy Chair of Industrial Chemistry which he occupied until becoming Emeritus Professor in 2005. He remained active in research until his last year.

Bob like to say that he learned some important skills from his early hockey days – skills occasionally needed as a Department Chair and multinational corporation executive. These included stick-handling, skating around issues, and the occasional use of a sharp elbow when called for.

As a colleague, Bob was a noted classroom teacher, an excellent graduate mentor, and a major contributor to McGill's research infrastructure, especially in his role as coordinator of McGill's first years of CFI applications. We will also remember Bob as a very passionate researcher who firmly contended that we, as scientists, should direct our research efforts towards practical (technological) applications. The 80 graduate and postdoctoral students he trained (34 PhD, 24 MSc, and 22 PDFs) greatly benefited from his wide ranging views on pure and applied science.

In this regard, I'd like to share these quotes by Bob made almost 30 years ago.

"You like to see a university be part of the economic stream. I don't think university researchers have the freedom to do anything they want. You have an obligation to be relevant. I don't mean research has to be subservient to industry. But when you train students, you have to realize that most of them are going to be out in the real world. You need to have curricula which fit."

Bob also said,

"There should be some freedom to do things which are pure research, but that shouldn't necessarily constitute the whole of your research program. Without being subservient to industry, research ought to be defensible with respect to the interests of your country." (McGill Reporter, 1989).

In 1986, Bob was named by Prime Minister Brian Mulroney to Canada's National Advisory Board on Science and Technology. The Canadian Chemical Society recognized his professional leadership by awarding him the Montreal Medal in 1991. He was elected as Fellow of the Royal Society of Canada, the American Physical Society, and the Chemical Institute of Canada. In 2000, he was made an officer of the Order of Canada, and in 2002 he was awarded the Queen's Jubilee Medal.

To Mary, his wife of 63 years, whose love and support he cherished to the end, and to their 6 children, Robert, Nicole, Claude, Janine, Kim and Pierre, ten grandchildren, and other members of his family, we offer our heartfelt sympathy. May all of us here at McGill be comforted by the knowledge that Bob left an impressive mark on campus by his scholarship, his early and passionate vision of green and sustainable industry in Canada, and the role he played in the education of students at McGill and elsewhere for over 50 years.

202.2 Dean Lennox said that he would consider the resolution as being adopted unanimously.

202.3 Dean Lennox said that Prof. Marchessault was a true giant in the Canadian context, and was also well known worldwide.

3) CANDIDATES FOR DEGREES

- a) Bachelor of Arts and Science **S-15-5**
- b) Bachelor of Science **S-15-6**

203.1 Director Allard said that there nine candidates for the B.A. & Sc. and 70 for the B.Sc. These numbers were very similar to those of the previous year.

Director Allard **moved**, seconded by Prof. Roulet, that the candidates for the B.A. & Sc. and the B.Sc. be approved for their respective degrees.

The motion carried.

- c) Diploma in Environment **S-15-7**
- d) Diploma in Meteorology **S-15-8**

203.2 There were no candidates for the Diplomas in Environment and Meteorology.

Director Allard further **moved**, seconded by Prof. Lydon, that the Dean be given discretionary power to make such changes as would be necessary to prevent injustice.

The motion carried.

4) MINUTES OF 15 SEPTEMBER, 2015 **S-15-4**

Prof. Mucci **moved**, seconded by Prof. Gyakum, that the Minutes be approved.

The motion carried.

5) BUSINESS ARISING FROM THE MINUTES

- Nominating Committee Report
 - 4) Committee on Student Standing (One member to be added)

205.1 Prof. Roulet **moved**, seconded by Prof. Lydon, that **Prof. Lauren Human**, Psychology, be approved to be added to the above Committee.

The motion carried.

- 8) Council of Graduate and Postdoctoral Studies (One member to be added)

205.2 Prof. Lydon **moved**, seconded by Prof. Stephens, that **Prof. Pengfei Guan**, Mathematics & Statistics, be approved to be added to the above Committee.

The motion carried.

6) **REPORTS OF COMMITTEES**

a) Scholarships Committee **S-14-31**

206.1 Associate Dean Western said that the Scholarships Committee Report lists the awards given to continuing students based on their grades for the 2014-2015 academic year. The SGPA cut-offs were as follows:

- Monetary Awards: 3.97
- B.Sc. Dean's Honour List Designation: 3.96
- B.A. & Sc. Dean's Honour List Designation: 3.86

b) Academic Committee - Associate Dean Tamara Western **S-15-9**

The Academic Committee approved the following on Tuesday, 22 September 2015:

(1) **MATHEMATICS AND STATISTICS**
- Request for Approval of a Joint Ph.D./Cotutelle-France (AC-15-1)

206.2 Associate Dean Western said that all undergraduate and graduate ad hoc programs are subject to approval by the Academic Committee.

Associate Dean Western **moved**, seconded by Prof. Mucci, that the above item be approved.

The motion carried.

(2) **BIOLOGY**
- Program Changes
Major in Biology, Quantitative Biology Option **(AC-15-2)**
Honours in Biology, Quantitative Biology Option **(AC-15-3)**

206.3 Associate Dean Western said the changes involved housekeeping: addition and removal of courses, with some Required courses being changed to Complementary.

Associate Dean Western **moved**, seconded by Prof. Bell, that the above changes be approved.

The motion carried.

Joint Major in Biology and Mathematics **(AC-15-4)**

206.4 Associate Dean Western said the changes provided more Complementary courses, and removed courses that were no longer offered or that overlapped substantially.

Associate Dean Western **moved**, seconded by Prof. Bell, that the above changes be approved.

The motion carried.

- (3) **PHYSICS**
- | | | |
|----------|------------------------------------|-----------|
| PHYS 101 | Intro Physics Mechanics | (AC-15-5) |
| | Change in description | |
| | 3 credits | |
| PHYS 102 | Intro Physics-Electromagnetism | (AC-15-6) |
| | Change in description | |
| | 3 credits | |
| PHYS 131 | Mechanics and Waves | (AC-15-7) |
| | Changes: description, restrictions | |
| | 3 credits | |
| PHYS 142 | Electromagnetism & Optics | (AC-15-8) |
| | Changes: description, restrictions | |
| | 3 credits | |

206.5 Associate Dean Western said that PHYS 101 and PHYS 102, and PHYS 131 and PHYS 142, formed pairs of courses. The changes made it easier for students to switch between course pairs. Some restrictions were also updated.

Associate Dean Western **moved**, seconded by Prof. Ragan, that the above changes be approved.

The motion carried.

- (4) **ANATOMY & CELL BIOLOGY**
- | | | |
|------------|-----------------------------|-----------|
| - ANAT 381 | Experimental Embryology | (AC-15-9) |
| | Changes: title, restriction | |
| | 3 credits | |

206.6 Associate Dean Western said the title better reflected the course content as taught. The restriction would now prevent students from taking a course with substantial overlap, BIOL 303.

Associate Dean Western **moved**, seconded by Prof. Gyakum, that the above changes be approved.

The motion carried.

- (5) **BIOCHEMISTRY - For Information Only:**
- | | | |
|------------|--|------------|
| - BIOC 670 | Biochemistry of Lipoproteins | (AC-15-10) |
| | Changes: renumbered from BIOC 570; | |
| | administering faculty, prerequisites, restrictions | |

206.7 Associate Dean Western explained that the number change was done in conjunction with the previous year's creation of BIOC 470. There would now be distinct graduate and undergraduate courses in lipoproteins. Because BIOC 670 is a graduate course in the Faculty of Medicine, it is not for approval by the Faculty of Science.

7) **DEAN'S BUSINESS**

a) Announcements

- i. Dean Lennox introduced Prof. Laura Nilson, Department of Biology, as the newly appointed Associate Dean (Graduate Education).

Associate Dean Nilson said that she had been Associate Dean in the Office of Graduate & Postdoctoral Studies, and because of her experience, Dean Lennox had invited her to become Associate Dean of Graduate Education in the Faculty of Science.

- ii. Dean Lennox announced that the Faculty of Science had been awarded two of the four Principal's Prizes for Excellence in Teaching for the 2014-2015 year. He stressed that these prizes were awarded across the entire University, and for a single Faculty to win two in one year was a great accomplishment. Indeed, over the years the Faculty of Science had a very good track record in winning Principal's Prizes. The two winners were:

Full Professor Category

Prof. John Stix, Earth & Planetary Sciences

Associate Professor Category

Prof. Andrew Hendry, Redpath Museum/Biology

Dean Lennox read student testimonials for the two winners.

Prof. Stix and Prof. Hendry will be presented with the prizes at the Fall Convocation on 10 November 2015.

Dean Lennox asked for a motion of congratulations for Prof. Stix and Prof. Hendry.

Prof. Harpp **moved**, seconded by Prof. Bell, that the Faculty of Science extend its congratulations to Prof. Stix and Prof. Hendry.

The motion carried.

- iii. The Fall Convocation ceremony is scheduled for 10 a.m., Tuesday, 10 November 2015 at Place des Arts. Dean Lennox mentioned that in the past, the Fall ceremony had not been well attended. He encouraged members to go to this very important occasion.
- iv. The Soup & Science research presentations by Faculty members had been held recently, and was very well attended. More than 20 presentations had been given. Soup & Science was excellently organized by Victor Chisholm, Undergraduate Research Officer.
- v. The Undergraduate Research Conference had been held on 16 October 2015. The quality of the 47 posters displayed was extremely high. Prof. Catherine Potvin, Department of Biology, gave the keynote address, entitled, "Acting on Climate Change: Solutions from Canadian scholars". The event was very well organized by Victor Chisholm, Undergraduate Research Officer. Dean Lennox encouraged faculty members, graduate students, postdoctoral fellows and staff to attend this important and deserving event in the future.
- vi. Canada First Research Excellence Fund (CFREF)
Dean Lennox said that CFREF was a \$1.25 B fund created by the recently defeated Conservative government. \$350 M had been allocated in March 2015, and a second competition for \$950 M, to be divided into roughly \$50-\$100 M allocations, was scheduled to be held. The initial step was submission of a five-page Letter of Intent, based on data. Full proposals would be submitted in March

2016 on approval of Letters of Intent. The Faculty of Science had taken the lead on behalf of seven faculties in submitting to McGill a project involving Sustainability, Sciences and Technologies. This project was not however selected by McGill to go forward to the national competition; a proposal based on Neuroscience will go forward. The Neuroscience project does however involve several departments in the Faculty of Science. Furthermore, the experience gained in submitting the Sustainability project will be used in future research by units in the Faculty.

b) Budget

207.1 Dean Lennox said that the Faculty of Science was in the initial stages of putting together a Faculty-Central Administration agreement regarding the budget. Additionally, he had attended a meeting of departmental administrative assistants/officers in which they made a start in discussing creative ways of staffing to deal with the coming budget cuts. He said that these were not going to be reversible cuts, but rather that in the future the Faculty would have smaller staffing. The Faculty would have to cope with smaller number of administrative and support staff. Every effort will be made to retain the best talent, even in the face of budget cuts.

c) Enrolment - Associate Dean Tamara Western

S-15-10

207.2 Associate Dean Western summarized the admissions process. Applicants to McGill are split into different pools: CEGEPs, Ontario high schools, rest-of-Canada high schools, U.S. high schools and overseas high schools. Different pools are assigned different thresholds for admission, to compensate for grading differences, and to generate appropriate percentages for each pool. Thresholds are based on previous years' experiences. Offers to students are made on a continuous basis, earlier offers being made to students with higher grades and to international students, who require more documentation (visas, etc.).

207.3 CEGEP students enter U1, other students enter U0.

207.4 Freshman students apply to one of two groups:

- Biological, Biomedical and Life Sciences (BBL group)
- Physical, Earth, Math and CS (PEMC group)

207.5 U1 Students apply to one of three groups:

- Biological, Biomedical and Life Sciences (BBL group)
- Physical, Earth, Math and CS (PEMC group)
- Neuroscience (NEUR group)

207.6 U1 (CEGEP) students are free to change majors within their group or apply for a transfer between groups. Note that it is difficult to transfer into the BBL or NEUR group.

207.7 At the end of their freshman year, students can choose a major from within their group or apply to transfer to another group, including the NEUR group.

207.8 Associate Dean Western went over the admissions cut-off levels for 2015-2016. Some could be lowered. The B.Sc. and B.A. & Sc. admissions totals were very close to the targets. For the B.Sc., about 30-35% of students come from CEGEPs, and about 35-40% from other parts of Canada.

- 207.9** Another statistic tracked is yield — the percentage of offers made that are accepted. For students from CEGEPs, both the total number of applications and the yield have decreased. This has been shared with some other faculties, such as Arts. However, while the applications and yields for BBL had decreased, those for PEMC had actually increased.
- 207.10** Total registrations for U0, U1, U2, U3 were very close to those of the previous year. The U0 load (students taught in Freshman courses) was at a manageable level. It is important to keep a close eye on this figure to ensure that it doesn't increase too much.
- 207.11** Regarding interfaculty transfers, similar numbers of students transferred into the B.Sc. as transferred out. For the B.A. & Sc., there was more movement out than in, largely to the Faculty of Arts and to the B.Sc. in the Faculty of Science.
- 207.12** More students come into the BBL than the PEMC group, although the number in the PEMC group is increasing, currently being a little over 30%; 40% would be a good target.
- 207.13** January admissions are only for CEGEP students and McGill graduates seeking a second degree. Admissions in January are only into the PEMC group.
- 207.14** Several things to consider for the future:
- Try to obtain more CEGEP applicants. Should the cut-off be lowered? Should CEGEP recruitment be increased?
 - Promote the PEMC group. Increase recruitment into PEMC? Inform students that medical-school admission from PEMC is possible?
 - Work on ensuring a high-quality of international students.
- 207.15** In reply to a member's question, Associate Dean Western said that students who turn down admission to McGill often have many other choices, and that they are specifically asked why they refused McGill. She would be contacting the Planning and Institutional Analysis Office for information.
- 207.16** In response to a member who asked about a breakdown of admissions into anglophone and francophone CEGEPs, Associate Dean Western said that she had asked the Director of Admissions about this, and the Director was going to see if that information could be shared.
- 207.17** In reply to a member, Director Allard said that while the Faculty of Science offers to visit CEGEPs more than once a year, the CEGEPs wish to restrict recruitment visits.
- 207.18** Dean Lennox said it might be possible to put a greater effort into McGill's Open House.
- Dean Lennox thanked Associate Dean Western for her informative presentation. He said that it was important to look at trends, and also to make sure to have large numbers of students from Québec.

d) Dean's Multidisciplinary Undergraduate Research List (DMURL)

S-15-11

- 207.19** Director Allard said that the DMURL provides recognition for students who have completed at least 9 credits of graded research-based courses in at least two different units, and who have a minimum GPA of 3.00 on these courses.
- Director Allard **moved**, seconded by Prof. Harpp, that the candidates on the DMURL be approved.

The motion carried.

8) REPORTS OF ASSOCIATE DEANS

a) Associate Dean Laura Nilson - Graduate Education

- 208.1** Associate Dean Nilson said as Associate Dean of Graduate Education, she would be overseeing the allocations of both graduate fellowships and undergraduate awards, as well as the allocations of graduate budgets from the University. As a former Associate Dean in the Office of Graduate and Postdoctoral Studies (GPS), and a current member of the Council of Graduate and Postdoctoral Studies, which among other things, approves graduate programs, she hoped she would be able to smooth the approval of graduate programs in the Faculty of Science.
- 208.2** Associate Dean Nilson said that she was also a current member of the Graduate Advisory Committee of Graduate and Postdoctoral Studies (GACGPS), a committee of the Dean of Graduate and Postdoctoral Studies. Associate Dean Nilson would be able to explain new GPS policies and procedures to the faculties, and as well convey Faculty feedback to GPS.
- 208.3** Additionally, Associate Dean Nilson will be taking on projects related to Graduate Studies, initially surveying the state of graduate education in the Faculty of Science.
- 208.4** Two items of particular interest had been discussed at a recent meeting of the (GACGPS). One item related to fellowships was to see how well McGill graduate students were doing in competition for external fellowships, and to see what could be done to improve further their prospects. GPS has recently expanded its workshops relating to grant writing, grant advice, etc. The second item was graduate-funding allocation - the money that GPS allocates to faculties which in turn is allocated to departments. The Dean of GPS emphasized funding will be stable in the foreseeable future, and that she encourages units to move towards multi-year fellowship packages. Related to graduate-funding allocations was the issue of departments not spending fellowship money in a timely fashion. Beginning in 2016, any fellowship money in excess of 10% that is unspent by January will be taken back.
- 208.5** Dean Lennox said that if clawed-back money was returned to the Faculty, he would promptly re-transfer it to departments. The Faculty of Science's argument is that its departments are spending money carefully and wisely.
- 208.6** Associate Dean Nilson said that one of her aims was to establish good communication among herself, GPS and departments.
- 208.7** In response to a member who commented that GPS was merely distributing money that rightfully belonged to departments, Associate Dean Nilson said that built into the distribution system were various incentives to spend according to various GPS policies. She would be in talks with GPS to try to maximize Science's share of the pie.
- 208.8** A member strongly discouraged the use of "template" letters of recommendation for fellowship applications, based on committee experience that template letters are not viewed favourably, and said that those writing letters of recommendations should know the applicant well, and express that in a personal fashion. Associate Dean Nilson said she will take note of that point.

Dean Lennox thanked Associate Dean Nilson for her report.

b) Associate Dean Doina Precup - Research

- 208.9** Associate Dean Precup said that the NSERC RTI selection had been completed. There were 20 applications for 14 slots for the Faculty of Science.
- 208.10** The NSERC Discovery Grant deadline will be the following week.
- 208.11** Associate Dean Precup emphasized that it was a very good idea to have grants reviewed by colleagues before submission.
- 208.12** The details of the upcoming CFI process will be announced in a couple of weeks. Anyone with suggestions for projects should contact her. Every effort would be made to maximize prospects for success in the proposals.
- 208.13** In the next couple of months, information sessions will be organized concerning CIHR grants. The sessions will be targeted to members of the Faculty of Science.
- 208.14** The deadline for nominations for Fellows of the Royal Society is approaching. Associate Dean Precup asked members to contact her if they had anyone in mind for a nomination.
- 208.15** The Committee on Innovation looks at issues involving IP and entrepreneurship. There are educational programs for undergraduate and graduate students regarding entrepreneurship. There may be improvements to IP policies at McGill.
- 208.16** Dean Lennox said that with the intensification of competition for grants, there was now a tendency on the part of reviewers to look for flaws rather than the positive. He reiterated Associate Dean Precup's advice to have grant applications, including particularly the Discovery applications, reviewed by colleagues before submission.
- 208.17** Regarding CFI grants, Dean Lennox said that while the Faculty is on time, he wanted to emphasize that the process should be done thoroughly, with due vetting to ensure submission of the best applications possible.

Dean Lennox thanked Associate Dean Precup for all her information.

9) REPORTS ON ACTIONS OF SENATE

Senate Meeting of 24 September 2015 – Prof. D.N. Harpp

The following is a brief summary of the Senate meeting that took place on 24 September 2015.

As a point of business arising from the last Senate meeting, it was announced that in the winter 2016 session of Senate there would be an open discussion on the subject of employment equity.

Principal Fortier indicated that the Faculty of Medicine has been re-accredited but has been put on probation by the accrediting body. Dean Eidelman provided an update on the situation indicating that much homework remains to be done on dealing in a proper way with several administrative issues, notably as pertains to the Curriculum Committee. The Faculty needs to submit a report by December 1, 2016, and the Faculty hopes to be off probation in the Spring of 2017.

Principal Fortier reported that the Administration has been continuing discussions with

the Quebec government on the future of the site currently occupied by the Royal Victoria Hospital. McGill and the government will be funding studies (\$4M each) on the feasibility of converting the site for use by McGill; a call for tenders for this study will go out soon. The government will retain control of the RVH site in the interim, and will take care of its maintenance and security.

Senators Hébert and Bernard posed a question regarding planning for the future of biomedical research in Canada, which was answered by Principal Fortier.

Four Senators posed a question regarding McGill's alleged violation of Bill 100 (bonuses for Administrative staff), to which an answer was provided by V.-P. Di Grappa.

Provost Manfredi presented the 466th report of the Academic Policy Committee containing understandable housekeeping items.

Senate approved the nominations for various committee seats proposed in the report of the Senate Nominating Committee.

Associate Provost Angela Campbell presented the annual report on the Policy on Harassment, Sexual Harassment and Discrimination Prohibited by Law and she also presented the annual report of the Joint Board-Senate Committee on Equity. Her report was very clear and she will be a valuable addition to Senate.

Deputy-Provost Dyens presented the annual report of the Committee on Student Services.

10) MEMBERS' QUESTION PERIOD

There were no members' questions.

11) OTHER BUSINESS

There being no other business, the meeting adjourned at 4:40 p.m.