



***Second Innovation Council Meeting  
Department of Chemistry***

***Minutes***

**Date:** Saturday, May 5, 2001, Donald Gordon Centre

**Time:** 8:30 am to 4:00 pm

**Council Members in Attendance:**

Dale Cameron (Boehringer)

Ron Commander (Bayer)

Barry Robins (Davos), Chairman

Dinesh Vyas (Bristol Myers)

Robert Young (Merck Frosst)

Stan Brown (Queen's Head of Chemistry)

Rick Boswell (Queen's Manager of Chemistry)

Doug Puffer (Queen's Faculty Development Officer)

Myrna Horton (Queen's Faculty Projects Assistant)

**Absent:**

Bruce Chernoff (Petrobank)

Bill Davidson (MDS)

Dave Thomas (AXYS)

Sue Riddell Rose (Paramount)

Ron Zelonka (DuPont)

Darwin Wilson (Dow)

**New Members:**

Shirley Tilghman (Princeton U.)

Ken Reucassel (International Group)

Rastko Vukov (Rhodia)

Neal Matheson (Johnson & Johnson)

**Resigned:** Ron Brunet (CITO)

**Guests:** Sandra Crocker (Queen's Director of Research Services)

Ray Satterthwaite (Queen's Director of Development, Major Gifts)

**General Session**

The second meeting of the Chemistry Council was combined with a Chemistry Faculty Retreat. The session began with introductory remarks and strategic plan presentation by Stan Brown. He welcomed and thanked everyone for attending.

The following are highlights from the Strategic Plan presentation and questions and discussion that followed:

**Strategic Plan, Department of Chemistry, 2001-2006**

- Seek opportunities outside University sources for Faculty replacement, plan is for Zero growth
- Provide high quality by strategically recruiting new faculty whose skills are aligned with areas of research excellence
- Success in getting research \$\$ based on awards achieved by faculty, dependent on quality of people and resources
- Of the \$3 Million Department budget, 95.7% is salaries, 4.3% for all else
- Department contributes \$128,000 towards operations

- \$30,000 has been traditionally available for new and replacement equipment from the Dean's Equipment Fund. Last year we didn't find out until August that this money wouldn't be coming, but still had to buy supplies for undergraduate labs in June. The same is likely for this coming year.
- CFI Application results will be forthcoming by end of year and if successful will have a better chance of significant matching \$\$
- \$2.5 Million Endowment Fund for equipment is needed
- How does the department rate amongst other universities? Tough to assess from a universally accepted standard. Generally in the top 5, however we must compete globally and get better known by communicating our strengths and expertise in order to attract the best people and funding. Some areas are stronger than others and we are doing very well in rounding this out.
- Criteria based on history, faculty, students, research, \$\$ acquired, and faculty who are training people best according to the industries who hire?
- Accountability is prevalent; use of outside consultants and high standards for accreditation
- Funding from the Ontario government for post secondary education is the lowest amount per capita in Canada, this is lower than the majority of states in the US as well.
- Among Canadian universities Queen's is 25<sup>th</sup> in overall size but 8<sup>th</sup> in research funding
- Standard must be high to compete globally but at the same time, infrastructure of Department must keep pace
- The Chemistry Innovation Council can help to bring forward opportunities that might not otherwise exist

### **Discussion Breakouts, Reports and Priorities**

Break out sessions of 4 groups followed with reports from each. The following points were made:

- Ensure faculty and staff are available for laboratory development (i.e. 3<sup>rd</sup> year lab course)
- Update curriculum, promote and recruit top notch faculty and produce higher quality of grads
- Increase operating budget to keep pace with increasing number of undergraduate students (i.e. double co-hort)
- Ensure funding is available for new equipment for undergraduate laboratories by approaching vendors for best deals, acquiring some used equipment from industry and appeal to alumni for endowment funding
- Raise funds by enhancing the use of PARTEQ, obtain industrial service research contracts, sell the skills high quality personnel in Department; maintain environment where fundamental research is valued, NSERC Industrial chairs can lead to great spin-off benefits if strategic
- Assemble, distribute and promote database of expertise and research; make known to targeted public
- Review strategy of Department; rationalize our FTE complement
- How do we compare with other Queen's departments in FTEs and infrastructure and funding?

Stan Brown concluded this General Session as follows:

- The University does provide some basis as to how \$\$ are divided up among departments, however Strategic Plans are not commonly shared. One Chemistry Innovation Council Member suggested, perhaps they should be in order to share commonalities and integration of plans as a whole. The Dean of Arts and Science could mandate this so that a better understanding of roles and functions emerges among departments. The integration of goals and strategic plans could lead to greater efficiencies in program delivery. (i.e. perhaps alter one to match goals of another). Because of the nature of a science education, chemistry and other science departments perform significant service roles for each other's students.
- At a recent Department Heads meeting, the Dean stated that large service loads would continue to remain underfunded by the government. Therefore new and non-traditional ways of funding need to be found.
- The double co-hort will also need to be accommodated. Recognizing that enrolment numbers and revenue from tuition fees will continue to grow after the initial impact of the double cohort, the fact remains that there has been no increase in operating funding for chemistry. The Vice-Principal,

Academic is currently working on a longer term 3 year budget rather than ad-hoc to position the University better overall

## QCIC Group

At this point, the **Chemistry Innovation Council** convened separately from the **Chemistry Faculty Group**.

The following slide presentations were made:

### **Research Services** - Sandra Crocker, Director of Queen's Research Services

Sandra thanked the members of the Chemistry Innovation Council for their valuable time and strong commitment to Queen's. The following points were addressed:

- **Challenges** - highly competitive environment
- **Trends** - more government investment, more government influence and more private sector involvement accompanied with the introduction of new programs. Queen's received \$77.3 Million in funding for 1999-2000, double from 5 years ago.
- **Performance Measures** - Awards are based on quality of research, recognition of peers and impact on society.
- **PARTEQ** - recognized as a leader amongst Canadian Universities, most profitable tech transfer office in Canada, generating \$10 million in revenues this year as well as first university office to attract and manage a venture fund. Equity share is split between the investigator (who gets 2/3 as per Faculty agreement) and the University, but not directly to the department. As noted by Barry Robins, perhaps these \$\$ should be distributed to the department generating the work as incentive and recognition in the industry. He advised of and circulated copies of a list of companies currently known to his business.
- **Breadth of Research** - How do we rate compared to other Canadian university tech transfer initiatives? Although the numbers of disclosures, US patent applications and patents issued are lower, the licensing revenue and total revenues are considerably higher. Ron Commander noted that 'the breadth of Queen's initiatives and significant contributions to science needs to be championed and promoted better in order to attract support from corporations that invest globally in their research needs'. How are these accomplishments currently promoted? (PARTEQ, Chemistry Council, peer reviewed journals, direct contact between faculty and industry, word of mouth)
- **Sources** - A number of sources were listed, including the \$U.S. Charitable Foundation.
- **Collaborating with Industry** - Partnership Programs and Industrial Chairs must be promoted as leverage for grant funds. Stan Brown advised that 6 Queen's chemists are in the top 10% in Canada in grant funding. In fact, Axel Becke is probably the most cited chemist in the world due to his developments of code in computational chemistry. He noted that contracts are very competitive.

### **Fundraising for Volunteers** - Ray Satterthwaite, Queen's Director of Development, Major Gifts

Ray presented the organizational structure of the Campaign and the process by which the Chemistry Innovation Council Members can assist in fundraising:

- **Challenge** - With an enormously competitive environment, Queen's must focus on strengths to achieve the \$200M Campaign Goal, \$170M of which has been obtained.
- **Quality** - Having a high quality of students, 80-90% coming from out of town and having over 95% averages, an environment conducive to a great residential experience must be maintained and enhanced. Queen's has the highest percentage of resources to student aid scaled for budget of any university in Canada.

- Goals - 1) to continue to attract and retain students with outstanding potential and diverse backgrounds from across Canada and around the world 2) to strengthen an environment which stimulates exceptional research and teaching 3) to provide rigorous, relevant and challenging programs of study 4) to prepare graduates for roles as leaders and citizens of a sustainable global society
- Nucleus & Leadership Standards of Giving - Of the \$49 Million needed for the Chemistry Project, \$21 Million must be raised privately, \$12M has been received with \$9 Million left to raise. The chart of standards for the project was included in the Chemistry Dept budget. Focus remains firmly on the nucleus gifts to ensure a successful campaign. All gifts are important.

### **Support Structure**

- Face-to-Face Solicitation - Build relationships with your industry contacts, linking a prospect's interests with Queen's needs, establishing a mutually beneficial partnership. Consider making your own financial commitment first. Call your development officer to clear the way and avoid collisions. Doug advised of the Principal Leggett's tremendous commitment of time to seek private source funding. He is available for top-level calls. Ray's presentation attached.

Ray thanked the members of the Chemistry Innovation Council for attending. Copies of the Campaign for Queen's kit were distributed for their review. Ray advised that Doug Puffer would follow up next steps.

At this point, Doug Puffer and Stan Brown addressed the following areas:

### **Short Term Needs**

- Seek new opportunities for support of programs.
- Revamp undergraduate curriculum
- Expand graduate program
- Seek contract research opportunities,

### **Chernoff Hall Chemistry Building Updates**

- Chemistry Building is major priority of Campaign shown by the commitment from the University to support the aggressiveness of the Chemistry Department in relation to the Campaign and other Departments
- Of \$49 Million needed, \$28 Million has been government funded through the Super Build Fund leaving \$21 Million to be guaranteed to be raised privately, \$12 Million of which we already have obtained, including a \$2.5 Million Endowment Fund with interest accumulating for the operations of equipment
- A total of \$9 Million is needed by June 2002 to open new facility without debt

## **How can QCIC help?**

### **Prioritize Needs**

#### **First:**

- Of the \$7 Million needed by June 2002, \$2 Million will likely come from the Kresge Foundation challenge initiative. In order to apply to Kresge we need to secure commitments for \$1M more than we already have by the end of June 2001. Gifts from the Kresge Foundation are forthcoming near the end of a campaign once 80% of the goal is achieved. This strategy allows for challenging others to match gifts and increases the participation of alumni in philanthropy.
- Therefore \$5 Million more is needed to open new facility without debt. Significant commitments are in the works and will put us a lot closer to the goal of \$7 Million. Under funding of buildings affects all of the University so our goal is to be debt free by October 2002 and achieve a prominent relationship with all of the University.

## Second:

- Set up \$2.5M endowed Instrumentation facility that will serve the needs of the entire dept (research and undergraduate teaching). Will fund 2 technical staff positions and maintenance of major installations: NMR's, Mass Spectrometers, X-Ray etc.
- The Kresge Foundation Scientific Equipment Fund will also consider a challenge to alumni from a separate pool of revenue for the purchase, maintenance and stewardship of equipment.

## Third:

- Annual needs will more and more be met from private sources. Annual donors will also be asked to give to the existing Chemistry Challenge Fund, to fulfill the ongoing needs for undergraduate equipment.
- Sponsorships - Doug announced today's generous **donation of \$20 Thousand from Ron Commander, Bayer Inc. for a named Lecture Series**. Rick Boswell extended thanks and indicated corporate sponsorships like this will improve the lecture series and frees operating \$\$ for other needs. Four annual sponsorships will be sought at this level to enhance existing programs and set up new opportunities for students.
- Student Awards - Queen's is ranked #1 in student aid among all Canadian universities. In 2000 students needed an average of 95.7% or higher for national level entrance scholarships that are awarded in the range of \$12-16,000 annually. Bursaries are widely available for students with financial needs. Our goal is to build the endowment for student aid which allows for "needs blind admission"
- Undergraduate Summer Research Awards- Must continue to stimulate and maintain brightest students and ensure next generation of chemists by communicating specialized opportunities in Chemistry. The department wants to encourage promising 3<sup>rd</sup> year students to stay on campus. This is a campaign priority as well. Summer jobs in industry are also available and the experience would go a long way to keeping up the level of interest in chemistry. Council members would like to help with placements.
- Internship programs - Promote and formalize cooperative work experience programs and mentorships, connecting with industry needs, expectations and timelines. Ron Commander suggested that we expand the internship to include 4<sup>th</sup> year grads. His company would like to take advantage of the internship opportunity to encourage very bright students to go for their PhD's. Others around the table agreed.

## Task Assignments

- Expand membership to 24; currently have 17, edging in on 20, therefore 4 more needed. A number of potential members were discussed (i.e. Glaxo, American Home Products, Nexen, Xerox) noting that the Council must be well represented by the various facets of industry and thus provide a good network with Queen's.
- Promote students to study chemistry at Queen's by offering Recruitment Nights where corporate people speak about the industry and the levels of university degrees needed as well as profiling professors (Dinesh Vyas and Ron Commander will address students during next Fall term, hopefully in conjunction with the next QCIC meeting.)
- Provide information and communicate through the Web Site
- Barry Robins stressed the need for personal contact by first finding people, then asking them. He offered, as Chair of the QCIC, to send out a letter to Queen's Chemistry and Eng Chemistry alumni asking for an annual gift to support purchases of undergraduate lab equipment. Rick Boswell advised

that \$60 Thousand is needed annually to support equipment costs not allowing for growth nor major refits/repairs. An additional \$60,000 will provide enough money to set up undergraduate labs in the new building with new equipment before opening for students Sept 2002. \*\*\*\*\*Davos Chemicals Inc. has subsequently offered to begin this challenge with a gift of \$20,000 US.\*\*\*\*\*

- Place an ad for Lost Trails in publications (i.e. Chemistry Newsletter, Alumni Review) to expand donor base
- **Innovative Ideas** - Doug is developing the proposal for suppliers to set up an endowed fund that produces an annual stream of revenue that will be used to purchase equipment back from the same suppliers. The Campaign goal is to set up a \$2.5M endowed fund that will yield \$125,000 per year. Existing annual purchases are \$90,000 growing to \$275,000. Estimated payback to the supplier is 5 years (tax receipt + purchases). A 10-year exclusive purchase contract could be negotiated.

### **Identify Opportunities**

- Promoting chemistry faculty research interests/accomplishments and chemistry graduates will help to make Queens' a first choice for students among universities in Canada
- Obtain funding for world class chairs to each of the Department's centres of excellence - Computational/Theoretical, Environmental/Analytical, Physical/Materials, Medicinal/Organic, thus increasing recruitment of new faculty

**Next Meeting - The next meeting of the Chemistry Council will be October 26, 2001.**

## **General Assembly & Chairman's Report**

At this point, the **Chemistry Innovation Council** and the **Chemistry Faculty Group** reconvened.

Doug Puffer and Barry Robins reported on the day as follows:

- Doug thanked everyone again for coming.
- Advised of the \$20,000 gift offered today from Ron Commander of Bayer for sponsorship of a weekly Seminar Series.
- Main objective is to have the Chemistry building fully funded so as not to impact on operations of the University as a whole
- Attract \$\$ to fund Undergraduate Programs, upgrades to equipment and computers
- Improve Graduate Program
- Barry agreed to write an informative letter to Alumni and others found through a Lost Trails ad, promoting Queen's, communicating the challenges faced within the Department and ask for their commitment and financial contribution to the annual needs of the Department
- Will review list of corporations and promote a Corporate Challenge for matching gifts, allowing the base budget to be freed up and provide leverage for other gifts and opportunities
- Act on innovative ideas and be more independent of government funding.

David Wardlaw reported briefly on behalf of the Faculty Group and thanked his colleagues for attending.

Stan concluded the day by indicating that the priority will be to establish a communication forum that will lead to long-term partnerships and recruit top-notch students, faculty and researchers to Queen's.