Review Summary

Program(s):
- Bachelor of Pharmacy, B.Sc.Phm.
- Doctor of Pharmacy, Pharm.D.
- Post-Baccalaureate PharmD
- Combined B.Sc.Phm./ Post-Baccalaureate Pharm.D.
- Pharmaceutical Sciences, M.Sc., Ph.D.

Division/Unit: Leslie Dan Faculty of Pharmacy (LDFP)

Commissioning Officer: Provost, University of Toronto

Reviewers (Name, Affiliation):
1. Dr. Bob Blouin, Vaughn and Nancy Bryson, Distinguished Professor and Dean of Pharmacy, UNC Eshelman School of Pharmacy, University of North Carolina at Chapel Hill
2. Dr. James P. Kehrer, Dean, Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta
3. Dr. David H. Sherman, Hans W. Vahlteich Professor of Medicinal Chemistry and Associate Dean for Research and Graduate Education, College of Pharmacy, University of Michigan

Date of review visit: November 13 – 15, 2013

Previous Review

Date: May 5 and 6, 2008

Summary of Findings and Recommendations:

1. Undergraduate Programs (Bachelor of Pharmacy, B.Sc.Phm.; Pharmaceutical Chemistry Specialist, B.Sc., Doctor of Pharmacy, Pharm.D.)

The reviewers observed the following strengths:
- Well-planned and executed expansion of the full-time, second-entry B.Sc.Phm. from 670 students to 904 students
- Proposal for new entry-level is Pharm.D. logical, well-designed and innovative
The reviewers identified the following areas of concern:
- Challenge of reorganizing the curriculum
- Uncertainty of transition to new degree
- Need to not underestimate resources required for new curriculum

The reviewers made the following recommendations:
- Be proactive in preparing to propose the Pharm.D. program
- Consider ways to expand opportunities for undergraduate professional students to engage in research

2. Graduate Programs (Pharmaceutical Sciences, M.Sc., Ph.D.)
The reviewers observed the following strengths:
- Improvements in graduate studies and doubled enrolment in PhD program

3. Faculty/Research
The reviewers observed the following strengths:
- Strong growth in research activities
- Strong recent hires
The reviewers identified the following areas of concern:
- Majority of faculty members seem to embrace an individual PI culture and are focused strongly on federal sources of funding
The reviewers made the following recommendations:
- Pharmacy Practice Division must grow and embrace both the scholarship and teaching missions
- Adopt greater multidisciplinary philosophy to take full advantage for further expansion of research
- Must invest in practice faculty as the curriculum evolves and the Pharm.D. program is implemented; resolve best way to hire Pharm.D. faculty

4. Administration
The reviewers observed the following strengths:
- Excellent senior administrative leadership
- Forwarding-thinking addition of Continuous Professional Development
- Commendable service and dedication from staff
- Very strong morale
The reviewers identified the following areas of concern:
- Need to consolidate organizational structure, communicate bi-directionally, and engage in planning at all levels
The reviewers made the following recommendations:
- Explore new revenue generating opportunities that are consistent with the Faculty mission
- Engage in faculty development to enhance faculty’s teaching and learning facilitation skills

Last OCGS Review(s) 2009
Date(s):
Current Review: Documentation & Consultation

Documentation Provided to Reviewers:

- Terms of Reference
- Self-Study
- Towards 2030 Framework
- View from 2012
- Leslie Dan Faculty of Pharmacy Strategic Plan
- Leslie Dan Faculty of Pharmacy Faculty CVs

Consultation Process:

The reviewers met with the Vice-President and Provost Cheryl Regehr; Vice-Provost Academic Programs, Sioban Nelson; LDFP Interim Dean, Heather Boon, Deans of cognate university faculties; junior and senior faculty members; administrative staff; LDFP undergraduate and graduate students; alumni; LDFP Senior Academic Leadership Team; LDFP Decanal Search Committee; and members of the external community (hospital pharmacy Directors, hospital and community preceptors).

Current Review: Findings & Recommendations

The Faculty has excellent faculty members, students, facilities, and programs. The Faculty provides rigorous professional and graduate training programs, and is critically acknowledged as having the leading research program in pharmaceutical sciences in the country.

1 Undergraduate Program

Bachelor of Pharmacy, B.Sc.Phm.
Doctor of Pharmacy, Pharm.D.
Combined B.Sc.Phm./ Post-Baccalaureate Pharm.D.

The reviewers observed the following strengths:

- Objectives
  - Pharm.D. curriculum reflects the state of the discipline, and adheres to Canadian accreditation standards and the 2010 AFPC Outcomes
  - Planned Pharm.D./M.B.A. program will provide students with opportunities to expand expertise in business and management
- Admissions requirements
  - Appropriate to program outcomes and match pharmacy accreditation standards
• Adoption of new curriculum has led faculty to strengthen admissions process, including using the MMI technique to assess students’ non-cognitive skills

• Curriculum and program delivery
  o Standard and appropriate structure and length for all programs
  o Commendable structure of new Pharm.D. program, incorporating biomedical and pharmaceutical sciences, excellent elective requirements, and broad and strong options for selectives and electives
  o Students happy with exposure to patient-centred problems and pharmacotherapy content matter early in the curriculum

• Assessment of learning
  o Assessment is appropriate to the learning outcomes
  o Pharm.D. completion rates are excellent (93-97%) and comparable to other pharmacy programs in Canada

• Quality indicators
  o Students happy with curricular changes and faculty responsiveness, including focus on small-group discussions in Pharm.D. program
  o Excellent quality of students admitted to the Pharm.D. program

• Support
  o Positive addition of Faculty Advisor position, mentorship and House programs over the past two years

The reviewers identified the following areas of concern:

• Admissions requirements
  o Admissions decisions favour GPA and PCAT scores
  o Some students have light course loads in their first terms because they have already met prerequisites

• Curriculum and program delivery
  o GPA required for progression is low
  o Maximum time to completion for Pharm.D. is long
  o Challenging rollout of Pharm.D. curriculum with respect to implementation time and funding
    ▪ Certain aspects of the curriculum remain underdeveloped, particularly the experiential portion
    ▪ Challenge of implementing the Discovery stream

• Quality indicators
  o PEBC pass rates are lower than some other Canadian schools
  o Some students expressed concern about internal competition for placements post-graduation
  o Significant decline in the Pharm.D. applicant pool over the past three years, while GPA has remained constant

• Students
  o Students expressed concern about the lack of technology used in instruction

• Faculty resources
50% of classes taught by sessional and clinical faculty

The reviewers made the following recommendations:

- Admissions requirements
  - Consider whether emphasis on GPA and PCAT scores are sufficient admissions criteria to ensure ongoing student quality
  - Assess appropriateness of anatomy and physiology as prerequisites

- Curriculum and program delivery
  - Continue to address challenges associated with implementation of Pharm.D. curriculum
  - Consider raising the minimum GPA progression requirement
  - Develop IT infrastructure to support the student learning experience
  - Shorten allowable time to completion for Pharm.D. program

- Program development
  - Continue to pursue combined program options

- Quality indicators
  - In working to improve PEBC scores, avoid “teaching to the test” if introducing capstone exams

- Enrolment
  - Increase recruitment efforts for the Pharm.D. program

- Student funding
  - Explore the need for student financial aid in the Pharm.D. program

- Faculty resources
  - Provide additional leadership for experiential education
  - Continue to increase the number of full-time faculty delivering the curriculum

2 Graduate Program

Pharmaceutical Sciences, M.Sc., Ph.D.

The reviewers observed the following strengths:

- Overall quality
  - Many areas of strength, including opportunities for funding and the quality of mentorship

- Curriculum and program delivery
  - Strong recent additions to the curriculum including increased emphasis on verbal presentation skills and internship placements
  - Robust service learning, experimental learning, and professional student research programs
  - Ample international opportunities for students

- Assessment of learning
  - Methods are comprehensive and appropriate

- Quality indicators
  - Average incoming GPA indicates high quality
Students
  o Extremely impressive, articulate, and motivated students
  o Excellent diversity of student professional and personal development opportunities
  o Student surveys are very positive

The reviewers identified the following areas of concern:

  • Admissions requirements
    o 50% of qualified applicants enrol
    o Students must secure a supervisor prior to enrolment

  • Curriculum and program delivery
    o Students take no or few courses within the pharmaceutical sciences department
    o Very few students engaging in service learning, experimental learning, and professional student research opportunities
    o Extent of faculty and student involvement in international opportunities is unclear

  • Assessment of learning
    o Lack of systematic program evaluation process; unclear how assessment data are being used to improve curriculum and student performance

  • Quality indicators
    o Decreasing number of traditional jobs available to graduates; concern about career support reflected in student survey
    o Concerns about mean of time-to-completion and its variability

  • Students
    o Tend to identify with a laboratory mentors or other researchers in lieu of the Faculty of Pharmacy or a particular graduate program

  • Student funding
    o Concern that modest base-level graduate support may result in increased time-to-degree

The reviewers made the following recommendations:

  • Admissions requirements
    o Consider moving to a model of first year rotations, to give both students and faculty members a chance to determine mutual fit and to allow junior faculty to better recruit students to their labs

  • Curriculum and program delivery
    o Develop an effective plan to incorporate technology-assisted learning initiatives
    o Consider adopting a more focused approach to international partnerships
    o Expand professional development opportunities

  • Assessment of learning
    o Continue to support the efforts of the Program Evaluation and Accreditation committee in developing systematic assessment methods

  • Quality indicators
    o Encourage entrepreneurship as students plan future careers
    o Make efforts to decrease the mean time-to-completion
• Students
  o Create a stronger affiliation with the Faculty leading to enhanced alumni relationships and advancement

3 Faculty/Research

The reviewers observed the following strengths:

• Overall quality
  o Leading research program in pharmaceutical sciences in Canada
  o Considerable research success; faculty should continue to make such achievements into the future

• Research
  o Diverse areas of research, with many opportunities available to undergraduate and graduate students
  o Positive academic research partnerships, particularly in the areas of drug and marker discovery, nanomedicine and drug delivery, and drug metabolism and disposition
  o Integrially involved in three cross-disciplinary research centres:
    ▪ Center for Pharmaceutical Oncology is in advanced planning stages and has the potential to foster significant innovation and intellectual property for the Faculty
    ▪ Well-funded, multi-disciplinary Centre for Evaluation of Health Technologies
    ▪ Appropriate new focus to create Centre for Pharmacy Management and Innovation, rather than fill an endowed chair in this area

• Faculty
  o Outstanding complement with many noteworthy achievements
  o Faculty development efforts are laudable, well-led, and solid
  o Successful recent efforts in recruiting more pharmacists to conduct research
  o Recent expansion of the faculty complement
  o Positive addition of clinical scientists, who have done well in peer reviewed research and are making great progress as scholars, educators, and clinicians

The reviewers identified the following areas of concern:

• Faculty
  o Raised questions regarding the Pharmacy Practice Division, including its complement and its involvement in graduate education
  o Lack of recent retirements has resulted in limited number of faculty at the rank of assistant professor
  o Pharmacy Management Chair position has been vacant since its creation in 2006
  o Concern about the number of faculty on sabbatical and the impact on the new curriculum

The reviewers made the following recommendations:

• Research
• Associate Dean for Research needs to manage research pilot projects, provide grant bridge funding, and have an annual budget to encourage new research initiatives
• Associate Dean for Research needs full authority for management of research space, in collaboration with division chairs, with sign-off from Dean

• Faculty
  • Evaluate the Division of Pharmacy Practice
  • Explore retirement incentive plans through the University
  • Hire more tenure-stream faculty through converting funds currently used for part-time faculty
  • Fill the Pharmacy Management Chair position or use the funds for another tenure-track position
  • Re-examine the mechanism by which sabbatical requests are evaluated and approved
  • Create a critical mass in research areas, adopting a more strategic approach to hiring and developing collaborative research centres
  • Provide enhanced recognition of the success of clinical scientists, and fill approved clinical scientist positions in a timely manner

4 Administration

The reviewers observed the following strengths:

• Relationships
  • Fortunate position as a part of a strong and vibrant university with rich healthcare and pharmaceutical industry connections
  • Effective communication of the Faculty’s quality of education, research, and engagement
  • Broad, strong relationships to other Faculties including many positive research partnerships
  • Commendable progress in relationships with HUPEC partners
  • Very good relationships with professional pharmacy organizations and the regulatory body in Ontario
  • Strong advisory board for advancement with an exceptional list of prospects
  • Solid international initiatives and partnerships with over 20 countries
  • Positive continuing professional development activities providing revenue for the Faculty
  • Office of Advancement is well-positioned to expand its operations

• Organizational and financial structure (including governance)
  • Beautiful multipurpose facility with excellent space and research equipment

• Planning / Vision
  • Well-thought out strategic plan with appropriate priorities and goals; consistent with the University’s mission
  • Excellent leadership of interim dean through period of significant transition

The reviewers identified the following areas of concern:
• Relationships
  o Relationships with University affiliated teaching hospitals being tested by new experiential education portion of Pharm.D. curriculum
  o Research funding from the government is expected to become increasingly more competitive
• Organizational and financial structure
  o Issues with administrative structure have not been addressed since previous review
    ▪ Concern about ratio of support to academic staff
  o High number of interim leadership appointments contributing to lowered morale
  o Budget challenges related to experiential education and the building
  o Large number of standing committees pose an administrative burden
  o Faculty and collaborative partners expressed concern about adequacy of facilities moving forward
• Planning / Vision
  o Challenges ahead relating to the economics of pharmacy, specifically generic drug pricing
  o Context of rapid change within pharmacy profession and academic discipline
  o Lack of common purpose and cohesion with the Faculty
• Department/unit/programs relative to the best in Canada/North America and internationally
  o Few international comparators provided by Faculty, and QS rankings are not ideal indicators

The reviewers made the following recommendations:

• Relationships (collaboration)
  o Encourage Dean to establish external advisory board, separate from advancement activities, to raise the profile of the Faculty locally and nationally
  o Be more proactive in public-private partnerships
  o Continue to develop relationships and improve communication with HUPEC partners to support the new experiential education curriculum
• Organizational and financial structure
  o Evaluate and modify current personnel, leadership, and infrastructure systems:
    ▪ Resolve situation with interim dean and numerous interim leadership appointments, and engage senior faculty in determining the best leadership structure, including the position of Vice Dean and combining the roles of Associate Dean for Academic and Associate Dean for Professional Practice
    ▪ Create discrete job responsibilities for members of the senior leadership team and communicate those widely
    ▪ Analyze the needs of administrative and support staff and conduct an overall staff assessment
    ▪ Take steps to provide the Faculty with more sophisticated information technology resources, including smart classrooms and personnel
    ▪ Conduct a space audit and consider a new approach to space management
- Implement a more transparent business model
- Make further efforts to give the Divisions more autonomy and authority
- Re-evaluate the current committee structure

- Planning / Vision
  - Engage all faculty in the implementation of the strategic plan
  - Link the strategic plan to the budget and the development plan
  - Prioritize and document progress in all areas of the strategic plan
  - Address future budget concerns, including resources to support the experiential education and funds to support the building and its mortgage

ADMINISTRATIVE RESPONSE – Appended