

**Final Assessment Report**  
Submitted by SUPR-G to SCAPA

Program:	Pathology –Name change proposed as part of review <b>New Name: Pathology and Laboratory Medicine</b>	
Degrees Offered:	Master of Science, Doctor of Philosophy	
Approved Fields:	<ol style="list-style-type: none"> <li>1. Oncology and Environmental Pathology</li> <li>2. Molecular Pathology and Transplant Pathology</li> <li>3. Neuropathology</li> <li>4. One Health</li> </ol>	
External Consultants:	Peter Greer Professor Queen’s Cancer Research Institute Queen’s University	Monika Keelan Associate Professor Dept. Laboratory Medicine & Pathology University of Alberta
Internal Reviewers:	Ruth Martin Associate Dean – Graduate Faculty of Health Sciences	Ryan Chan Graduate Student Faculty of Health Sciences
Date of Site Visit:	January 4, 2018	
Evaluation:	<i>Good Quality</i>	
Approved by:	<i>SUPR-G on September 17, 2018</i> <i>SCAPA on October 3, 2018</i>	

**Executive Summary**

The Department of Pathology and Laboratory Medicine at Western University offers MSc and PhD degrees in Pathology. Both full-time and part-time programs are offered, the latter being the format of choice for medical and dental surgery trainees. There are four approved fields. Three are longstanding, core fields (i.e., Oncology and Environmental Pathology, Molecular and Transplant Pathology, Neuropathology). The fourth field of One Health is a recently introduced, interdisciplinary field that focuses on the connection between human health and the health of animals and the physical environment. The Department also offers a course/practicum-based Master of Clinical Science Pathologist’s Assistant program which is reviewed through a separate process.

The External Consultants found that the Pathology graduate program is “in excellent health with highly competent and dedicated staff and faculty who are providing excellent training of MSc and PhD students”. They were particularly impressed with the positive attitudes of students, faculty and staff regarding the graduate program and the strong sense of camaraderie and collegiality.

**Significant Strengths and Innovative Aspects**

1. The Learning Outcomes for the MSc and PhD clearly address Western’s Graduate Degree Level Expectations and are well aligned with Western’s mission and academic plans. The program has developed and applies detailed measures for assessing its Learning Outcomes and Degree Level Expectations. The graduate curriculum is innovative and of excellent quality, emphasizing the development of critical thinking and communication through required courses including Understanding Disease, Biostatistics and Effective Proposal Writing and Journal Club Seminar Series. The External Consultants also were impressed by the number of optional courses including Public and Private Partnerships.
2. The faculty complement in the program appears to be well structured to maintain, and even grow, graduate enrollment in the future, with 32 primary and 28 supporting/other basic and

clinical faculty members who are clearly capable of providing excellent coverage for the four approved fields of study. Although some faculty are approaching retirement, their capacity was seen to be offset by several new faculty members, including nine associated with One Health, who recently have begun to take graduate students and whose supervisory capacity will continue to grow. Further, there is an endowment in place for a new Beryl Ivey Chair in One Health, and a CRC Tier 1 has been allotted for recruitment of a neurobiologist. Faculty members have held largely stable Tri-council and other funding over the past five years despite the challenging funding environment.

3. The Department has leveraged its hybrid clinical/basic science structure to (i) support and promote clinical/basic faculty research partnerships, and, in concert (ii) provide innovative, hybrid graduate supervision and graduate learning experiences. The Department's Annual Pathology and Laboratory Medicine Research Day provides an opportunity for research-based and course-based graduate students and to share their learning. Several MSc students expressed interest in taking the MCISc Pathologist's Assistant program following their research-based program.
4. The program is geographically distributed, with supervisor/laboratory space located at Western University and at several affiliated hospitals and research institutes in London.
5. There is significant enthusiasm among faculty members for the new One Health field which should provide opportunities for new translational research projects. The Beryl Ivey endowed chair in One Health has been created through private donation and matching institutional funds, demonstrating institutional commitment to this new field.
6. The quality of applicants to the program is high, with eligibility resting at an A- average and 75% of applicants being turned away. The students are achieving excellent scholarly accomplishments in terms of both quality and quantity of presentations and peer-reviewed publications, as well as Tri-council and OGS scholarship success. Times to completion are appropriate. The students are exceptionally bright and articulate, with well-developed and positive outlooks on their future career directions.
7. Since the last review, the number of PhD students has doubled from 9 to 18 out of a total of 32 students. While the overall enrollment decreased from 39 to 32 over the same period, this was seen as likely reflecting improved promotion from MSc to PhD. Total enrollment is likely to increase as One Health ramps up over the next few years.
8. The program provides substantial media support to its graduate students to help them prepare presentation and publication materials. In addition, both staff and one junior faculty member help students with specialized experimental protocols and use of equipment in the Dental Sciences Building that may not be available in their home laboratories.
9. The Department has cultivated a "remarkably collegial group of staff and faculty who are highly dedicated to creating a positive learning environment for their students". The students are most positive about their training experiences.
10. While the part-time program option is not typical, it is well suited to the needs of clinical trainees and represents an innovative aspect of the graduate program.
11. Graduate student compensation packages appear to be competitive with other departments and should not be a deterrent to future enrollment.

### **Suggestions for Improvement and Enhancement:**

1. Provide all graduate students with the opportunity to participate in GTAs, including those with scholarships in excess of \$25,000/yr. Program response: the criteria for TA positions is uniform throughout Schulich Medicine & Dentistry such that recommendations by individual departments are not feasible.
2. Consider the new field of One Health for support, including faculty recruitment, but not at the expense of the other fields. Program response: focusing resources on specific areas is not a viable option. The program believes that upcoming retirements may create the possibility of not have resources to maintain the current research fields and supervision.

3. Consider expanding the MCISc Pathologist's Assistant Program. Program response: any changes to the MCISc PA program should be based on its separate review. No expansion of the PA program is anticipated due to challenges inherent in creating additional clinical rotations and practica.
4. Continue to leverage their strengths as a hybrid clinical/basic Department to develop further translational research projects. Continue to foster the development of new interdisciplinary, translational research projects involving both clinical and basic faculty members as these provide excellent and unique opportunities for graduate trainees.  
Continue to develop opportunities for trainees to interact with clinical faculty. Develop a database of available equipment and expertise to support trainees whose program is geographically distributed across multiple university and hospital sites across London.  
Program response: Enhanced interaction between clinical and basic faculty has been a focus of the Department's efforts over recent years and will be the focus of various task forces being developed as part of the Department's current strategic planning. Most graduate students are now either co-supervised by basic scientists and clinicians or have this composition reflected in their Advisory Committee.
5. Regarding the part-time program, continued careful evaluation of part-time performance metrics should be carried out to ensure that this model is meeting its intended Learning Outcomes. Program response: The program has taken steps to ensure satisfactory progression by part-time students including required submission of a detailed timeline of all program requirements prior to acceptance to the program.
6. Continually monitor the workload of the graduate coordinator staff position as it will likely increase substantially as the One Health field grows over the next few years. The External Consultants noted that an additional, part-time administrative assistant has been recruited. Program response: The program agrees with the need for continued monitoring of staff workloads related to the graduate program.

<b>Recommendations required for Program sustainability:</b>	Responsibility	Resources	Timeline
Assess the appropriateness of laboratory space and explore possibilities for modernization	Department Chair, Graduate Chair, Department strategic planning committees/task forces, faculty members	Department's strategic planning processes	September 2019