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TO: Mike Mahon
President and Vice Chancellor

DATE: June 14, 2017

FROM: Alan Siaroff
Chair, Academic Quality Assurance Committee

RE: Department of Neuroscience Academic Quality Assurance Review

In accordance with the U of L *Academic Quality Assurance Policy and Process*, the Academic Quality Assurance Committee approved the review of the Department of Neuroscience at its May 25, 2017 meeting.

The Self Study Committee for this review comprised Robert Sutherland (Program Review Coordinator), Bryan Kolb, Bruce McNaughton, Gerlinde Metz, Matt Tata, Andrew Iwaniuk, Sergio Pellis, and Robbin Gibb. The review produced seven documents:¹

1. *Department of Neuroscience: Self Study Report* (received May 20, 2015; revised version received June 6, 2015) – Self Study Report, developed by the Department of Neuroscience Self Study Committee.
2. *External Review Report: Department of Neuroscience* (received December 23, 2015) – by Carolyn Harley (Memorial University) and James Pfaus (Concordia University) based on their site visit of November 26-27, 2015.
3. *Department Response - Department of Neuroscience External Review* (received February 3, 2016) – response of the Self Study Committee to the external review.
4. *Dean's Response* (received March 9, 2016) – written by Craig Cooper, Dean of the Faculty of Arts and Science.
5. *Review of Undergraduate Neuroscience Program, University of Lethbridge* (received November 4, 2016) – second External Review Report, by William F. Colmers (University of Alberta) and Ken Lukowiak (University of Calgary) based on their site visit of October 19-20, 2016.
6. *Department Response to the Curriculum Review Provided by Drs. Ken Lukowiak and Bill Colmers-prepared by Matthew Tata, Robbin Gibb, David Euston and Sergio Pellis based on comments received by Neuroscience Faculty* (received February 8, 2017) – response of the Self Study Committee to the second external review.
7. *Dean's Response to Quality Assurance Review of the Neuroscience Undergraduate Program* (received May 5, 2017) – response to the second external review and the second Self Study Committee response, written by Craig Cooper, Dean of the Faculty of Arts and Science.

¹ All documents are available upon request.

As noted below, the first external review was limited in its suggestions, and in particular was lacking in analysis of the undergraduate program and curriculum. Consequently, at the Dean's presentation to the Academic Quality Assurance Committee on March 18, 2016 it was agreed to commission a second external review, which was to focus on matters of the undergraduate program. That is why there are more documents and steps with this review. Both Craig Cooper and myself were satisfied with the second external review.

NOTE: This is a reissue of this memo. One member of the Department of Neuroscience requested their name be removed from the membership list for the Self Study Committee.

Self Study

The Self Study Report included a summary of strengths, weaknesses, opportunities, and threats:

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| Strengths: | <ul style="list-style-type: none">• High impact, especially in behavioural science and neuroscience.• High level of external funding.• Plays a central role in research grants for the Life Sciences group at the U of L.• The graduate programs show a consistent growth in student numbers and program support.• Good growth in the number of junior faculty.• Almost all senior faculty hold research chairs.• The department is strong in the area of computational neuroscience. |
| Weaknesses: | <ul style="list-style-type: none">• There is a sense of isolation and a lack of strong cognate disciplines at the U of L.• There are some constraints in recruiting graduate students.• Budget constraints.• External perceptions.• Retaining mid-career faculty is difficult.• There are several impending faculty retirements.• Thin curriculum. |
| Opportunities: | <ul style="list-style-type: none">• The small size of the department makes it more able to quickly respond to opportunities.• The forthcoming science building will make undergraduate teaching laboratories available to the department. This will expand the number of Neuroscience courses that have a laboratory component.• AI - HS junior faculty program.• Linkages to Alberta Health Services.• Synergy in recently-tenured faculty.• The CCBN has been established as a U of L Institute. This brings together faculty members from across the university and will also add external affiliate members from Alberta Health Services, other Alberta universities, and industry.• Training experiences through Campus Alberta Neuroscience group activities. |
| Threats: | <ul style="list-style-type: none">• There is a lack of focus among U of L administration on new hires and faculty retention.• University budget constraints.• Lack of investment in Neuroscience due to the perception that the department is doing well.• Difficulties partnering internally.• Shifting of funding to larger universities. |

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- Shifting of funding to translational work.
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Further strengths and opportunities for the department were also mentioned in the body of the report:

- The Neuroscience major is multidisciplinary, drawing on expertise from several other departments.
- Since 2007 the number of Neuroscience majors has risen from 3 to 27.
- Enrolment in the MSc and PhD program has slowly risen over the past decade.
- Since 2008, the year two to year four retention rate for Neuroscience majors has been improving steadily.
- Student satisfaction is higher than the average for the Faculty of Arts and Science.
- The department has been very successful in offering undergraduates research experiences through Independent Studies, Applied Studies, and summer training with faculty.
- The department has an NSERC CREATE grant that it is using to create a training environment for MSc and PhD students in information processing in biological systems.
- Neuroscience majors have a high probability of pursuing graduate training.
- The faculty complement has grown from five in 2001 to 16 in 2013. Fifteen of these 16 faculty have tenure.
- All faculty have PhDs from major research universities.
- Faculty have published over 365 academic papers since 2010.
- The department established a Polaris Research Chair and recruited junior faculty into a proposed Polaris Group.
- Department faculty members have been chosen as among the Top 50 Most Influential Albertans three times in the last six years.
- Research by department faculty members contributes to at least two of the five research themes in the Strategic Research Plan.
- The department has recruited a Campus Alberta Innovates Program Chair in Brain Health and Dementia.
- All faculty have continuing external research funding and account for almost half of the new NSERC funding received by the U of L.
- The department holds regular community engagement activities, like Brain Awareness Week and the Brenda Milner Lecture Series.
- The department works with a variety of external academic partners, regional school districts, Alberta Health Services, Alzheimers Society of Alberta and the Northwest Territories, and Alberta Prion Research Institute.
- A Neuroscience 1000 course, under development, has the potential to attract more students. Successful junior-level courses could allow the development of more third and fourth year courses.

- The department can develop a greater breadth of courses that can be taken by majors from other disciplines.
- There is a plan to develop a concentration in Neurotechnology.
- The department is discussing a research and training partnership with the University of California, Irvine.
- Graduate education in the department will be moving to a modular style of teaching, which will provide higher quality graduate training.

Weaknesses and challenges mentioned in the body of the report were:

- Only a limited number of optional Neuroscience courses can be incorporated into the Neuroscience major. Most of these new courses have been undersubscribed, and several have been cancelled due to low enrolment.
- The curriculum needs new junior level courses. A team-taught Neuroscience 1000 course is critically needed.
- The current building, the CCBN, does not have any undergraduate teaching laboratories.
- The limited number of graduate courses at the U of L can be problematic for graduate students.
- Scholarship funding for graduate students has declined, putting pressure on faculty members and university administrators to provide money for graduate student stipends.
- The department needs to hire at least one molecular neuroscientist. The research gap in the molecular neuroscience area puts the future quality of the department's research programs at risk.

The following recommendations were contained in the body of the report:

1. Recruit a junior tenure track faculty member in Human Neuropsychology / Cognitive Neuroscience.
2. Recruit two junior to mid-career tenure track faculty members in Molecular Neuroscience.
3. Recruit an Academic Assistant to manage the technical aspects of research infrastructure, such as imaging apparatus and microscopy applications.

The report posed eight main questions for the External Reviewers:

1. What are the threats to the department?
2. Are departmental goals reasonable and appropriate?
3. How can the department improve graduate student recruitment?
4. What disciplinary areas need more coverage?
5. What are the department's major strengths?
6. What areas of expertise are needed to expand to 20 faculty members?
7. How important is developing capacity for translational research?

First External Review

In summary, the first External Review Report had this to say about the Department of Neuroscience:

- The department is a world leader in research and teaching.
- The department has an innovative program of undergraduate teaching and research training. The graduate program is outstanding.
- The department is a centre of research excellence at the U of L, with highly productive and creative researchers, and is at the forefront of the technical ability to study brain-behaviour relationships.
- The department is very sophisticated in its application of imaging tools to the study of behavioural systems, from the macro to the molecular level. The investment in imaging resources will help maintain the high profile of the department nationally and internationally.

Concerns discussed in the report include:

- Succession planning, with the impending retirement of the founders of the department.
- Increased turnover in mid-career faculty.
- Retention of younger faculty, with relatively lower salaries and higher workloads.
- Pressures to decrease animal research in favour of human brain imaging.
- Lack of standardization of graduate student funding.
- High costs of tuition for foreign students.
- Lack of accurate information coming from the School of Graduate Studies.
- Lack of space for graduate students.
- Lack of funding for the repair of equipment.
- Lack of on-line evaluations of Teaching Associates means that these individuals are not getting feedback.
- There is the need for an experienced senior researcher to direct and support the human MRI facility.

The report contained the following recommendations:

1. Hire a mid-career level cognitive neuroscientist with research expertise in human MRI technology.
2. Before the Polaris funding runs out in 2018, hire the following individuals to support the technology developed for this program: molecular biology technician; laser and imaging support technician; and confocal and serology technical support person.
3. Build strength in the areas of neurotechnology and neuroengineering.
4. Hire mid-career and junior scientists in the area of neuropsychology to offset the impending faculty retirements.

5. Build a more supportive and responsive graduate studies administration to support graduate programs in the department.
6. Maintain supports for research-intensive junior faculty and students: review and, where appropriate, increase merit remuneration for outstanding faculty; encourage more sensitivity for facilitating research that uses animal models; as the founding neuroscientists retire, do strategic hiring to maintain the world-class stature of the department.
7. Related to graduate students, improve the delivery of services, improve communication, and re-implement online evaluations of Teaching Associates.
8. Review the tuition scheme and financial support for international students.
9. If an engineering program is developed, consider including a neurotechnology component.

First Program Response

In their first Program Response, the Neuroscience Self Study Committee responded to the recommendations from the first External Review Report:

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| <i>1. Hire a mid-career level cognitive neuroscientist with research expertise in human MRI technology.</i> | Agreed. The Department of Neuroscience will work with the Dean of Arts and Science, the Vice President (Research), and any other member of senior administration to implement this recommendation. |
| <i>2. Before the Polaris funding runs out in 2018, hire the following individuals to support the technology developed for this program: molecular biology technician; laser and imaging support technician; and confocal and serology technical support person.</i> | Agreed. Unless addressed, the end of the Polaris Award will have significant negative effects on the department's research and training programs. |
| <i>3. Build strength in the areas of neurotechnology and neuroengineering.</i> | Agreed. |
| <i>4. Hire mid-career and junior scientists in the area of neuropsychology to offset the impending faculty retirements.</i> | Agreed. The department will work with the Dean of Arts and Science to ensure courses in neuropsychology are maintained. |
| <i>5. Build a more supportive and responsive graduate studies administration to support graduate programs in the department.</i> | Agreed. The department will participate in any process to improve the supportiveness and responsiveness of graduate studies administration. |
| <i>6. Maintain supports for research-intensive junior faculty and students: review and, where appropriate, increase merit remuneration for outstanding faculty; encourage more sensitivity for facilitating research that uses animal models; as the founding neuroscientists retire, do strategic hiring to maintain the world-class stature of the department.</i> | Agreed. The department will participate in reviews of merit remuneration and of procedures for facilitating research with animals, and will help coordinate new strategic faculty hires. |
| <i>8. Review the tuition scheme and financial support for international students.</i> | Agreed. The department will participate in a review of ways to remove financial disincentives for international students. |

First Dean's Response

In the response to the review documents, the Dean of Arts and Science began by noting that the recommendations from the first External Review Report focused mainly on resource issues. The first Dean's Response recommended that the Department begin offering Neuroscience 1000. This course will expose students to Independent Studies opportunities in the Department.

The first Dean's Response addressed the recommendations from the first External Reviewers Report:

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| <i>1. Hire a mid-career level cognitive neuroscientist with research expertise in human MRI technology.</i> | This recommendation suggests hiring a Canada Research Chair (CRC). Currently there are no CRCs open at the U of L. If a CRC position opens up, Neuroscience will have to make a case to the Vice-President (Research). The Dean has begun discussions with Advancement on other funding opportunities. |
| <i>2. Before the Polaris funding runs out in 2018, hire the following individuals to support the technology developed for this program: molecular biology technician; laser and imaging support technician; and confocal and serology technical support person.</i> | The budget cannot absorb the three technicians supported by Polaris. Regarding the technical support needed with the impending retirement of the microscopy position, the Dean's office is considering ways to create a full-time position that fulfills other needs in Neuroscience. Another possibility is to jointly fund technical positions between the Faculty of Arts and Science and research funding. The salaries of the junior faculty hired through Polaris have been absorbed by the U of L. |
| <i>3. Build strength in the areas of neurotechnology and neuroengineering.</i> | The U of L is exploring the development of an engineering program. |
| <i>4. Hire mid-career and junior scientists in the area of neuropsychology to offset the impending faculty retirements.</i> | The Department will have to make a case for hiring to the Dean's office. Budget restraints make it very unlikely that all retired faculty will be replaced. The Arts and Science Academic Plan, under development, will include principles and priorities for future hiring decisions. |
| <i>5. Build a more supportive and responsive graduate studies administration to support graduate programs in the department.</i> | The Chair of Neuroscience should meet with the Dean to share specific issues. The Dean can then initiate conversations with the Dean of Graduate Studies on how to address these issues. The School of Graduate Studies is in the process of devolving some graduate activities to the Faculty of Arts and Science and its departments. |
| <i>6. Maintain supports for research-intensive junior faculty and students: review and, where appropriate, increase merit remuneration for outstanding faculty; encourage more sensitivity for facilitating research that uses animal models; as the founding neuroscientists retire, do strategic hiring to maintain the world-class stature of the department.</i> | Changes to merit remuneration have to be discussed between administration and ULFA. There is no move to wind down animal research. A new vivarium will be included in the forthcoming science building, for instance. |

8. *Review the tuition scheme and financial support for international students.*

Issues related to funding for international graduate students will have to be addressed in a broader discussion involving the School of Graduate Studies.

Second External Review

This site visit and external review was directed to focus on the undergraduate program.

In summary, the second External Review Report noted that the undergraduate neuroscience program “is a high-value investment on the part of the University and the Faculty of Arts and Sciences that has yielded great rewards with regard to the University’s reputation in Alberta, Canada and importantly, internationally. Graduates of this undergraduate Program are highly sought after in first-tier research Institutes and Professional Schools.”

Strengths of the program noted in the report included:

- Faculty retention is not an issue, as faculty enjoy the environment of the institution and the city.
- The undergraduate program has boosted the U of L’s reputation provincially, nationally, and internationally.
- Undergraduate students are very good to outstanding in quality and are exposed to the research-intensive faculty.
- There are considerable opportunities for undergraduates to be involved in research publications, independent study courses, and summer research programs.

Concerns identified included:

- The recruitment and replacement of faculty.
- There is a lack of awareness of the program among high school students and new undergraduates.
- Faculty advisors are often unable to provide appropriate information for the program.
- Undergraduate students do not get advice on how to learn.
- There is a significant gap in knowledge between Neuroscience 2000 and Neuroscience 3000.
- Advanced undergraduate students are concerned that advanced courses do not meet their needs or interests.
- Several courses are sometimes not offered to due low registration.
- There is a lack of 4000-level undergraduate courses.
- There is a lack of lab courses.

The report made recommendations for improvement, stating that the Department should:

1. Establish a neuroscience undergraduate association.
2. Use senior undergraduate students as ambassadors for the program in outreach to nearby high schools.
3. Provide more clarity to first-semester undergraduates about preferred undergraduate courses in areas outside Neuroscience. In doing this, the Department should interact closely with the Faculty of Arts and Science undergraduate advisors.

4. Provide a “how to learn” tutorial for undergraduate students.
5. Implement a Neuroscience 1000 course, which will explore the breadth and possibilities of the discipline. The use of graduate students and advanced undergraduate students in course delivery should be considered.
6. Revise the content of Neuroscience 1000 and 2000 to accommodate better student preparation for Neuroscience 3000.
7. Use flexible courses (which can be customized for smaller groups or individual students) to enhance course offerings available at the undergraduate level, and consider using graduate students and postdoctoral fellows in the delivery of these courses.
8. Request enough course numbers to allow students to take more than one flexible course per semester.
9. Develop additional advanced undergraduate courses.
10. Reinstate a formal Honours Neuroscience program.
11. Develop at least one undergraduate laboratory course and make this course as widely available as possible.
12. Develop and offer a Minor in Neuroscience and make this available to undergraduates within and external to the Faculty of Arts and Science.

Second Program Response

The second Program Response addressed the recommendations from the second External Review Report, using a thematic categorization of the report’s comments and recommendations:

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| Student recruitment: Students are unaware of opportunities offered by the Department. | The Department will align with Arts and Science recruitment activities to recruit students at an earlier stage. The Department will help revive an undergraduate neuroscience group, which will engage students earlier in studies. A 1000-level neuroscience course is being planned for 2018. This course will expose first and second year students to neuroscience. |
| Advising: The advising office sometimes gives bad advice to Neuroscience undergraduates. | The Department will make its curriculum committee available to the advising office. |
| Learning course: Provide a “how to learn” tutorial for undergraduate students. | Agreed. The Department will investigate this, and will coordinate with other departments. |
| Undergraduate engagement: Need more ways to engage students in the Department. | The Department will support students in relaunching a Neuroscience club. If an honours coordinator teaching appointment were made, this position could supervise undergraduate mentoring. The Department will investigate a mentorship program that pairs senior undergraduates with junior undergraduates. The Department will draw from a pool of engaged undergraduates to serve on Department committees. |

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| Neuroscience 1000: Implement a Neuroscience 1000 course, which will explore the breadth and possibilities of the discipline. The use of graduate students and advanced undergraduate students in course delivery should be considered. | Agreed. The Neuroscience 1000 course is being developed for Spring 2018. Graduate students can teach an occasional lecture in this course. |
| Revision of NEUR 2600: The NEUR 2600 Brain and Behaviour course should be revised to better prepare students for NEUR 3600 Fundamental Neurobiology. | NEUR 2600 and NEUR 3600 are not sequential courses. NEUR 2600 is a broad course for non-majors. The Department will consider developing a second-year course for majors that prepares students for NEUR 3600. |
| Fourth-year courses | Agreed, but there are challenges with adding flexible fourth-year courses as this could worsen the availability of courses. The Department will consider regularizing several fourth-year courses then alternating their offering over a two-year cycle. |
| Honours program: Reinstate a formal Honours Neuroscience program. | The previous Honours program was actually an Honours thesis. As all U of L students do a minimum four-year program, they are technically all Honours students. Creating a separate Honours stream would require institutional-level changes. The Department will appoint a faculty coordinator to guide Honours thesis students. |
| Undergraduate laboratory courses: Develop at least one undergraduate laboratory course and make this course as widely available as possible. | The Department is constrained by the lack of teaching laboratory space in the CCBN. When the new science building opens, the Department should be able to redevelop laboratory courses. |
| Pre-Med Track: The Neuroscience major was designed to allow students to apply for medical school. The U of A medical school has switched to a problem-solving approach, which the U of C medical school is also contemplating. These changes could impact the usefulness of the Neuroscience major for pre-med students. | The Department will consider this in future planning for the major, in coordination with other pre-med departments. Representatives from the U of A and U of C medical schools should be consulted on how the Neuroscience major can be best aligned with their requirements and skills for pre-med students. |
| Neuroscience minor: Develop and offer a Minor in Neuroscience and make this available to undergraduates within and external to the Faculty of Arts and Science. | The Department will investigate the development of a Neuroscience minor. |
| Accessibility of Neuroscience programs outside the Department and the Faculty | There is a desire to open up the Neuroscience program to participation and engagement across campus. Students from Education and Health Sciences will likely be particularly interested in Neuroscience courses. |

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| Topic seminar course with visiting scientists from the U of C. | Neuroscience has offered this course (Neuroscience 4630) for several years. This course now features little interaction between visiting scientists and the Department. The Department will revamp the course and consider involving two faculty members in hosting and scheduling the course. These faculty would share the work of hosting visitors, and scheduling meetings and luncheons. |
| List of authorship and career paths: Maintain a list of student authorship on peer-reviewed publications and track careers of former undergraduates. | The Department developed a list of student publications, conference presentations, and career paths and will maintain this list. |
| Faculty replacement and recruitment: Replace Neuroscience faculty as they retire. | Agreed. This should be a priority for the Dean of Arts and Science. |
| Summer course credit: Instructors for the summer workshop course should be given a 0.5 teaching credit for their work. | This has been done. Each summer computational workshop instructor will receive a 0.5 teaching credit. |
| Award teaching credit for Independent Studies | The Department is invested in Independent Studies and this is labour intensive and time consuming. Independent Study teaching credit could result in a lack of instructors for courses. The Department will maintain the current three course teaching assignments, but as new Faculty are hired or current Faculty no longer qualify for course relief this will be revisited. |

Second Dean’s Response

The second Dean’s Response provided an update related to the recommendations from the first External Review and Program Response:

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| 1. Hire a mid-career level cognitive neuroscientist with research expertise in human MRI technology. | Funds have been secured to hire an MRI Physicist for three years. If there is a retirement in Neuroscience, a new hire in the cognitive area can be considered. |
| 2. Before the Polaris funding runs out in 2018, hire the following individuals to support the technology developed for this program: molecular biology technician; laser and imaging support technician; and confocal and serology technical support person. | One full-time technical support position has been created. |
| 3. Build strength in the areas of neurotechnology and neuroengineering. | The curriculum for a proposed Engineering program in Arts and Science is under development. A complete Engineering curriculum will be ready for internal review Fall 2017. The challenge in curriculum development will be how to best incorporate demand for specialties. |

The second Dean’s Response went on to address the recommendations from the second External Review Report:

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| 1. Establish a neuroscience undergraduate association. | Agreed. |
| 2. Use senior undergraduate students as ambassadors for the program in outreach to nearby high schools. | Senior students can be important mentors but should not be heavily involved in advising. |
| 3. Provide more clarity to first-semester undergraduates about preferred undergraduate courses in areas outside Neuroscience. In doing this, the Department should interact closely with the Faculty of Arts and Science undergraduate advisors. | Agreed. The Neuroscience department proposes to make their Curriculum Committee available for advising. The Curriculum Committee should coordinate advising efforts with the Associate Dean to oversees Arts and Science advising. |
| 4. Provide a “how to learn” tutorial for undergraduate students. | Agreed. The department will explore adding this type of tutorial to their curriculum, in coordination with other departments who may have similar tutorials. A tutorial could be provided in conjunction with NEURO 1000 or NEURO 2600. |
| 5. Implement a Neuroscience 1000 course, which will explore the breadth and possibilities of the discipline. The use of graduate students and advanced undergraduate students in course delivery should be considered. | NEURO 1000 will be offered for Spring 2018. The department is considering how to use graduate students in this course. |
| 6. Revise the content of Neuroscience 1000 and 2000 to accommodate better student preparation for Neuroscience 3000. | The department will consider offering a second year course for majors that prepares them for NEURO 3600. Consider redesigning NEURO 2600 for majors, or evaluating if there is still a need for two broad-based courses for non-majors (one at the 1000 level, one at the 2000 level). NEURO 1000 could become a broad survey course, but it will not replace NEURO 2600. The department will explore options. |
| 7. Use flexible courses (which can be customized for smaller groups or individual students) to enhance course offerings available at the undergraduate level, and consider using graduate students and postdoctoral fellows in the delivery of these courses. | The Dean supports the department’s proposal to regularize several new fourth year courses and cycle them over a two-year period. The Dean supports the use of graduate students and postdoctoral fellows to teach some of the new courses. |
| 9. Develop additional advanced undergraduate courses. | Without more faculty or a change to the delivery model, it will be difficult to develop and offer more fourth year courses. The department will revisit this recommendation as new faculty are recruited or as current faculty no longer qualify for course relief. |
| 10. Reinstate a formal Honours Neuroscience program. | It may be possible to create an honours program by developing the concentration “Honours Research Concentration.” |

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| 11. Develop at least one undergraduate laboratory course and make this course as widely available as possible. | The department should develop a proposal for review and approval in Fall 2018 and implementation in Fall 2019. |
| 12. Develop and offer a Minor in Neuroscience and make this available to undergraduates within and external to the Faculty of Arts and Science. | Agreed. |

This Dean's Response also responded to additional actions discussed in the second Program Response:

- The Dean supports using an Honours Coordinator, if this position is created, to oversee undergraduate mentoring.
- The Dean supports drawing from a pool of engaged undergraduates to serve on department committees.

The Dean went on to address additional comments and recommendations from the second Program Response:

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| Implement a specific advising module for those interested in a career in medicine. Engage the medical schools at the U of C and U of A to help implement this module. | The department noted that they will consider this in future planning. |
| Provide accurate and up-to-date information for faculty advisors to pass on to incoming and junior students. | The department should coordinate advising efforts with the Associate Dean. |
| Reinvigorate internal communications and interpersonal bonds. | The department proposes to revamp NEURO 4630, which used to be departmental engagement with visiting scientists. The department should also explore other options for improving internal communication and engagement. |
| Maintain a list of student authorship on peer-reviewed publications and track careers of former undergraduates. | The department will maintain a publication list. The department should give graduate career tracking information to the faculty's Director of Communications. |
| Replace Neuroscience faculty as they retire. | Given budget uncertainties it will not be possible to make new hires to overlap with existing faculty before they retire. |

The Academic Quality Assurance Committee is satisfied that the Department of Neuroscience academic quality assurance review has followed the U of L's academic quality assurance process appropriately, and acknowledges the successful completion of the review.

Sincerely,

A handwritten signature in black ink that reads "Alan Siaroff". The signature is written in a cursive style and is positioned above a horizontal line.

Alan Siaroff

Chair, Academic Quality Assurance Committee

Cc: Andrew Hakin, Provost and Vice President (Academic)