UNIVERSITY OF TORONTO

University of Toronto Quality Assurance Process (UTQAP)
Cyclical Review: Final Assessment Report and Implementation Plan

Programs Reviewed:	Animal Physiology, B.Sc. (Hons.): Major Cell and Molecular Biology, B.Sc. (Hons.): Major Developmental Biology, B.Sc. (Hons.): Major Genome Biology, B.Sc. (Hons.): Major Cell and Systems Biology, M.Sc., Ph.D.
Unit Reviewed:	Department of Cell and Systems Biology
Commissioning Officer:	Dean, Faculty of Arts & Science
Reviewers (Name, Affiliation):	1. Professor Vincenzo De Luca, Ph.D., Department of Biological Sciences, Brock University 2. Professor Carl Douglas, Ph.D., Department of Botany, University of British Columbia 3. Professor Jeff Hardin, Ph.D., Chair, Department of Zoology, University of Wisconsin
Date of review visit:	November 5 – 6 , 2015
Date reported to AP&P:	November 1, 2016

Unless otherwise noted, all bulleted comments apply to all programs reviewed.

1 Outcome

- The Committee on Academic Policy and Programs (AP&P) concluded that the Decanal response adequately addressed the review recommendations.

2 Significant Program Strengths

- Strong, modern undergraduate curriculum, which serves both CSB's students and many students from other life sciences programs
- Innovative technology-based undergraduate teaching methods and course design, including online and digital learning and use of the inverted classroom
- Undergraduate students' high satisfaction with the programs offered and their value for career development
- Well-run graduate programs that offer high quality research and preparation for both academic and alternative scientific careers
- Research programs are productive, forward-looking, and cutting edge
- CSB's status as a vigorous, healthy unit that is a clear asset to the Faculty and the University

3 Opportunities for Program Enhancement

The reviewers recommended that the following be considered:

- Enhancing aspects of the undergraduate curriculum, including adding statistics courses, more lab courses, and an introductory course
- Addressing graduate students' desire for a more uniform approach to Ph.D. exams and Master's theses
- Considering the gap between years of funding and average times to completion for graduate students
- Engaging in better advising and support for undergraduate students
- Taking a more strategic approach to complement planning, including improving relationships between subgroups and strengthening the "Systems" area of Cell and Systems Biology
- Investigating space and other solutions for integrating faculty currently located in two different buildings, to support programs, research and communication

4 Implementation Plan

The Dean undertook in consultation with the Department to support the following changes:

- Immediate Term (6 months)
  - Enhancing aspects of the undergraduate curriculum, including adding statistics courses, more lab courses, and an introductory course
    - The program will launch a new lab course in January 2017 specifically designed for students enrolled in the Animal Physiology Major program of study
  - Addressing graduate students' desire for a more uniform approach to Ph.D. exams and Master's theses
    - The Department will continue to use its current approach, which is very structured and follows the guidelines set by the School of Graduate Studies
  - Considering the gap between years of funding and average times to completion for graduate students

        - The Faculty of Arts & Science increased base funding for all doctoral-stream students in the funded cohort
        - The Faculty introduced two new programs, Milestones and Pathways, aimed at supporting students as they progress through their studies and prepare effectively for their careers
    - Engaging in better advising and support for undergraduate students
        - The Department is introducing "CSB time," when course scheduling is minimized, to promote student participation in CSB learning community and co-curricular activities
    - Taking a more strategic approach to complement planning, including improving relationships between subgroups and strengthening the "Systems" area of Cell and Systems Biology
        - The Department has introduced a department-wide monthly PI meeting to bring faculty members together to present, informally, their ongoing research to each other
        - The Department has addressed complement planning with the hire of a faculty member who specializes in the "Systems" area of study (neural circuit development and function)

- Medium Term (1-2 years)
    - Enhancing aspects of the undergraduate curriculum, including adding statistics courses, more lab courses, and an introductory course
        - Human Biology, Pharmacology & Toxicology, and Statistical Sciences are developing a proposal for a statistics course geared towards life science students
        - Major renovations to the Ramsay Wright teaching laboratories are underway, which will significantly enhance the student laboratory learning experience and potentially increase enrolment capacity. Full occupancy for CSB undergraduate students is expected in early 2017.
    - Engaging in better advising and support for undergraduate students
        - The Department plans to set up learning communities to promote community-building for students. Through these communities, students would be connected to a faculty member and a small group of year 2-4 students with a common interest in a particular topic over 2-3 year periods for each student.

- Longer Term (3-5 years)
    - Investigating space and other solutions for integrating faculty currently located in two different buildings, to support programs, research and communication
        - The Dean's Office is working proactively with the Department to review resource options, both short- and long-term, to facilitate integrating faculty more closely

The Dean's Office will follow up annually with the unit to assess progress.

5 Executive Summary

The reviewers identified the programs' strengths as its strong, modern undergraduate curriculum, which serves both CSB's students and many students from other life sciences programs; students' high satisfaction with the programs offered; and CSB's status as a vigorous,

healthy unit that is a clear asset to the Faculty and the University. The reviewers recommended that the following issues be addressed: enhancing aspects of the undergraduate curriculum; addressing graduate students' desire for a more uniform approach to Ph.D. exams and Master's theses; considering the gap between years of funding and average times to completion for graduate students; engaging in better advising and support for undergraduate students; taking a more strategic approach to complement planning, including improving relationships between subgroups and strengthening the "Systems" area of Cell and Systems Biology; and investigating space and other solutions for integrating faculty currently located in two different buildings. Major renovations to the Ramsay Wright Labs are underway, and the program will launch a new Animal Physiology lab course in January 2017. A cross-departmental statistics course for Life Sciences students is in development. In addition to raising base funding for all doctoral-stream students in the funded cohort, the Faculty introduced two new programs, Milestones and Pathways, aimed at supporting students as they progress through their studies and prepare effectively for their careers. The Department is introducing "CSB time" for undergraduate students, when course scheduling is minimized, to promote student participation in CSB learning community and co-curricular activities. The Department has introduced a department-wide monthly PI meeting and has made a hire in the "Systems" area of CSB. The Department plans to set up learning communities to promote community-building for students. The Dean's Office is working proactively with the Department to review resource options, both short- and long-term, to facilitate integrating faculty more closely.