

REGENERATIVE MEDICINE

The Collaborative Specialization in Regenerative Medicine (RM) provides students with a broad, comprehensive training program in RM through a multidisciplinary approach. Students will gain a thorough understanding of topics and techniques, which they may use to pursue further studies and/or find employment in research, industry, or government, filling in-demand jobs such as research scientists, policy advisors, consultants, and educators. Doctoral and Master's (thesis or MRP) students wishing to undertake graduate studies with emphasis in RM will be admitted by a participating department and will register in both the participating department and in the collaborative specialization.

The participating academic programs are Biomedical Sciences (MBS, MSc, PhD), Clinical Studies (MSc), Engineering (MAsc, PhD), and Human Health and Nutritional Sciences (MSc, PhD). Doctor of Veterinary Science (DVSc) students enrolled in participating programs are eligible to participate in the Collaborative Specialization as well.

Administrative Staff

Graduate Program Coordinator

Thomas Koch (3601 Ontario Veterinary College, Ext. 53719)
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collaborative-specializations/regenerative-medicine/
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Graduate Program Assistant

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Graduate Faculty

This list may include Regular Graduate Faculty, Associated Graduate Faculty and/or Graduate Faculty from other universities.

Stephen H. M. Brown

BHK, MHK Windsor, PhD Waterloo - Associate Professor
Graduate Faculty

Andrea L. Clark

B.Sc. Loughborough, PhD Calgary - Assistant Professor
Graduate Faculty

Judith Koenig

DVM, M.Sc. Vet. Medicine (Austria), D.V.Sc. Guelph, Dipl. ACVS/ECVS -
Associate Professor
Graduate Faculty

Jonathan LaMarre

DVM, PhD Guelph - Professor
Graduate Faculty

Huiyan Li

BEng Harbin, MAsc Victoria, PhD McGill - Assistant Professor
Graduate Faculty

Melissa MacIver

BSc, DVM Guelph, MS Texas - Contractually Limited Faculty, Small Animal
Surgery, OVC, University of Guelph
Associated Graduate Faculty

Pavneesh Madan

B.V.Sc.& AH, M.V.Sc. India, PhD British Columbia - Professor

Graduate Faculty

Michelle Oblak

DVM, D.V.Sc. Guelph, Dipl. ACVS - Assistant Professor
Graduate Faculty

James J. Petrik

BA, MA, PhD Western Ontario - Professor
Graduate Faculty

John Z. Srbely

B.Sc. Laurentian, DC Canadian Memorial Chiropractic College, PhD
Guelph - Associate Professor
Graduate Faculty

Matthew Vickaryous

B.Sc., M.Sc. Calgary, PhD Dalhousie - Professor
Graduate Faculty

Masters Collaborative Specialization

Admission Requirements

Graduate students in the Collaborative Specialization in RM must initially meet the department/program admission requirements in which they are enrolled. Prospective students must first apply to their primary graduate program, while at the same time identifying their interest in enrolling in the Collaborative Specialization. If the student is admitted to their primary program as a course-based or thesis-based graduate student, then the departmental graduate program coordinator will review their application for suitability within the collaborative specialization. Final vetting and approval of Collaborative Specialization applications will be performed by the RM graduate program committee, led by the Graduate Program Coordinator (RM GPC). Upon admission, the student will register in their parent program and the collaborative specialization.

As Biomedical Sciences, Human Health and Nutritional Sciences, and Engineering programs already require a statement of research interest as part of their admissions process, only prospective MSc students in Clinical Studies are required to submit a short statement to the RM GPC on how their proposed research topic aligns with the RM specialization.

For Biomedical Sciences graduate students who wish to do a practicum placement in BIOM*6910, the location must be pre-approved by the RM GPC to ensure it falls under RM-related research, manufacturing, or policy.

All applications to participate in the Collaborative Specialization in RM will be reviewed by the specialization's Graduate Program Coordinator and a committee of 3-5 faculty from different colleges.

Program Requirements

Master's students in the Collaborative Specialization in RM must complete:

Code	Title	Credits
BIOM*6920	Comparative Stem Cell Biology and Regenerative Medicine	0.50
BIOM*6930	Concepts in Human Regenerative Medicine	1.00

Students must also successfully complete an MRP or thesis in RM research. For thesis-based master's students, at least one member of the student's advisory committee must be a core graduate faculty member of the Collaborative Specialization in RM. Requirements of this collaborative

specialization may also serve as elective requirements in the student's home program.

Doctoral Collaborative Specialization

Admission Requirements

Graduate students in the Collaborative Specialization in RM must initially meet the department/program admission requirements in which they are enrolled. Prospective students must first apply to their primary graduate program, while at the same time identifying their interest in enrolling in the Collaborative Specialization. If the student is admitted to their primary program as a course-based or thesis-based graduate student, then the departmental graduate program coordinator will review their application for suitability within the collaborative specialization. Final vetting and approval of Collaborative Specialization applications will be performed by the RM graduate program committee, led by the Graduate Program Coordinator (RM GPC). Upon admission, the student will register in their parent program and the collaborative specialization.

As Biomedical Sciences, Human Health and Nutritional Sciences, and Engineering programs already require a statement of research interest as part of their admissions process, only prospective DVSc students are required to submit a short statement to the RM GPC on how their proposed research topic aligns with the RM specialization.

All applications to participate in the Collaborative Specialization in RM will be reviewed by the specialization's Graduate Program Coordinator and a committee of 3-5 faculty from different colleges.

Program Requirements

PhD students in the Collaborative Specialization in RM must complete:

Code	Title	Credits
BIOM*6920	Comparative Stem Cell Biology and Regenerative Medicine	0.50
BIOM*6930	Concepts in Human Regenerative Medicine	1.00

DVSc students in the Collaborative Specialization in RM must complete:

Code	Title	Credits
BIOM*6920	Comparative Stem Cell Biology and Regenerative Medicine	0.50

Students must also successfully complete a thesis in RM research. At least one member of the student's advisory committee must be a core graduate faculty member of the Collaborative Specialization in RM.

Students that previously completed these courses as part of the master's collaborative specialization will be exempt from retaking it as part of the doctoral collaborative specialization. Requirements of this collaborative specialization may also serve as elective requirements in the student's home program.

BIOM*6920 Comparative Stem Cell Biology and Regenerative Medicine Winter Only [0.50]

The emerging field of translational regenerative medicine is explored in depth through a series of seminars, discussions, literature review and oral presentations. Specific topics include regenerative therapies for osteoarthritis, cell-based therapies in non-traditional model species, biomaterials, and novel therapeutic applications in veterinary medicine.

Restriction(s): Instructor consent required

Department(s): Biomedical Sciences

Location(s): Guelph

BIOM*6930 Concepts in Human Regenerative Medicine Fall and Winter Reg Required [1.00]

This course provides a broad overview of the field of human regenerative medicine (RM), including cell-based disease models, emerging technologies, clinical applications and ethical, commercial and regulatory challenges to moving stem cell therapies from the lab to the clinic.

Restriction(s): Instructor consent required.

Department(s): Biomedical Sciences

Location(s): Guelph