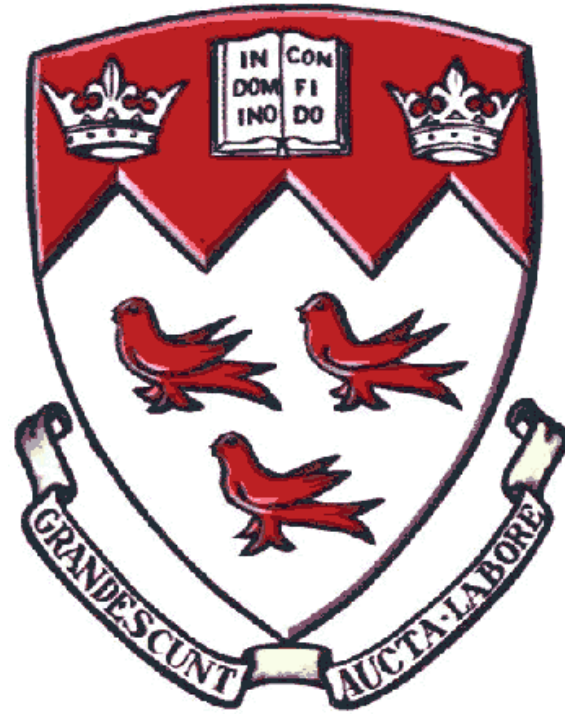
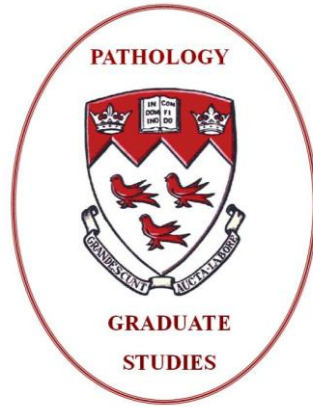


# PATHOLOGY



# GRADUATE STUDIES

2017

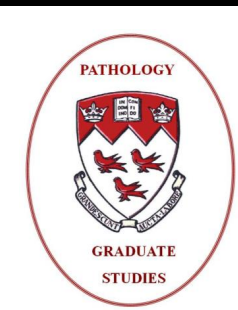


**Each student has a personalized advisory committee:**

**Research director, and often a co-director**

**Two research advisors, one of whom is usually from another biomedical science department.**

**They meet with the student individually throughout the year, and jointly attend a mandatory research proposal and seminar the student must give each year.**



## GRADUATE COURSES IN PATHOLOGY

**PATH 504 DISEASE IN DEPTH** (3) Mechanisms controlling the cellular life cycle in normal versus disease states such as cancer, infectious disease, cardiovascular, neurodegenerative and immune disorders. Dr. Telleria

**PATH 607 Biochemical Pathology** (3) Immunopathogenesis of Human Disease: The critical role of immune-regulatory mechanisms (cellular/molecular) in maintaining a balance between protection and pathology; pathogenesis of major infectious diseases caused by bacteria (e.g. Tuberculosis), viruses (e.g. AIDS), parasites (e.g. Malaria), as well as non-infectious diseases involving immunopathogenesis (e.g. Asthma). Dr. Divangahi

**PATH 613 Research Topics in Pathology.** (3) Analysis of current research within a chosen theme that varies each year. Dr. Zorychta

**PATH 614 Research Topics in Pathology.** (3) Dr. Zorychta

**PATH 620 Research Seminar 1.** (3) Evaluation of research literature in relation to a proposed thesis project, development of hypotheses to be tested and the rationale for intended methodology. Dr. Zorychta

**PATH 622 Research Seminar 2.** (3) Presentation of thesis research to departmental graduate students and faculty.

**PATH 652 Molecular Biology of Disease** (3) Environmental Toxicants: The role of various environmental toxicants in causing human diseases, approached from different scientific viewpoints, with an emphasis on cellular / molecular mechanisms. Dr. Baglolle

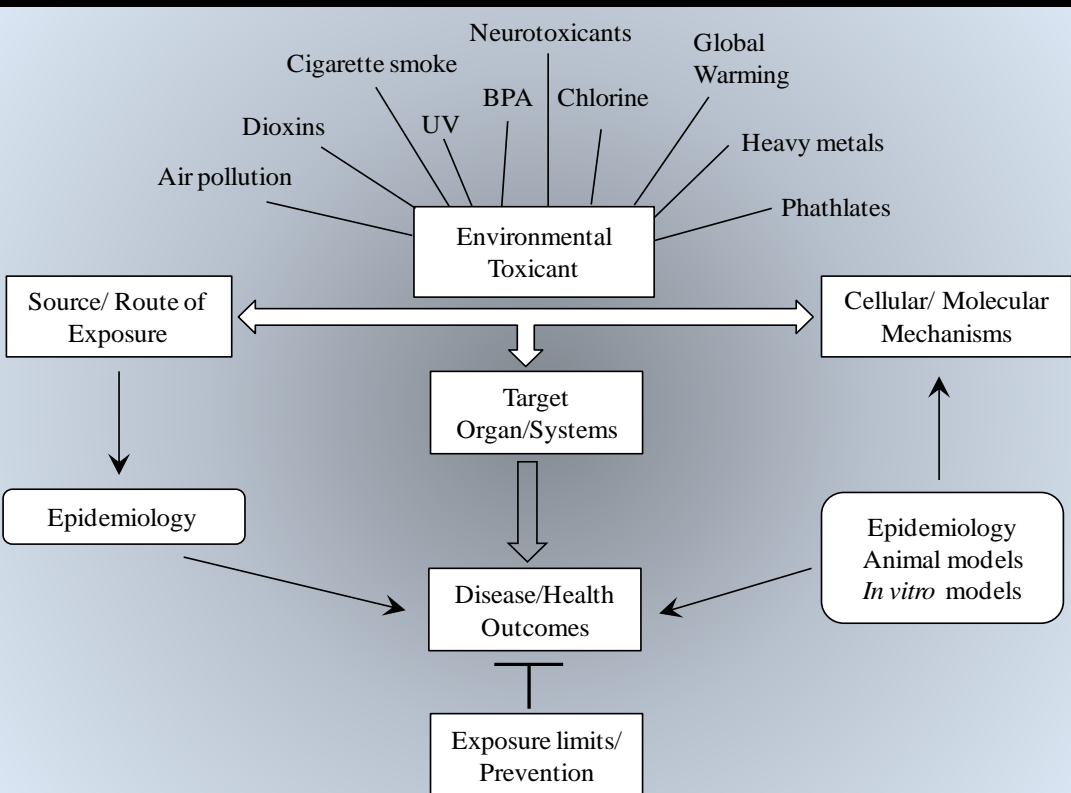
**PATH 653 Reading and Conference:** (3) Cytogenetics. (Offered in conjunction with the Department of Human Genetics.) Analysis of human chromosomes, and the genetic alterations involved in human diseases. Basic facts and mysteries about chromosomes will be explained and discussed in the light of clinical examples. Dr. Lavoie

**PATH 701 Comprehensive Exam for PhD Candidates**



# GRADUATE COURSE PATHOLOGY 652: MOLECULAR BIOLOGY OF DISEASE: ENVIRONMENTAL TOXICANTS

Dr. Carolyn Baglole  
Fall, 2016



Week	DATE	LECTURER	TOPIC
1	Sept 6	Dr. C. Baglole	Introduction
2	Sept 13	Dr. E. Zorychta	<u>Neurotoxicology</u>
3	Sept 20	Dr. Lehnert	UV/skin cancer
4	Sept 27	Dr. D. Maysinger	<u>Nanoparticles</u>
5	Oct 4	Dr. C. Baglole	Cigarette smoke and lung cancer
6	Oct 11	Dr. K Mann	Arsenic- heavy metals/CVD
7	Oct 18	Dr. C Baglole	Dioxins
8	Oct 25	STUDENT PRESENTATIONS	
9	Nov 1	STUDENT PRESENTATIONS	
10	Nov 8	Dr. J. Martin	Chlorine exposure/lung injury
11	Nov 15	Dr. L Chalifour	Diethylstilbestrol and bisphenol A <u>estrogenizing endocrine disruptors</u>
12	Nov 22	Dr. M. Culty	Phthalates- Reproductive dysfunction
13	Nov 29	Dr. C. O'Flaherty	ROS- infertility

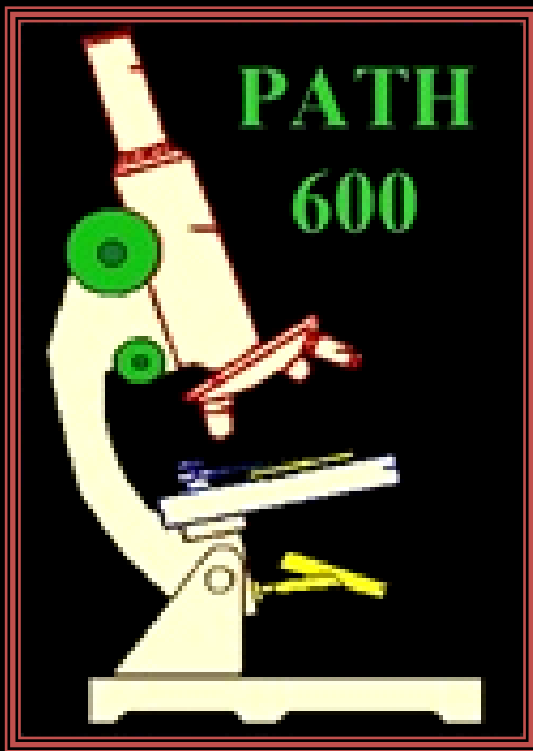
# NEW GRADUATE COURSE PATHOLOGY 504: DISEASE IN DEPTH

**Dr. Carlos Telleria**  
**Winter, 2017**



**PATH 504** offers an in-depth examination of current knowledge on the fundamental abnormalities that cause disease. It is focused on mechanisms controlling the cellular life cycle and how these mechanisms are altered in common diseases, including cancer, infections, cardiovascular, neurodegenerative and immune disorders. Among the cell fate paradigms addressed are cell mass, growth, lineage, differentiation, the division cycle, stem cells and the stem cell niche, cellular senescence, cell death modalities, and the cancer cell. Basic understanding of present knowledge is complemented by an explanation of current research techniques and what we might expect in the near future. The course is oriented toward graduate students and undergraduates who are interested in biomedical research; PATH 300 is a required prerequisite

Week	DATE	LECTURER	TOPIC
1	Jan 10	Dr. C. Telleria	Cell Fate Modality #1: <b>GROWTH</b>
			Assign topics for student presentations linking a cell fate mechanism and a particular disease state
2	Jan 17	Dr. C. Telleria	Cell Fate Modality #2: <b>DIVISION</b>
3	Jan 24	Roundtable discussion	Paper #1
4	Jan 31	Dr. C. Telleria	Cell Fate Modality #3: <b>DIFFERENTIATION</b>
5	Feb 7	Dr. C. Telleria	Cell Fate Modality #4: <b>SENESCENCE</b>
6	Feb14	Roundtable discussion	Paper #2
7	Feb21	STUDENT PRESENTATIONS	
8	Mar 7	Dr. C. Telleria	1 <sup>st</sup> Assessment of Learning
9	Mar14	Dr. C. Telleria	Cell Fate Modality #5: <b>DEATH*</b>
10	Mar21	Dr. C. Telleria	Cell Fate Modality #6: <b>CANCER*</b>
11	Mar28	Roundtable discussion	Paper #3
12	Apr 6	STUDENT PRESENTATIONS	
13	Apr 11	Dr. C. Telleria	2 <sup>nd</sup> Assessment of Learning



**PATH 613/4**

**Team lecture plus term paper x 2**

**Dr. Edith Zorychta**

**PATH 620/22**

**Research proposals and seminars**

**Dr. Edith Zorychta**

**THEMES, PATH 613/4:**

**Advanced techniques in biomedical research**

**Global diseases in the 21<sup>st</sup> century**

**Cardiovascular pathology**

**Diseases with increasing prevalence**

**Lifestyle – induced diseases**

**Disease linked to global warming**

**Neuropathology**

**Gastrointestinal pathology**

**Molecular biology of cancer: new insights**

**Pathogenesis of autoimmune diseases**

**Disease and the Microbiome**

**Exercise, Myokines & Disease**

**Disease and the Skin**

**Diseases of increasing prevalence**

# MAIN STRENGTHS :

**balanced curriculum**, well designed graduate courses provide essential breadth

**excellent research supervisors** provide exceptional facilities and training in experimental research on disease

**interdisciplinary collaboration** with research advisors from other departments

**follow the 12 guiding principles** of the Canadian Association of Graduate Studies

**specialized resources** made available through other units at McGill

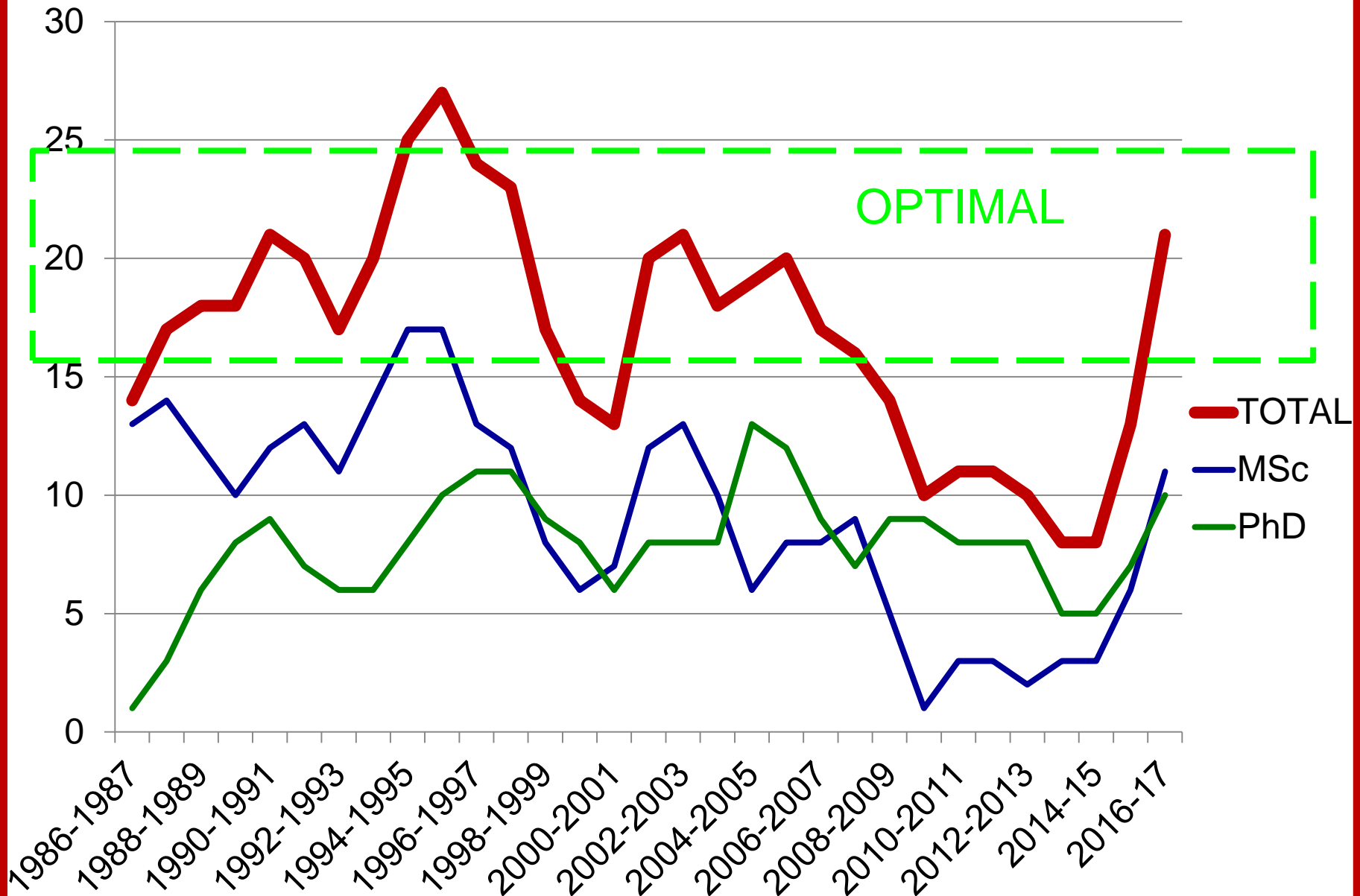
Career Planning Service: advice and training for future careers

Teaching and Learning Services: professional workshops

McGill Writing Center: special courses for graduate students

**students consistently successful** – no dropouts or failures; good outcomes after

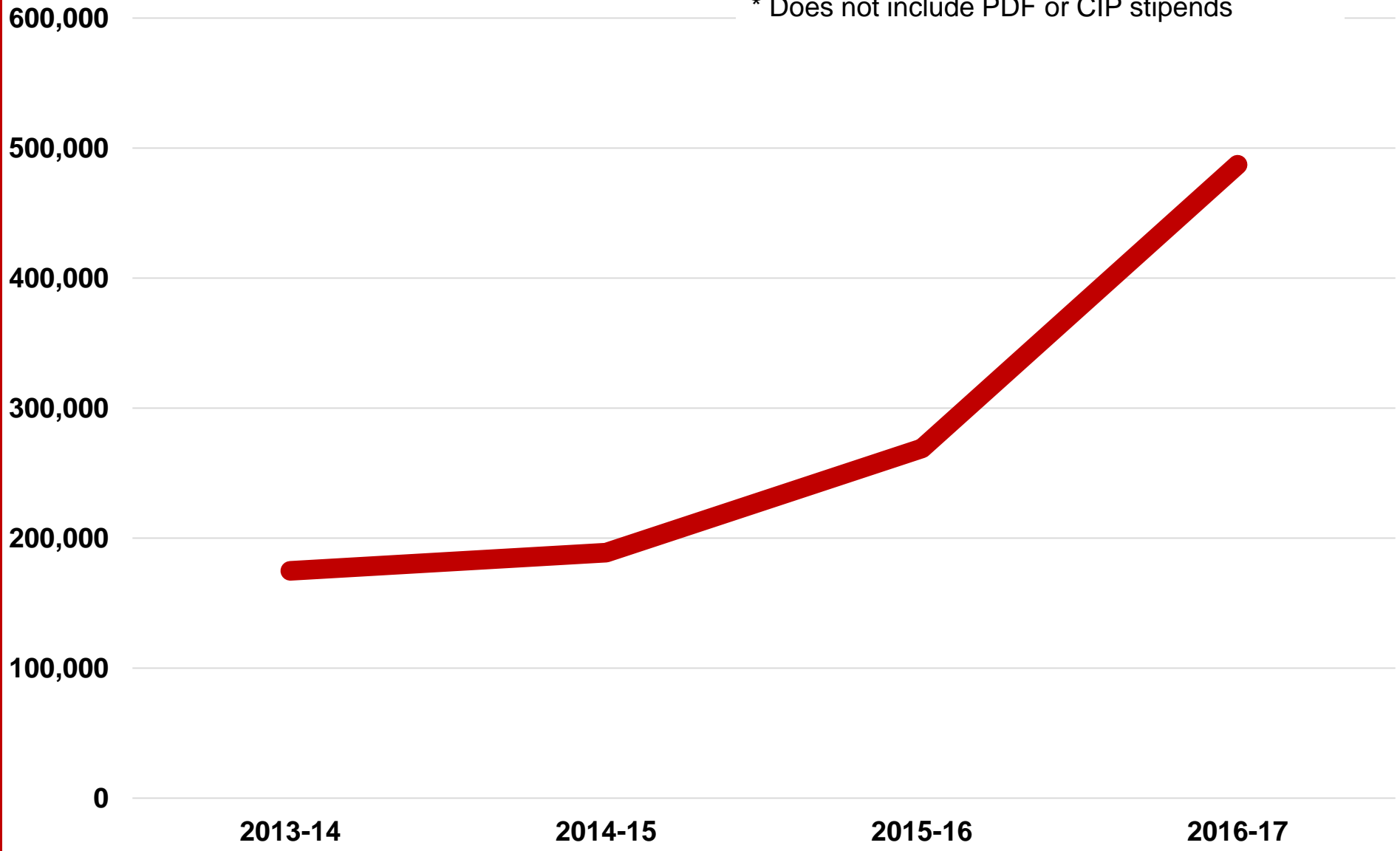
# GRADUATE STUDENTS, DEPARTMENT OF PATHOLOGY



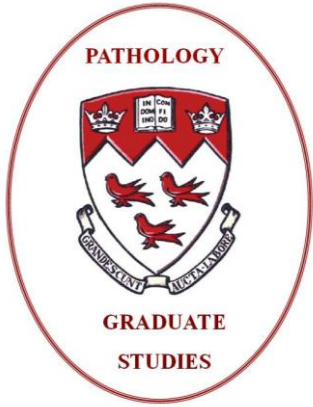


# GRADUATE STUDENT FUNDING\*

\* Does not include PDF or CIP stipends



**FUNDING** — \$ — .



## THE FUTURE

New Basic Science Assistant Professor arriving in 2017

Associate members are highly involved, with multiple collaborations, excellent research projects

Interdisciplinary and translational research is expanding

Graduate student numbers should remain between 20-25

**MAJOR GOAL for 2017 – CONTINUE TO INCREASE FINANCIAL SUPPORT**