

# 2021 Course Announcement

## PATHOLOGY 751 CELLULAR AND MOLECULAR BIOLOGY OF AGING



**Department: Pathology and Laboratory Medicine in conjunction with faculty from the Department of Medicine**

**Credits: 3**

**Director: Dr. Rozalyn Anderson**

**Time: Monday, Wednesday, and Friday at 9:55 AM**

**Location: HSLC 1203**

This course examines the molecular, cellular, physiological, and clinical aspects of aging. The course is designed for \*graduate students, MD or MD/PhD students, and clinical fellows interested in understanding the biology of aging and how it relates to translational biomedical and clinical research. Diseases of human aging including cancer, neurodegeneration, and diabetes, together account for more than 70% of all deaths. This course includes an introduction to cellular pathways implicated in aging and longevity regulation. From there we present a series of “modules” focusing on the etiology of Age-Related Diseases that are examined via the combined expertise of basic scientists and clinicians in blocks of two lectures. The first lecture in the module introduces the molecular and cellular aspects of topic, while the second lecture focuses on the clinical aspects and current treatments. Modules covered include Alzheimer’s disease, stroke, heart and vascular disease, diabetes, cancer, asthma and COPD, sarcopenia, and rheumatoid conditions. Additional themes include hormonal dysfunction in aging, genome approaches in aging research, stem cells and rejuvenation, and studies of human aging biology. Interspersed among these modules are “spotlight” presentations, these lectures focus on Emerging Topics in Aging Research such as microbiome, epigenetics, metabolism, and proteostasis.

Students will be provided reading material each week via Canvas. Formal evaluations include 3 exams and 3 assigned papers dispersed over the course of the semester.

Feedback from previous students:

- *I liked the broad range of topics covered and how both the biology of different areas of aging and the clinical implications were included. It is awesome to hear from so many experts in the field, both in the lab and how it applies to patients.*
- *I loved how every lecture was different, but always interesting. I really enjoyed the lectures/topics that had both the research-based lecture and then talked about the clinical side too.*

35 Instructors

14 Aging  
Modules

9 Research  
Spotlights

3 Exams

1 Great  
Aging Course

If you have questions about the course or enrollment please contact: Sara Seton- [sseton@medicine.wisc.edu](mailto:sseton@medicine.wisc.edu) or Dr. Anderson- [rozalyn.anderson@wisc.edu](mailto:rozalyn.anderson@wisc.edu)

\* advanced undergraduates with an interest in aging may contact the administrator, participation will require meeting pre-requisites