



Molecular Pathobiology of Neural Disease

Course Number: GMS 6705

In this one credit online course, we will examine the neuropathology, underlying causes, and treatment strategies for five common neural diseases: Alzheimer's disease, Parkinson's disease, Huntington's disease, glioma, and lysosomal storage disease. These diseases represent a range of different types of neurological disorders and are currently without cures. At the end of this course, you will be able to discuss and answer the following questions:

- What are the distinguishing pathological features of Alzheimer's, Parkinson's, Huntington's, glioma, and lysosomal storage disease?
- What is our current understanding of the underlying causes of these diseases?
- What are the current treatment strategies for these diseases and how effective are they?
- What future directions might be taken to improve treatments for these diseases?

The course consists of a series of lectures on the symptoms, epidemiology, a description of the defining neuropathology, and underlying disease mechanisms that may point the way to experimental treatments of each disease. You will be required to choose a paper topic for each disease and write a brief synthetic and referenced essay each week that goes beyond the presented material via independent research on each disorder.