Amyotrophic lateral sclerosis (ALS) is a motor neuron disease of animals and man with life-altering consequences. The defining pathology is destruction of neurons resulting in loss of neuromuscular connections. Genetic predisposition to develop ALS is a factor in a small number of cases, about 10%. The most commonly recognized presentation is idiopathic (no identified cause) and results in spontaneous disease (sALS). Spontaneous ALS may be due to multiple factors and that means treating disease would require multiple therapies in a targeted, individual approach.

Our hypothesis is that sALS initiates innate immune mechanisms that become dysfunctional at the cellular level. We suggest that a bystander mechanism could initiate innate immune responses that become dys-regulated and the dysfunctional systems vary with the site of the pathology. Therefore, it becomes important to identify individual disease mechanisms with biomarkers and have targeted treatments for each individual.

The mission of Neurodegenerative Disease Research Inc., NDR, is *to identify and validate biomarkers for determining drug effectiveness in neurodegenerative diseases and to disseminate research findings to interested parties via peer reviewed publications*.

Our areas of interest are *in vitro* cell testing to identify disease pathogenesis in response to drug molecules, facilitate modeling to test treatments for specific immune pathways, and evaluate bioassays that could potentially assist in determining a response to treatment.