



Rusty Gage

President



Rusty Gage, a professor and Vi and John Adler Chair for Research on Age-Related Neurodegenerative Diseases in the Laboratory of Genetics, concentrates on the adult central nervous system and unexpected plasticity and adaptability to environmental stimulation that remains throughout the life of all mammals. His work may lead to methods of replacing or enhancing brain and spinal cord tissues lost or damaged due to neurodegenerative disease or trauma.

Dr. Gage's lab showed that, contrary to accepted dogma, human beings are capable of growing new nerve cells throughout life. Small populations of immature nerve cells are found in the adult mammalian brain, a process called neurogenesis. Dr. Gage is working to understand how these cells can be induced to become mature functioning nerve cells in the adult brain and spinal cord. His lab showed that environmental enrichment and physical exercise can enhance the growth of new brain cells. They are studying the underlying cellular and molecular mechanisms that may be harnessed to repair the aged and damaged brain and spinal cord.