**Methods for Identifying Neurodegeneration Mutants and Screening Neuroprotective Agents**

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing neurodegeneration mutants of *Drosophila* and a method for obtaining them.

**OVERVIEW**

The cellular and molecular mechanisms underlying age-dependent neurodegeneration are poorly understood. *Drosophila* neurodegeneration mutants would be useful in elucidating these mechanisms; however, a targeted and efficient approach to screening for such mutants is needed.

**THE INVENTION**

UW-Madison researchers have developed neurodegeneration mutants of *Drosophila* and a method for obtaining them. The method starts with a collection of temperature-sensitive paralytic or bang-sensitive paralytic mutants, among which are relatively high numbers of neurodegeneration mutants with altered neural function. The neural function mutants are then screened for age-dependent neurodegeneration.

The researchers used this method to identify several neurodegeneration mutants in *Drosophila*. Several of the identified mutants have marked neuropathology throughout their entire central nervous systems, which leads to a shortened lifespan. These mutant animals are also particularly well suited for screening assays aimed at identifying neuroprotective agents.

**APPLICATIONS**

- Screening assays to identify neuroprotective agents
- Identifying key proteins and biochemical pathways required for maintenance of neuronal viability
- Developing novel therapies for avoiding natural senescence
- Treating and preventing neurodegenerative disorders in humans and other animals
KEY BENEFITS

- Efficient means of obtaining neurodegeneration mutants
- Faster than some currently used methods

ADDITIONAL INFORMATION

Tech Fields
Drug Discovery - Disease models

CONTACT INFORMATION

For current licensing status, please contact Jennifer Gottwald at jennifer@warf.org or (608) 262-5941.