



Unit Leader **Makoto Hashimoto** Parkinson's disease Unit

Protection of neurodegenerative diseases

Research description

The number of patients with age-associated neurodegenerative diseases, such as Alzheimer's disease (AD) and Parkinson's disease (PD), is rapidly increasing worldwide. Consequently, huge costs for medical treatment and nursing care for these patients have become a serious socioeconomic dilemma. Nonetheless, extensive studies of amyloid immunotherapy in AD have been so far unsatisfactory. Thus, the development of an effective disease-modifying therapy is the highest priority in neurodegenerative disease research.

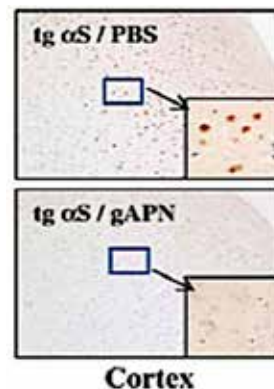


Fig. 1
Effect of adiponectin on neurodegeneration in tg mice

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In our laboratory, we seek to exploit a mechanism-based disease-modifying strategy for a-synucleinopathies, such as PD and dementia with Lewy bodies. In this context, we have a particular interest in the suppressive effect of adiponectin on neurodegeneration (Fig.1). We will also attempt to identify new molecules that could be useful for the prevention of neurodegenerative diseases. For such purposes, we currently perform the *Drosophila* molecular genetics (Fig.2) in addition to cell biological and transgenic mice studies. Apparently, the results will be applicable to other diseases, including AD and Huntington's disease.

Members

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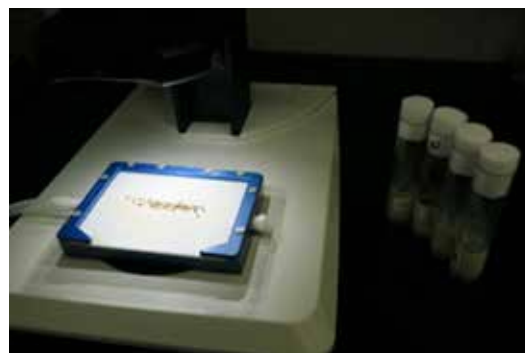


Fig. 2 *Drosophila* molecular genetics

Parkinson's disease