

Evaluation of brain functions Using Aged Germ-free Mice

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Effects of long-period sterile housing on brain functions were assessed using aged germ-free mice at 72 to 75 weeks of age.

We conducted a novel object recognition test as the behavioral test in a germfree environment, measurement of monoamine concentration in the brain in the biochemical test, and Iba1 immunostaining as an indicator of microglial activation in the histopathological examination.

In the novel object recognition test, no difference from the SPF mice of the same age was seen in the aged germ-free mice. However, increased noradrenaline content in the frontal cortex and decreased Iba1-positive cells were noted in the aged germ-free mice.