Olfactory and cognitive abilities in two strains of Alzheimer's disease model mice

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Final Thesis, Masters Programme, Applied Biology and Animal Biology 2009

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Background

- Alzheimer`s disease (AD) is the most common form of dementia and causes abnormal changes in the brain which worsen over time and interfere with many aspects of the brain.
- One of the earliest symptoms of AD in humans is an olfactory impairment.

Aim

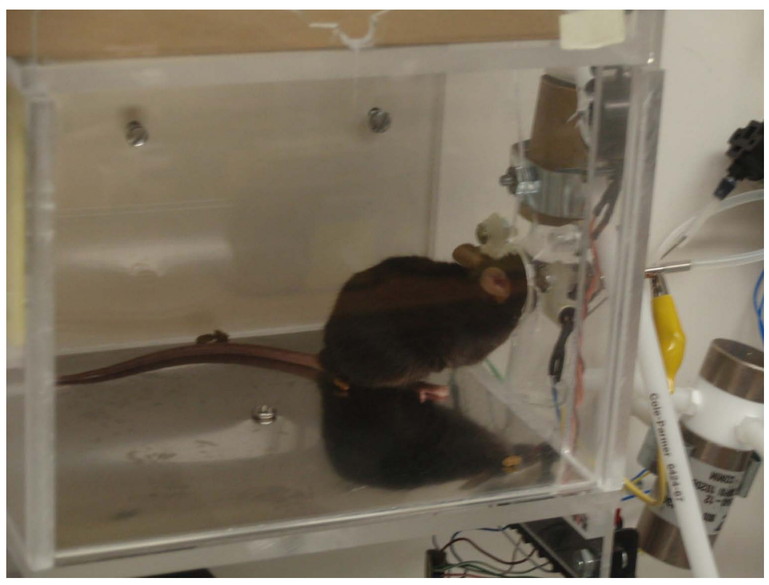
- To assess olfactory and cognitive abilities in two strains of AD model mice and in healthy control mice over a time period.
- To learn more about how the changes in the brain caused by AD and the observed cognitive and olfactory impairments are linked.

Material and Method

- Testing was carried out using nine male adult mice of three different strains.
- Olfactory and cognitive abilities in the mice were assessed using an automated olfactometer and a spatial learning test with non-olfactory cues.

Results

- There were no systematic differences in olfactory performance of AD model mice and the control mice across the testing period.
- There was no indication of an age-related decline in performance in any of the mouse strains across the testing period.



When the mouse inserts its snout into an opening of the operant chanber it is presented with an odor.

Conclusion

- Alhough the AD model mice were likely to have developed neuro anatomical changes that are typical of human AD, they did not display olfactory and cognitive impairments as long as they were tested.