Neuroimmunology Laboratory

Published date: Aug. 27, 2012

Technology description

The University of Adelaide is able to deliver in vivo preclinical testing services in the field ofbehavioural neuroscience.
Behavioural tests for mice available in our Neuroimmunology laboratory include tests for:
*depression-like behaviour (e.g. Swim Test)
*cognition-like behaviour (e.g. Barnes Maze, or Novel Object Recognition Test for hippocampal dependent memory and learning)
*anxiety-like behaviour (e.g.,elevated zero maze)
*complex sociability test (e.g. to model autism).
Each of these tests derives several different measures. These tests can be used in specialised experiments using environmental conditions such as chronic mild stress, or include both pharmacological or nonpharmacological interventions (e.g. exercise in running wheels).
In addition to this, our laboratory maintains a colony of transgenic mice which over-express brain specific inflammatory markers such as TNF (conditional transgenic mice). Such mice can simulate inflammatory states of the brain seen in chronic conditions (e.g. depression, ageing) in humans.
Our laboratory is also able to perform additional neurobiological studies in the brain or serum of tested animals, including immunohistochemistry, protein analysis and microarrays.

Application area

Our expertise may be of interest for the study of novel pharmacological agents such as anti-inflammatory compounds, anti-depressant compounds, and other new compounds including anything that may have possible side effects on cognition and neuropsychological function, as well as compounds which may alleviate such side effects. Side effect studies may be of interest in the development of new cancer drugs, or those for cardiovascular disease.

Institution

The University of Adelaide

Inventors

Bernhard Baune
Psychiatry