



UNSW
SYDNEY



Pinpointing motivational dysfunction in ageing brains

Identifying what neural elements are the first to manifest decaying motivational function in the brain: Pinpointing susceptible neural circuitry allows the design of strategies to support enduring brain function in advanced aged.

Competitive advantage

- Combination of new genetic technology with behavioural intervention drawn from associative learning theory
- World-leading expertise in anatomy and physiology of neural systems supporting motivated behaviour
- Development of novel methods for large-scale functional mapping of specific circuits in the brain engaged during motivational tasks

Impact

- Prevention of motivational and cognitive decline by identifying malfunctioning circuitry at early stages of ageing
- Establishment of efficient intervention by temporally and spatially retargeting available pharmacology to vulnerable brain circuitry

Successful Outcomes

- Identification of vulnerable circuitry specifically responsible for re-learning deficits in ageing
- Determination of neural bases underpinning age-related temporal dysfunction during motivated action

Capabilities and facilities

- High-throughput spinning-disk confocal microscopy for functional mapping of neural circuits
- Access to pre-clinical models of ageing and circuit-specific dysfunction
- Extensive facilities for neural targeting and behavioural evaluation

Our partners

- Decision Neuroscience Laboratory

More Information

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