# 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

## More Information

Dr Jay Bertran-Gonzalez

School of Psychology

T: +61 (0) 2 9385 2388
E: j.bertran@unsw.edu.au

UNSW Knowledge Exchange

knowledge.exchange@unsw.edu.au

www.capabilities.unsw.edu.au

+61 (2) 9385 5008

## 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