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What does the nervous system do?

- Allows you to interact with the environment
 - Movement
 - Smell, sight, sound, touch, taste
 - Behaviour
 - Don't forget internal environment!
 - Digestion
 - Breathing
 - Heart rate

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Neuroscience Research at St Andrews

Motor control in *Xenopus* tadpoles (WenChang Li, Keith Sillar)

Motor control and motor neuron disorders in mammals (Gareth Miles)

3

Neuroscience Research at St Andrews

Neural control of locomotion in *Drosophila* (Stefan Pulver)

Sensorimotor integration in zebrafish brain (Maarten Zwart)

Hormonal control of brain systems (Karen Spencer)

The life and death of neurons (Gayle Doherty)

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Neuroscience Research at St Andrews

Neural mechanisms of navigation in rodents (Anna Smith)

Memory and cognitive deficits in neurodegenerative disorders (Jamie Ainge)

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Pre-honours Neuroscience

First Year

- Core Biology and Psychology modules each semester
- Plus 3rd module of your choice each semester

Second Year

- A core psychology module each semester
- A core Biology module each semester*

* Cell Biology (Sem 1); Cell Systems (Sem 2)

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Honours Neuroscience Third Year

Semester 1

- Psychology and Neuroscience module - Neuroscience
- Two core 10 credit Psychology modules
- Choose appropriate other Psychology or Biology modules

Semester 2

- Psychology and Neuroscience module - Pharmacology
- Two core 10 credit Psychology modules
- Choose appropriate additional Psychology or Biology modules

Fourth Year

- Conduct research project in Psychology & Neuroscience
- Choose appropriate specialized neuroscience modules in Psychology & Neuroscience or Biology

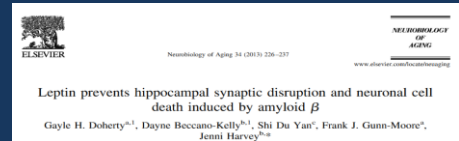
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Linking research and teaching: PN3312 pharmacology

TEACHING: PEPTIDE BASED DRUG DESIGN

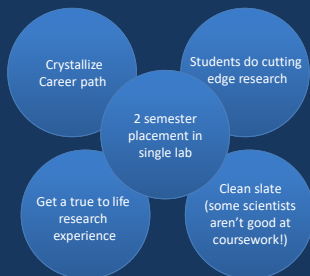


RESEARCH: DEVELOPING PEPTIDE BASED DRUGS TO COMBAT ALZHEIMER'S DISEASE



8

PN4299 –Neuroscience research project (Full academic year)



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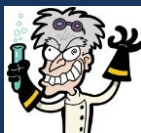
Hot off the presses....

Recent research articles with undergraduate authors

- Li, W, Zhu, X-Y & **Ritson, E.** 2017. Mechanosensory stimulation evokes acute concussion-like behaviour by activating GIRKs coupled to muscarinic receptors in a simple vertebrate. *eNeuro*. In press.
- Svensson, E, **Jeffreys, H** & Li, W. 2017. The modulation of two motor behaviours by persistent sodium currents in *Xenopus laevis* tadpoles' *Journal of Neurophysiology*. DOI: <https://doi.org/10.1152/jn.00000.2017>
- Malakizadeh, Y, **Holiday, AR, Radfearn, D, Ainge, JA, Doherty, GH** & Harvey, J. 2016. A leptin fragment mirrors the cognitive enhancing and neuroprotective actions of leptin' *Cerebral Cortex*, 27(10):4769–4782. DOI: <https://doi.org/10.1093/cercor/bhw001>
- Jersakova, R, Allan, R, **Booth, J**, Souchay, C, O'Connor, AR. 2017. Understanding metacognitive confidence : insights from judgment-of-learning justifications. *Journal of Memory and Language*, Vol. 97, 12.2017, p. 187-207.

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What can I do with a degree in Neuroscience?



Research Scientist
(University or Industry)



Education



Postgraduate medicine
(UK, US, Australia, etc)



- lawyer/solicitor
- Science writer
- Journal Editor
- Grant manager at non-profit charity
- Marketing executive (neuro-economics)
- Scientific equipment sales
- Midwife
- Politician

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Neuroscience Contacts

Pre honours:

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Admissions:

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