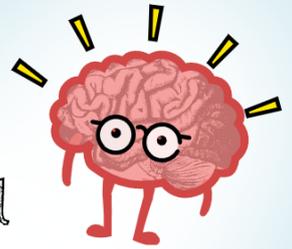


Stalls & Exhibits

#BrainPower: UCL Neuroscience Festival



Hey, what's that in the brain?

Dr Joan Liu, Senior Research Scientist, Clinical and Experimental Epilepsy and Division of Neuropathology

See first-hand how the human brain is affected in Alzheimer's disease, Epilepsy, Tumour and Brain Injury, and try your hand at 'common histological staining', a technique routinely performed in biomedical laboratories.

Words for Wellbeing

Sarah Griffiths, Research Associate, Psychology and Language Sciences

Interactive activities demonstrating the importance of language skills for wellbeing—including motion recognition and regulation tests.

The two faces of anticipation: how do excitement and fear change the way that we think?

Alexandra Pike, Postdoctoral Research Associate, Institute of Cognitive Neuroscience

Dreaming of your forthcoming holiday is sometimes more exciting than the holiday itself. Worrying over something bad that might happen is sometimes more distressing than when it actually happens. We will discuss how anticipation of both good and bad things relates to mental health using exciting games and psychological experiments.

Making Marvellous Medicines

Amy Monaghan, Postdoctoral Research Associate, Alzheimer's Research UK Drug Discovery Institute, Institute of Motor Neuroscience and Movement Disorders

Come and find out how the genes that make you unique can help us discover new medicines for dementia, and have a go yourself!

Single Yellow Lines

Charles Harrison, Artist Consultant / Associate Staff, Institute of Neurology / Dementia Research Centre

In addition to presenting research conducted at UCL Whole Body Sensorimotor Laboratory / Dementia Research Centre / Wellcome Collection, *Single Yellow Lines* will be trialling a new interactive activity, asking visitors to paint single yellow lines which will be tracked and recorded on a digital tablet device.

How your Little Brain does Big Things

Zane Mitrevica, Undergraduate student in the Neural Computation Lab, Department of Neuroscience, Physiology, and Pharmacology

From walking to playing the piano, all coordinated movement relies on the cerebellum. Latin for '*little brain*', this computational powerhouse contains more cells than the rest of the brain combined. Come to our stall to test your cerebellum in a motor adaptation task. Can you perform it better than mice?

Putting folk psychology to the test

Nikolaus Steinbeis, Associate Processor, Division of Psychology and Language Sciences

Cognitive neuroscience gives insights into how the mind works. This often runs counter to what we would predict. Take part in interactive psychological experiments on laptops, as well as in groups, and square up your results your own predictions.

The Bilingual Brain in Childhood

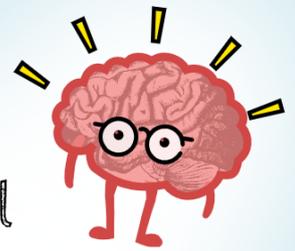
Dr Sezgi Goksan, Research Associate, UCL Institute of Education

The Bilingual Brain Imaging team together with UCL Bilingo will be sharing research evidence about the impact of bilingual experience on the developing brain, as well as offering visitors a chance to try out 'executive function behavioural tasks' (i.e. games!)



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Stem cells in motor neuron disease

Helen Devine, Patani Lab, Clinical Research Fellow, Department of Neuromuscular Diseases

How do motor nerves carry messages from the brain to the muscles?

How does this go wrong in motor neuron disease?

Stem cells are amazing as they can become any other type of cell. How might stem cells be used to study and treat motor neuron disease?

'Re-fit'

Kongpyung Moon, Post-graduate Student, The Bartlett School of Architecture

A responsive installation for all ages that invites interaction with a projected visualization of a replicated environment. Visitors are invited to identify the environment copy that most closely responds to their own motion.

Discovering how the brain gives rise to behaviour

April Cashin-Garbutt, Communications Manager, Sainsbury Wellcome Centre

How does the brain form memories, make decisions and generate representations of the world? Neuroscientists at the Sainsbury Wellcome Centre will explain how they are tackling these problems. Visitors will have the chance to journey through brain data in VR and to control someone else's arm with their own brain activity!

MRI Storytime

Barbara Dymerska, Marie Curie Postdoctoral Fellow, Medical Physics and Biomedical Engineering

MRI Storytime will be organised for children aged 5-8 years and their families. The presented MRI Peekaboo Book contains a short entertaining story, crisp water-colour illustrations and incredible high-resolution MRI of fruits and human head. Children will learn how MR scanner works and how important and beautiful its images are.

Bead Your Brain

Laura Kischkel, PhD Candidate, Great Ormond Street Institute of Child Health

Through the Bead your Brain game we would like to increase visitors' awareness of the brain in children, by asking them to draw on brain regions that are involved in activities that they do every day. Moreover, videos of our project in Gambia will show visitors an example of scientific research being conducted in a lower-middle-income country.

It Takes Two to Tangle

Dr Damian Cummings, Senior Research Fellow, Neuroscience, Physiology & Pharmacology

Visitors can use fluorescent microscopes to visualise fluorescent neurones and microglia (the resident immune cells of the brain), alongside fluorescently marked Alzheimer's disease pathologies (Plaques and Tangles), all within brain tissue taken from mouse models of the disease.

Brain banking: What is involved and why is it important?

Dr Tammayn Lashley, Principal Research Fellow, Neurodegenerative

Demonstrations of what changes occur in the brain when somebody has dementia. Have a go at building a brain! Can you be the quickest? Plus images examining the changes occurring in the brains with neurodegenerative diseases.

fMRI: food Magnetic Resonance Imaging

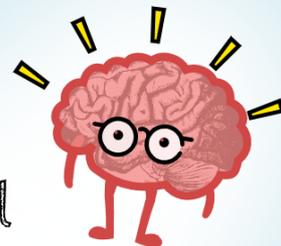
Dr Jake Fairnie, Neuroscientist and Head of Communications, UCL Division of Psychology and Language Sciences

Guess the food before the end of the clip in this series of short films showing sequences of magnetic resonance images (MRIs) of various foods.



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Exploring the world's smallest brain

Prof David B Sattelle, Prof of Molecular Neurobiology, UCL Respiratory

The nematode worm (*C. elegans*) has only 302 neurons in its brain and guess what – all its connections are fully mapped!! This can help us understand how nerve cells (neurons) interact to generate behaviour, and how diseases affect our brain and nerve– muscle junctions. Try out our microscopes and watch a film showing a roller-coaster ride through the world's smallest brain.

Why doesn't my brain work?

Dr Nicola Muirhead, Principal Research Associate, MRC Prion Unit at UCL

The MRC Prion Unit offers visitors several interactive, object based learning activities in which participants will learn about the structure and function of proteins and experience some symptoms and impacts of dementia when the proteins cease to function correctly.

Children can leave with their own creations of DNA bracelets and brain hats.

Journey across the senses

Mai-Carmen Requena-Komuro, PhD researcher, Institute of Neurology, Dementia Research Centre

Have you ever wondered how your brain enables you to talk, have a good laugh, listen to music? Can we always rely on our senses? What happens when the brain stops working properly? We will present our various research projects which explore in creative ways how we interact with our environment and how different forms of dementia can impact on this.

The Third Thumb Project – exploring neural correlates of hand augmentation

Dani Clode, Designer & Research Assistant, Plasticity Lab

The Third Thumb is a 3D-printed thumb extension for your hand, controlled by your feet, investigating the relationship between the body and prosthetic technology. By studying the neural correlates of hand augmentation, we probe the boundaries of neuroplasticity, seeing how it can be harnessed to improve usability and control of prosthetic devices.

www.youtube.com/watch?v=UD_LwZD2KIs

The age of anxiety

Dr Audrey Mercer, Lecturer, School of Pharmacy

It's stressful this living lark, right? If you want to find out what anxiety does to your short-term memory or if you just want a place to relax and try our colour therapy corner, this is the place to be.

The Consciousness Field

Maria Lopes, Anthropologist/ Artist, Alumni: Social Anthropology

The Consciousness Field is an Interactive art installation/ ethnographic study of consciousness where ideas about what consciousness is are collected. Here a collaboration between Maria Lopes and Prof Chris Frith marks the 10 Year Anniversary of the installation, first created for The Brain Unravelled exhibition in 2009 at UCL. The public will experience the installation ten years on, and have an insight into the work of Prof Chris Frith at UCL's Wellcome Trust Centre for Neuroimaging.

