

IoN ANNUAL ADDRESS 2019

REVIEW OF THE PAST YEAR





Science

Patients

Discovery science and bi-directional translational research

8 Departments, 1200 staff and students, £268m active grants



Current active research grant funding £268m

Total

Medical Research Council

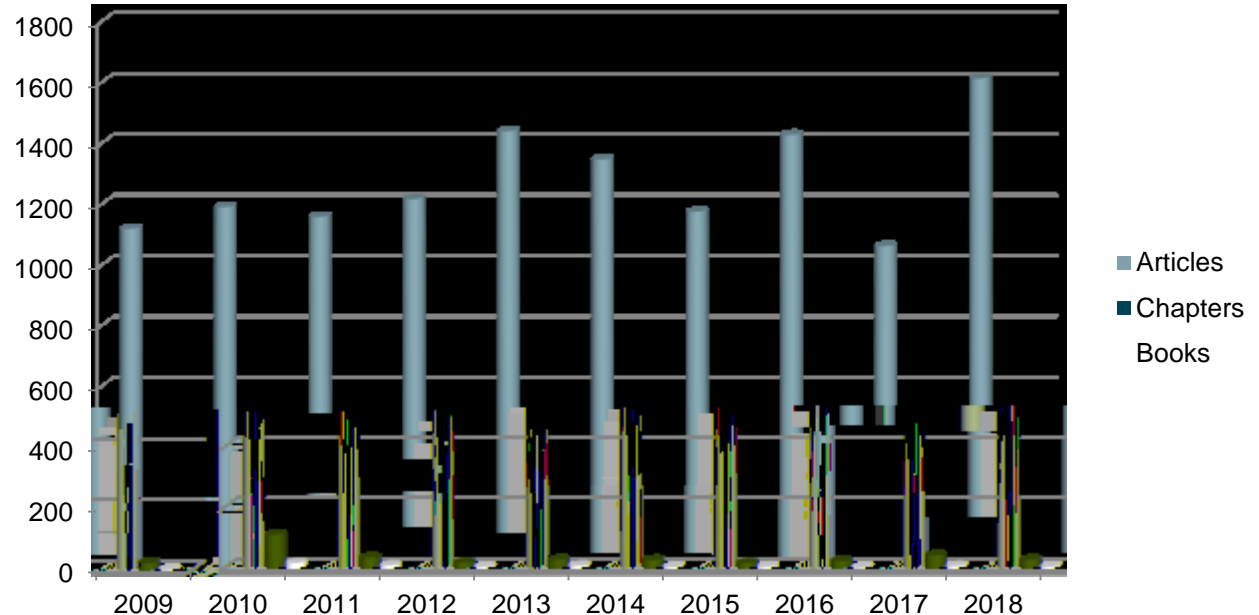
Pitceathly	£1.1m
Hanna, Reilly, Houlden	£3.66m
Lambert	£1.2m
Tabrizi, Bates	£1.5m
Busche	£1.6m
Hong	£1.8m
Fratta	£1.9m
Sleigh	£1.2m

Impact: published output / citations



Outputs in 2018:

- 1613 papers (1 every 5h!)
- 22 book chapters
- 1 book



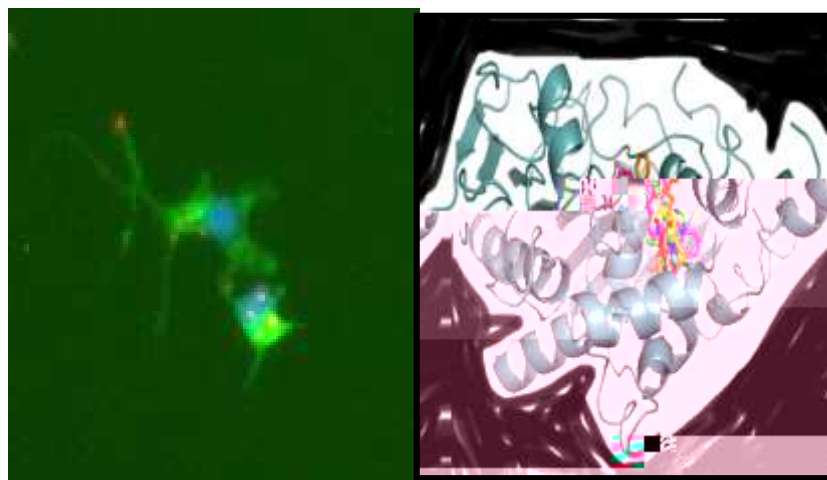
ISI world ranking for highly cited authors in Neuroscience and Behaviour: 5 in the top 100 / 4 in the top 50

68 publications in the top 50 highest impact journals:

BMJ (5), Cell (6), JAMA (2), Lancet (5), Lancet Neurology (31), Nature (4), Nature Biotechnology (1), Nature Genetics (6), Nature Medicine (2), Nature Methods (1), Nature Reviews Disease Primers (1), Nature Reviews Neuroscience (1), Science (3).



Successful Quinquennial
Review
£15M funding for 2020-25

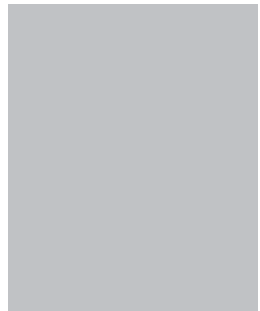
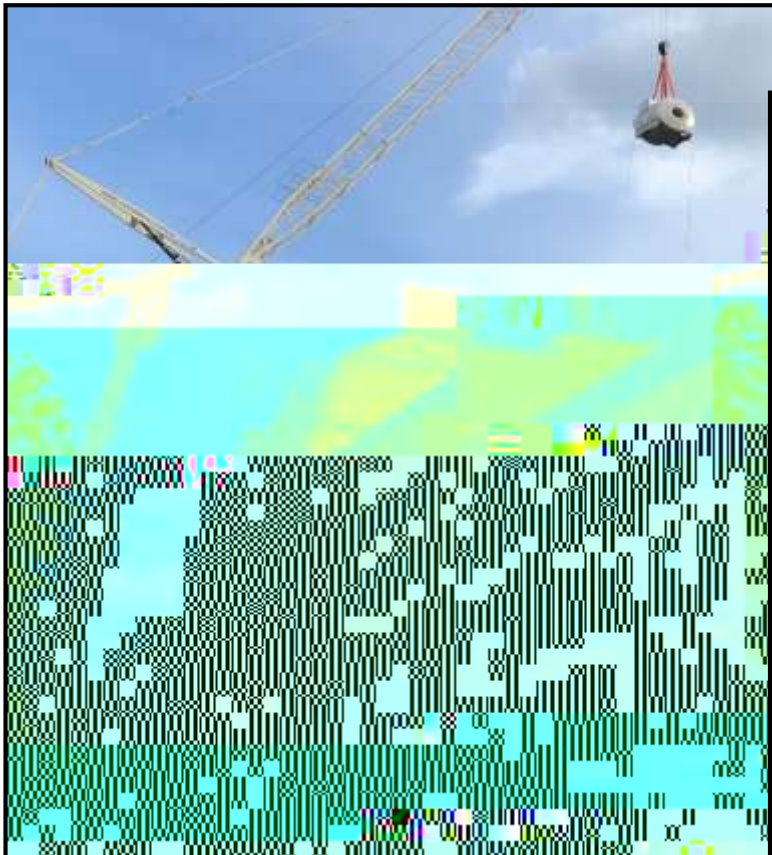


(Some) research highlights 2018-19





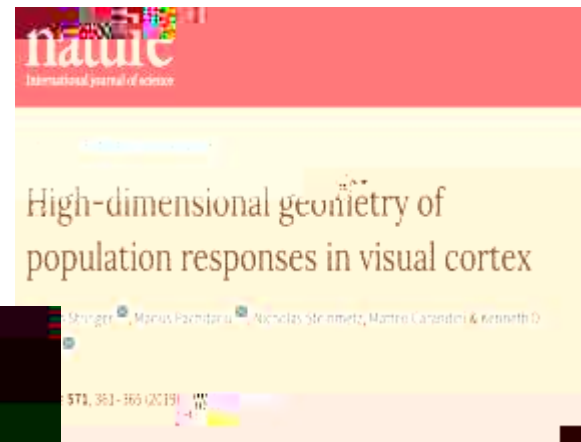
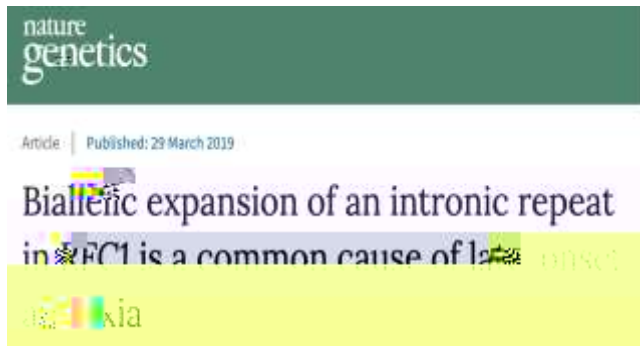
May 31st





50th Anniversary of Reta Lila Weston Institute symposium, Attended by trustees and UCL Provost – an artwork from QSBB was presented by Provost





Cell

Heteromeric RNP Assembly at LINEs Controls Lineage-Specific RNA Processing

Abstract

Young LINEs contain highly multivalent binding sites for splice-repressive RNA-binding proteins (RBPs) MATR3, PTBP1

evolutionarily young LINEs

LINEs Human Introns

>1kb

Authors

Jan Attig, Federico Agostini, Clare Gooding, Christopher W.J. Smith, Nicholas

Correspondence



INAUGURAL SYMPOSIUM SEPT 2019

(>30 waiting list)

- Representatives from Charities, MRC; Journal Editors; MHRA; NHS; 16 Industry Reps

- Across UK: London, Cambridge, Sheffield, Reading, Oxford, Midlands

- International: USA, Italy, Denmark, Netherlands



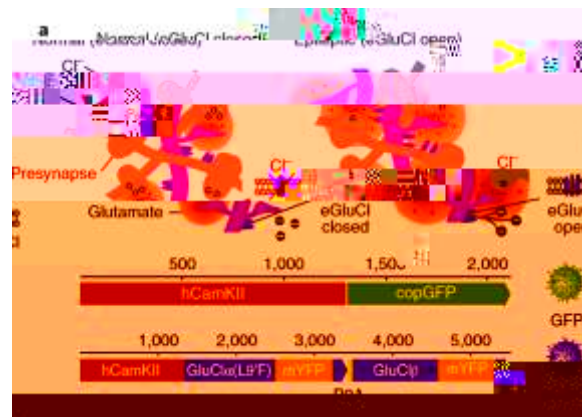
Lizzy Fisher
Debbie Hadley



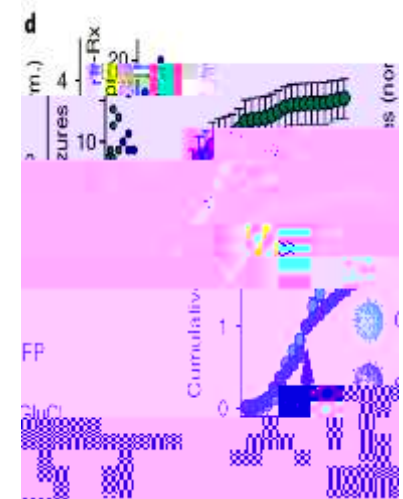
Expressing worm receptors to cure epilepsy



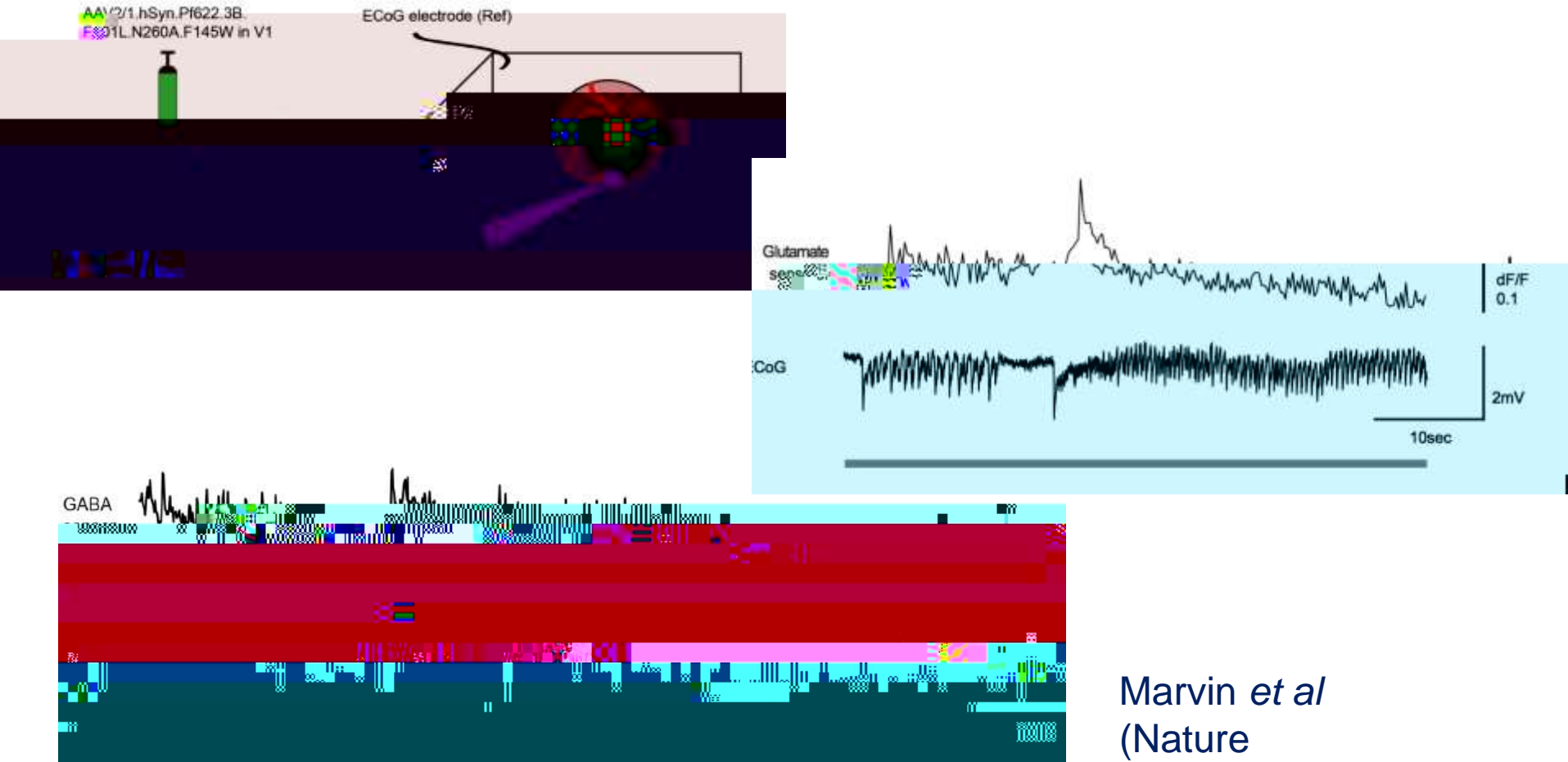
Mechanisms underlying epilepsy



Gene therapy for refractory epilepsy



First measurements of extracellular glutamate and GABA during seizures



Marvin *et al*
(Nature
Methods 2019)

Individual treatment responses: towards personalised medicine in multiple sclerosis

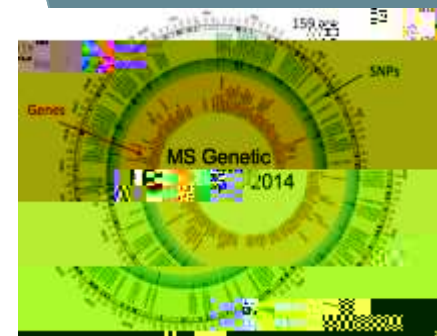
Information that defines an individual disease

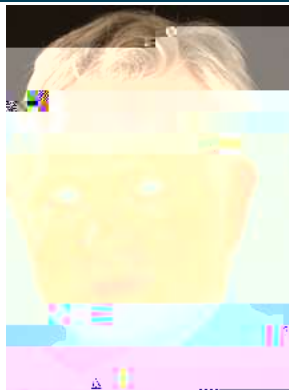
Major trial of strategies to treat multiple sclerosis begins

The biggest ever trial of secondary progressive multiple sclerosis (SPMS) in the UK has begun under UCL research leadership.



Olga Ciccarelli
NIHR
Professorship





Dave Werring Head



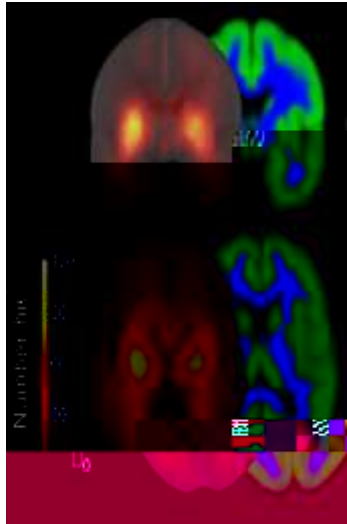
Lancet Neurol 2019



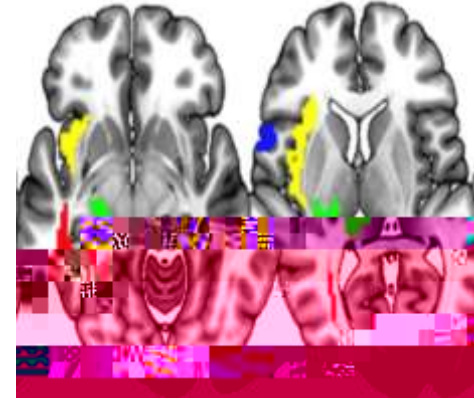
Cerebral microbleeds and stroke risk after ischaemic stroke or transient ischaemic attack: a pooled analysis of individual patient data from cohort studies

Lancet Neurol 2019

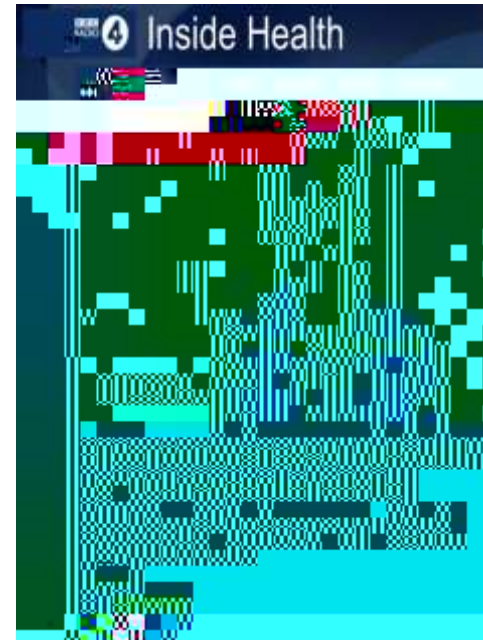
Cerebral Amyloid Angiopathy following Childhood Exposure to Agent Orange



Alex Leff and
Jenny Crinion
awarded
£600,000 (National
Brain Appeal) to
set up a high-dose
aphasia service
Commenced 2019



**Parashkev
Nachev: £4.5 million
Wellcome
Innovations Grant:**
Programme for High-
Dimensional
Translation in
Neurology (Stroke)
Commenced 2019



Prof Leff talked
about language
after stroke
on BBC Radio 4



Genetic Epidemiology of Alzheimer's Disease

Alzheimer's Disease

Alzheimer's disease is a neurodegenerative disorder characterized by progressive memory loss and cognitive decline. It is the most common cause of dementia, affecting approximately 10% of the population over the age of 65. The disease is caused by a combination of genetic, environmental, and lifestyle factors.

The genetic epidemiology of Alzheimer's disease involves the study of how genetic factors influence the risk of developing the disease. This includes identifying specific genes and variants that are associated with an increased or decreased risk of Alzheimer's disease.

Key genetic findings in Alzheimer's disease include the discovery of the APOE4 allele, which is a major risk factor for late-onset Alzheimer's disease. Other genes, such as PSEN1 and APP, are associated with early-onset Alzheimer's disease. The study of genetic epidemiology helps to understand the underlying mechanisms of the disease and may lead to the development of new treatments and diagnostic tools.

Genetic Epidemiology of Alzheimer's Disease

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ORIGINAL ARTICLE

Tauopathy in Huntington's Disease

Sarah J. Tabriz, M.B., Ch.B., Ph.D., ... Landashmeyer, M.D., Edward J. Wild, M.B., B.Chic., Ph.D., ...



HUNTINGTON'S DISEASE

Evolution of CAG Repeats

Association of CAG Repeats With Long-term Progression in Huntington

... Ph.D., James A. Mills, M.Sc., Alexandra Dun, MD, ...



Regulatory mechanisms of incomplete huntingtin



mHTT Seeding Activity: A Marker of Disease Progression

... Ph.D., Alexander Bartsch, ...



MSH3 modifies somatic instability and disease severity in Huntington's and myotonic dystrophy type 1

... Ph.D., Yilia Lerebault, ...



In vivo characterization of white matter pathology in premanifest huntington's disease

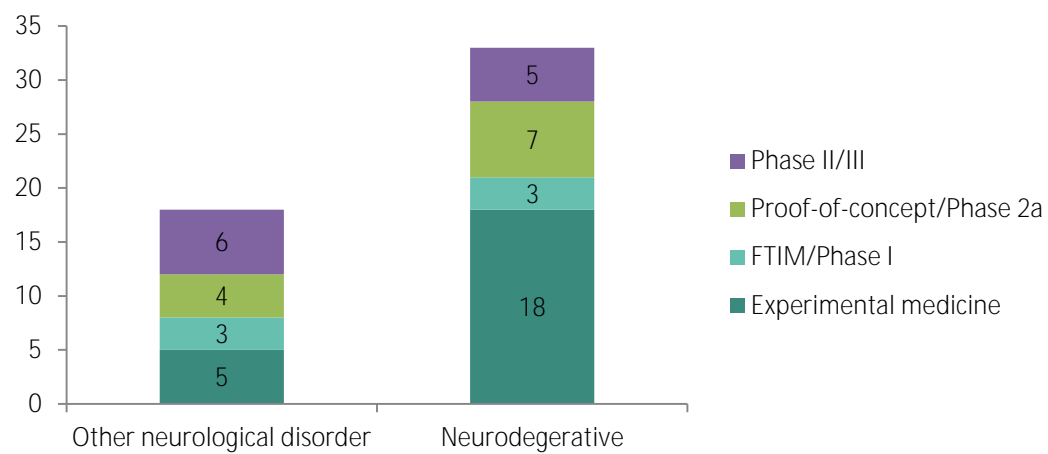
UCL research into genetic therapies for

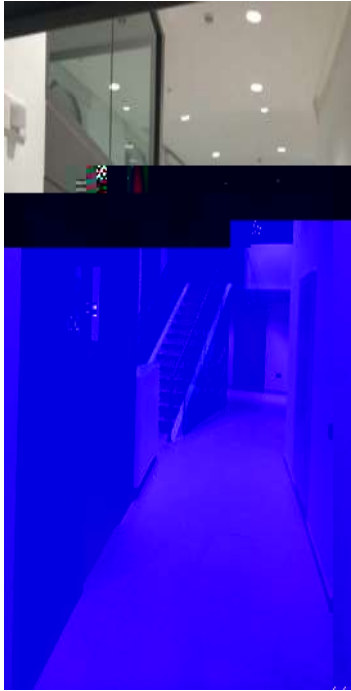
Lancet Neurol 2019



Harnessing Seven Decades Of Prospective
Data Collection To Understand The Causes
Of Dementia A Deep Phenotyping Study
Of The British 1946 Birth Cohort

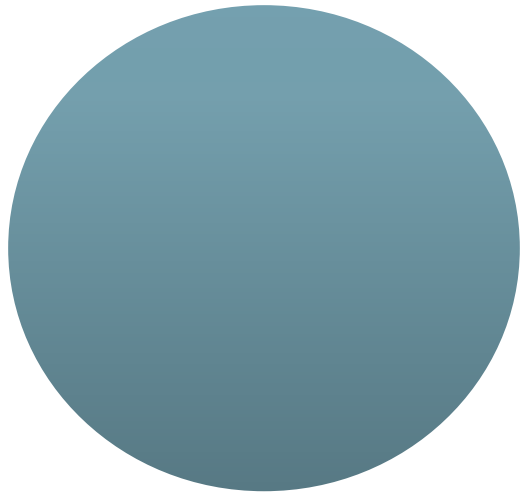
Schott, Fox, Zetterberg, Crutch, Hardy,
Richards, Chaturvedi
\$10,559,333





... September 2019

- 30-40 active research studies active at any one time
- 10-20 research studies in set up at any one time







Professor Simon Shorvon
Department CE Epilepsy



Shihan Jayasuriya
Institute Executive
Officer, IoN
30 years at UCL!



Professor Martin Brown
Department of Brain Repair
& Rehabilitation



Professor Gerald Stern

October 9 1930 to September 9 2019

UCL OVPD



Brain Research UK



National Brain Appeal



Hospital / Trust



NIHR Biomedical Research Centre



UCL Partners



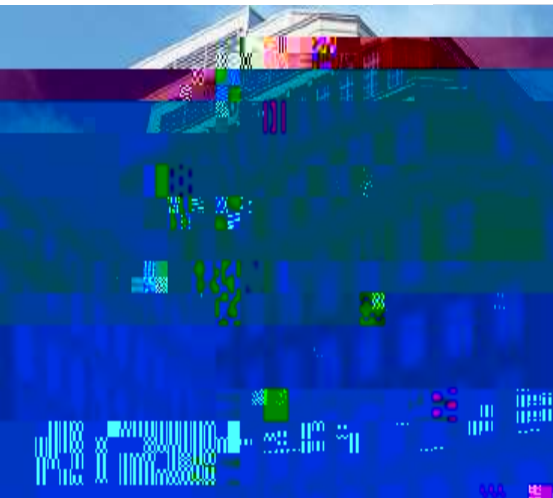
Faculty of Brain Sciences and School



UCL Neuroscience Domain



**A single cohesive translational research community
across different locations**



Russell Square House



**23 Queen Square: QSIoN
headquarters**



Wakefield Street



Royal Free London



256 Grays Inn Road

New Translational Neuroscience Building EDH 2023

Major investment in the future of IoN

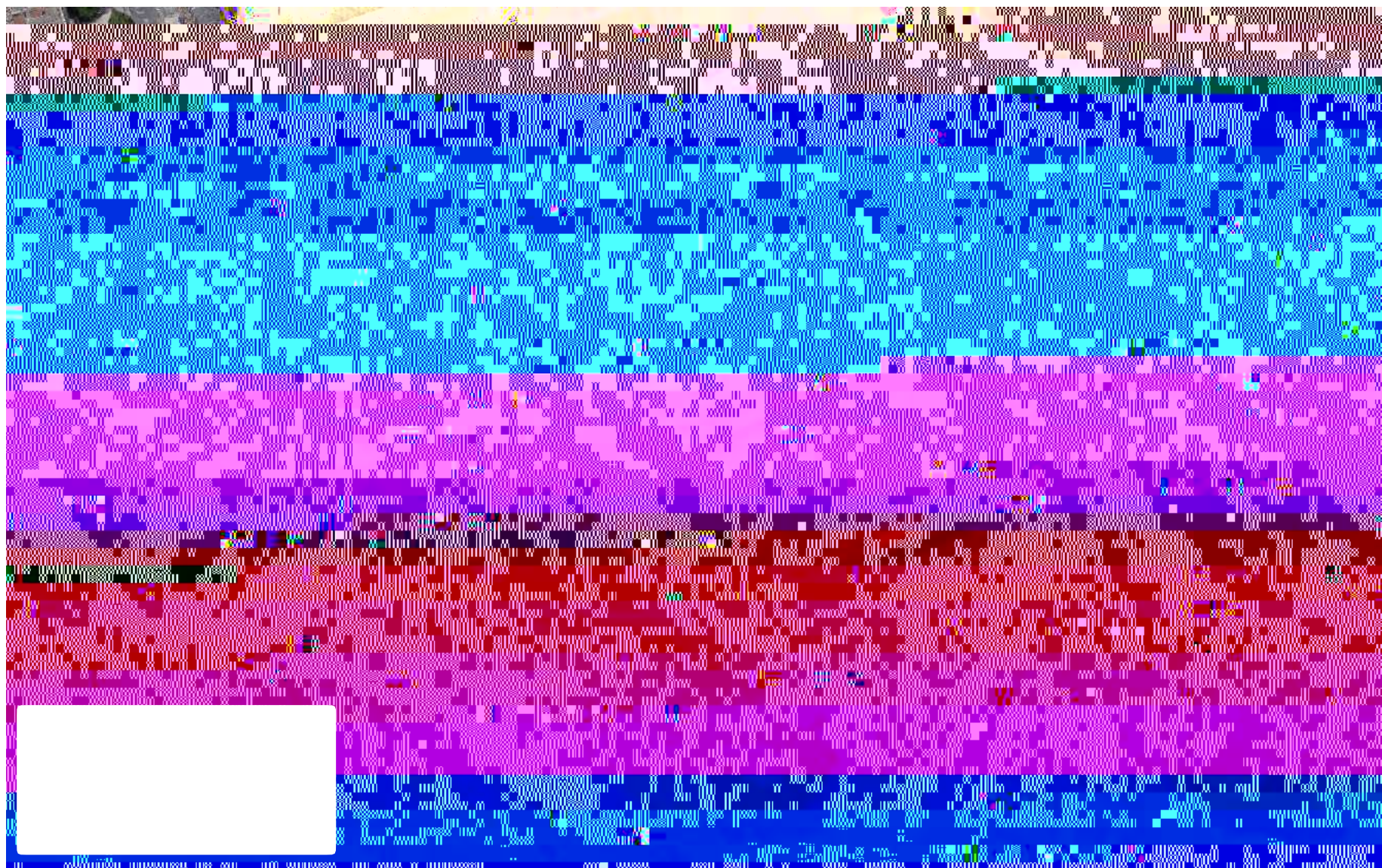
~£281M

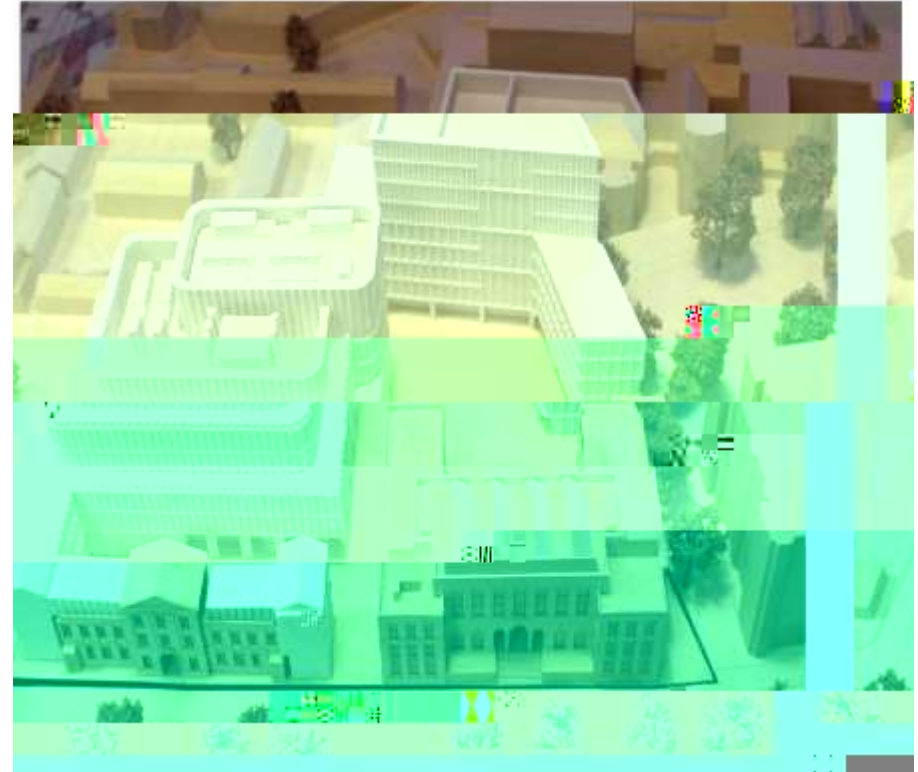
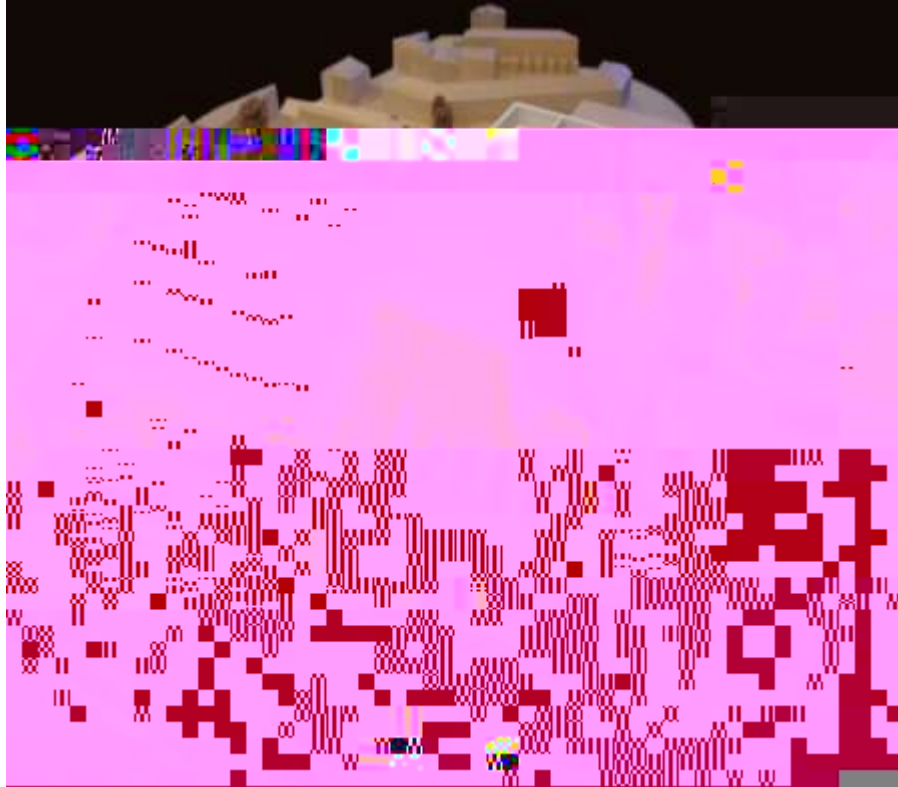


| GAP | £23.8M

Full business case approved by UCL Council March 2019

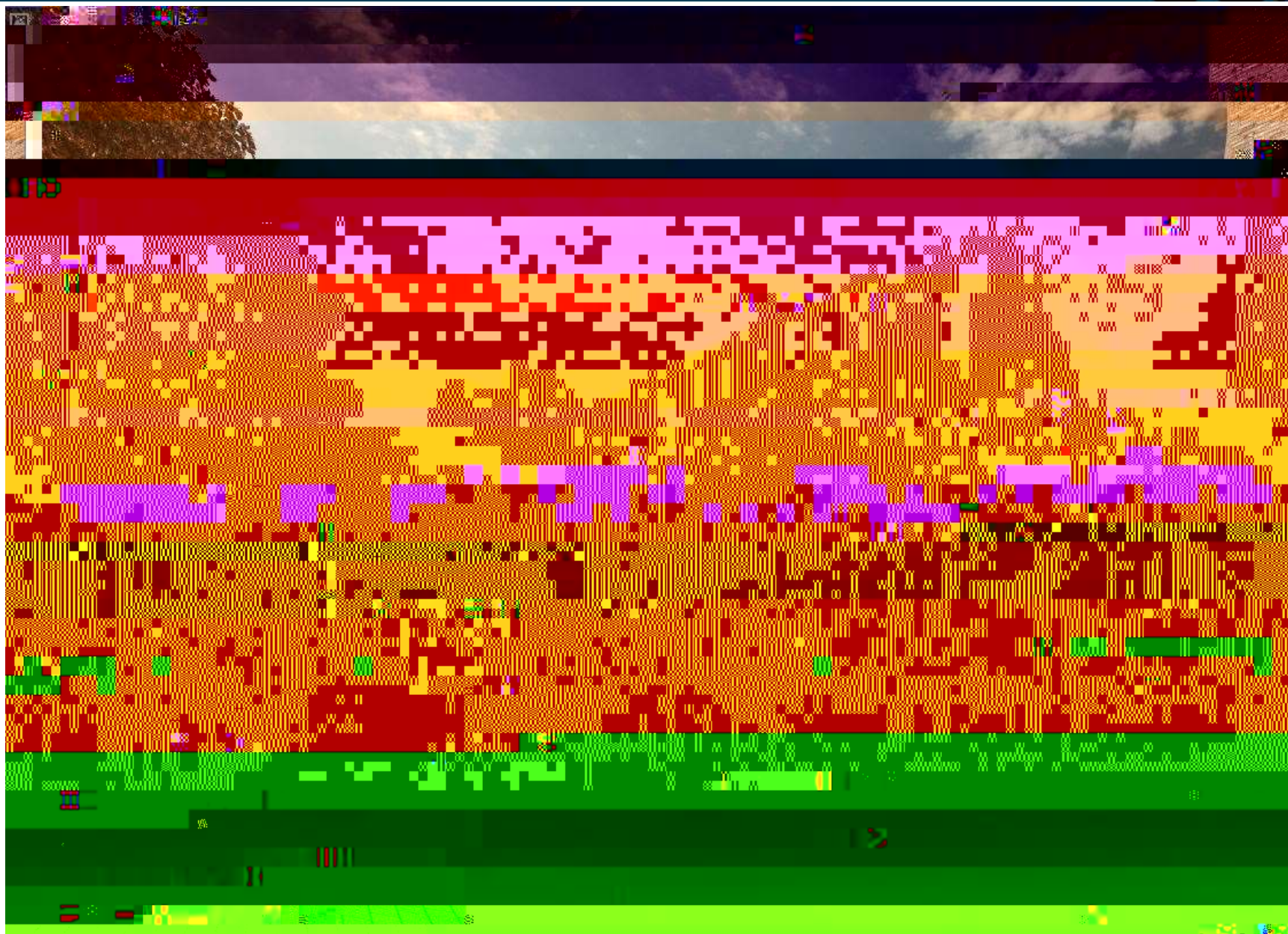
Camden planning approval granted Sept 2019





**Thanks to
Michael Schuitevorder
Building Project Programme Director**

**Roger Tuke
UCL Estates**

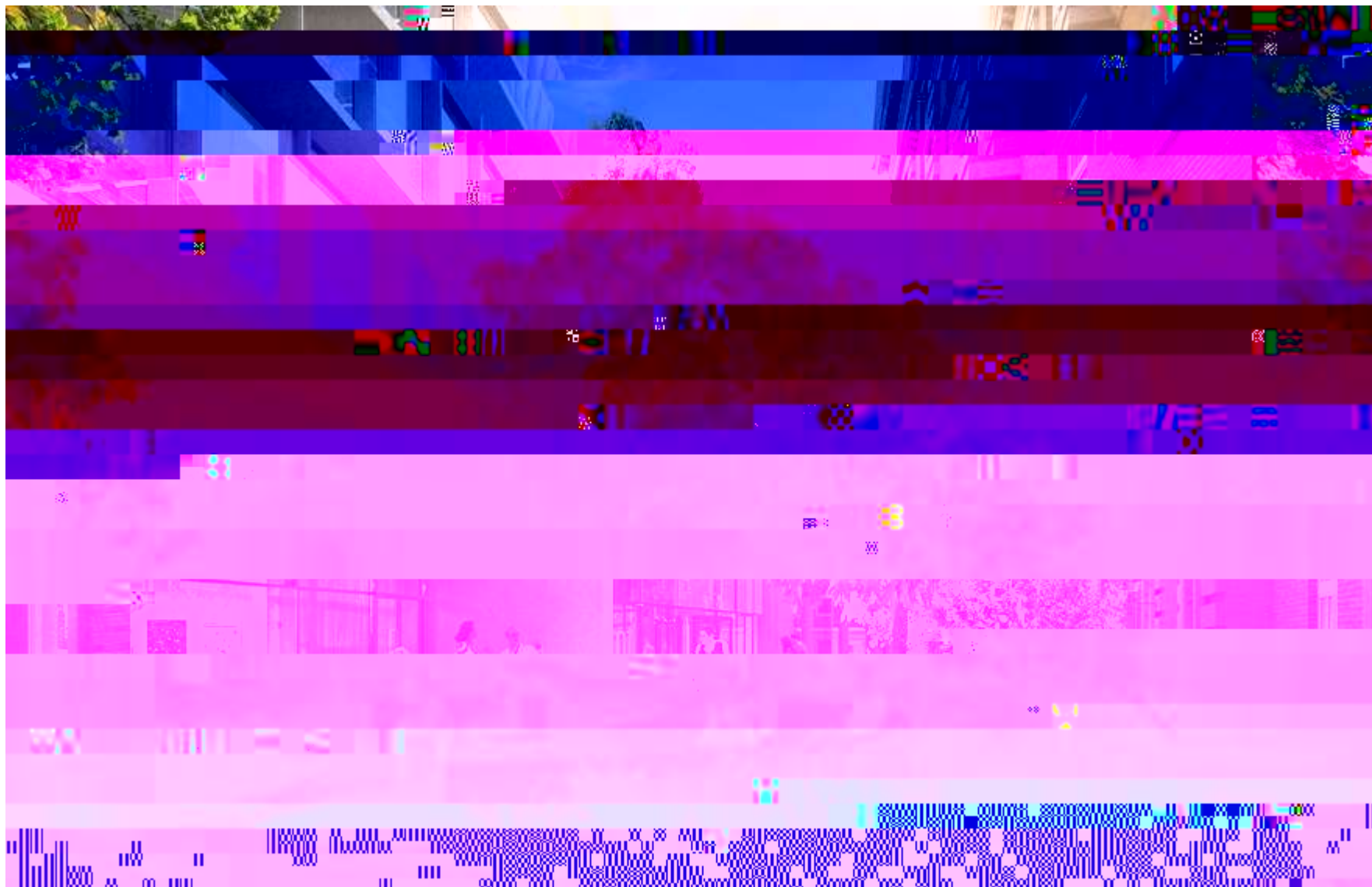


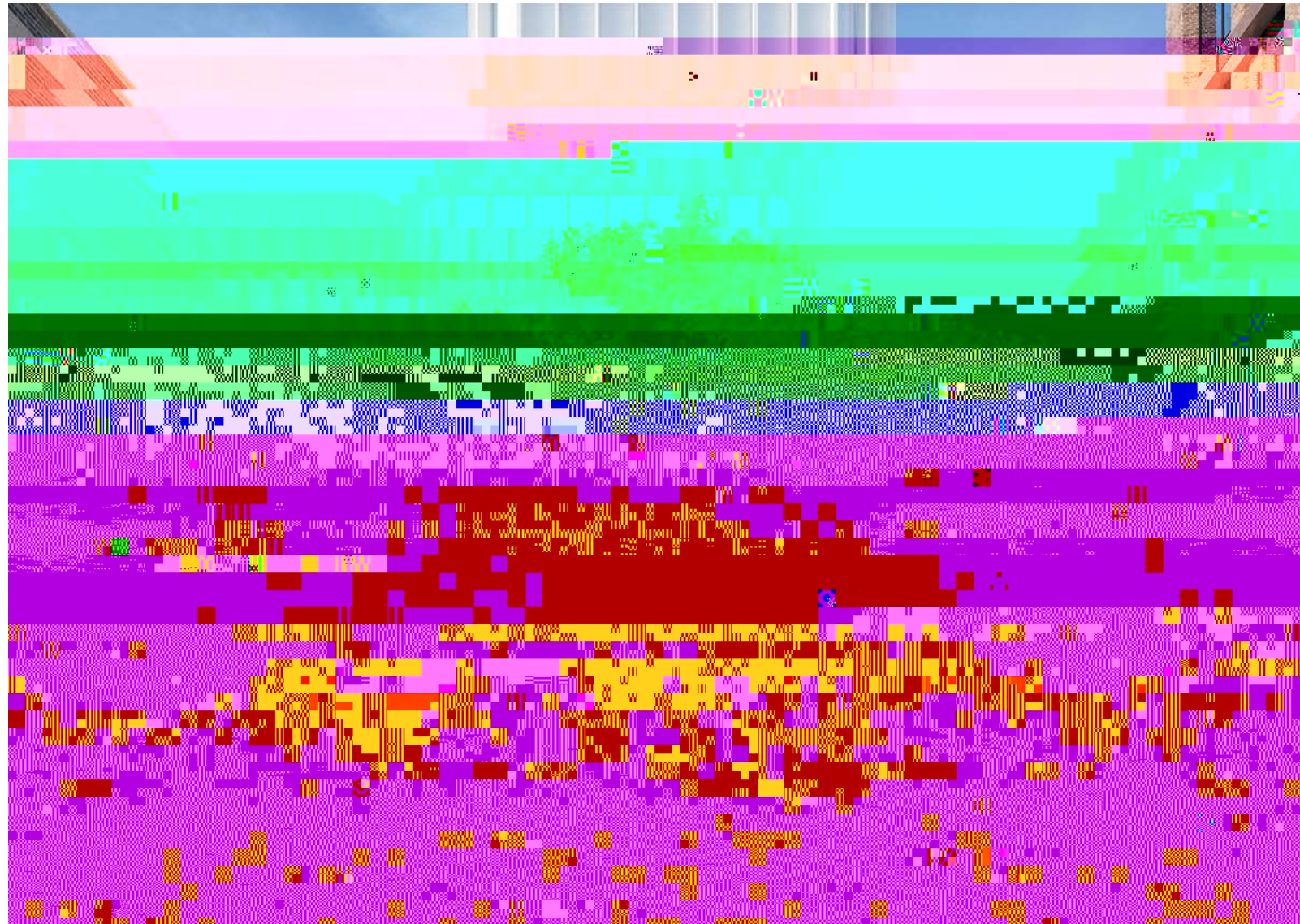


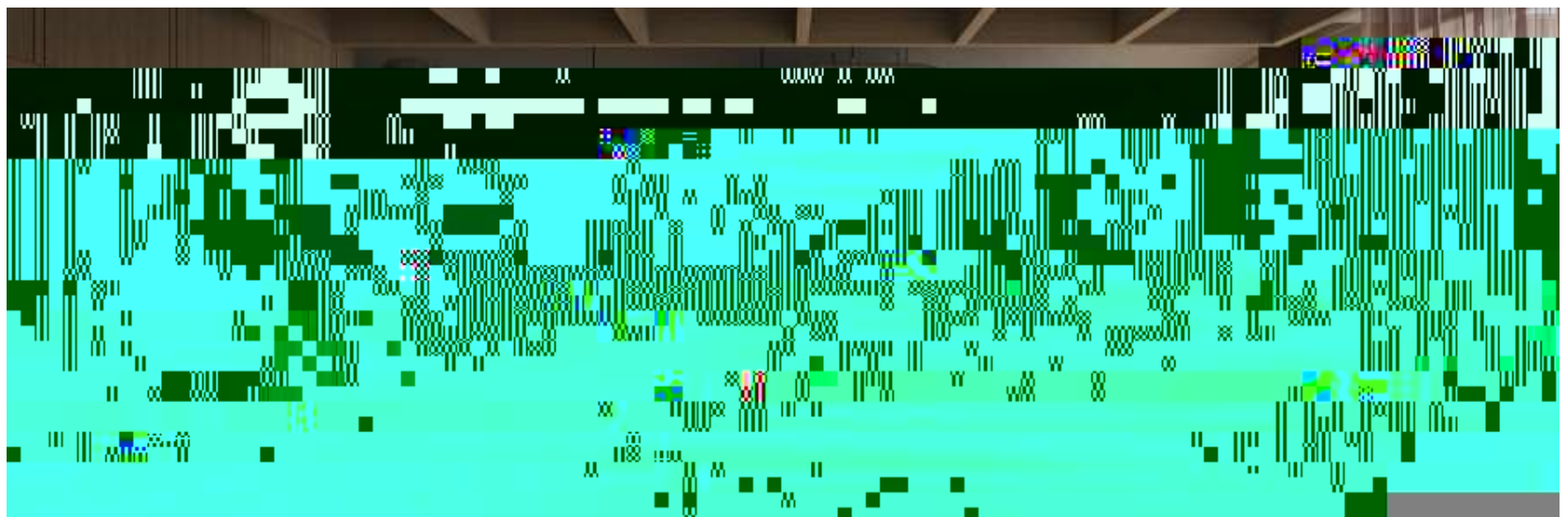
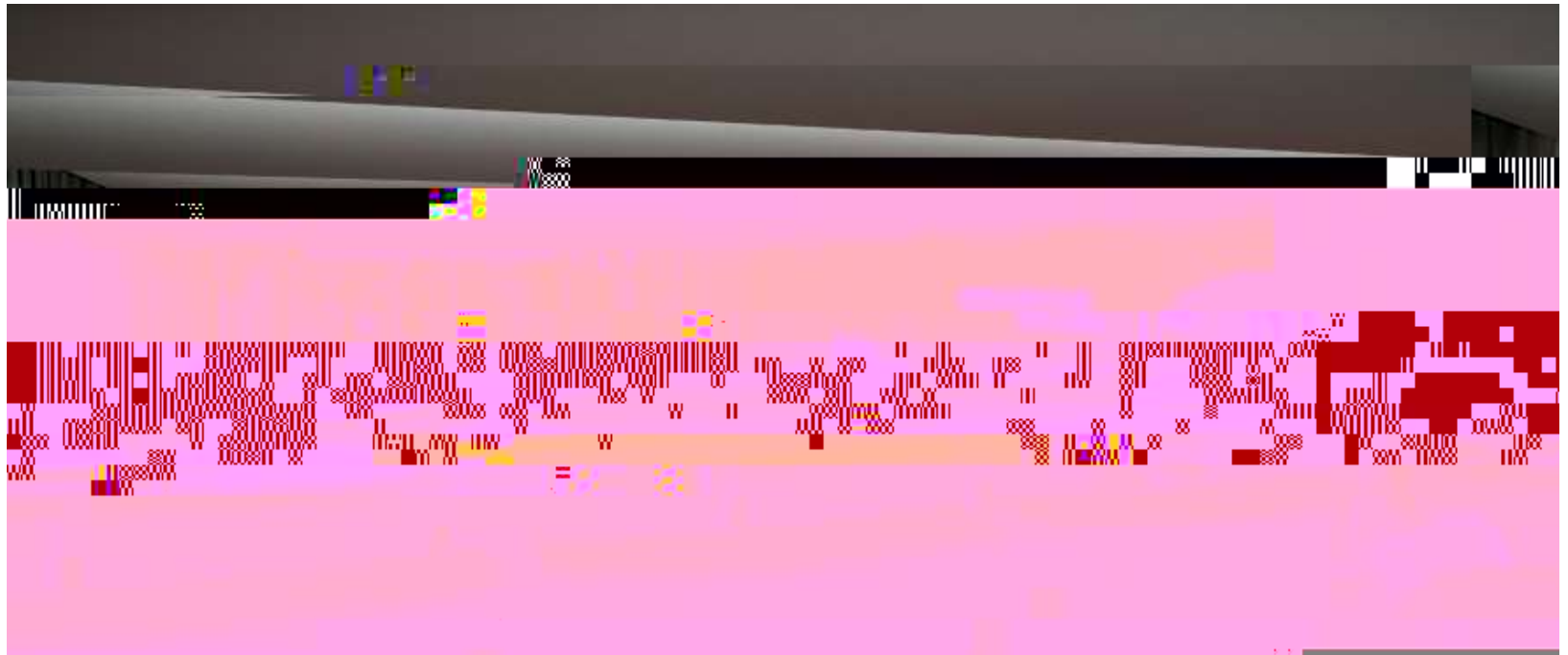




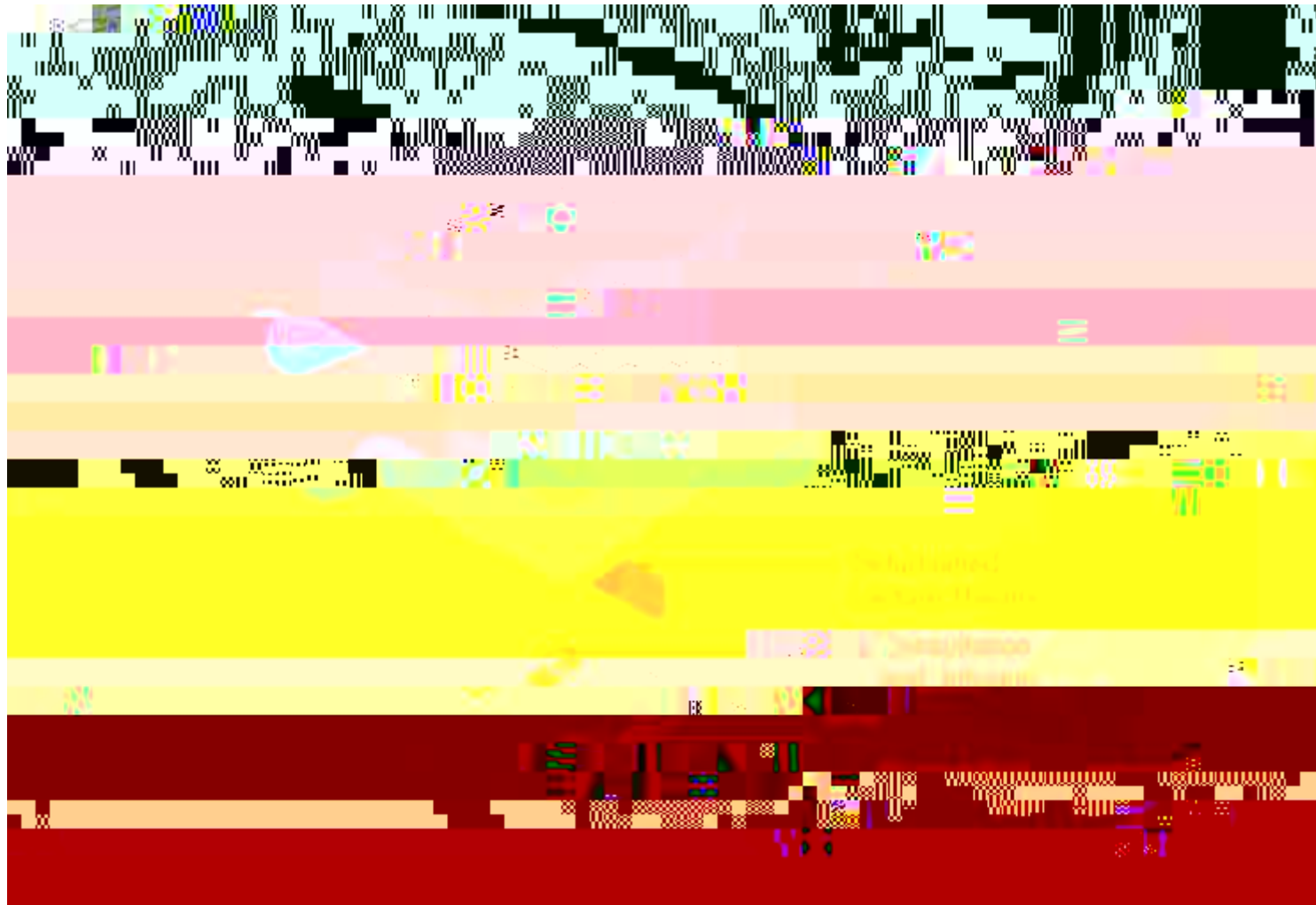




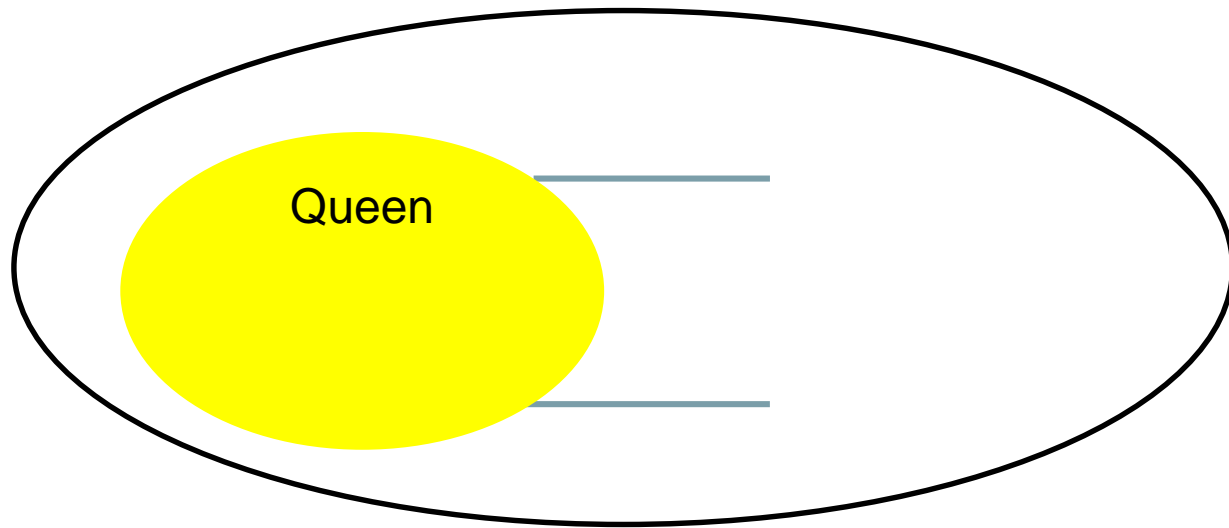




Queen Square House



Linking Translational Neuroscience Community



Teaching awards 2018/19

Djamshidian-Chinthapalli award for outstanding contribution to clinical teaching

- Dr Etienne Laverse

Clinical Tutor of the year

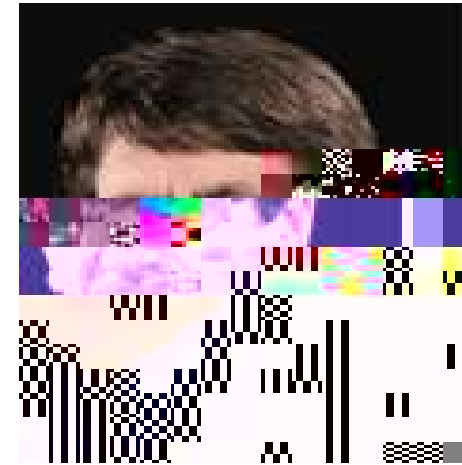
- Dr Sam Shribman
- **Dr Tony Pullen Lecturer of the Year Award**
- Prof Nick Fox

ION LIFE-LONG LEARNING STRATEGY

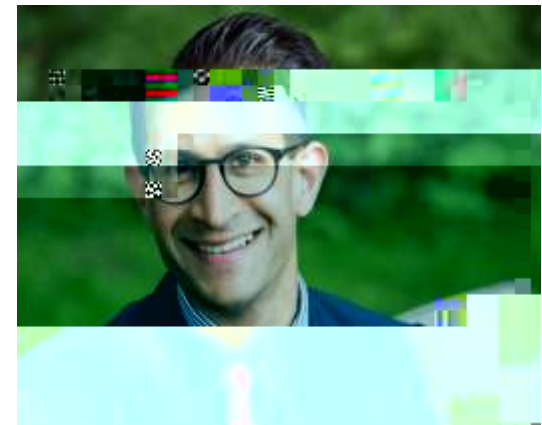


MASTER CLASS (2 days)
NEUROLOGY 2015, 2016, 2017, 2018, 2019

250-300 delegates trainees and consultants



Prof Simon Shorvon



Dr Tabish Saifee



Student Prizes 2019



2019

MSc Clinical Neurology



Hugo James Ross Prize

Dr Sabhat Iqbal

Queen Square Essay Prize 2019

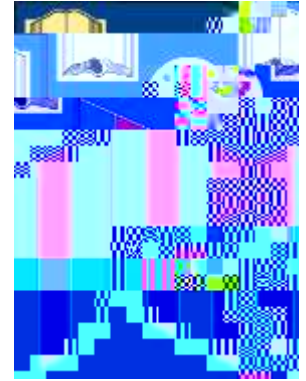
Dr Karen Sutterlin

MRC Clinical Training fellow



Annual Address

**Dr C. Frank Bennett, PhD,
Senior Vice President,
Research & Neurology
Franchise Leader,
IONIS Pharmaceuticals Inc.**





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**Dr C. Frank Bennett, PhD,
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