

A microscopic view of cells, likely from a human cell line, showing a grid-like structure of cells. Several cells contain bright orange, textured spheres, possibly representing specific organelles or markers. The background is a light purple/pinkish hue with a fine, dotted texture.

THE HUMAN CELL FORUM 2026

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user
exchange

AGENDA

WELCOME

FRANCIS CRICK AUDITORIUM

9.00 Registration & refreshments

10.00 Welcome

Przemek Obloj
CEO, bit.bio

10.10 Opening address

Lord David Prior
Deputy Chairman UK and
Global Senior Advisor, Lazard

SESSION 1

FRANCIS CRICK AUDITORIUM

Moderator: Emma Pepperell, PhD
VP Commercial, bit.bio

10.25 Accelerating the development
and translation of new approach
methodologies through the
Queen Mary centre for predictive in
vitro models

Professor John Connelly
Professor of Bioengineering
Queen Mary University of London

10.50 Establishing validity standards for
iPSC modelling of neuropsychiatric
disorders

Professor Anthony Vernon
Professor of Neuropsychopharmacology
Fellow of the Higher Education Academy
King's College London

11.05 Cell identity and regulatory
architecture: linking 3D genome
organisation, multiomics and
engineered human cells

Dan Turner, PhD
Chief Technology Officer
Enhanced Genomics

BREAK

11.30 Refreshments

Poster session & image gallery

Bricks of biology competition
Race the clock: Be the fastest to
correctly build the brick-style neuron
model. The quickest brain at the end of
the day gets to keep p the kit!

Access the digital agenda
and speaker abstracts here



AGENDA

SESSION 2 | TRACK 1

FRANCIS CRICK AUDITORIUM

Building in vitro models of neurodegeneration: Recapitulating human-specific pathogenesis in iPSC-derived cells

Moderator: Zoe Nilsson, PhD
Associate Director Marketing, bit.bio

12.00 Autoantibody-driven synaptic impairment in cerebellar ataxia: insights from in vitro systems

Professor Simone Mader, PhD
Professor & Director,
Translational Immunology,
University Hospital Erlange

12.20 Validation of HTT CAG50 iPSC-derived neurons to support drug discovery in Huntington's disease

Jovana Kovačević, PhD
Scientist Discovery,
VectorY Therapeutics

12.35 A human iPSC model of tauopathies expressing 4R tau isoforms

Aurora Veteleanu, PhD
Neuroscientist,
bit.bio

12.40 Tau aggregation at synapses

Professor Sir David Klenerman
Royal Society Professor
Molecular Medicine,
Department of Chemistry,
University of Cambridge

LUNCH

SESSION 2 | TRACK 2

ROSALIND FRANKLIN PAVILION

From research to regulation: Validating hiPSC-derived platforms for toxicity and liability assessment

Moderator: Tom Harris-Brown
Senior Portfolio Manager, bit.bio

12.00 Regulatory-ready NAMs: Advances in hiPSC-cardiomyocyte and neural MEA assays

Mike Clements, PhD
SVP Scientific Partnerships &
Strategy, Axion BioSystems

12.20 Building a predictive structure activity relationship (SAR) tool to help avoid ion channel related central nervous system liability in novel compounds

Louisa Zolkiewski, PhD
Postdoctoral Research Scientist
Apconix

12.35 From action potentials to organoids: A unified optical platform for multi-modality safety pharmacology in human iPSC models

Hamed Ghazizadeh, PhD
Sr. Business Development Manager,
Curi Bio Inc

12.40 Development of consistent, predictive human iPSC-derived hepatocytes to improve translational research and toxicity testing

Sabitri Ghimire, PhD
Senior Scientist II, bit.bio

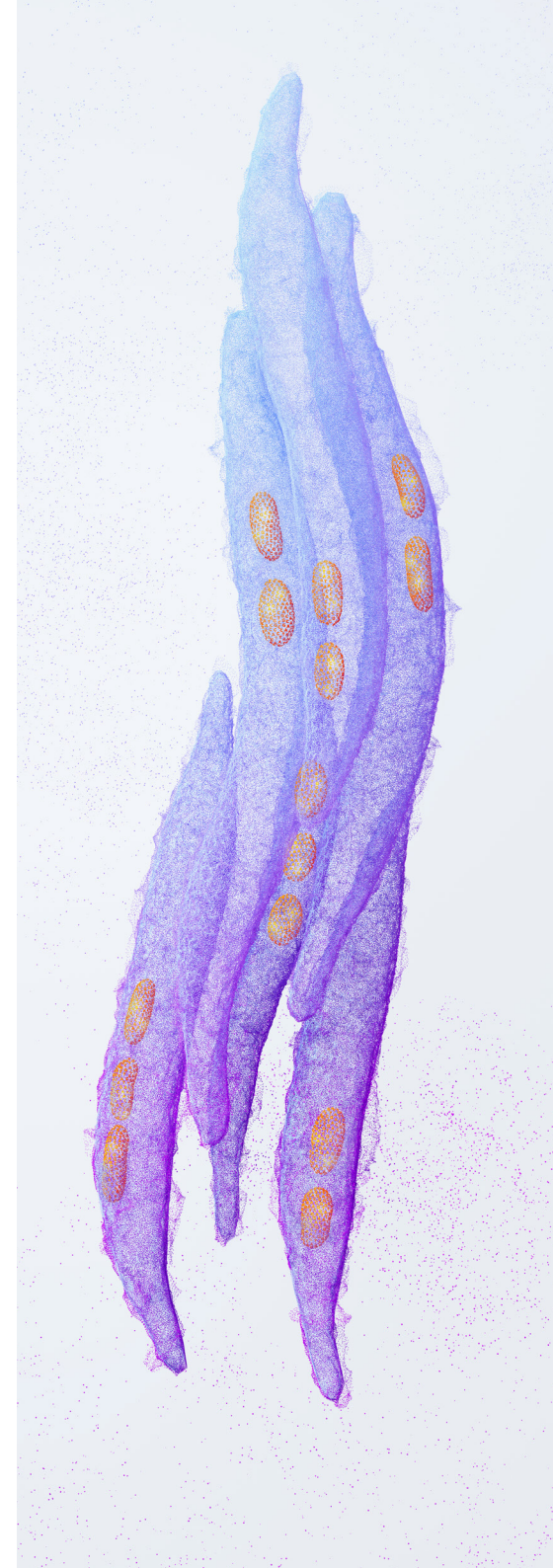
WORKSHOP SERIES

BARBARA MCCLINTOCK PAVILION

12.00 Mastering cell culture: Troubleshooting your biggest hurdles in ioCells™ adherence, morphology, and counting

Luke Foulser
Field Applications Scientist,

Emmalie Schoepke, PhD
Senior Field Applications Specialist,
bit.bio



SESSION 3 | TRACK 3

FRANCIS CRICK AUDITORIUM

Engineering complexity: hiPSC-derived NAMs for neurodegenerative disease

Moderator: Sebastian Fiedler, PhD
Sr. Demand Generation Manager, bit.bio

-
- 14.00 **Complex hiPSC models to investigate novel mechanisms and therapeutic efficacy in Alzheimer's disease**
Katerina Gospodinova, PhD
Neuroinflammation Team Lead,
Alzheimer's Research UK Oxford Drug
Discovery Institute, University of Oxford
-
- 14.15 **Advancing functional characterisation of in-vitro neural models with next generation electrophysiology**
Tom Dufor, PhD, Field Application
Scientist, MaxWell Biosystems
-
- 14.20 **Development of advanced 3D models for neuroscience drug discovery**
Matthieu Trigano, PhD
Senior Scientist In Vitro Neurobiology,
Medicines Discovery Catapult
-
- 14.35 **A human 3D neuroinflammation model using BrainZell organoids with integrated bit.bio ioMicroglia**
Robin Pronk, PhD
Co-founder & CSO, BrainZell
-
- 14.40 **Patient iPSC-derived brain MPS to model gene by environmental interactions in neurological disorders**
Dowlette-Mary Alam El Din, PhD
Postdoctoral Fellow Center for
Alternatives to Animal Testing,
Johns Hopkins University
-
- 15.00 **Building better brain models: optimised iPSC-derived neuronal and microglial live-cell assays**
Jasmine Trigg Senior Scientist, Sartorius

SESSION 3 | TRACK 4

ROSALIND FRANKLIN PAVILION

Advancing drug discovery: High-throughput screening and functional genomics in hiPSC-derived cells

Moderator: Amanda Turner, Associate
Director, Portfolio & Partnerships, bit.bio

-
- 14.00 **Modelling TDP-43 proteinopathy in human iPSC-derived motor neurons captures mislocalisation and loss of function**
Elodie Chevalier, Sr. Research Scientist &
Marjorie Decroux, Sr. Research Assistant,
AC Immune
-
- 14.15 **CRISPR screens in human iPSC-derived neurons and glia for target identification and validation**
Alex Armesilla, PhD, Senior Portfolio
Manager, Custom Services, bit.bio
-
- 14.20 **MY014: Developing an intrabody-based gene therapy for TDP-43 proteinopathies**
Nikole Zuñiga Quiroz, PhD, Senior
Scientist Neurobiology, Mabyon AG
-
- 14.35 **Working with the MRC-AstraZeneca-University of Cambridge functional genomics screening laboratory**
Nicola McCarthy, PhD, Head of
Research, Milner Therapeutics Institute
-
- 14.40 **Signature-guided, phenotype-driven drug repurposing in familial Alzheimer's disease models from human iPSCs**
Amina McDiarmid, PhD, Postdoctoral
Research Fellow, University of Edinburgh
-
- 14.55 **A step toward reproducible cell culture with hamilton**
Shannon Crow, Territory Sales
Manager, Hamilton Sales and Service
UK & **Adam Hill**, Scientist, bit.bio

WORKSHOP SERIES

BARBARA MCCLINTOCK PAVILION

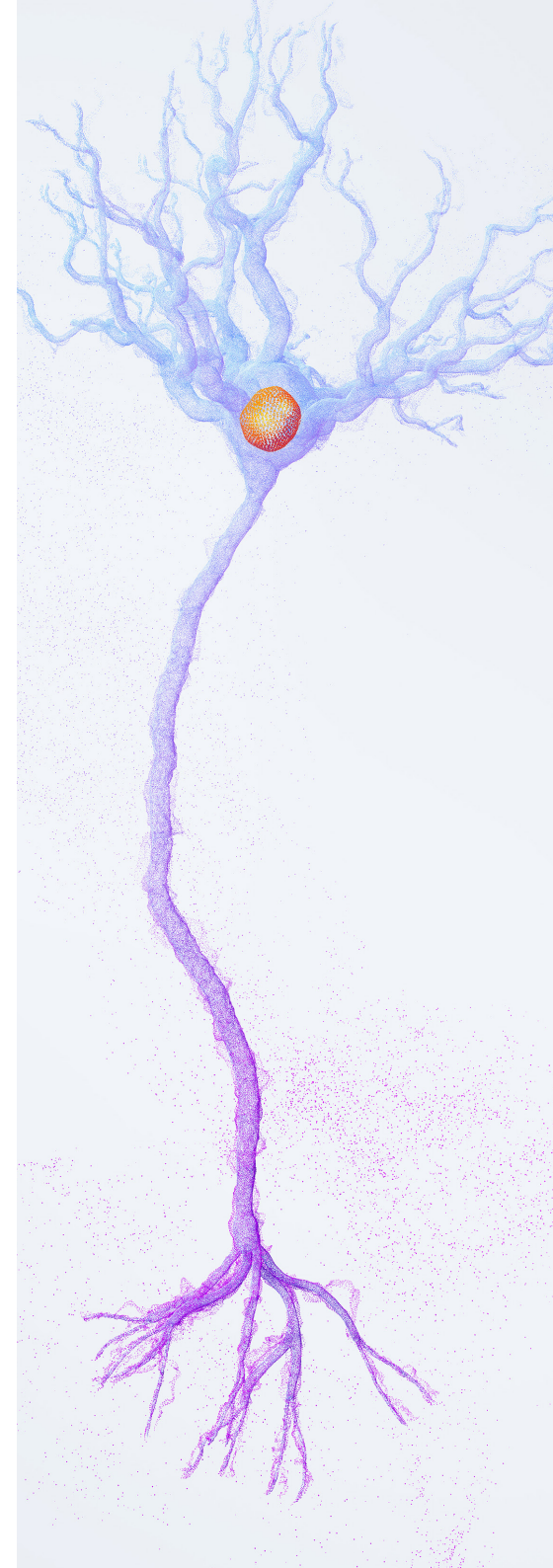
Top tips for human iPSC-derived cells

Moderators:

Luke Foulser
Field Applications Scientist, bit.bio

Emmalie Schoepke, PhD
Senior Field Applications Specialist, bit.bio

-
- 14.00 **Transfection workshop**
Tulin Tatar Ozkan, PhD
Senior Scientist, bit.bio
-
- 14.15 **Immunocytochemistry workshop**
Emmalie Schoepke, PhD
Senior Field Applications Specialist
bit.bio
-
- 14.30 **Flow cytometry workshop**
Claire McQuitty, PhD
Senior Scientist, bit.bio
-
- 14.45 **Building complex cultures of hiPSC-derived neurons and glia**
Mitzy Rios de Anda, PhD
Senior Scientist, bit.bio



BREAK

-
- 15.05 Refreshments
Poster session & image gallery
Bricks of biology competition
-

SESSION 4

FRANCIS CRICK AUDITORIUM

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- 15.30 Lightning talks
-
- 16.00 Human iPSC-derived neurons for neurotherapeutic discovery and development
Hassan Al Ali, PhD, MSM
Associate Professor, Neurosurgery & Medicine, University of Miami, Director, Drug Discovery Centre, The Miami Project to Cure Paralysis
-
- 16.30 Fireside chat
Professor Julie Frearson
Corporate Senior Vice President & Chief Scientific Officer Management, Charlie River
-
- 16.50 Panel discussion: Moving beyond the gold standard: Can NAMs outperform traditional models?
Professor Julie Frearson

Ross Dobie, PhD
Head of Science, The Centre for Human-Specific Research;

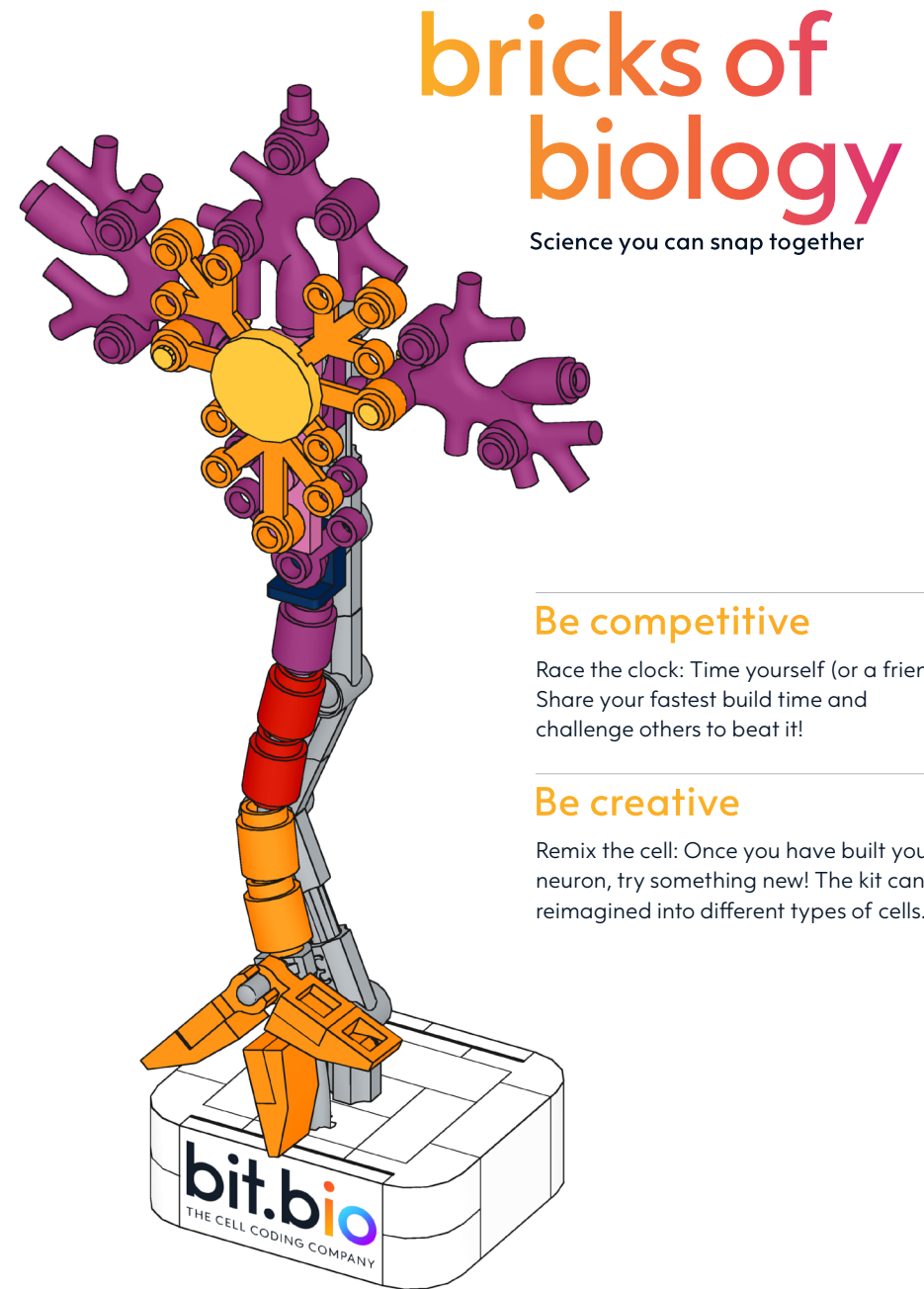
Eric Hill, PhD
Reader, Loughborough University;

Pelin Candarlioglu, PhD
Director, 3D and 3Rs
-

AWARDS AND CLOSING

-
- 17.20 Poster winner, image winner and fastest builder
-

DRINKS RECEPTION



Share your photos on social media using the hashtag #bricksofbiology

POSTERS

POSTER NO. 1

Multifactorial Evaluation of Neuroinflammatory Responses in iPSC-derived Microglia

Jasmine Trigg
Sartorius

POSTER NO. 2

Interferon- β -mediated activation of human iPSC-derived microglia increases tau phosphorylation in a human microglia-neuron co-culture model of familial British dementia

Lucrezia Bruno
University College London

POSTER NO. 3

Amyloid-beta ($A\beta$) synaptotoxicity is dependent on alpha-synuclein (α Syn)

Anshua Ghosh
King's College London

POSTER NO. 4

Modeling Human Migraine: From Induced Sensory Neurons to Personalized Patient Samples

María Lopez
Universidad Miguel Hernández

POSTER NO. 5

A human neuron-microglia tri-culture platform to study the influence of microglia on developing neuronal networks in vitro

Sara Guerrisi
King's College London

POSTER NO. 6

Modelling human oligodendrocyte (OL) heterogeneity using stem cells, mouse chimeras and organoids to study myelination and metabolism

Rana Fetit
University of Edinburgh

POSTER NO. 7

Modelling Cerebral Metabolic Derangements in Traumatic Brain Injury using Human iPSC-Derived Neurons and Astrocytes

Joshua Heihre
University of Cambridge

POSTER NO. 8

Validation of Human Cell Line-Derived Neurons as a Cellular Model for Postpartum Depression

Deepika Negi
University of Greenwich

POSTER NO. 9

Discovery of Novel Anti-fibrotic Drugs Through Phenotypic Screening Using Primary Human Cells: A Translational Success Story

Selim Cellek
ARU

POSTER NO. 10

Developing new model systems to investigate the involvement of the immune system involvement in age-related macular degeneration

Amanda Carr
University College London

POSTER NO. 11

A human iPSC platform for studying aggregation of pathogenic proteins in neurodegeneration

Matthieu Trigano
Medicines Discovery Catapult

POSTER NO. 12

An iterative human iPSC programming pipeline for scalable bioproduction and NAM development

Alessandro Bertero
Università di Torino

POSTER NO. 13

Generation of an immunocompetent neural assembloid model

Kara O'Driscoll
King's College London

POSTER NO. 14

Benefits of early in vitro screening for seizure liability in problem solving and decision making

Louisa Zolkiewski
Apconix

POSTER NO. 15

Utilising in vitro assays to assess drug-induced sedative central nervous system liabilities

Louisa Zolkiewski
Apconix

POSTER NO. 16

Building a predictive structure activity relationship tool to help avoid ion channel related central nervous system liabilities in novel compounds

Louisa Zolkiewski
Apconix

POSTER NO. 17

A next-generation human brain organoid HTS platform for functional and mitochondrial neurotoxicity profiling

Robin Pronk
BrainZell

POSTER NO. 18

Myomaker Bio: Bespoke screening on complex muscle organs

Andrew Capel
Myomakers

POSTER NO. 19

From Action Potentials to Organoids: A Unified Optical Platform for Multi-Modality Safety Pharmacology in Human iPSC Models

Hamed Ghazizadeh
Curi Bio Inc

POSTER NO. 20

Functional 3D Human Neuromuscular Junctions Enable Scalable Neurotoxin Potency Testing and Translational Neuromuscular Research

Mohammad Khoonkari
Curi Bio Inc

POSTER NO. 21

Label-free Functional Characterization of Human iPSC-Derived Neurons at Subcellular Level

Tom Dufor
MaxWell Biosystems

POSTER NO. 22

Scalable CRISPR Functional Genomics in Human iPSC-Derived Motor Neurons Using Multi-Omics Phenotypic Profiling

Katie Headland
Axxam

POSTER NO. 23

opti-ox™ deterministic cell programming to enable the industrialisation of New Approach Methodologies

Tom Harris-Brown
bit.bio

POSTER NO. 24

Harnessing iPSC-Derived Cell Models to Advance Neuroscience Drug Discovery

Tatiana Rosenstock
Sygnature Discovery

POSTER NO. 25

A contractility platform for 3D engineered muscle tissues

Daniel Vaughan
optics11life

POSTER NO. 26

Optimising Automated Hepatocyte Counting

Suzanne Riches
Revvity

PANEL DISCUSSION

FRANCIS CRICK AUDITORIUM

Moving beyond the gold standard: Can NAMs outperform traditional models?

For decades, animal testing has been considered the 'gold standard' in biomedical research. But with clinical failure rates remaining stubbornly high, is it time to admit that this standard is holding us back? This panel explores how New Approach Methodologies (NAMs) are moving us beyond legacy systems to offer unprecedented human predictability.



Moderated by
Connie O'Donnell
Director, Marketing, bit.bio

Panelists



Professor Julie Frearson, PhD
Corporate Senior Vice President &
Chief Scientific Officer, Charles River

Professor Frearson leads Charles River's effort in developing and managing strategic venture fund and innovation technology partnerships across the Company's business units. Prior to joining Charles River, Professor Frearson built substantial experience in early-stage drug discovery through roles with Zeneca, The Babraham Institute, Cambridge Drug Discovery, BioFocus, and a faculty position in the Drug Discovery Unit of the University of Dundee. Professor Frearson has served as the Director for Scottish Universities Life Sciences Alliance (SULSA) and on funding committees for the Medical Research Council, The Wellcome Trust, Novo Foundation BiInnovation Institute and regional BIO industry groups. Professor Frearson currently sits on multiple private and not-for-profit boards in the life sciences tools and drug development arena across the UK and US. Professor Frearson received a Ph.D. in Biochemistry from King's College London, University of London and has authored more than 60 peer-reviewed publications.



Pelin Candarlioglu Deacon, PhD
Director 3D and 3Rs

Dr. Pelin Candarlioglu is an internationally recognised scientist and strategic leader in Advanced Cell Models (ACMs), organoids, and microphysiological systems, with over 20 years' experience spanning academia, biotech, and global pharma. She has led innovation programmes at GlaxoSmithKline, Vivodyne, and Enplas, driving the development of human-relevant models for oncology, immunology, and safety assessment. Pelin is the founder of 3D and 3Rs Ltd., advising organisations on the adoption of non-animal models, regulatory strategy, and translational implementation. She also chairs the EUROoCS Industry Advisory Board and is a recognised voice in global 3Rs and regulatory initiatives focused on modernising preclinical drug development.



Ross Dobie, PhD
Head of Science Centre for
Human Specific Research

Ross Dobie is Head of Science at the Centre for Human Specific Research, an initiative dedicated to supporting researchers in adopting human-focused methodologies. He obtained his PhD at the Roslin Institute, University of Edinburgh, before undertaking postdoctoral research at the Centre for Inflammation Research within the Queen's Medical Research Institute. Ross later moved into industry, progressing from Senior to Principal Scientist at Concept Life Sciences, a Contract Research Organisation. With over a decade of experience spanning academia and industry, Ross has seen first-hand the rapid advances in human-specific research and its growing impact on biomedical science.



Eric Hill, PhD
Reader
Loughborough University

Dr Eric Hill is a Reader in the Department of Chemistry at Loughborough University, appointed in 2023 after eight years at Aston University. He received his PhD in Cell and Molecular Biology in 2004 and has since developed extensive expertise in stem cell biology, tissue engineering, and human in vitro neuronal models. His research focuses on developing physiologically relevant, stem-cell-derived models of the central nervous system to study neurodevelopment and neurodegeneration, including Alzheimer's disease. Dr Hill's work supports drug discovery by recreating human disease mechanisms in vitro.

Map



- 1 Posters
- 2 Image gallery
- 3 Talk to us about CRISPR Screening
- 4 Discover new! ioHepatocytes
- 5 Dive into digiCells
- 6 Explore Neuroscience toolkit
- 7 Bricks of biology



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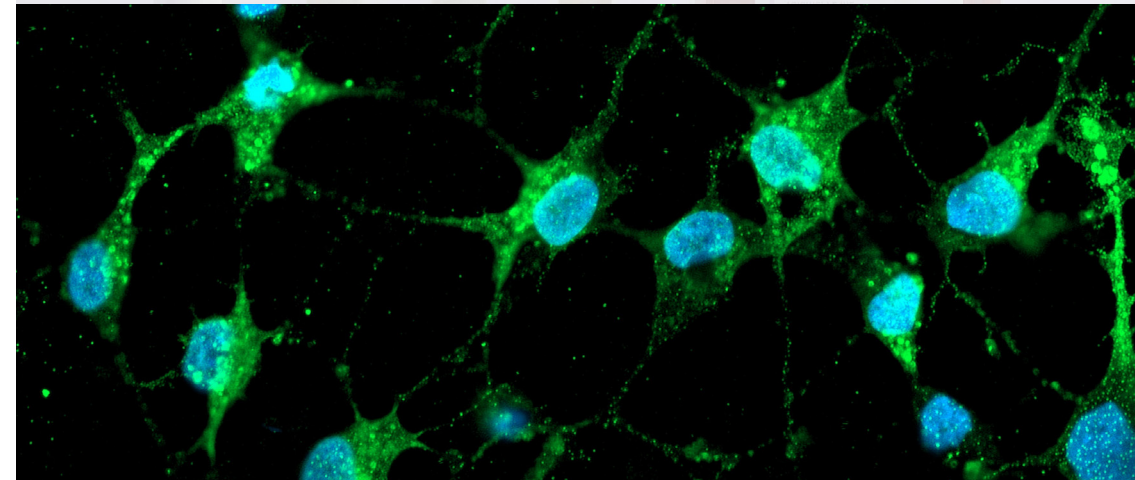
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