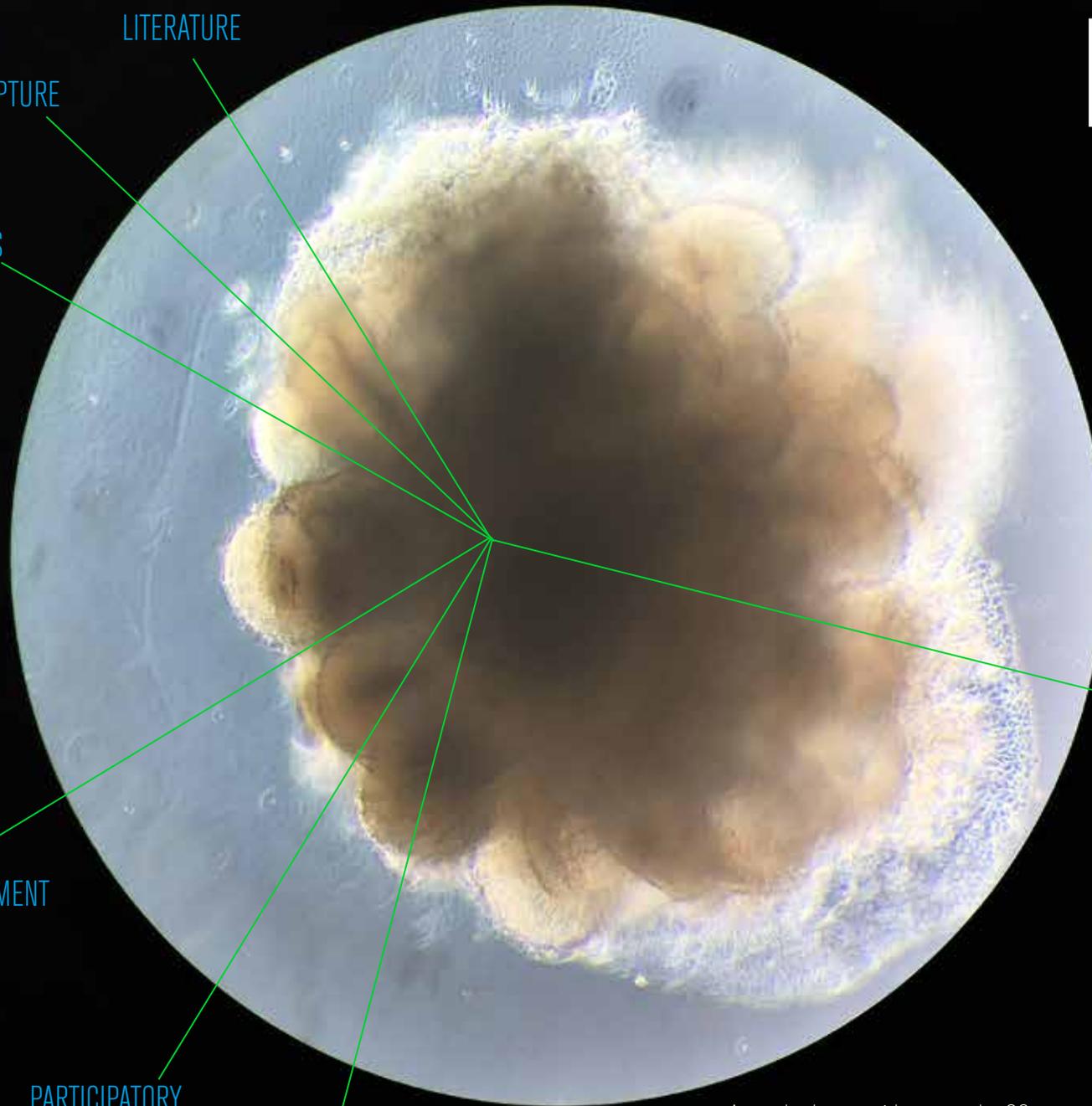


# BRAINS IN A DISH

GROWING  
THE  
STUFF  
OF  
THOUGHT

[www.brainsinadish.org](http://www.brainsinadish.org)

**INVITATION** to work with us to develop and realise groundbreaking new presentations and events for national and international audiences



LITERATURE

SCULPTURE

PROJECTIONS

PUBLIC ENGAGEMENT  
+ DEBATE

PARTICIPATORY  
EVENTS

BROADCASTS

A cerebral organoid, approx day 20, grown from artist Charlie'Murphy's skin cells by PhD researcher Christopher Lovejoy  
Photo: Christopher Lovejoy / Created Out of Mind / UCL

# BRAINS IN A DISH

## AN INTRODUCTION

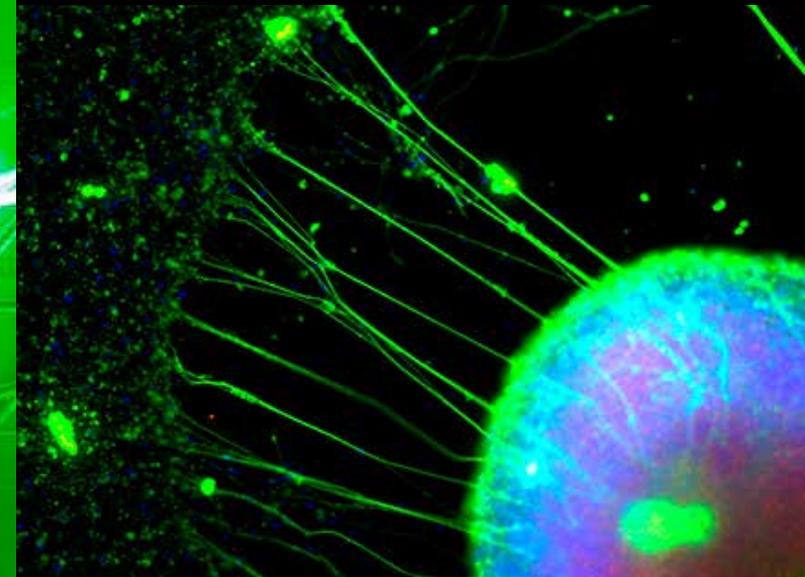
Through their residency with Created Out of Mind at Wellcome's Hub, artist Charlie Murphy, science writer Philip Ball, BBC medical correspondent Fergus Walsh and clinical neurologist Professor Nick Fox have personally participated in Dr Selina Wray's molecular research to investigate how the brain works on a cellular level and how different dementias function at their earliest stages.

They each donated a sample of skin to Dr Wray's [research study](#) - and have been following their cells' extraordinary journey through each stage of the culturing processes 'in a dish'.

Learning about some of the critical differences in growth and degeneration between their cells and cells affected by Frontal Temporal Dementia (FTD) and Familial Alzheimers' Disease (FAD), this novel personal experiment is opening up unique new insights and perspectives for many new public audiences.

They have been developing a dynamic range of thought provoking literature, artworks, participatory events and broadcasts. Examples trialed during their residency :[www.brainsinadish.org](http://www.brainsinadish.org)

Created Out of Mind are an interdisciplinary team researching ways to challenge and deepen public understandings of dementias through science and the arts. They have been residents in the Hub at the Wellcome Collection, London (2016-18).  
[www.createdoutofmind.org](http://www.createdoutofmind.org)



Phil Ball's neurons extending their axons within a 2D culture dish  
Stained and seen through a fluorescent microscope.  
Photo : Christopher Lovejoy / Created Out of Mind / Wellcome

We welcome new collaborations and partnerships to work with us to develop and realise larger scale, events and installations, to inform the public about how their brains function, how dementias impact on a cellular level. Join us to encourage public engagement and debate on some of the prescient cultural, spiritual and personal questions raised through the growth and exploitation of human tissue engineering..

Charlie Murphy, *Spontaneous Synapse (test)*, 2018  
Coloured borosilicate glass and lights, approx 20 x 16 x 16cm

See further glass 'synapse' experiments

# CHARLIE MURPHY

ARTWORKS + EVENTS IN DEVELOPMENT

Charlie Murphy is developing artworks and events inspired by her participation and unique access to pioneering dementia research at UCL's Institute of Neurology.

Investigating the intricate rituals, patterns, colourings and analysis of cell cultures nurtured over many months, she is developing a major body of **sculptures** which are informed by her ongoing dialogues and collaborations with Dr Wray's lab, Rare Dementia Support groups and the BiaD team.

She had developed a series of trial sculptural *studies*, performative projection works and video installations aim to connect the abstract, delicate brain cells grown 'in a dish' with the urgent human perspectives and embodied, lived experiences of people living with different kinds of dementia.

[See existing artworks and Making](#)

**Charlie welcomes new collaborations and partnerships to develop larger scale artworks and presentations for a wide range of contexts and platforms.**

Charlie Murphy, *Nuclear*, 2018  
Hand drawn coloured borosilicate glass and UV light  
50 x 25 x 25cm. (work in progress)  
Photo: Charlie Murphy / Created out of Mind / Wellcome



Murphy & Wrays' *Neuronal Disco* for B(old) Festival at Royal Festival Hall, Southbank, London May 2018.  
Photo : David Sanderson / Wellcome

## CHARLIE MURPHY + DR SELINA WRAY'S NEURONAL DISCO

The Neuronal Disco invites participants to animate the development of brain cells through a series of choreographed movements to well known pop songs. Patterns and formations of neuronal growth, connection, and development are celebrated through dance moves, groupings and wearable technologies - bringing disco dancing into the heart of molecular neurochemistry.

Inviting audiences of all ages to learn about and explore Dr Wrays' research and the scientific principles behind it , this accessible dance workshop offers unique insights into the workings of the brain and the impacts of different kinds of dementias on a cellular level.

**We can adapt and expand this event to accommodate many different audiences, scales and contexts. Get in touch if you'd like to commission an event like this**

[See examples of our Neuronal Disco here](#)

# IN VITRO proposal

## PROJECTION INSTALLATIONS (the LOMU series)

Charlie's projection installations offer playful interpretations of the microscopic imagery being created by Dr Wray's lab.

Asserting a personal dimension to what are conventionally anonymised, abstract scientific images, these installations also present selected tools and materials from her glass bench alongside those of the lab.

Blowing, shaping and colouring scientific glass at a manufacturers workshop in East London, Charlie juxtaposes optical and refractive qualities, shadows and illuminations of a variety of domestic and scientific materials to recreate, embody and enlarge the cell morphologies she's observing and to question the assumed objectivity of scientific images

Extending the performative and participatory potential of this work, Charlie plans to invite audiences to create a series of images in collaboration with her and the Wray lab team while gaining valuable insights into dementia research colour is used to identify and analyse their cell cultures.

Would you like contribute to the further development of this projection series ?  
Commission new pieces or events like this ...?

[See further examples here](#)



Charlie Murphy, *Dermo Fibroblast, In Vitro*, 2018  
Hand blown and coloured glass, liquids, lab and glass tools.  
Presentation at UCL's 'Activism Hub' at Bloomsbury Festival  
Photo: Charlie Murphy / Created Out of Mind



## SKIN TO MIND *proposal* VIDEO INSTALLATIONS & SCREENINGS

Shot through the circular frames of lab vessels, cells and microscopes, Charlie Murphy's video series will invite audiences on an astonishing cellular journey from skin to mind.

Confronted by the extraordinary development and functioning of her brain cells outside of her body, these short videos investigate how microbiology and stem cell technologies are informing and changing our understandings of brain function.

Interweaving the insights of lab staff with first hand perspectives of people living with dementias, the 'skin to mind' series will highlight some of the the urgent human stories driving research to try to understand and intervene in the molecular behaviours of dementias.

Drawn into repetitive cycles of feeding, washing, splitting and freezing cells for Dr Wray's dementia research, viewers will be subtly hypnotised by the powerful array of technologies they witness down the microscope.

Contrasting poignant personal stories with the intricate labors of laboratory processes, each video chapter will be edited to condense, shift and manipulate our senses of scale and time through the growth and degeneration of different cell lines and to consider the profound ethical questions raised.

*Skin to Mind* may be developed in multiple formats for presentation and distribution across a wide range of contexts and platforms.

Artist impression of *Skin to Mind* projected in a planetarium.  
Photo: Composite images by Christopher Lovejoy / UCL and ESO Supernova

This series may be developed at a variety of scales for different contexts and audiences.

See examples of work in progress

# THE INCREDIBLE ORGANOIDS proposal GLASS + LIGHT PROJECTION INSTALLATIONS

During the course of her residency with Created out of Mind, Charlie has developed artworks inspired by the microscopic imagery and laboratory processes she has observed in the lab.

[See her test pieces+ sketches here](#)

Charlie now plans to upscale and further develop these ideas to create powerful, immersive installations which simulate neuronal cultures and organoids at dramatic, visceral scales.

Supported and informed by an expert team of organoid scientists, glass and electronics technicians, Charlie will create a series of spectacular organoid installations using a modular scaffold of reformed scientific glass, specialist lighting, lab tools, and stands.

Experimenting with programmable simulations of cell growth and degeneration, they will embed matrixes of LEDs and lasers within each organoid structure, to visualise patterns and functions of cell development, growth and the impacts of disease through cascades of light, sound and shadow.

Charlie's epic organoid sculptural installations will offer audiences unique timely insights into this pioneering area of research.

Exploding and visualising different qualities and dimensions of these extraordinary human brain tissues - this 'stuff of thought' will also open out some of the profound ethical and personal questions raised - for many different forms of public engagement, scrutiny and debate.

R&D for this project has been kindly supported by Wellcome + UCL's Institute of Neurology. Dr Wray's lab is also supported by ARUK



Would you like to work with us towards develop and realise these 'incredible organoid' installations?  
Get in touch to let us know how you'd like to grow 'brains in a dish'.

**contact: Charlie Murphy**  
tel. 07855328565 email. [charlie@charliemurphy.co.uk](mailto:charlie@charliemurphy.co.uk)  
[www.brainsinadish.org](http://www.brainsinadish.org)

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