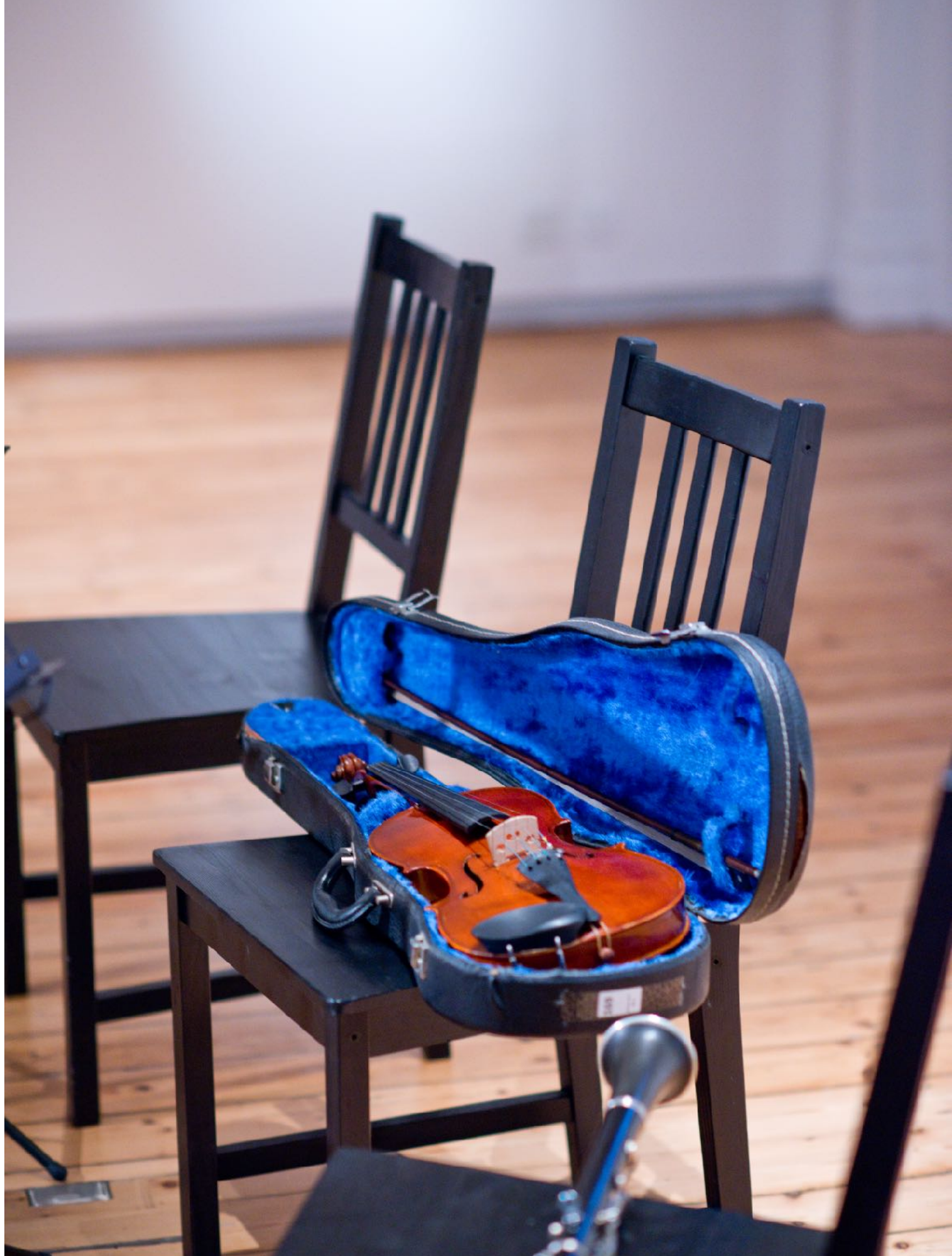
ORIGINS & ENDINGS

Hatton Gallery 18th January - 7th March 2020

This exhibition brings together the work of musician Mark Carroll and artist Marianne Wilde in collaboration with academics from the Policy, Ethics & Life Sciences Research Centre (PEALS) at Newcastle University. The artworks highlight partnerships that have culminated in creative works addressing the broad themes of being human, and how we engage both culturally and societally with the medical and scientific research that affects us all from the beginning to the ending of life.

PEALS was founded at the turn of the 21st century, at a time when rapid developments in human genetics research and the increasing availability of fertility treatment gave rise to studies involving human embryos. These advances pushed the boundaries of the life sciences, promising great benefits but also bringing new challenges. Over the years PEALS has worked with a range of practitioners including NHS colleagues from the Newcastle Fertility Centre and the Northern Genetics Service as well as various groups of University scientists, particularly those at the forefront of research on therapeutic cloning, human embryonic stem cells, developmental biology, synthetic biology and rare disease research.

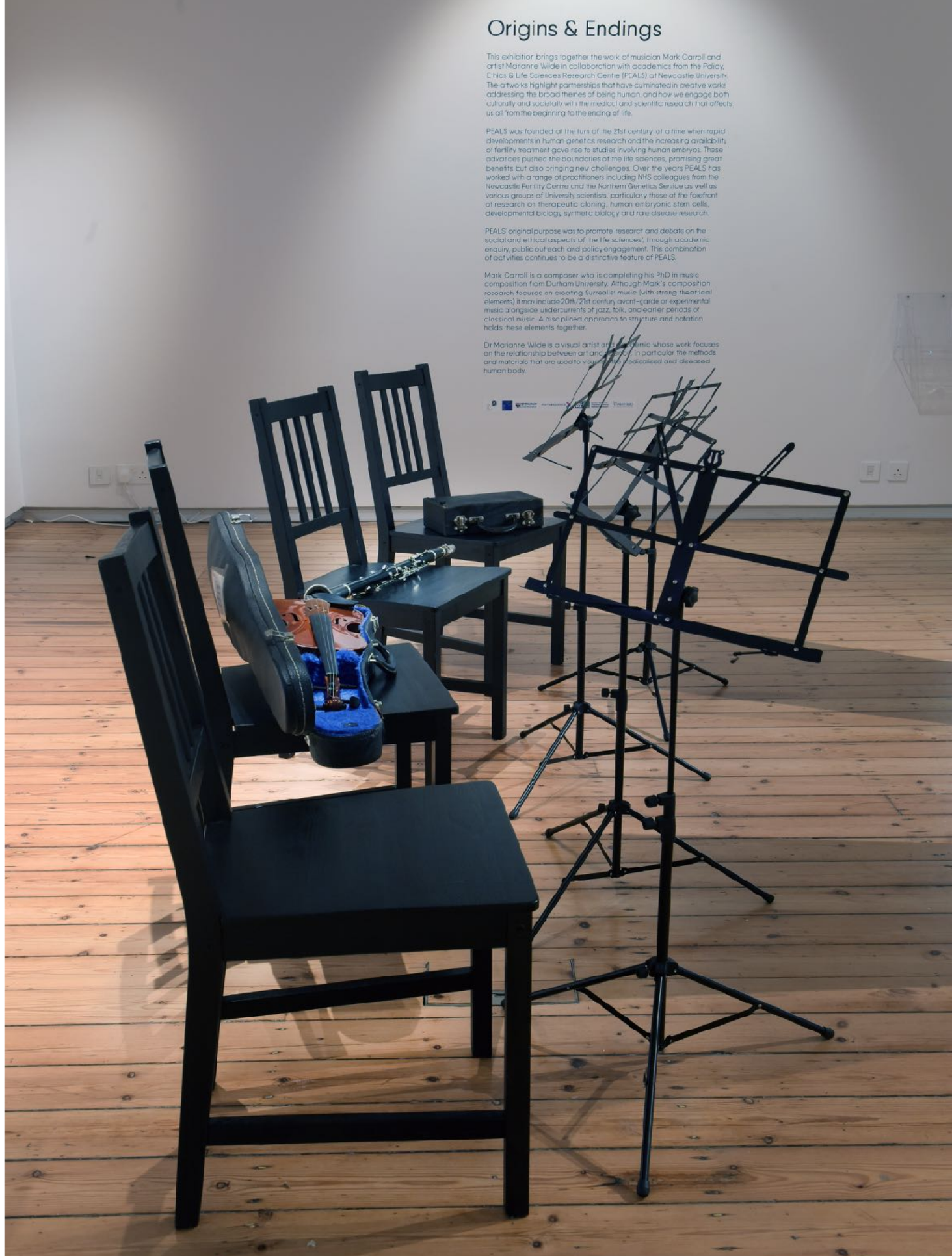
PEALS' original purpose was to promote 'research and debate on the social and ethical aspects of the life sciences', through academic enquiry, public outreach and policy engagement. This combination of activities continues to be a distinctive feature of PEALS.

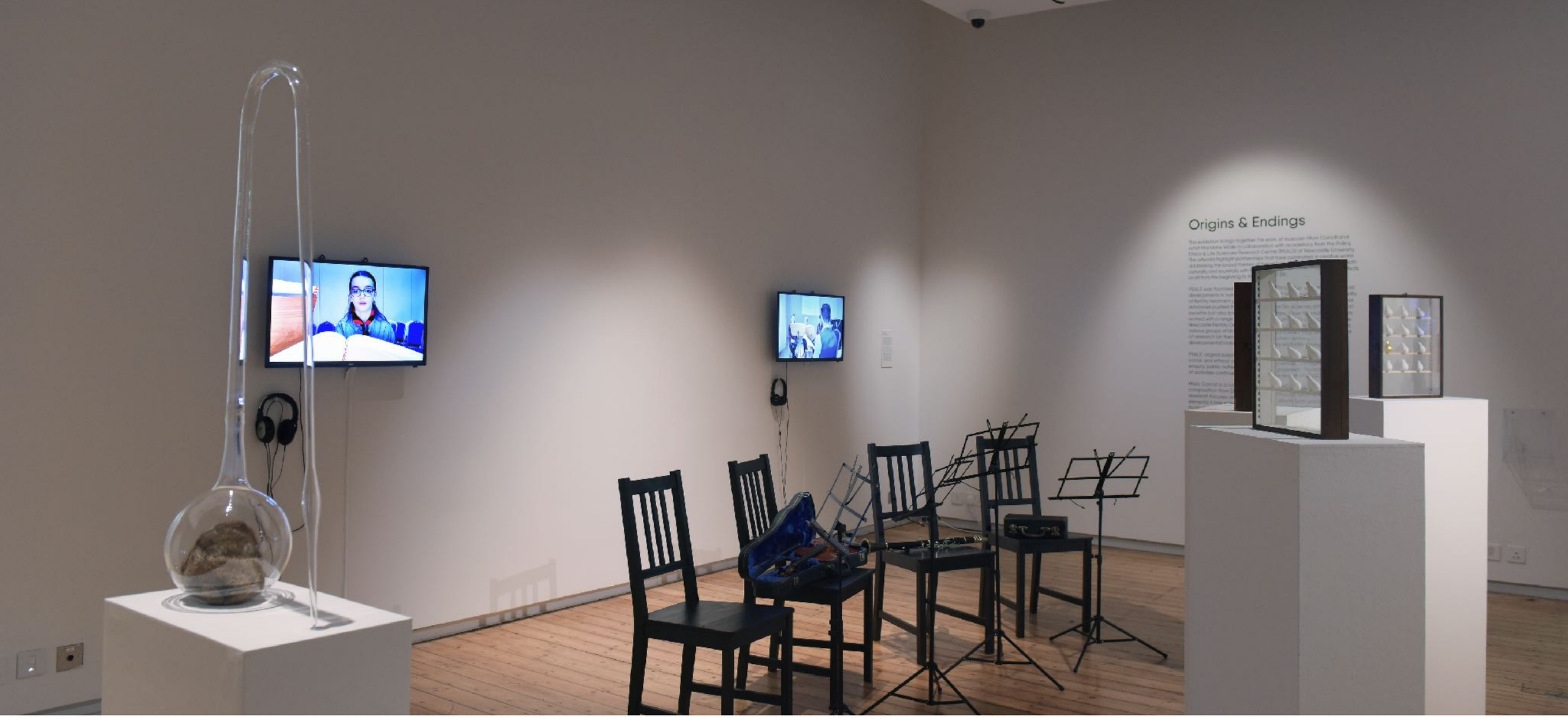


ARTISTS

Mark Carroll is a composer who is completing his PhD in music composition from Durham University. Although Mark's composition research focuses on creating Surrealist music (with strong theatrical elements) it may include 20th/21st century avant-garde or experimental music alongside undercurrents of jazz, folk, and earlier periods of classical music. A disciplined approach to structure and notation holds these elements together.

Dr Marianne Wilde is a visual artist and academic whose work focuses on the relationship between art and science, in particular the methods and materials that are used to visualise the medicalised and diseased human body.





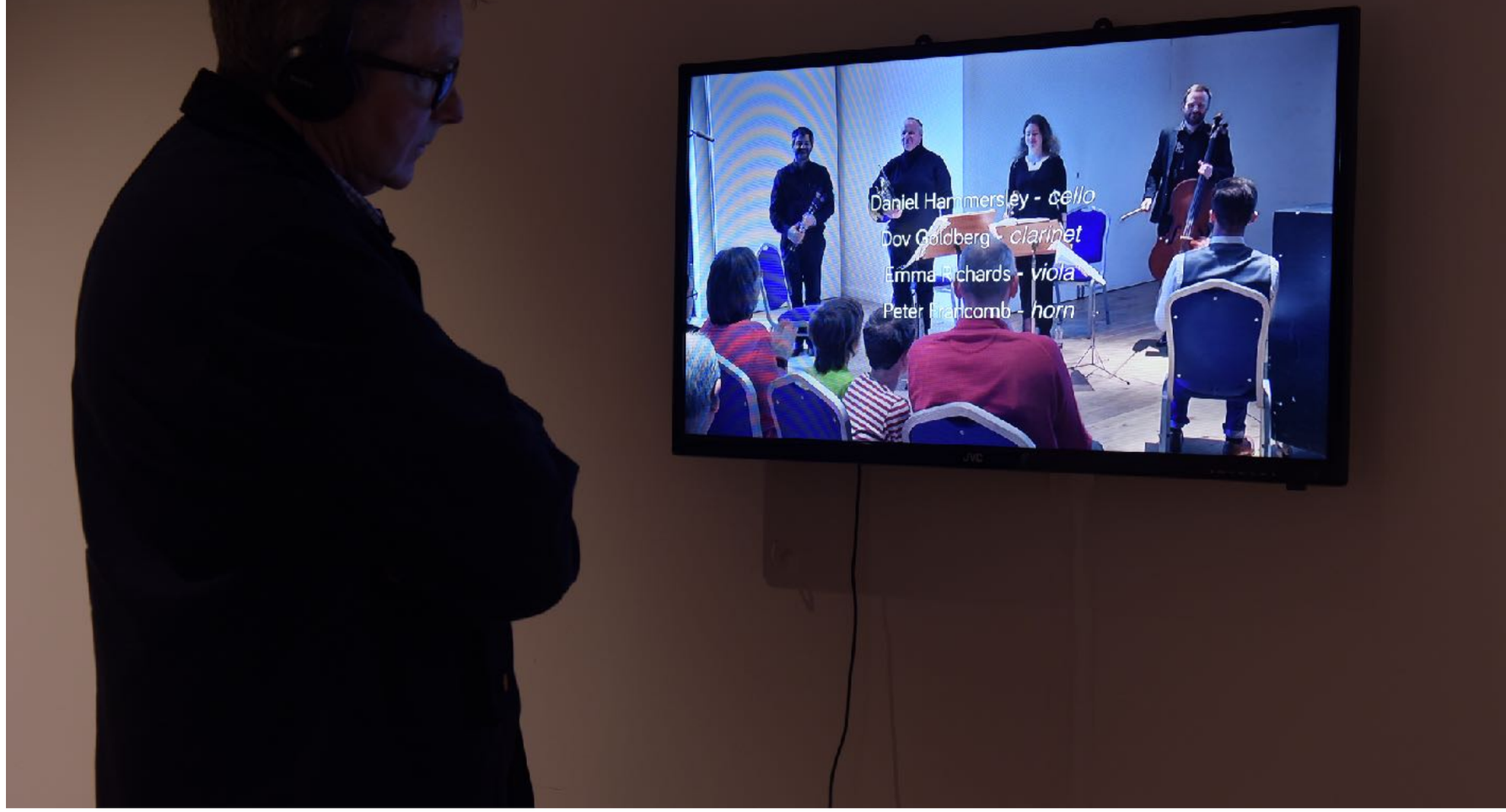
From 2005 onwards PEALS has worked with scientists in Newcastle and other UK centres where pioneering work has been conducted into human developmental biology. This area of science explores the role of gene expression in the developing human foetus, in order to both understand normal development and to identify when things go wrong.

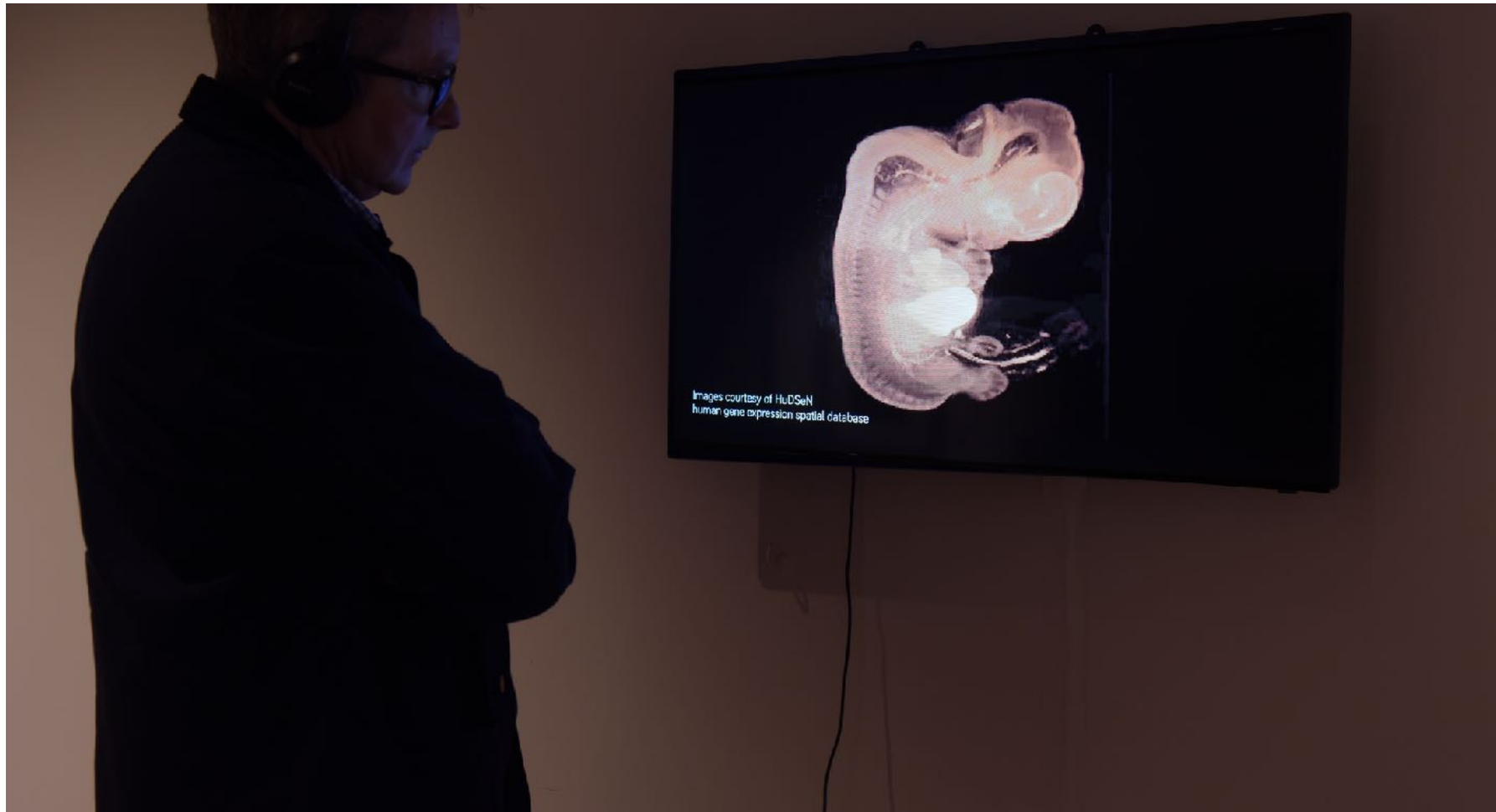
Any research involving human embryonic and foetal tissue is ethically complex and PEALS has looked to different ways of enabling dialogue and promoting awareness of this research. One result was PEALS' work with composer Mark Carroll. Mark took the idea of the regular staged development of embryos, and worked with local schoolchildren, encouraging them to represent the stages of growth in musical terms. Mark then converted these musical sketches into a complete piece of music. The resulting composition was first performed in the Great North Museum by professional musicians to an audience of the young musicians, their parents and teachers.

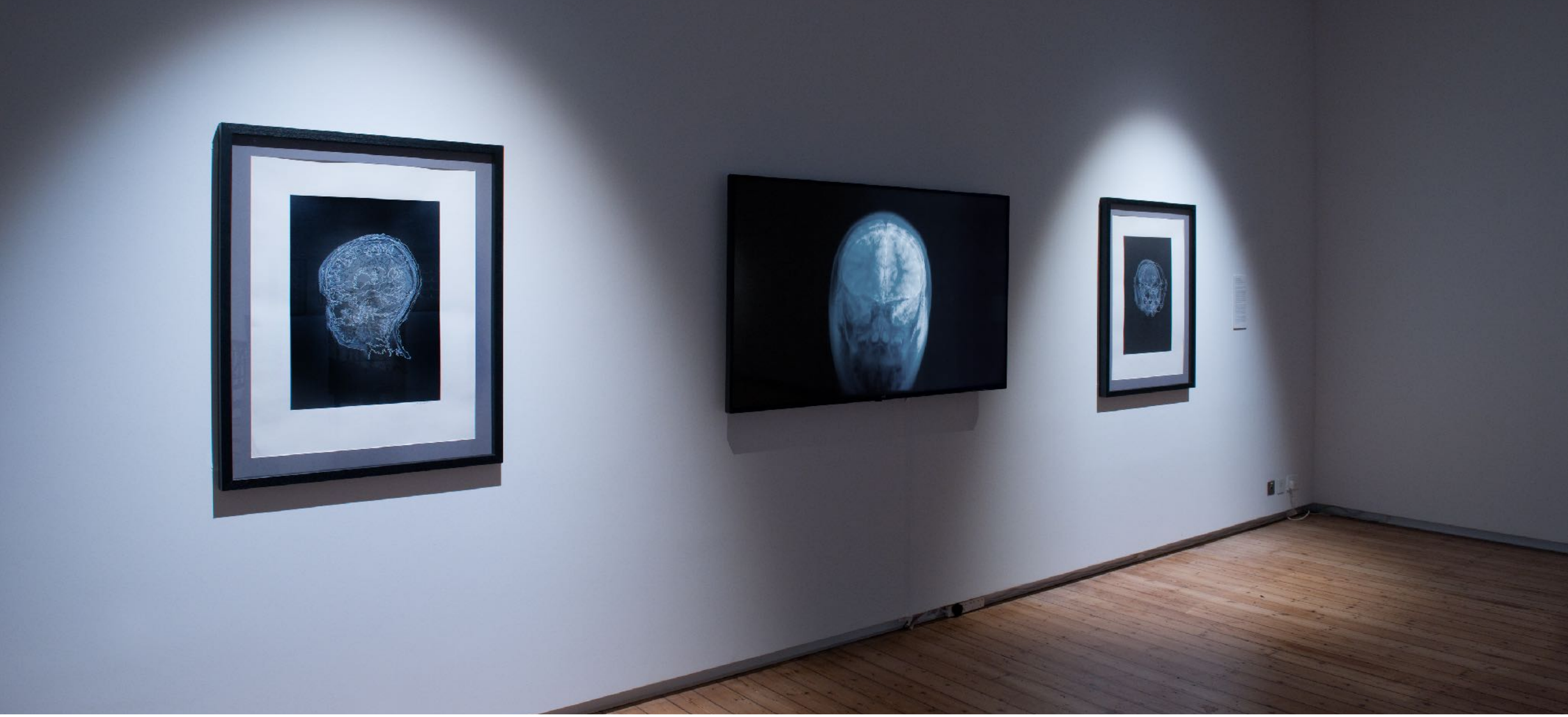
Mark Carroll

2018

Embryo Music







PEALS' academics have worked for a number of years with Professor Volker Straub and TREAT-NMD, an EU Network of Excellence project, looking at the ethical and social aspects of research in neuromuscular diseases (NMD). This network has succeeded in improving NMD infrastructure and clinical practice across Europe including accelerating research into treatments such as specific gene-based therapies.

Artist Marianne Wilde worked with Professor Straub and created a body of artwork that considered the ways in which genetic diseases are visually, linguistically and culturally represented through illustration and new technologies used in laboratory diagnostic techniques and in the cultural narratives that are constructed around genetic diseases.

Marianne Wilde

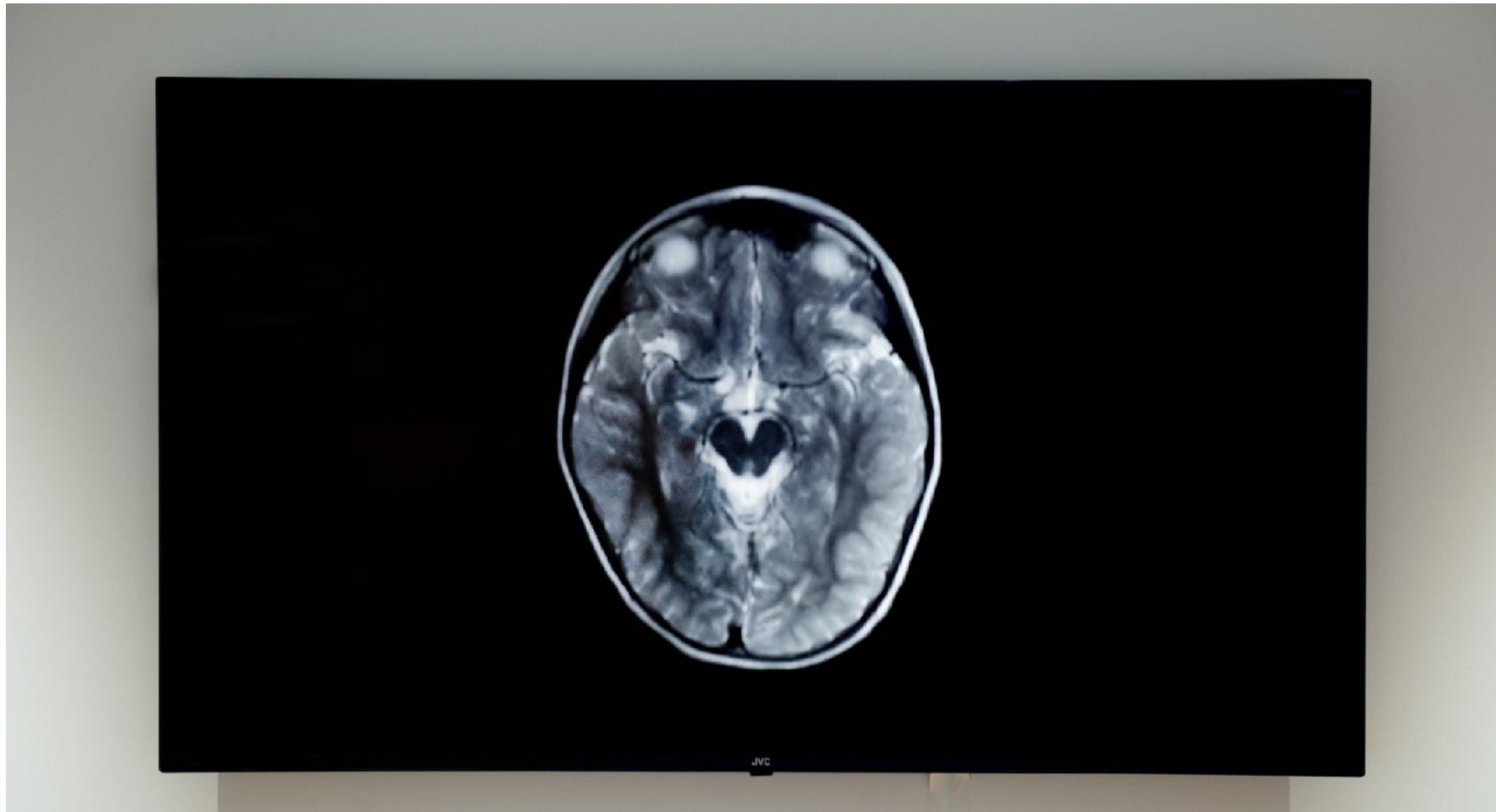
The Unsolved Case (Der ungelöste Fall)

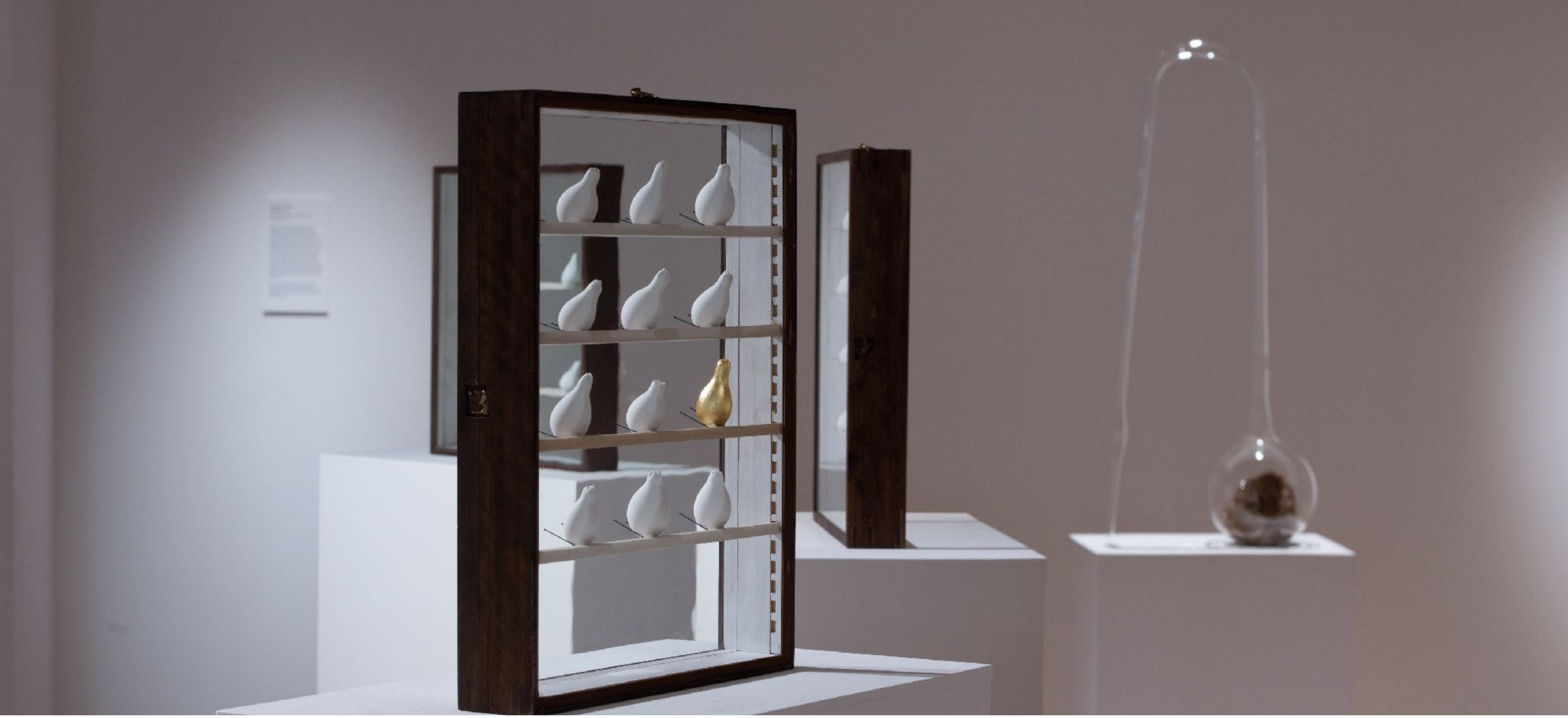
2012

Screen prints/MRI Video

A human being is only breath and shadow

Sophocles 496 BC - 406 BC





Since its inception, PEALS has conducted research on the experiences of women undertaking IVF treatment who were asked to provide eggs and embryos to medical research. One study was of women who were offered a financial discount on private IVF in “exchange” for half of the eggs that they produced during their treatment. PEALS’ academics found that women often thought about choice. The choice of whether or not to reduce by half the number of eggs available to them? Was that choice worth the saving, financially? Could this choice give them access to treatment more quickly? And if they went ahead, which eggs did they get for their treatment and which went to research? Was “the one that might work” in their allocation?

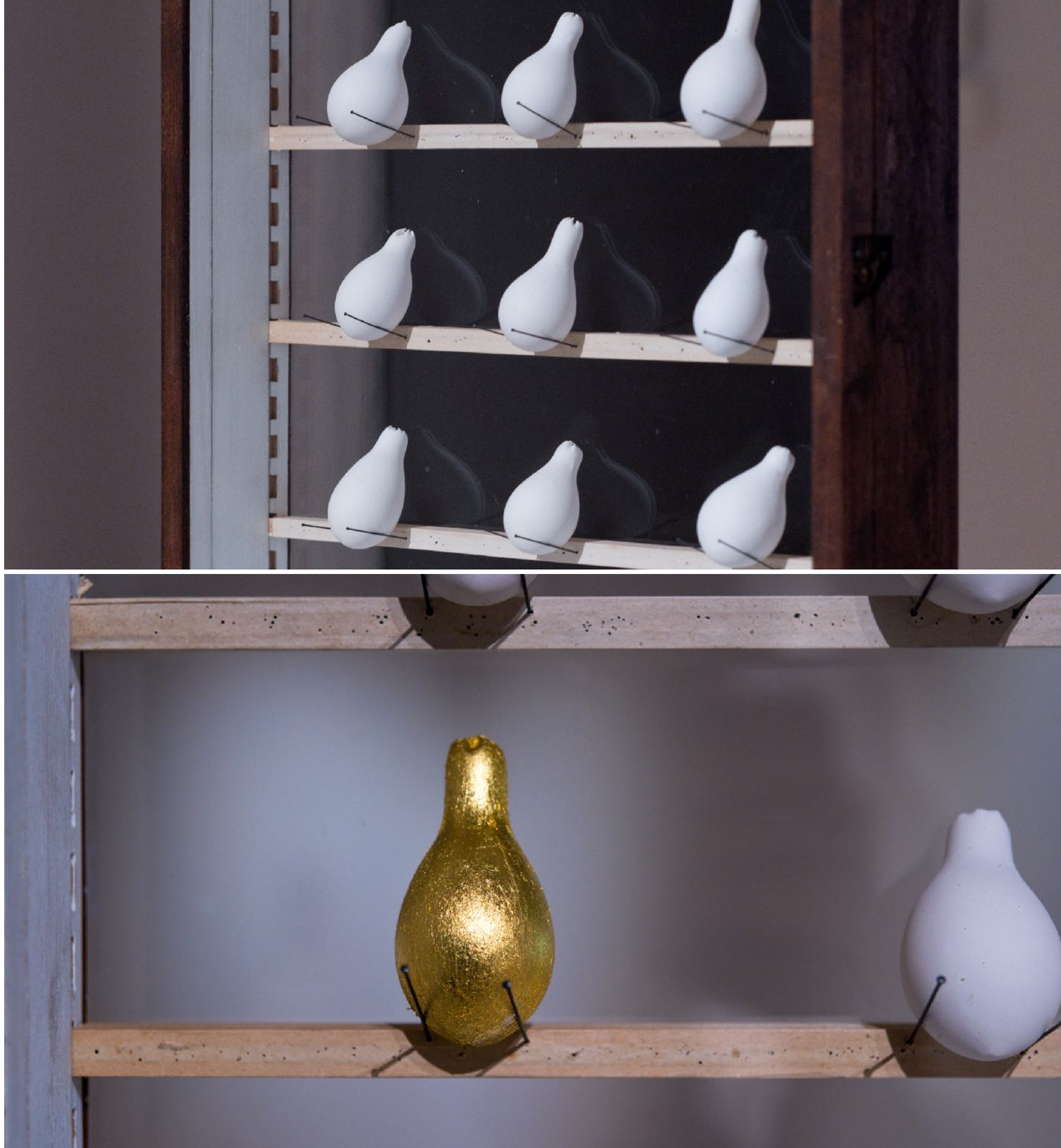
These were just some of the many elements these women juggled as they experienced the rollercoaster of emotions and made the myriad calculations needed to negotiate the process of having a family.

Marianne Wilde

2018

Oology

Plaster/Gold Leaf/Entomology Cases/Entomology Pins



PEALS provides the expertise behind the Responsible Research and Innovation strand of a major UK-based synthetic biology project, 'Synthetic Portabolomics'. Led by Professor Natalio Krasnogor of Newcastle University this is a large multi-disciplinary synthetic biology project.

Synthetic biology is a diverse new field with many claimed potential applications. One such application is the development of a fermentation-based industrial approach to making high-value materials, such as fine chemicals and pharmaceuticals. The aim is to realise this by applying engineering principles of systematic design and structured building and testing to the messy world of bacterial cell biology. The Portabolomics project hopes to find ways to improve the speed and ease of moving from laboratory studies to industrial application, and doing so with early consideration of societal and ethical issues.

Marianne Wilde

2020

Vital Heat

Wolf Pelt/Dog Teeth/Borosilicate Glass