

BLACK BOX PROGRAMME

EDINBURGH SCIENCE FESTIVAL 2022

Total Running Time: 2 hours

Film start times: Wed - Sun: 12:00 | 14:00 | 16:00



SUMMERHALL
Open Minds Open Doors



ASCUS
ART & SCIENCE

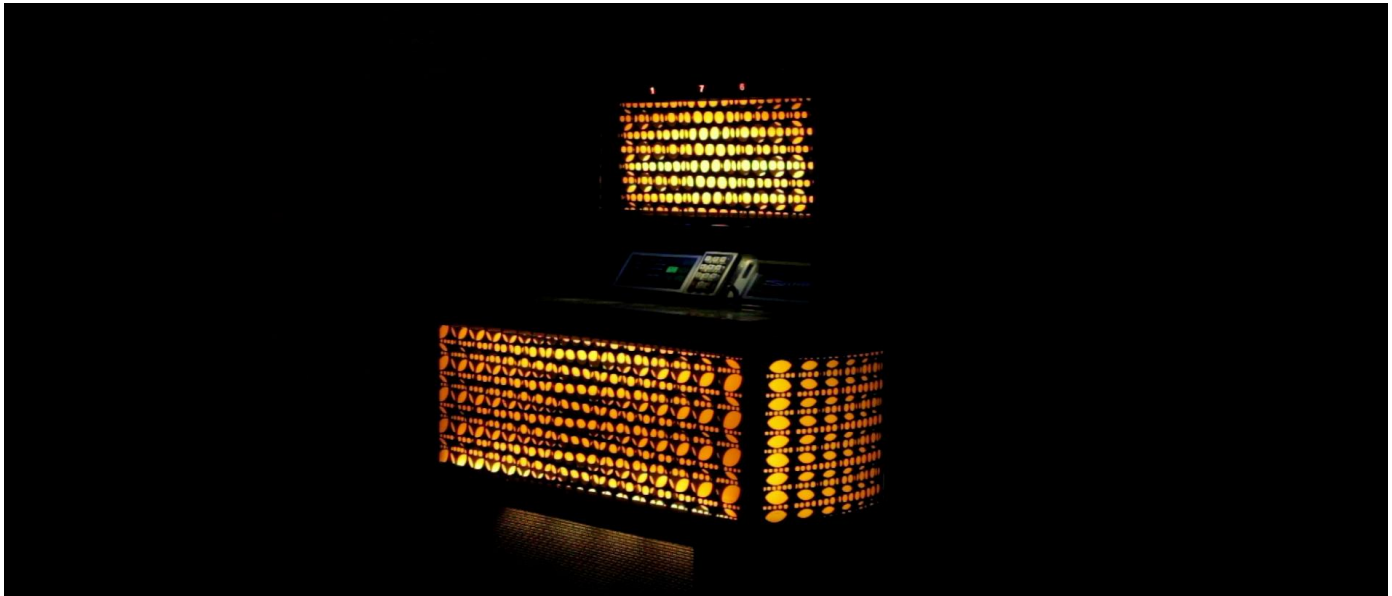


Image credit: Limulus, 2014. Karen Kramer

Is kinship more than family? How do we relate to the cells and viruses that comprise our body? How do connections form across time and distance? How do scientists relate to patients? How do patients connect to one another?

In **KINSHIP** week, we explore how science and art engage with connection and family, within the body and beyond. In **KINSHIP I** we begin by asking what kinship means in the context of the body. *Inside the Shared Life* asks us to reflect on our relationship with the multiplicity of species that live on and inside our bodies. Then with *Battle of Blister* and *Tame is to Tame* we ask how reconsidering these relationships might change our approach to medicine and medical treatment. In **KINSHIP II** we explore a sense of connection across time and space with works that look at life from other perspectives. We begin with Paul Goodfellow's meditative work that allows us to reflect on what we might understand by terms such as kinship, connection and boundary, followed by an oceanic-scale sense of historical and geographical kinship in Karen Kramer's *Limulus*. Then we move to a world seen through the eyes of an organism looking for a host in Anne Milne's *Invasion*, a bodily connection to inanimate, yet lively material in Vicky Smith's *Noisy Licking, Dribbling and Spitting* and finally a surreal attempt at communication between cells and their scientific 'owners' in Louise Mackenzie's *Zone of Inhibition*. In **KINSHIP III** we move towards a familial sense of kinship. We explore how families deal with the unknowable impacts of genetic medicine in *Future Families* and how medical experts understand kin through their patients in an excerpt from Jacqueline Donachie's *Tomorrow Belongs to Me*. We then see how kinship can arise through making art in Claudia Sacher's *Binky* before closing with two moving, award winning works that explore the impact of genetic illness on family members with Lucy Walker's *The Lion's Mouth Opens* and Jacqueline Donachie's *Hazel*.

GUIDANCE: Some films contain scenes that some viewers may find uncomfortable. Whilst there is no age specific content guidance, and viewing of all films is at the discretion of parents, we have deemed content suitable for age 12+.



Inside the Shared Life, 2017
Erin Espelie

09:13
www.erinespelie.com

Inside the Shared Life is part of filmmaker Erin Espelie's RGB (Red Green Blue) film trilogy. Each of the three films focuses on red, blue, or in this case, green, from a medical standpoint. With the voice of (r)evolutionary biologist, Lyn Margulis - who challenged contemporary scientific practice to develop her theory of symbiogenesis - Inside the Shared Life presents for us a world within worlds, where we understand our evolutionary origin as part of a complex co-existence of species that have over time, come to live and thrive alongside one another in communities, partially bound by bodily forms.



Battle of Blister, 2016
Genetic Moo

05:54
www.geneticmoo.com

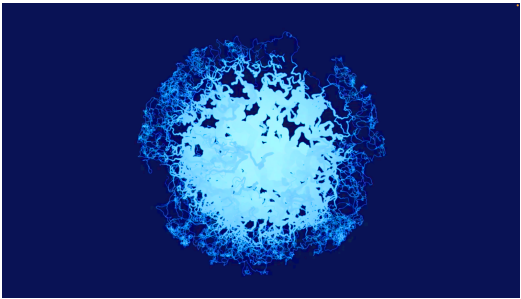
Each sequence in Battle of Blister has been generated by human performers in an interactive film set. The animations capture the complex dynamics of microbial and cellular relations during inflammation, charting the escalation from fly bite to full scale engagement. The language of the battleground is common when referring to infection however for our KINSHIP programme, Genetic Moo's film acts as provocation to the concept of the body as battlefield, allowing us to ask what other forms of relation we might find in the body.



Tame is to Tame, 2016
Pei-Ying Lin

03:00
www.peiyinglin.net

Artist Pei-Ying Lin's project Tame is to Tame asks us to reconsider our relationship to the virus. Throughout history viruses have integrated themselves into our genome and became a part of the 'human'. They evolve, and we evolve with them. Despite this deeply intertwined relationship, humanity treats viruses as enemies. Through this project, Lin and scientist, Miranda de Graaf try to find out if we can treat viruses as wild animals and build a controllable bond with them. In other words - to tame them. Is it possible to befriend/observe viruses that remain dangerous from a safe distance, like the virologists have been doing for decades? Can this relationship be extended to the general public?



Boundary, 2019
Paul Goodfellow

02:00

The visuals in Paul Goodfellow's meditative work allow for reflection and contemplation of what it means to connect, to grow and to form boundaries. Goodfellow is an artist and academic in the Department of Arts, at Northumbria University. With a background in Environmental Science, Visualisation and Art, Goodfellow is interested in the intersection of these disciplines, and how aesthetic and affective experiences emerge within complex systems. *Boundary* forms part of Goodfellow's on-going enquiry into the nature of objects, and whether objects are merely vessels which channel energy and forces and are solely defined by their relationships or whether their true nature is withdrawn from access and specifically the human gaze.



Limulus, 2014
Karen Kramer

11:45

www.karenkramer.eu

This speculative work makes kinship connections through space and across time. In *LIMULUS* the narrator is a supernatural piece of marine debris. The protagonist alludes to a kinship that spans geological time and species boundaries, combining the human medical history of the horseshoe crab with the potential for marine pollution caused by a discarded helium balloon and the demise of American jukebox company Seeburg. This complex but beautifully woven work draws our attention to the almost incomprehensible span of humanity's presence and impact on earth.

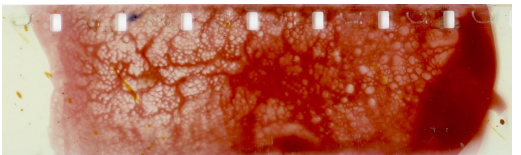


The Lab I: Invasion, 2015
Anne Milne

12:36

www.annemilne.com

What is our relationship to the organisms that we host within our bodies? *Invasion* is a fantastical, other worldly journey of an imaginary, mysterious thing which has come to Earth looking for a host. Macro, micro, natural, artificial, inside, outside. *Invasion* is an investigation into the lives of pathogens, bacteria, parasites and other creatures, from the air to the lab. We are brought into a world that is claustrophobic and at times frightening. Who is the host and who is the guest?



Noisy Licking, Spitting and Dribbling (2014)
Vicky Smith

03:25

www.beefbristol.org/staff/vicky-smith/

Vicky Smith's animation combines 16mm film and bodily fluids, making apparent our material relationship to technology. Made using the mouth, *Noisy, Licking, Dribbling and Spitting* is a direct animation that takes the idea of licking as a primary and semi-automatic action. Using the stained tongue as a tool and stamping pad, the first impression is made 40 frames (1 foot) into the film and then reduced by one frame with each new stamp, accelerating until the marks overlap. Mechanistic control is then rejected in favour of spitting and dribbling as random action. Painterly like splats and swirls roll down the filmstrip and spill across into the audio track, generating noisy rasps and skidding sounds.



Zone of Inhibition, 2019
Louise Mackenzie

14:13
www.loumackenzie.com

How might we relate to a life that is genetically modified? Zone of Inhibition refers to the space (generally on a petri dish) in which microbial growth is inhibited as a result of antibiotics. A threshold in which microbes encounter humanity's resistance to them. During artist-led genetic modification workshops, Mackenzie presented a fictional, human-scale zone of inhibition, a space of encounter that is both intensely personal yet also restrictive. In this space, the artist facilitated dialogue between microbial cells and those who have genetically modified them. The work questions our relationships with non-humans and highlights the importance of role-play and speculation as mechanisms for shifting perspective.

KINSHIP III



Future Families, 2014
Wellcome Trust
Directed, filmed and edited by Barry J Gibb

02:26
www.wellcome.ac.uk

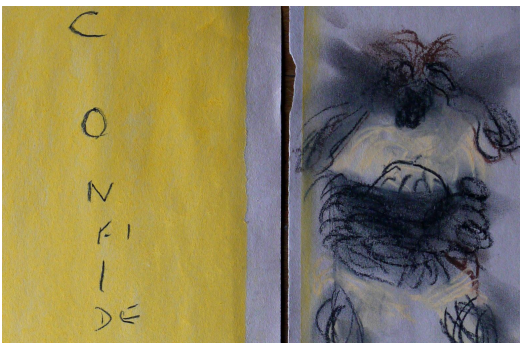
Professor Susan Golombok, Director of the Centre for Family Research at the University of Cambridge, talks about Future Families, a five-year research project investigating the social and psychological outcomes of emerging assisted reproductive technologies for individuals, families and society.



Tomorrow Belongs to Me (excerpt), 2006
Jacqueline Donachie and Darren Monckton

05:39
www.jacquelinedonachie.co.uk

This work is the result of a five-year collaboration with Darren G. Monckton, Professor of Human Genetics at the University of Glasgow, that looked at anticipation, the phenomenon of certain genetic conditions worsening as they are passed on from generation to generation. The film Tomorrow Belongs to Me is based on interviews with eleven scientists who were involved in the key research that proved pivotal in establishing the idea of anticipation as a true biological effect.



Binky, 2015
Claudia Sacher

02:00
claudiasacherart.com

In this short film, we experience art as therapy, a means to heal broken bonds of kinship and form new ones. Claudia Sacher volunteered as an artist for Art for the Brain, a brain injury and dementia friendly art workshop for anyone with a diagnosis of dementia/alzheimers, stroke, acquired or traumatic brain injury, and friends, family and carers. Claudia is a visual artist working in the areas of drawing, sculpture, video and installation.



The Lion's Mouth Opens, 2014
Lucy Walker

15:53

www.lucywalkerfilm.com

This multi-award-winning documentary short by Lucy Walker explores the impact of genetic bonds and genetic testing on the people we love and on how we face our destiny. Courageous young filmmaker-actress Marianna Palka gathers her friends around her as she finds out whether she has inherited Huntington's Disease, an incurable degenerative disorder which took her father and now has a 50% chance of taking her body and her mind. This original 15-minute version of the film (the full film is 28 minutes long), omits Palka's recital of *The Lion's Mouth Opens*, the Bob Dylan poem about Woody Guthrie who died from Huntington's Disease.



Hazel, 2015
Jacqueline Donachie

09:48

www.jacquelinedonachie.co.uk

In this poignant award-winning film, we are introduced to the siblings of individuals with Myotonic Dystrophy, a rare genetic condition. Donachie asks, when do you stop looking like your family and start looking like the symptoms described in a textbook? When is familial resemblance overtaken by another layer of inheritance, something that, like long legs or short tempers, also comes from your parents? In *Hazel* we see a kinship that causes assumptions about health, ability and competence to be made both by 'the outside world' and within family dynamics. The interviews for the artwork *Hazel* recognise the importance of considering the private, domestic experience of an inherited genetic condition by asking women to speak frankly about their own lives.

BLACK BOX

KINSHIP IN THE HEADLINES

April 2022

DNA donations that will help identify genetic conditions. Viruses that tackle climate change. Bacteria that talk. Animals that help save lives.

From the micro to the macro, there are many ways in which our lives are connected. Here are some headlines from recent years that draw attention to the many forms of kinship that we have both within and beyond our genetic ties.

Genetic medicine draws attention to our inheritance and what connects us. Who or what connects us? What would you do to help those you love?



Noel (pictured) and his young daughter, Aine Ward were both recently diagnosed with extremely rare disease, Hereditary Spastic Paraplegia (HSP). Today, his wife Cathy (also pictured) has spoken out in the hopes of raising awareness of this extremely rare disease that affects two people in 100,000.

Father and daughter with rare disease are 2 in 100,000

By Victoria Housden
v.housden@ulsterherald.com

NOEL Ward and his daughter, Aine really are a unique pair. Not only do the duo from Omagh have Hereditary Spastic Paraplegia (HSP) - a rare disease that affects less than two people per 100,000, but the mutation they have has never been seen before in the entire world.

NEWS

Hundreds of patients in gene study given rare disease diagnosis

By Philippa Roxby
Health reporter
© 11 November 2021



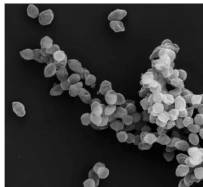
Leslie and daughter Ferri have the same kidney condition, which is inherited. Hundreds of patients with rare diseases have been given a diagnosis for the first time, thanks to a study which involved analysing their entire genomes.

Scientists in Cambridge have completed the world's largest project in healthcare - which brings hope of better understanding and faster diagnosis.

SCIENTIFIC AMERICAN

These Bacteria Steal from Iron and Could Be Secretly Helping to Curb Climate Change

By Shikha Rayan on September 28, 2020



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This crab could save your life - if humans don't wipe it out first

February 21, 2019

Case Western Reserve University

Bacteria in the gut do far more than help digest food in the stomachs of their hosts; they can also tell the genes in their mammalian hosts what to do. A study describes a form of 'interspecies communication' in which bacteria secrete a specific molecule -- nitric oxide -- that allows them to communicate with and control their hosts' DNA, and suggests that the conversation between the two may broadly influence human health.

Health · Second Opinion

Canada is shifting to 'living with the virus' - better or worse

f t e i in

Boosting vaccination rate key to lifting COVID-19 measures, but uncertain

Adam Miller · CBC News · Posted: Feb 05, 2022 4:00 AM ET | Last Updated: February 5, 2022



Experts warn about returning to 'normal' too soon

2 months ago | 2:04

John's Campaign - now 1,500 hospitals and homes welcome family carers

The list keeps growing as more hospitals and residential homes encourage carers to stay with their loved ones



▲ Campaigners Nikki Gerrard and Julia Jones with Jo James, lead nurse for dementia medicine, and Josephine Tapit, ward manager, at St Mary's Hospital, Paddington, London. Photograph: Richard Saker/The Observer

▲ Atlantic horseshoe crabs spawning in the shallow sandy waters of the Delaware Bay estuary. Photograph: Alamy

Horseshoe crab outlived dinosaurs but is no match for medicine's hunger for its blood

NEWS

Home UK World Business Politics Tech Science Health Family & Education

Entertainment & Arts

BBC Music website offers dementia lifeline

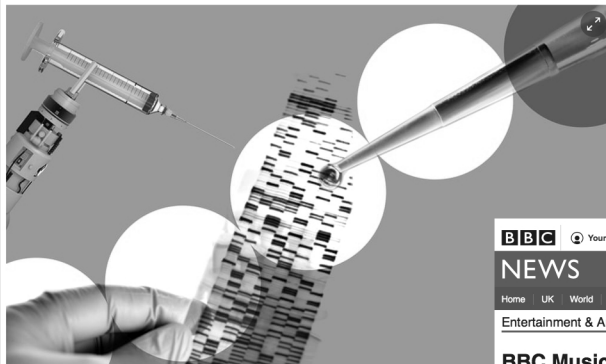
By Mark Savage
BBC Music reporter

INDEPENDENT Health and Wellbeing

Could gut bacteria slow down ageing?

John Cryan explains why it's possible that the fabled secret to eternal youth could be sitting in our digestive system

Routine DNA tests will put NHS at the 'forefront of medicine'



▲ The NHS will build on foundations laid down by the 100,000 Genomes Project, a huge DNA sequencing effort run by Genomics England. Composite: Guardian Design Team

From 1 October new cancer patients will have tumours screened for key mutations

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Biosciences Institute