



28:01:11–25:02:11

VISCERAL

THE LIVING ART EXPERIMENT

SCIENCE GALLERY PRESENTS A SYMBIOTICA EXHIBITION,
CURATED BY ORON CATTS AND IONAT ZURR

WOULD YOU TELL YOUR MOST INTIMATE CONCERNS TO A TISSUE ENGINEERED
WORRY DOLL? WHAT SOUNDS COME FROM A SPEAKER MADE OF BONE? HOW DOES
YOUR VISIT TO SCIENCE GALLERY REDUCE EPILEPSY IN A REMOTE PETRI DISH?



WHY VISCERAL?

MICHAEL JOHN GORMAN

Director, Science Gallery

There is something that makes us a little uneasy, perhaps even queasy, about the idea of creating artworks from living tissue. While we are increasingly comfortable with the use of digital technologies for artistic purposes, the very idea of tissue engineering as an art-form makes us squirm. SymbioticA, a leading art-science lab based in Perth at The University of Western Australia led by Oron Catts and Ionat Zurr, has become internationally celebrated for its pioneering and provocative experiments in art and science based on a deep understanding of the scientific processes and ethical issues involved. The work exhibited in VISCERAL: THE LIVING ART EXPERIMENT forms a series of provocations and puzzles around the nature of the living and non-living, asking us to consider the myriad of possible implications of our new biotechnological toolkit. VISCERAL incorporates ten years of challenging work at the frontier between fine art and biotechnology. For a whole month the entire SymbioticA laboratory will be transplanted from Perth to Dublin, allowing Science Gallery visitors to witness and participate in a series of living art experiments.

Marshall McLuhan could have been describing the work of SymbioticA when he said that artists have a key role to provide “precise advance foreknowledge of the psychic and social consequences of the next technology”, regarding artists as canaries in the coal-mine of scientific research, alerting us to unexpected ways in which new technologies might transform social relations. By creating objects of communication exploring the consequences of emerging technologies the different artists involved in VISCERAL alert us to a series of concerns, about the human body and its possible extension through “semi-living” tissues, about our relationship with medical technologies, and with our environment.

The works are occasionally playful, frequently uncanny and may even appear to be sentient. They confront us with important questions around our manipulative capacities more powerfully than any amount of abstract bioethical literature. I want to thank SymbioticA, all the artists and scientists, our supporters and the team at Science Gallery for making VISCERAL come to life, literally.



THE LIVING ART EXPERIMENT

DRON CATTS & IONAT ZURR

Curators VISCERAL, SymbioticA

The last decade of the 20th Century was marked with an increase of anthropocentric interventions with life on all levels; from the molecular to the ecological. The extent in which life was being manipulated and affected by human activity required new cultural strategies to contemplate, scrutinise and make sense of what it means to be alive. With the aim to explore these questions, SymbioticA was set up in the year 2000, as an artistic research lab in The School of Anatomy and Human Biology at The University of Western Australia. In the last ten years SymbioticA has facilitated a thriving programme of residencies, research, academic courses, exhibitions, symposiums, seminars and workshops. VISCERAL is both an experiment and an historical survey of some of the works researched and developed at SymbioticA over the last decade.

From hacking into “DNA Fingerprints” to produce cultural icons, through the proposition of using cultured neurons as computational devices, to superimposing a dying lake from Western Australia onto the grounds of Trinity College; the breadth of artistic engagement and experimentation presented in VISCERAL is a testimony to SymbioticA’s wide approach to the exploration of life manipulation. VISCERAL is designed as a living experiment in which the SymbioticA lab is transplanted into Science Gallery where research and experimentation into some projects will continue during the show.

The participatory engagement with the processes of the manipulation of life is a visceral experience and implicates everyone involved—including the gallery visitor—into the larger picture of the techno-scientific approach to life. At the core of all of the artistic explorations in this show is the sense that human intervention with life processes needs to be culturally articulated. Rather than an opinionated, didactic attitude VISCERAL will take an ambiguous posture and by that will facilitate a space to discuss, critique and debate issues concerning the future of life, be it a material, an entity or a concept.

THE VISION SPLENDID

Photo: Alicia King



Alicia King, Australia

The Vision Splendid explores biotech processes and the physical, ethical and ritual body, through the augmentation of human tissue in sculptural form. The living tissue growing in the glass bioreactor in this work originates from an anonymous female patient. Her cells (isolated from the skin sample of a 13 year old African-American female on January 31, 1969) were purchased through the American Type Culture Collection (ATCC) online catalogue, which itemises over 4,000 human, animal and plant cell lines available for order. Trawling through the thousands of entries in the ATCC catalogue for these cells drew to mind searching

through online obituary notices. Estranged from the donor's body, the cells and tissue presented here are re-embodied in the form of a contemporary living reliquary. The significance of the living relic—a true vision splendid—and product of contemporary biological technologies acts as the ultimate 'miracle', such as a relic of the dead which is claimed to bleed or weep, as a sign of the direct power of the 'creator', or in this case, Institution. Just as the egg displayed at Sparta was regarded as a true relic of Leda's union with the swan—so too living relics may appear as validation of the fruits of biotechnology.

AFTERLIFE: IMMORTALISATION OF KIRA AND RAMA

Photo: Svenja Johni Kratz



Svenja Johni Kratz, Australia

Afterlife: The Immortalisation of Kira and Rama is inspired by the shifting understandings of life and death and the interconnections between self and other in response to contemporary biotechnologies. The work involves the production of a custom-made Egyptian-inspired bioreactor containing living foetal calf cells that have been immortalised using a lentiviral plasmid (bacterial DNA molecule containing viral vectors), as well as preserved items from the calves' bodies including their hearts, hide and bone fragments. The work looks at the ethical ambiguities and challenges that accompany the use and

manipulation of organisms, in particular the use of Foetal Bovine Serum (FBS) in cell and tissue culture. FBS is a protein rich serum derived from the blood of foetal calves used as a nutrient supplement to enable cells in culture to survive. The work highlights that there are victims at every level of consumption, and that the boundaries between harm and benefit are in constant flux and often blurred. This exhibit—a work in progress—is a collaboration between SymbioticA Research Group, Svenja Kratz, Dusty Tame and John Barnard.

PROTO- ANIMATE²⁰

Photo: Andre Brodyk



Andre Brodyk, Australia

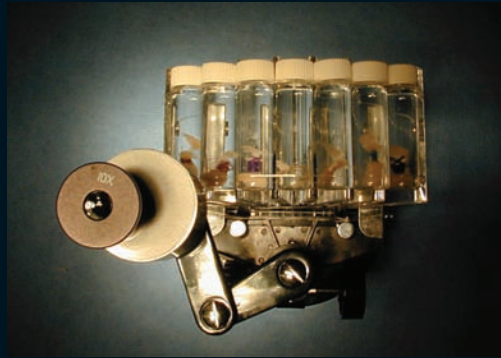
Can non-coding DNA be given a new lease of life through modern biotech processes? Proto-animate²⁰ is concerned with genetic material that is considered inanimate in so far as it does not code for proteins within the genomic environment. However, these strands of non-coding DNA do have potential properties as yet to be comprehensively defined. In Proto-animate²⁰ a novel code sequence is comprised of 158 DNA letters (bases) derived from what is considered

a non-coding region of a gene. This gene known as the APOE gene (Apolipoprotein E) is associated with Alzheimer's disease in humans. This sequence was inserted in *E.coli* bacteria and is the principal creative agent at work. Through this process a previously inanimate, non-coding section of DNA is poetically expressed in interplay of memories and repetition within the artist's childhood classroom.



THE SEMI-LIVING WORRY DOLLS

Photo: Tissue Culture and Art Project



Tissue Culture and Art Project, Oron Catts and Ionat Zurr, Australia

The Semi-Living Worry Dolls were the first tissue engineered sculptures to be presented alive in a gallery eleven years ago. Inspired by the Guatemalan worry dolls given to children to whisper their worries and concerns to, these worry dolls were hand crafted out of degradable polymers (PGA and P4HB) and surgical sutures. The dolls are then seeded with living cells that, throughout the exhibition, will gradually replace the polymers within a micro-gravity bioreactor

that acts as a surrogate body. The worry dolls become partially alive. These semi-living dolls represent the current stage of cultural limbo, characterised by childlike innocence and a mixture of wonder and fear of technology. This work invites you to whisper your worries to the worry dolls—will they take your concerns away?

CRYOBOOK ARCHIVES

Photo: Tagny Duff



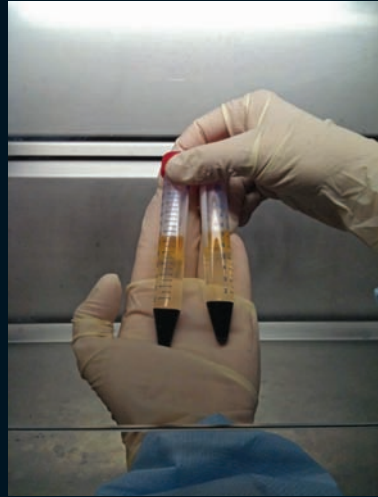
Tagny Duff, Canada

This installation features a series of handmade books made of human and pig ex-plant tissue, HaCat cells and a synthetic biological virus (Lentivirus). Tissue culture engineering techniques such as transfection and immunohistochemical staining procedures along with traditional book binding techniques are used to manifest these fleshy books. These four sculptures are exhibited in a “Cryobook Archives”, a

portable freezer unit made into a mobile miniature library. The Cryobook Archives unit is engineered by David St.Onge, Benoit Allen and Jean-Michel Dussault. Cryobook Archives designed by Tagny Duff, John Greyson and Vincent Chavalier.

BLOOD WARS

Photo: Benjamin Forster



Kathy High, USA

Blood Wars is an art project that looks at the biological reaction of human white blood cells, and also questions traits inherited through blood. Blood Wars is set up as a competition in a simulated tournament where different individuals' white blood cells vie for dominance in the Petri dish. Blood Wars playfully engages with age-old debates about blood traits and also in discussions of the powerful histories

of blood. Blood Wars involves a series of play-offs where the cellular 'winner' of each round will go on to fight another participant. Blood Wars will ultimately give a better understanding of the processes of blood cell division and cell membrane fluid exchange, the immune system and the mythologies of inheritance and blood pathologies.

VISCERAL EVENTS

VISCERAL: THE LIVING ART EXPERIMENT GIVES YOU THE CHANCE TO GET UNDER THE SKIN OF THE EXHIBITION BY MEETING THE ARTISTS AND RESEARCHERS FROM SYMBIOTICA AS THEY WORK IN THEIR TEMPORARY LABORATORY, ATTENDING OUR EVENTS OR CHECKING OUT OUR WORKSHOPS.

29:01:11 10:00–18:00

VISCERAL: THE LIVING ART EXPERIMENT A SYMBIOTICA SYMPOSIUM

This conference will deal with cultural strategies that engage and scrutinise development in the life sciences with a particular emphasis on hands-on artistic research embedded within a biological

laboratory. Two of SymbioticA's co-founders and a selection of SymbioticA residents will speak on art and biology from many different perspectives: political, ethical, historical, aesthetical and more.

Speakers include: Oron Catts, (Australia), **Marta de-Menezes** (Portugal), **Deborah Dixon** (UK), **Tagny Duff** (Canada), **Miranda D. Grounds** (Australia), **Kathy High** (USA), **Kira O'Reilly** (Ireland), **Adele Senior** (UK), **Meredith Walsh** (Australia), **Jennifer Willet** (Canada), **Adam Zaretsky** (USA), **Ionat Zurr** (Australia).

For more information contact: info@sciencegallery.com.

To register for this free conference visit: sciencegallery.com/events

30:01:11 12:30–16:00

SYMBIOTICA AND ARTISTS' TALKS:

Start your Sunday with a panel discussion on the unique programme of SymbioticA's Masters in Biological Arts—the opportunities and challenges offered by this interdisciplinary degree; where students from art or science backgrounds have

to 'abandon' their respective discipline and comfort zones, towards a creative project that combine arts and the life sciences. Following this discussion artists from the VISCERAL exhibition will give you a deeper insight into their work throughout the gallery.

For full line-up please check out www.sciencegallery.com/events

TICKETS AND WORKSHOP DETAILS AVAILABLE ON WWW.SCIENCEGALLERY.COM



02:02:11 18:00–19:30

SYMBIOTICA DOCUMENTARY SCREENING

View a number of short documentaries about works developed at Symbiotica, featuring pieces such as 'The Harlequin's Coat' by ORLAN and Critical Art

Tickets €4 (pre-booking essential)

Ensemble's 'Producing Immolation'.
A discussion led by Oron Catts will follow the screening.

09:02:11 18:00–19:30

SCIENCE, ART AND ETHICS

This event will bring together world leaders from the interface of science, art and ethics who will address the ethical hurdles encountered by using living material in art and the questions raised by

Tickets €7/€5 for students (pre-booking essential)

combination of new medical and artistic technologies. Featured panelists include Oron Catts (Symbiotica), Dr Steven Potter (Georgia Tech), Robert Devcic (GV Art) and Michael John Gorman (Science Gallery).

16:02:11 18:00–19:00

PROFESSOR MARTIN KEMP TALK:

STRUCTURES AND INTUITIONS IN ART AND SCIENCE FROM LEONARDO TO NOW

Certain kinds of art and science originate in the intuiting of deep structures that lie behind appearance. These themes run across art, architecture, design and various sciences from the Renaissance to today. Join this fascinating talk

Tickets €5 (pre-booking essential)

by Martin Kemp, Emeritus Research Professor in the History of Art at Oxford University, who has written and broadcast extensively on imagery in art and science, with a special interest in Leonardo da Vinci.

24:02:11 18:30–20:00

VISCERAL: THE FUNERAL

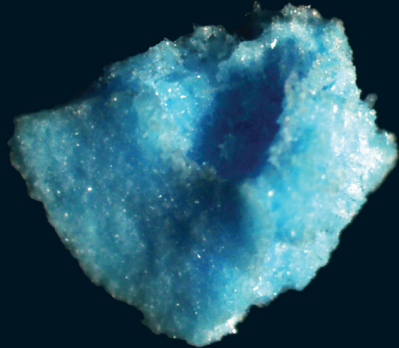
What happens when the bio-reactor gets switched off? How do you dispose of art if it's still alive? Join this funeral event marking the end of the month-long living art experiment. We'll hear what visitors whispered in the digital 'ears'

Free (pre-booking essential)

of the Semi-Living Worry Dolls and we'll take a last look at the exhibition to try and answer the questions of how 'alive' biological art is, who it is, and what respect it merits—before we open up the doors of the wet lab for the 'killing ritual'.

LET A THOUSAND PROTEINS BLOOM

Photo: Abhishek Hazra



Abhishek Hazra, India

Imagine a not so distant future where rogue nation states are harnessing human biomaterials to create explosives. This work attempts to produce ammonium nitrate from breast milk. Using a process called deamination to extract ammonia from breast milk, the work interrogates popular perceptions around 'good' and 'bad' material. Staged as a failed experiment, the work draws attention

to the constraining logic of utility that frames scientific research. Milk donated by The Human Milk Bank, Irvinestown, Co Fermanagh.



TRANSJUICER

Photo: Boo Chapple



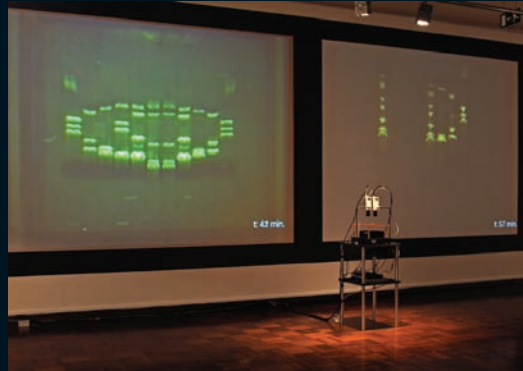
Boo Chapple, Australia

Transjuicer represents the culmination of several years of work on the piezoelectric nature of the bone matrix in order to make bone audio speakers. So what does the cow bone audio speaker, the piezoelectric transducer, actually transduce? At the purely material level it transduces electromagnetic waveforms—in this case of bone songs and cow songs—into nano-sonic vibrations.

These vibrations have been recorded using a laser interferometer and can be listened to on headphones. At another level again, the speaker transduces between macro social context and micro technical interventions, between the cow and the gallery, between the dead and the living, between the performance of science and its representation.

LATENT FIGURE PROTOCOL

Photo: Alan Dimmick



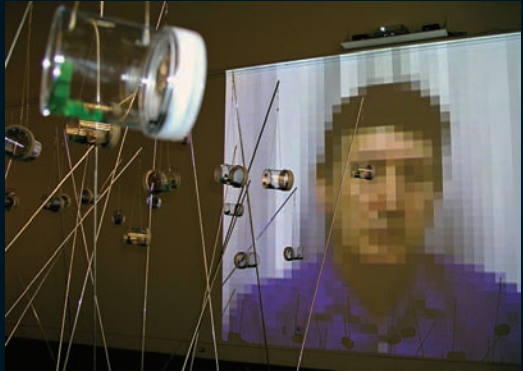
Paul Vanouse, USA

Latent Figure Protocol (LFP) is an installation that uses DNA samples to create unique images, employing a reactive gel and electrical current. In the first LFP a copyright symbol is derived from the DNA of an industrially-produced organism (a bacterial plasmid called “pET-11a”), illuminating ethical questions around the changing status of organic life and the ownership of living organisms. The LFP imaging process relies on cutting DNA to the sizes needed to make the correct image. This is essentially doing molecular biology in reverse.

Usually scientists use imaging techniques to determine an organism’s genetic sequence, whereas LFP utilises known sequences in online databases to produce “planned” images. A “DNA fingerprint” is often misunderstood to be a single, unique human identifier. However, there are hundreds of different enzymes, primers and molecular probes that can be used to segment DNA and produce banding patterns. These banding patterns that appear tell us as much about the enzyme/primer/probe as the subject that they appear to reproduce.

HOST

Photo: Nigel Helyer



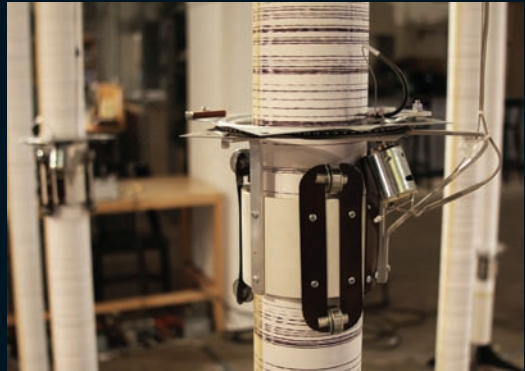
Nigel Helyer, Australia

The Host project suggests that for a moment we abandon our anthropomorphic worldview and think about life (well actually think about sex) from the perspective of an insect. We are invited to join an audience of 200 live crickets, who are attending a very serious scientific lecture on the sex life of insects, which we quickly realise is rather more complex and interesting than our own! One screen shows the heavily pixelated talking-head of the scientist, the other an image of an oscilloscope signal. The oscilloscope image with its crackling sound-track was obtained under

laboratory conditions and is a direct recording of the electrical activity in the aural nerve centre of a cricket listening to the sex lecture. From one perspective the creature becomes a type of electro-physiological microphone—but at a deeper metaphorical level we are asked to re-consider our own perceptual assumptions about the world.

SILENT BARRAGE

Photo: Exit Art



Neurotica, Philip Gamblen, Guy Ben-Ary, Peter Gee, Dr. Nathan Scott, Brett Murray
in collaboration with Dr Steve Potter's lab, Georgia Tech, Atlanta.

Silent Barrage declares its presence in scale and sound. This architectural scale arrangement of noisy pole robots is more than a mere amplification of neuronal activity in a remotely located culture dish. Silent Barrage investigates the nature of thoughts, free will, and neural dysfunction. The work focuses on the bursts of uncontrolled activity of nerve tissue, a typical characteristic of epilepsy

and cultured nerve cells. Silent Barrage uses audience movements in and responses to the architectural space of amplified neuronal activity to feed it back to the cultured nerve cells in an attempt to silence the barrage of electrical impulses. The scientists hope that this might help them understand better how to quieten the activity in the culture dish and this in turn would assist in treating epilepsy.



INVOCATION OF MY DEMON SCREEN

Photo: Alana Culverhouse



Bio-Kino, Tanya Visosevic & Guy Ben-Ary, Australia

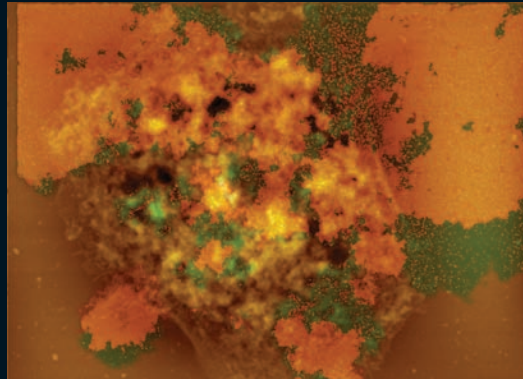
Invocation Of My Demon Screen casts a cinematic spell by employing the techniques of the French filmmaker Jean Painlevé. Painlevé cinematically synthesized poetry and science in his surreal zoological films from the 1930s through to the 70s.

Invocation Of My Demon Screen, emphasises the properties of time over the qualities of movement with a projection of the microscopic movie onto a living screen.

Produced to celebrate the 10th anniversary of SymbioticA, VISCERAL sees the world premiere of Bio-Kino's most recent manifestation of The Living Screen project. Bio-Kino was established in 2004 as a collective of two artists (Tanya Visosevic and Guy Ben-Ary) and an optical engineer (Bruce Murphy).

MIDAS

Photo: Screen capture (© Paul Thomas)



Paul Thomas and Kevin Raxworthy, Australia

The Midas project is a visual and sonic installation that amplifies certain aspects of experience at the nano level. The project draws analogies to the curse of the fabled Midas, King of Phrygia, to whom Dionysus gave the power of turning all that he touched into gold. This gift soon became a curse, as even his food and drink transformed into gold. The Midas project uses a single skin cell as a visual metaphor for exploring touch of the nanobiological body. An Atomic Force Microscope (AFM) was used to image a

cultured skin cell and the AFM in a force stereoscopy mode recorded the atomic vibrations when skin touches gold. The installation comprises a gold coated three-dimensional model and a digital projection of an image of the skin cell. The viewer touches the gold coated model to play the atomic vibrations of atoms and to initiate the release of semi-autonomous nanobots that consume the projected image of the cell.



STRUCTURING SOMNOLENCE

Photo: Keitaro Yoshioka and Lisa Carrie Goldberg



Lisa Carrie Goldberg, Canada

Structuring Somnolence highlights how the use of graphical representations of sleep positioning can be changed for the sake of art and how scientific tools can be repurposed as artistic tools. A conductor and an administering sleep technician will reconfigure the sleeping body of a volunteer with the intention of forming predetermined landscape/architecture drawings from the emerging graphical sleep data known as “Sleep Architecture”. Unlike a traditional scientific experiment this research is not attempting to solve a problem; there are

no health benefits to an experiment of this sort. It is not about calculating sleep efficiency; in fact, the sleep of the subject will be disturbed for the sake of this research. It should be considered as a method for creating art, using the electrical data gathered from a sleep study for an objective assessment. This installation will be based on a volunteer’s sleepover at Science Gallery on January 28th, which will be viewable from Pearse Street from 21:00 onwards.

THE SUMMER FLURRIES

Photo: Perdita Phillips



Perdita Phillips, Australia

"We chart our cities, so we chart ourselves."—Peter Turchi

The Summer Flurries presents a landscape of droughts, dry lakes and wildfires from Lake Clifton in Western Australia. A postcolonial invasion from somewhere else inverts the deep history of Dublin's spoken and scribed streets with sounds of wattlebirds and Australian Shelduck. Participants experience the meshing of two very different locations as they hunt for

invisible traces and track the movement of water. The piece aims to create linkages at different scales across human and nonhuman worlds. The Summer Flurries is an outdoor spatial sound art walk around a Dublin location utilising high resolution GPS as part of The Sixth Shore project.



ACKNOWLEDGEMENTS

PROTO-ANIMATE²⁰

Assoc. Prof. Peter Lewis, Ryan Withers, University of Newcastle, Australia.

AFTERLIFE: IMMORTALISATION OF KIRA AND RAMA

ACID Internship, The Institute of Health and Biomedical Innovation (IHBI), The Tissue Repair and Regeneration (TRR) Group.

THE VISION SPLENDID

Australia Council for the Arts (OZCO), MONA Museum, The bioreactor was developed as part of SymbioticA Research Group by Alicia King and Matt Johnson.

THE SEMI-LIVING WORRY DOLLS

The TC&A Project is hosted at SymbioticA—the Centre of Excellence in Biological Arts, School of Anatomy and Human Biology, the University of Western Australia.

CRYOBOOK ARCHIVES

The Canada Council for the Arts, Social Sciences and Humanities Research Council of Canada and Concordia University.

BLOODWARS

John Simon Memorial Guggenheim Foundation Fellowship.

LET ONE THOUSAND PROTEINS BLOOM

Dr. Will Stanley (School of Plant Energy and Biology, UWA), CEMA, Srishti School of Art, Design and Technology, Bangalore, Yashas Shetty and Anne McCrea. Milk donated by The Human Milk Bank, Irvinestown, Co Fermanagh.

TRANSJUICER

Research conducted in collaboration with William Wong.

SILENT BARRAGE

Neurotica (Philip Gamblen, Guy Ben-Ary, Peter Gee, Dr. Nathan Scott, Brett Murray) in collaboration with Dr Steve Potter's lab (Riley Zeller-Townson, Douglas Swehla and Stephen Bobic) Georgia Tech, Atlanta.

STRUCTURING SOMNOLENCE

The University of Western Australia Sleep Laboratory, Geraldine O'Connell, Respiratory Scientist and the volunteer sleeper.

THE SUMMER FLURRIES

Australian Government through the Australia Council, its arts funding and advisory body and the Sydney Myer Fund.

ALL PROJECTS WERE RESEARCHED AND DEVELOPED AT SYMBIOTICA IN THE SCHOOL OF ANATOMY AND HUMAN BIOLOGY AT THE UNIVERSITY OF WESTERN AUSTRALIA FROM 2000–2010. SYMBIOTICA, THE CENTRE OF EXCELLENCE IN BIOLOGICAL ARTS IS A JOINTLY FUNDED INITIATIVE BETWEEN THE UNIVERSITY OF WESTERN AUSTRALIA AND THE WESTERN AUSTRALIAN DEPARTMENT OF CULTURE AND THE ARTS (2008–2011).

ABOUT SCIENCE GALLERY

Science Gallery is a world first—a new type of venue where science and art collide. Since opening in early 2008 over 750,000 people have visited Science Gallery. Science Gallery aims to involve, ignite and transform curious minds through science—creating dynamic intersections between science and art—through exhibitions, experiments and events.

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Do you love Science Gallery? Do you want access to a creative community of thinkers and doers? Become a MEMBER + today and pledge your support to Science Gallery, while receiving a number of benefits for yourself—like VIP events, discounts and much, much more.

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SCIENCE GALLERY COMMUNITY

Science Gallery is a community—a group of enthusiastic individuals committed to exploring and implementing creative ideas in science and art. This community is enabled by our pyramid of engagement which ensures opportunities to get involved from walking in the door as a Science Gallery visitor to suggesting a major exhibition as a Science Gallery Leonardo.

Le

LEONARDO GROUP

GOVERNING

Am

AMBASSADORS

PARTICIPATING

Me⁺

MEMBERS

CONTRIBUTING

Vi

VISITORS

SCIENCE GALLERY VISITOR

Whether visiting for an event or a coffee, following Science Gallery on Twitter or attending all exhibitions, visitors are encouraged to engage directly with Science Gallery—leaving their thoughts on cards in the space, blogging about their experiences or adding to our visitor comments book.

SCIENCE GALLERY AMBASSADORS/PARTICIPATING

Science Gallery Ambassadors are people who roll up their sleeves and get involved! It could be anything from running a workshop to providing a talk about Science Gallery in their local school.

SCIENCE GALLERY MEMBERS/CONTRIBUTING

Science Gallery members are the first to find out about upcoming events and get access to special previews and members only events. Since the start of 2010 the MEMBER+ scheme offers a range of benefits including discounts, priority booking and free WIFI in Science Gallery, all while supporting Science Gallery activities.

SCIENCE GALLERY LEONARDO GROUP/GOVERNING

Drawing together a group of exceptional people from a range of backgrounds—science, technology, the arts, media, education and business—the Leonardo group acts as the “brain trust” of Science Gallery.

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symbiotica
BIOLOGICAL ARTS



Government of Western Australia
Department of Culture and the Arts

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The Science Gallery team has been involved in a rich dialogue with SymbioticA around the interface between art and science for two years now, and it is a great honour to be able present this major exhibition to the world for the first time in Dublin. Special thank you to curators Oron Catts and Dr Ionat Zurr, as well as Jane Coakley and Rachael Glasgow from SymbioticA and the University of Western Australia in Perth.

A special thank you to the Wellcome Trust, Lennox Laboratories and Micron Optical for their support of VISCERAL. Thank you to Dr Conor Buckley, Trinity Centre for Bioengineering, Trinity College Dublin, Anne McCrea from the Human Milk Bank, Irvinestown and Annabel Huxley PR. The exhibition is also supported by the Government of Western Australia - Department of Culture and the Arts. Thank you also to the members of Science Gallery's Science Circle: Dell, Google, ICON and PACCAR, the Department of Tourism, Culture and Sport as well as our media partner the Irish Times and DART/Irish Rail. Finally a big thank you to all the artists, scientists and the team at Science Gallery.

Brochure Design by Ruža Leko, Science Gallery

Exhibition Design by Russell Works

SYMBIOTICA IS AN ARTISTIC LABORATORY DEDICATED TO THE RESEARCH, LEARNING, CRITIQUE AND HANDS-ON ENGAGEMENT WITH THE LIFE SCIENCES. SYMBIOTICA ENABLES DIRECT AND VISCERAL ENGAGEMENT WITH SCIENTIFIC TECHNIQUES. CROSSING THE DISCIPLINES OF ART AND LIFE SCIENCES, SYMBIOTICA ENCOURAGES BETTER UNDERSTANDING AND ARTICULATION OF CULTURAL IDEAS SURROUNDING SCIENTIFIC KNOWLEDGE AND INFORMED CRITIQUE OF THE ETHICAL AND CULTURAL ISSUES OF LIFE MANIPULATION. SYMBIOTICA HAS FACILITATED OVER 70 RESIDENCIES AND RUNS A THRIVING PROGRAMME OF RESEARCH, ACADEMIC COURSES, EXHIBITIONS, SYMPOSIUMS, SEMINARS AND WORKSHOPS INTERNATIONALLY. SYMBIOTICA WAS HONOURED IN BEING PRESENTED THE INAUGURAL GOLDEN NICA IN HYBRID ARTS IN PRIX ARS ELECTRONICA AT ARS ELECTRONICA 2007. SYMBIOTICA IS A JOINTLY FUNDED INITIATIVE BETWEEN THE UNIVERSITY OF WESTERN AUSTRALIA AND THE WESTERN AUSTRALIAN GOVERNMENT'S DEPARTMENT OF CULTURE AND THE ARTS.

[HTTP://WWW.SYMBIOTICA.UWA.EDU.AU/](http://www.symbiotica.uwa.edu.au/)



sympiotica
BIOLOGICAL ARTS



Government of Western Australia
Department of Culture and the Arts

COMING SOON: **MEMORY LAB** 11:03:11–01:04:11
HUMAN+ 15:04:11–24:06:11

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