

BioArt and Bacteria

Anna Dumitriu

ESTHER KLEIN GALLERY

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2018

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A solo exhibition of artworks by internationally acclaimed BioArtist Anna Dumitriu exploring our relationship to the microbial world. Dumitriu's art practice fuses craft, technology and bioscience to weave complex but engaging narratives around our relationship to infectious disease and its cultural and personal implications.

Curator:

Angela McQuillan

Collaborators:

Alex May, Dr. Nicola Fawcett, Professor Maggie Smith, Dr. Sarah Goldberg, Dr. Melissa Grant, Dr. Rachel Sammons, Professor John Paul, Martin A. Smith, Dr. James Price, Kevin Cole, Dr. Rosie Sedgwick, Xiang Li, and Professor Bruce Christianson

Creative input and support from:

Museum of the History of Science, University of Oxford, Science Gallery London, Modernising Medical Microbiology, Public Health England, and the Liu Lab for Synthetic Evolution at University of California Irvine, ,

Sponsors:

FEAT Project, Leverhulme Trust, Arts Council England, Wellcome Trust, and The Science Gallery Lab Detroit

October 18 – November 24, 2018

Esther Klein Gallery (EKG)

3600 Market Street
Philadelphia, PA 19104

www.annadumitriu.tumblr.com

www.sciencecenter.org/discover/EKG

Cover: *Ex Voto*; photo: Jaime Alvarez

Book design: Angela McQuillan



Make Do And Mend, 2017

Vintage CC41 women's suite patched with silk grown with E. coli bacteria which has been genetically modified using a technique called CRISPR (sterilized and dead), vintage sewing machine and embroidery silk.

Photo: Jaime Alvarez

Introducing BioArt

BioArt is an emerging area of artistic practice that brings together art and science, using biological media and scientific as well as artistic methods to create artworks.

It explores the relationship between humans, science and ethics. BioArtists work with living organisms such as bacteria or tissue. They also explore life processes using scientific methods such as biotechnology and genetic engineering and artworks may be produced in laboratories, galleries, hacker-spaces, or artists' studios.

With the impact of biotechnological progress and human involvement in everything from the environment to DNA, far-reaching discoveries have created fertile ground for artistic expression. The work of BioArtists can help offer new meanings for our lives in the wake of scientific discovery or raise issues for societal and ethical debate. Anna Dumitriu is internationally recognised as a pioneer in BioArt and known for her work with bacteria and synthetic biology.



Pneumothorax Machine, 2014
Altered antique medical device with engraving and carving
Funded by the Wellcome Trust
Photo: Jaime Alvarez



Microbe Mouth, 2016
porcelain, glazes pigmented
with sterilized bacteria,
a tooth made from hydroxyapatite
(tooth enamel)
created by bacteria
in collaboration with Dr. Melissa Grant
and Dr. Rachel Sammons
photo: Jaime Alvarez

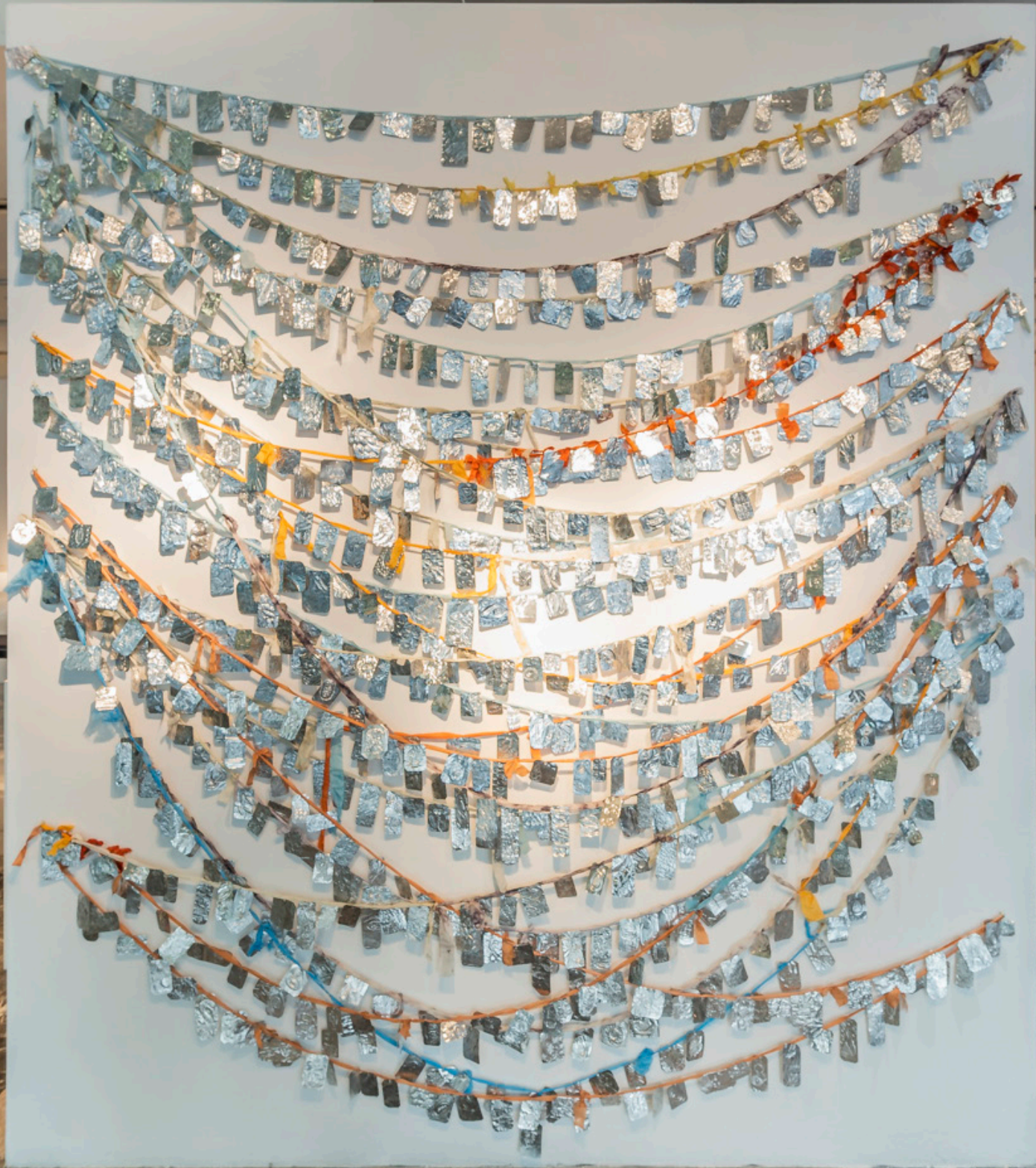
CURATOR'S NOTE

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Angela McQuillan
Curator, Esther Klein Gallery

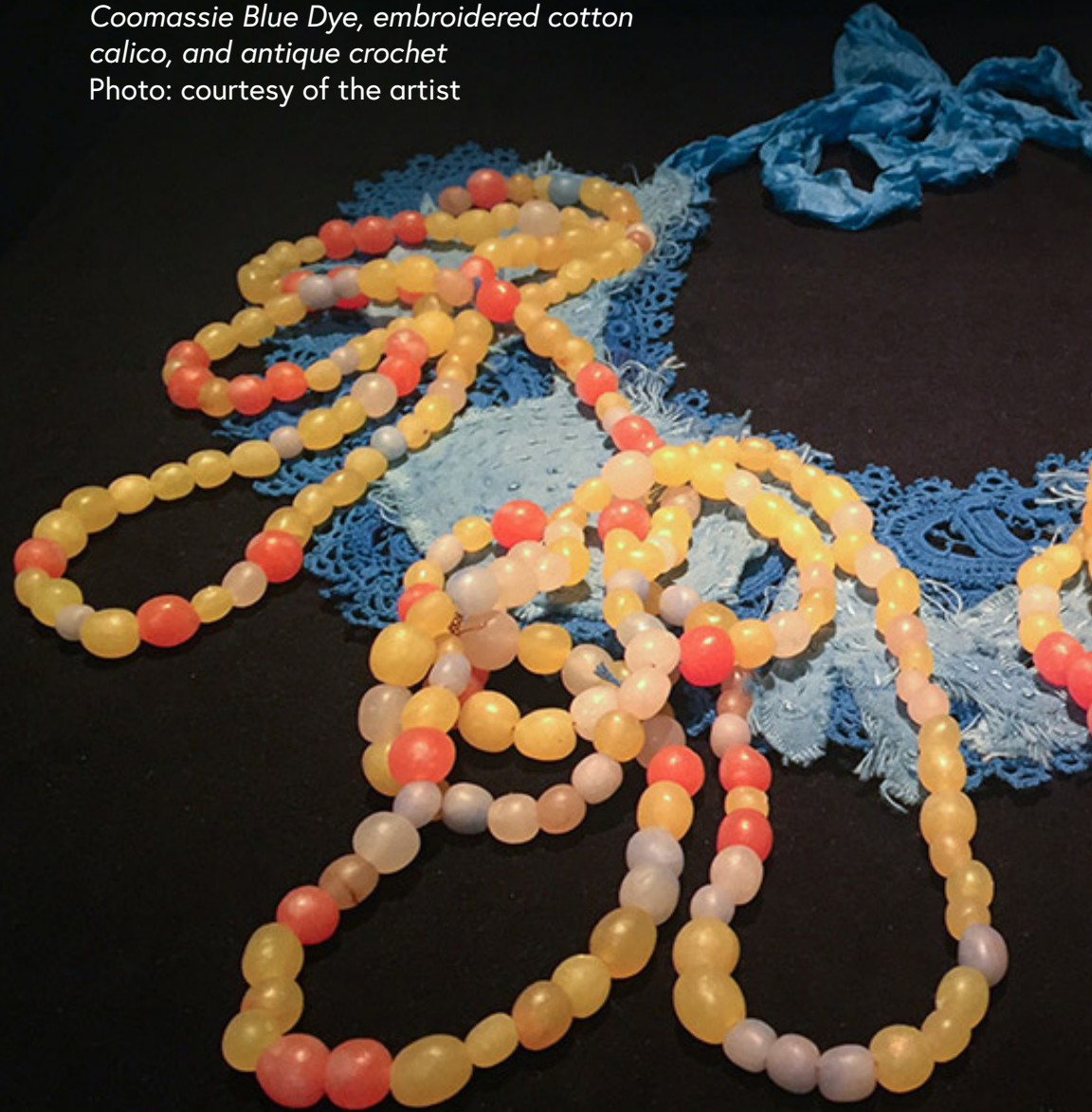


BioArt and Bacteria
installation view
Esther Klein Gallery 2018
photo: Jaime Alvarez

Hypersymbiotics™, 2018
Altered antique wooden apothecary box, engraved copper, glass,
cork, sealing wax, paper, textile, gold and biomaterials
Photo: Jaime Alvarez



Engineered Antibody, 2016
Polymer clay, crystallized amino acids,
Coomassie Blue Dye, embroidered cotton
calico, and antique crochet
Photo: courtesy of the artist



"Engineered Antibody functions as a contemporary reliquary; it is a precious container of biological traces with the potential to heal and ward of disease. Although based in science rather than religion, this art object also makes abstract concepts tagible."

BIOART AND BACTERIA

by Cindy Stockton Moore

Encased in a vitrine, an unusual necklace sits atop black velvet; its 452 handmade beads range in hue from yellow to orange. Each bead contains a crystallized version of one of 21 amino acids that form an antibody created in the lab from the blood of an HIV positive patient. Strung together in exact sequence, the beads structurally mimic the antibody's protein structure. The artwork – 'Engineered Antibody' by Anna Dumitriu – functions as a contemporary reliquary; it is a precious container of biological traces with the potential to heal and ward off disease. Although based in science rather than religion, this art object also makes abstract concepts tangible. It is one of many works in "BioArt and Bacteria" that invite viewers to visualize and contemplate socially complex work being done in laboratories today.

'BioArt and Bacteria' at Esther Klein Gallery is a solo exhibition featuring the work of Anna Dumitriu, an internationally recognized artist who fuses traditional craft practices with innovative biotechnology. The traveling show spans the last seven years of Dumitriu's career. It features a wide range of objects — sculpture, wearable art, wall hangings and video — each of which asks nuanced questions about the ethics and ethos of science.

Working directly with research scientists in the US and abroad, Dumitriu often employs cutting-edge synthetic biology to re-design components of her artwork. Several pieces in this exhibition are from her series "The Romantic Disease" that explores historical connections to the bacteria that causes tuberculosis (TB.) Working with extracted DNA, the artist neutralizes the infectious agents of the bacterium while encapsulating the fears and misconceptions. Whether stained into fabric or woven into textiles, the residue of disease becomes the substance of the art.

Where there's dust, there's danger, 2014
Needle felted wool and dust extracted DNA of tuberculosis
Photo: Jaime Alvarez



In “Where there’s dust, there’s danger,” Anna Dumitriu impregnates wool and dust with the sterilized TB bacterium. From that altered material, she creates miniature, pillow-like sculptures of lungs depicting different stages of the disease. The piece references a historical misunderstanding (the belief that TB was caused by household dust has since been disproven) but also activates the fear mechanism that spreads misconceptions. Next to this un-framed, wall sculpture hangs a ‘Do Not Touch’ sign. Although undoubtedly used to protect the artwork, the sign also triggers mistrust in the viewer, calling into question our belief in science when weighed against a perceived threat of personal danger.

The combination of hand-made and genetically altered materials also engenders another reading of Anna Dumitriu’s “BioArt and Bacteria.” Her textile works, beaded necklaces, and doll-house scaled furniture carry a tradition of ‘feminine arts’ where the beauty and utility coexist within the domestic sphere. In addition to spotlighting women’s on-going cultural and scientific contributions, these items –that would be treasured keepsakes– speak to broader ideas of hereditary and genetic connection.

Anna Dumitriu’s wall-hung “MRSA Quilt” is infused with a sterilized strain of the drug-resistant bacterium. The blanket brings to mind the person-to-person spread of infection, its fabric stained in the color palette of a muted blueprint. At the same time, the quilt recalls the circles of community that help ward off misconception through knowledge sharing. This piece, among many in “BioArt and Bacteria” is a precisely crafted hybrid of science, storytelling and artistry. Synthesis and connection are at the core of Anna Dumitriu’s diverse practice; this fascinating exhibition reflects her on-going experiments in the communicability of information.



Rest, Rest, Rest! 2014
Metal and cloth stained with madder root and walnut
with extracted DNA of tuberculosis
Photo: Jaime Alvarez

Anna Dumitriu: An Artistic Obsession with Bacteria

Anna Dumitriu is a British artist whose work fuses craft, technology and bioscience to weave complex narratives around our relationship to infectious disease and its cultural and personal implications.


Dumitriu has an extensive international exhibition profile including ZKM, Ars Electronica, BOZAR, The Picasso Museum, The V & A Museum, The University City Science Center Philadelphia, MOCA Taipei, LABORal, Art Laboratory Berlin, and The Museum of the History of Science Oxford.

She was the 2018 President of the Science and the Arts section of the British Science Association and holds visiting research fellowships at the University of Hertfordshire, Brighton and Sussex Medical School, and Waag Society, as well as artist-in-residence roles with the Modernising Medical Microbiology Project at the University of Oxford, and with the National Collection of Type Cultures at Public Health England. Dumitriu is a renowned speaker and has presented her work at venues including TATE Modern, Princeton University, Imperial College, La Musee de la Chasse et de la Nature, The Mendel Museum and UCLA.

Her work is featured in many books including “Bio Art: Altered Realities” published by Thames and Hudson in 2016 and many other significant publications across contemporary art and science including Artforum International Magazine, Leonardo Journal, The Art Newspaper, Art Quarterly, Nature and The Lancet.

Dumitriu works hands-on with the tools and techniques of microbiology and synthetic biology to create intricate artworks that reveal strange histories and emerging futures. Her obsessions with the history and treatment of infectious diseases, medical ethics, antibiotics and genetics speak urgently to the concerns of wide audiences and create a visceral and emotionally affecting experience.

As well as creating artworks collaboratively in laboratories and healthcare settings at the cutting edge of science she is known for developing participatory workshops for diverse audiences in order to share stories and create spaces for dialogue between researchers and the public.



*The Sequence Dress, 2015
in collaboration with Alex May, Dr. John Paul, Dr. James Price, Kevin
Cole, Dr. Rosie Sedgwick and Professor Bruce Christianson
Funded by Arts Council England
Photo: Jaime Alvarez*



Blue Henry, 2014
Antique sputum cup, engraving
Funded by the Wellcome Trust
photo: Jaime Alvarez

