

SYNERGIES IN ART AND SCIENCE

"Synergies in Art and Science," is an art exhibition showcasing thought-provoking collaborations at the intersection of microbial science and artistic innovation.

This exhibition was facilitated, in part, by the Arts and Design Research Incubator and the One Health Microbiome Center. Contents include highlights from the One Health Microbiome Center's Biannual Symposium art exhibition, "Synergies in Art and Science"

Curated by Cynthia White, with special thanks to Nichole Ginnan, Cody Goddard, Dina Constantinides, the Arts and Design Research Incubator, College of Arts and Architecture, One Health Microbiome Executive Committee.



PennState
Huck Institutes of
the Life Sciences



PennState
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Andrew Hieronymi

CONTACT, 2022

Wood, metal, Processing and Arduino software

CONTACT is an installation game about motion, interaction, perception, and the aesthetic sensation of coordinated skill.

Design and development: Andrew Hieronymi,
Concept: Andrew Hieronymi, Joseph Cusumano,
Jonas Rubenson, Input device design and production:
Matt Olson, Sound: Kevin Matthews

Developed with funds from the College of Arts and
Architecture at Penn State University

Ex-Utero Collective (Cristin Millett, Cynthia White, and
Ionat Zurr)

Placen-Tech, 2024

Interactive mixed media acrylic sculpture with live feed
of a corrosion cast placenta

"Ex-Utero: A Sculptural Exploration of Ectogenesis" is
a provocative examination of human reproduction and
the extraordinary possibilities of ectogenesis. This
collaborative project merges scientific inquiry with
artistic methodologies to investigate the human
placenta as a transient and temporary organ. The
project envisions a future where pregnancy occurs
entirely outside the body and relies on a mechanized,
man-made version of the placenta.

Project collaborators: Cristin Millett, Cynthia White,
Ionat Zurr, Dan Hayes, Thomas Neuberger, Tim Ryan
and Jonas Rubenson.

Project consultants: Center for Reproductive Biology
and Health, Alison Gernand, Jamie Heilman, David
Marie, OriginLabs

Project support from the Huck Institutes of Life
Science, the College of Arts and Architecture,
SymbioticA (Perth), and the Australian-American
Fulbright Commission



Benay Gürsoy and Felecia Davis
***MycoKnit: Cultivating Mycelium-based Composites on Knitted Textiles for Large-Scale Biodegradable Architectural Structures*, 2023**

Led by co-PIs Felecia Davis and Benay Gürsoy, the project explores using mycelium-based and knitted textiles to form a sustainable building material. The creation of "MycoKnit" as a concept began through a collaboration between Davis' SOFTLAB and Gürsoy's ForMat Lab to create a lightweight material for biodegradable architectural structures.

Project Team: **Pennsylvania State University**, Department of Architecture , Paniz Farrokhsiar, Parachi Masown, Alale Mohseni; **Material Science and Engineering**, Katy Gerace, PhD; **Department of Plant Pathology and Environmental Microbiology**, John Pecchia, PhD; **Texas Tech University**, Huckabee College of Architecture, Ali Ghazvinian, PhD, Tahmures Ghiyasi, **Louisiana State University**, College of Art and Design, Farzaneh Oghazian, PhD; **North Carolina State University**, Wilson College of Textiles, Andre West, PhD, Jenna DeCandio

Developed with funds from The SOM Foundation Research Prize 2021 and support from The Stuckeman Center for Design Computing

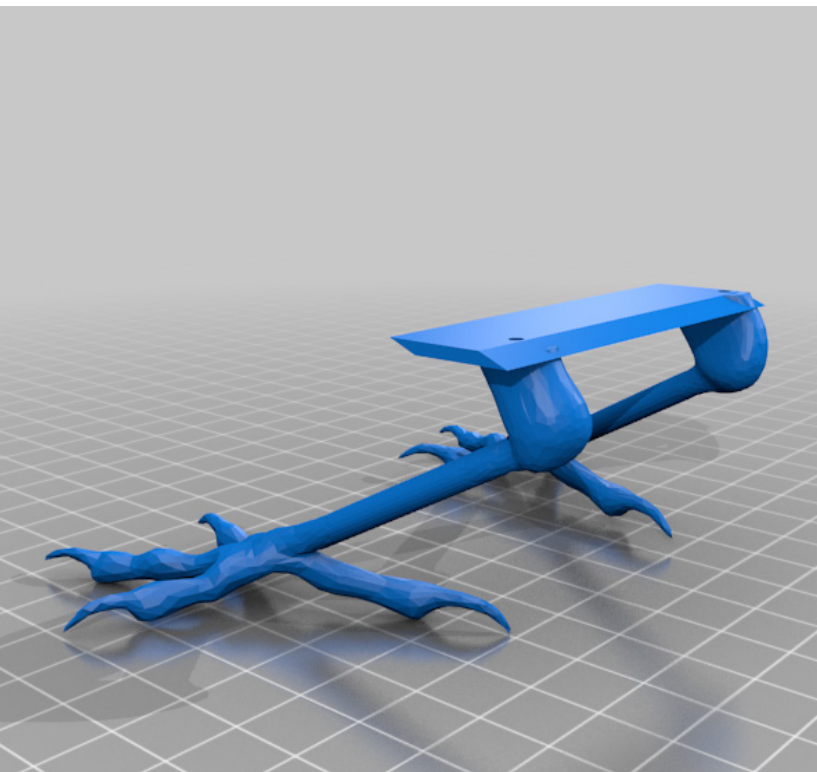
photo credit: Benay Gürsoy



Marianna Renda and Johanna Beam
***Untitled*, 2023**

Johanna Beam, Ph.D. student in avian evolution in the Toews Lab and BFA sculpture student Marianna Renda, visited each other's curiously differing workspaces (a laboratory with avian collections and sculpture studio, respectively) to exchange ideas and learn more about each other's practice. The task was to create an artwork that would heighten awareness about the concerning number of bird strikes caused by windows in the built environment, especially on University Park campus. This artwork in progress is an outcome of their extensive conversations about avian biology, ecology and built environments.

Support from the Arts and Design Research Incubator, College of Arts and Architecture





Kathy High
Kathy as Bowie, 2015

Attempted exchange project with David Bowie is a performative piece about taking on someone else's identity through sharing their gut microbiome via a Fecal Microbiota Transplant (FMT). Photographs were offered to David Bowie in exchange for a poop sample. The offer was never completed as Bowie died in 2016.

Looking at research in fecal microbial transplants and gut biomes to better understand the important function of bacteria in our bodies, this project embraces metaphors of interspecies love. As a patient with Crohn's disease, High's interest in gut microbiota starts with her own body.

Photographer: Eleanor Goldsmith

Pep Avilés, Laia Celma, Cynthia White and Mary Ann Bruns

Soil Samples, 2022

This artwork is from a larger body of work called Sentinel Lands: The Geospace of Mine fires, 2022 which explores the long-term spatial and ecological consequences of extraction economies and their impact on climate change and the built environment. The project was site specific to Centralia, PA where a devastating mine fire changed the course of a community and the local ecology where the fire still burns. This photographic series explores the growth of microbial communities in soil samples from bore holes in Centralia, PA. Sentinel Lands was exhibited in 2022 at the Penn State Stuckeman School's Rouse Gallery as part of the school's Lecture and Exhibit Series.

Collaborator and consultant: Mary Ann Bruns, Professor of Soil Microbiology and Biogeochemistry

