

Baroque biology (paper theatre)

In the photographic series *Baroque Biology Paper Theatre* (2019), Jennifer Willet enages with GMO bacteria growing in LB Agar petri dishes. Each plate presents imaginary biological vignettes where non-human organisms teach humans complex biotechnological processes. In this work, living bacteria cultures serve as collaborators in the creative process creating artworks that are both sublime and disgusting. *Baroque Biology (Paper Theatre)* presents a series of biotechnological vignettes where I reimagine laboratory aesthetics as feminine, gawdy, and fantastical in direct contradiction to the norms of contemporary scientific practices.

text and images: **Jennifer Willet**

Baroque Biology (*Paper Theatre*) is a series of 20 allegorical photographs where microbes take centre stage in melodramatic ecological interspecies performances. Each image includes GMO bacteria growing in LB Agar Petri dishes illustrating imaginary biological vignettes. Reminiscent of artist William Hogarth's serial engravings, this series presents cautionary fairy tales from a biotech past or future, reminding us to listen closely to our non-human neighbors. In this work, living bacteria cultures are presented in contexts that are gawdy, feminine, and fantastical. The images and titles envision microorganisms as square dancing, leading a lunar landing, and performing for royalty. *Baroque Biology (Paper Theatre)* imagines microbes and other non-human organisms as possessing agency. Within these biotech narratives, E. Coli try to communicate with humans about the biological processes they employ for survival, reproduction, and/or aesthetic pleasure. Sometimes the human audiences (ourselves as viewers, and those represented as paper characters in the collages) are open to receiving the communicated information, and sometimes we are hostile, or ignorant to the messages broadcast across species.

Ironically and delightfully, *Baroque Biology (Paper Theatre)* is only able to imagine microbial communication tactics within an entirely anthropocentric context – a paper puppet theatre. This work offers up to the viewer the ultimate dilemma of attempting to imagine or communicate across species (or making artwork about communication across species) with drastically differing physicality, sensory perception, and agency. This work acknowledges the impossibility of a literal translation of meaning across divergent lifeforms, while valuing shared knowledges and experiences that come from ecological cohabitations within the lab, within cultural settings, and in the natural world.

This artwork is inspired by the research of Science and Technology Studies luminaries, Lynn Margulis and Dorion Sagan, who argue that humans learned genetic engineering techniques from bacteria who has been successfully engaging in genetic modification since the creation of single-celled organisms on planet earth.¹ Baroque Biology is also informed by Bruno Latour's arguments that Pasteur's success in the discovery of penicillin was not possible without a network of human and non-human collaborator actants.²

Particularly, the melodramatic tone of these images is spurred by his statement, 'There is a history of microbes that is also filled with sound and fury'.³ In this passage, he reminds readers that the creation of culture media in Pasteur's lab was a historical event, and a new and transformative experience for the microbes, as much as it was for the human scientists. *Baroque Biology* is intended to upset the more common narrative of human ingenuity and discovery as the central and dominating force in evolving biotechnologies.

In the final work, Petri dishes growing a rainbow of GMO bacteria also contain paper cutouts, temporary tattoos, stenciled sugars, faux gemstones, and 3D cast agar forms. The agar is stained with food-grade pigments. The plates are inoculated and stored in large airtight Tupperware containers to prevent the smell from overtaking the laboratory. The bacteria replicate and interacts with the collage material over a few days incubating at room temperature. The resulting images are subject to the tenants of interspecies collaboration, emphasizing happenstance and unspoken shared experiences in the production of contemporary art. I never quite know what will grow over time.

A few days later, the plates are cleaned of moisture and arraigned on top of historical paper theatre scenography. They are photographed top down on the lab bench. Through the optical illusion of collage, it seems as if the bacteria colonies are traveling to far-off lands, traversing space and time, within the protective bubble of their Petri microenvironments. In reality, the performing GMO bacteria never leave the lab. They do, however, experience foreign objects within their more usual agar ecologies. The resulting microbial performances are lush and robust, but also contaminate and pungent and evoke disgust. After the photoshoot, the plates are tightly taped up and disposed of as biowaste, frozen, and awaiting pick up from Chemical Control.

In this portfolio, I have included six selected images from the *Baroque Biology (Paper Theatre)* (2019) series in conjunction with 4 images from the related *Baroque Biology Petri* (2019) series, where individual Petri dishes are photographed without the elaborate context of historical paper theatre scenography used as collage material within the larger works.

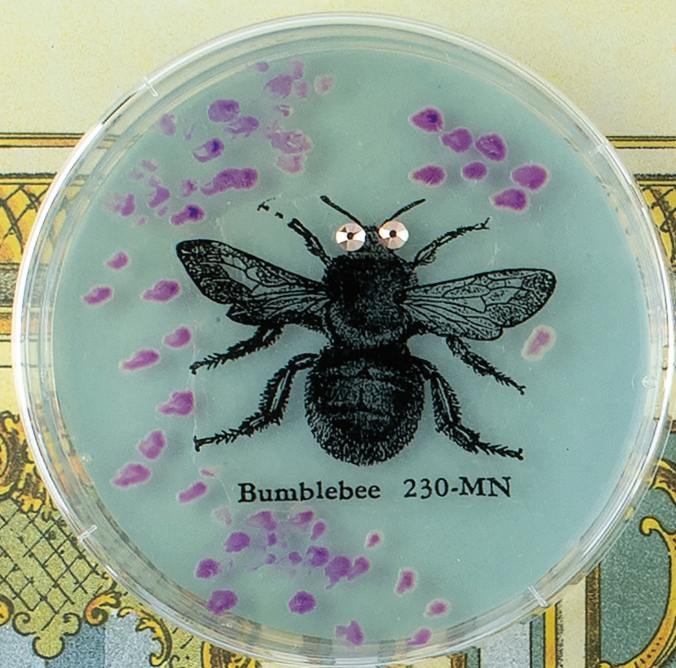
These living biological artworks were grown in my lab, INCUBATOR Art Lab, within the School of Creative Arts at the University of Windsor (Canada) in 2019. Human research contributors to *Baroque Biology* include, Jude Abu Zaineh, Lisha Laing, Philip Habashy, Aleeza Tariq, Gillian Hughes, Kadila Adili, Domenica Mediati, with photography by Justin Elliott. I would also like to extend a special thanks to the lab strain of E. Coli hibernating in our fridge for their contribution. Baroque Biology was supported by the University of Windsor, SSHRC Social Science and Humanities Research Council of Canada, and the Canada Research Chair Program.

Endnotes

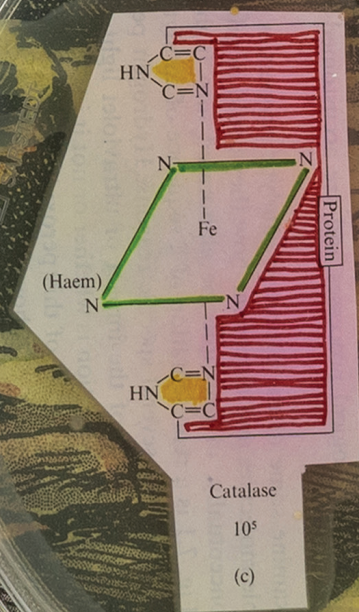
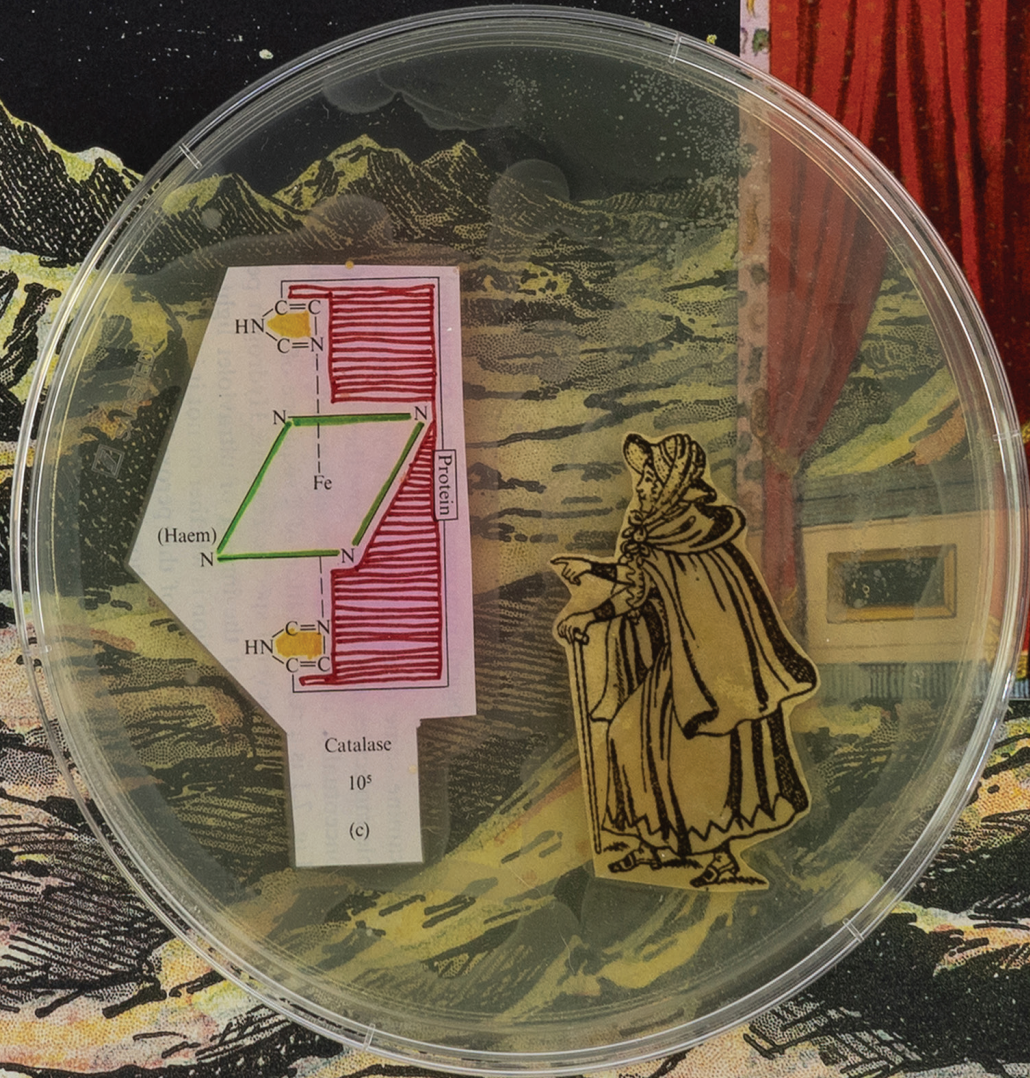
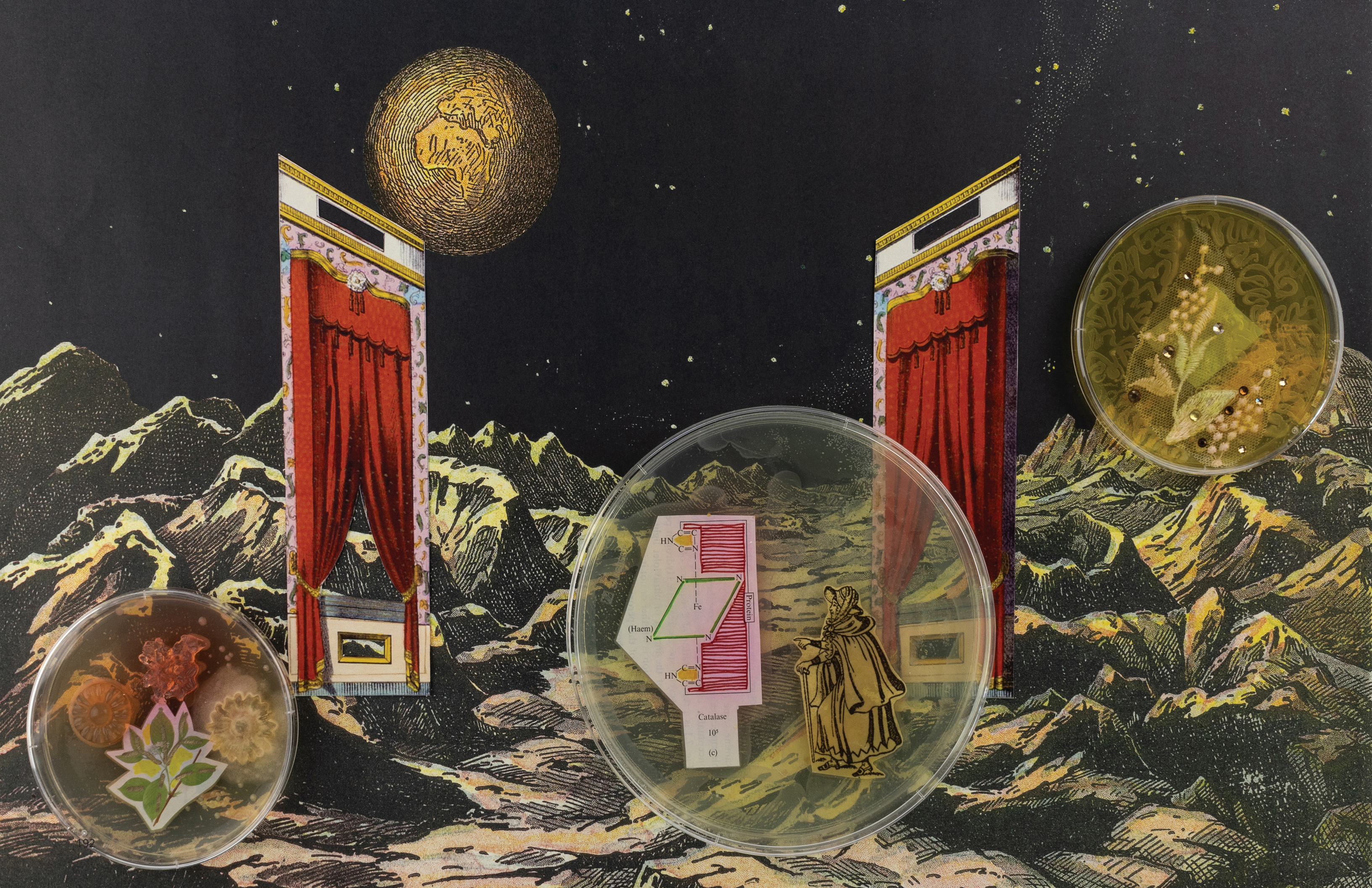
[1] Lynn Margulis and Dorion Sagan, *Microcosmos: Four Billion years of Microbial Evolution*. (Berkeley, CA: University of California Press, 1997), 196.

[2] Bruno Latour, *The Pasteurization of France*, (Cambridge: Harvard University Press, 1988), 149-50.

[3] Ibid, 82.

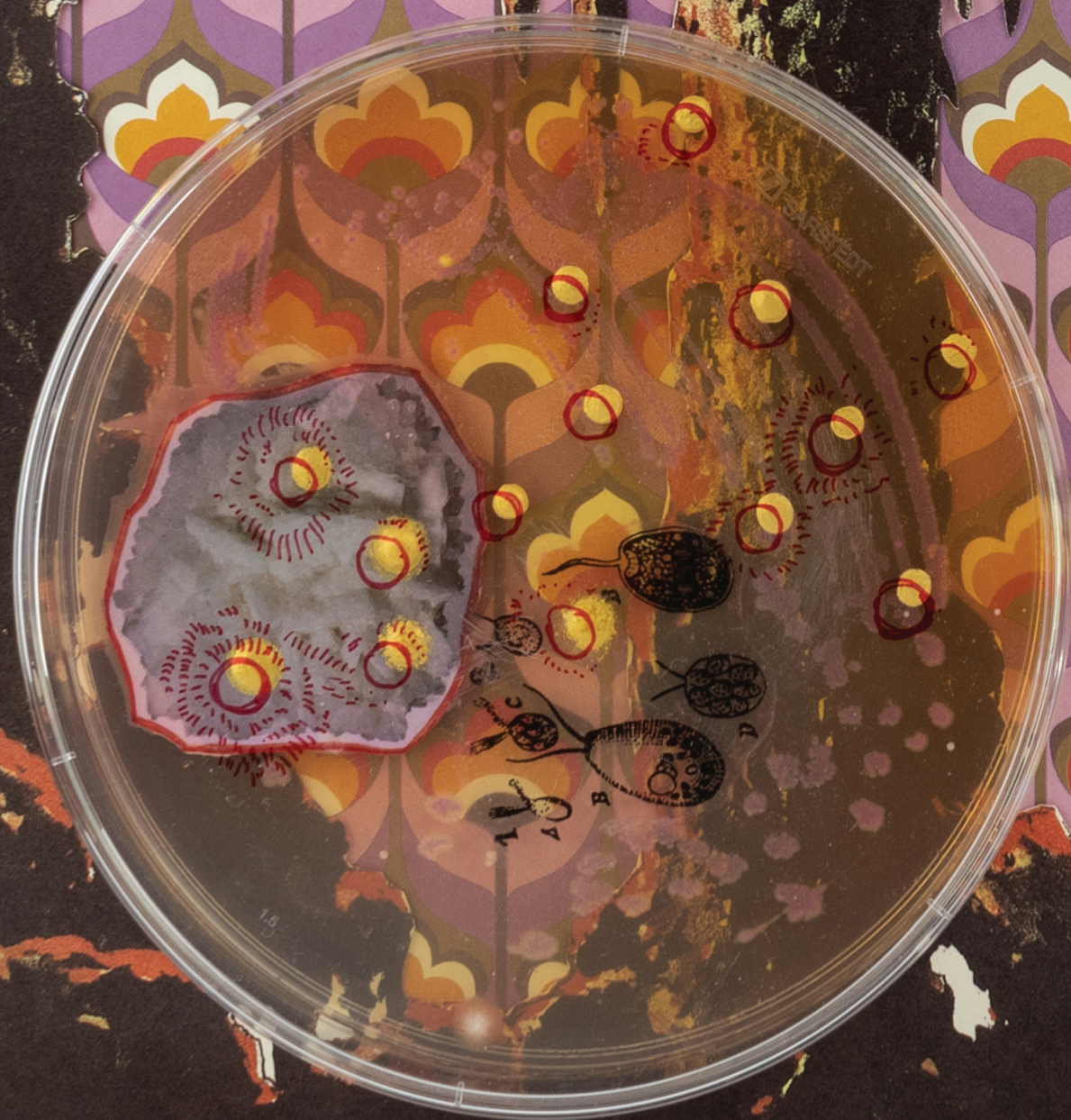
















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Digital Print
2019 © Jennifer Willet

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Jennifer Willet is a Canada Research Chair in Art, Science, and Ecology, a Professor in the School of Creative Arts at the University of Windsor (Canada) and the Director of INCUBATOR Art Lab. She is a member of the College of New Scholars, Artists, and Scientists in the Royal Society of Canada. Willet is a leader in the Canadian bioart community and works internationally as an artist and curator in the field. Willet's artwork is represented by IOTA Institute.

Proximal spaces

The notion of bubbles, territories and personal space has had a much longer history than the paradigms of social/physical distancing in the era of the pandemic. The paper takes as its case study the work ‘Proximal Spaces’, a research-creation project that invites a group of bioartists to sample and grow cultures of microbial colonies in their environments at multiple zones of proximity from the body. The paper will discuss the emergent thematics of boundary crossings, biophobia and microbial aesthetics that have arisen in such collective activities, and include references to the project’s AR application, site-specific installation and ekphratic poetic responses.

text: **Joel Ong, Mick Lorusso, Elaine Whittaker and Roberta Buiani**

As I write this piece on a wintery afternoon in a little midtown neighbourhood just north of downtown Toronto in early 2022, the city will lift its masking regulations in a week after removing capacity restrictions at indoor dining, gyms, and other public settings. All remaining COVID-19 directives are set to follow in Spring, bringing an abrupt end to community mitigation regulations that began when the first confirmed case in Canada was announced at the start of 2020. In March this year, the Biden administration released its updated COVID-19 preparedness plan that was less about eradicating the virus, and more about increasing vigilance and resource allocation to live through, and with, multiple waves and emerging variants of COVID in the coming years¹. North America’s optimism may not yet be shared by countries such as Australia and South East Asia, which are just seeing the peak of Omicron on their shores. Much of our time in the last 2 years has been muddled in endless repetitions of lock-downs and reopening, social distancing and then returning to gatherings, however uncomfortable, in parks and homes; and the constant bathing of surfaces, skin, and air with anti-septic chemicals. While health scientists, artists, and laypeople alike have been working to raise general awareness of the interrelationship of micro-organisms to personal and public health, nothing we have done has been as effective as the Pandemic in realizing the porosity of the body, its vulnerability to external infection and the unprecedented literacy with which we have all begun to discuss the scale of the minute and its overlap with us. At the same time, all the good work in the last decades correcting public opinion about dirt and the misguided stigma of ‘germs’ and all bacteria as hostile (for example when scientists realized that systemic antibiotics like tetracycline prescribed for bacterial infections on the skin were also found to cause lasting and potentially negative changes to the skin’s microbiome²), seemed to be upended in a sea of non-discriminatory hand sanitizers and surface disinfectants.

Through the Pandemic, what has been mundane, hidden, or invisible has become visible and visibly dramatic – our fight against the virus caricatured as a geopolitical struggle and an ‘arms’ race to immunize the world. In our social lives, our communities of play and family have been constantly demarcated through public health guidelines as inoculated bubbles, currently set at a 6-foot radius. The exploration of bubbles, territories, trans-border migrations (of both the hu-