



**AT THE TEMPERATURE OF MY BODY**

Heather Dewey-Hagborg

**FRIDMAN GALLERY**

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Joel Kuennen

### **INTIMATE VIOLENCE IN AN OVER-DETERMINED FUTURE**

Sequencing the human genome was like seeing the handwriting of god. But since the global mobilization of research capacities that led to the sequencing of the human genome in 2003, this codex has proven incredibly complex, making genes seem more like the notes of a symphony without any clue as to how they're arranged, their time signature or even what harmonies are used to make the music of us.

Artificial intelligence has given a boost to understanding this cypher, with start-ups like Genomic Predictions providing services to in vitro fertilization clients to predict qualities like disease probabilities and the height (within in an inch) of their children. Intelligence prediction is next. The ability to foretell the intelligence of one's offspring will be too tempting for parents to deny, especially if they can afford it. Genetics have become a site of obsession, a locus we can approach for oracle-like answers to questions of being. We are led to believe gene therapy will cure us of the diseases that mark our temporal experience and make us smart enough to solve the problems of the future, forever. Genetic engineering will remake us in the image of a new god.

But what can this essentialist obsession teach us? What happens when we have seemingly unlimited access to a scaffold that can rewrite our very identity for better or worse? Heather Dewey-Hagborg's second solo show at Fridman Gallery, *At the Temperature of My Body*, explores the emotional implications of genetic engineering through three invocations: obsession, love, loss.

### **OBSESSION**

*T3511* (2018), a short video done in collaboration with Toshiaki Ozawa, tells the story of a biohacker who becomes amorously obsessed with the donor of a saliva sample she ordered online. She sequences the sample by mail, receiving enticing bits of incomplete information from 23andMe: this individual could be an elite athlete, probably cannot smell asparagus, likely has a full head of black hair and none on their back, wet earwax. Obsession forms in the absence of knowledge but moved by the notion that something can still be known with certainty. The obsessed confuses attributes for the whole, building



*T3511*, 2018

Heather Dewey-Hagborg

Four-channel video, 9:04 minutes

*At the Temperature of My Body*, 2019, Fridman Gallery, NY. [Installation view]

out a profile of an individual into which their disappointments turn to hopes and form a musculature on an imagined ideal.

These probabilistic qualities of an individual drive the post-genetics sleuth to dive further, immortalizing the donor's cells by infecting them with the virus SV40 to prompt replication. SV40 pops the cell membrane with a needle, formed from proteins and inflated with plasma, and inserts T-antigen into the host cell, co-opting the RNA of the host to induce replication while simultaneously binding with and turning off tumor suppressor genes. The interior world is violently co-opted by her, as the virus to its host, in order to implant her vision. She suspends the cells in a medium of sugars and amino acids and tapes the petri dish to her bare stomach to "hold them at the temperature of [her] body" while the qualities of the donor quietly replicate on her belly. Instead of seeking out or taking images of the object of her obsession, she replicates him, his cells, each containing the script for his personhood.

Our obsessive protagonist cross-references the genetic profile with genealogical databases and finds the donor, Michael Daniels. She continues to passage his cells, tending to them like a finicky houseplant or a struggling annual. She goes to St. Louis and the company that provided the sample, just down the street from where Michael lives. As she peers through the windows of the nondescript office building, the obsessed waxes on feeling close to Michael, on experiencing what he experienced when donating his saliva to Lee Biosolutions. She lies down on a cot in a sanitized room and inserts a plastic tube into her mouth, becoming donor T3511 in an attempt to inhabit her obsession's experience, becoming object for another.

## LOVE

"To break the cell is to trespass the most intimate of spaces" says the protagonist in *T3511*. But what if this trespass is a benevolent one? *Lovesick* (2019) is a virus that infects with love, or rather, inserts a gene into its host that increases oxytocin production. Something as complex and fleeting as love may not necessarily be the outcome, but the poetic gesture is not lost. Beyond this simple gene-therapy for a post-Trump existence, the reality behind the hormone oxytocin mimics the aporia we face in decoding how genes are expressed.

Oxytocin was called the "moral molecule" when it first gained purchase in the popular imagination in 2012. It was said to increase feelings of social connection, to promote bonding between parent and child, to flush the brain with endorphins during pairing and perhaps be the key to moving towards a more just, compassionate, and loving society. However, further research began to show that not only did oxytocin encourage bonding, but it was foundational in the mechanism of Othering. It turns out, this hormone may be a key to love,

but also hate. It may form the familial unit, but it keeps that unit small.

*Lovesick*, presented in solution and housed in rose glass squiggles that represent the various states of excitation of the oxytocin molecule, is a danger. Encased in elongated petri dishes, it is untouchable, a distant solution to a constant problem: how do we be good to each other? It reminds us that solutions to systemic issues are never found by tweaking a singular variable but by addressing the multiplicity.

## LOSS

Tweaking a variable might not affect the changes we desire but removing that same variable will certainly produce an effect. The loss of my father has been one of the most profound experiences of my life. To lose someone foundational to one's self-concept forces us to face the instability of our own identity as social animals. And so, the audacity to reach beyond the border of life and claw back the loved ones past makes a certain amount of sense. It is not only a testament to the power of love, but the hubris of desire.

*Spirit Molecule* (2018-2019), created in collaboration with Phillip Andrew Lewis, took the form of a series of genetically modified tobacco plants that now carry a gene of Lewis' grandmother. The intention of the project, to create a psychoactive plant that can act as a platform between realms, is to connect the living and the dead. But here too, the intention of the gesture is complicated by the biological realities of the artwork's production.

These plants are created through cutting up leaves of *Nicotiana glauca* and washing them in a solution of *Agrobacterium tumefaciens* which inserts a plasmid of Lewis' grandmother, Jinny, and a tumour-inducing plasmid into the wounded tobacco cell. The cell is then placed in a growth medium saturated in cell differentiation hormones and an herbicide that kills off non-genetically modified cells. As the modified tobacco cells reproduce, a wholly new plant emerges: part Jinny, part tobacco. This locus of a human is now inside another being, the script for Jinny violently written into a plant that cannot use the information but keeps it inside its nuclei, at its center.

—

Here we are faced with the violence of knowledge, the violence of reaching into ourselves and trying to conquer the functionality of all things, and the violence of trying to assert our humanity by reimagining it at the center of another living being. Cell walls are pierced and their intimate self-knowledge amended, edited, annotated.

The violence of these cellular intimacies is also present in the abstraction of this intimate knowledge. What can we really know of an individual's

contours and crevices, traumas and desires when we presume to know someone so completely from an 8-bit code? While Dewey-Hagborg's work has often touched on the dystopian possibilities and realities of technological advancement — at this moment, I am reminded of Dewey-Hagborg's series *Stranger Visions* (2012–2013) gazing forward like inanimate funeral masks at an unknown future, simulacra of an idea of what humanity once was and how it might be in the future — her newest work examines what these realities portend for us, the subjects of an increasingly over-determined world.



*Spirit Molecule III*, 2018–2019

Heather Dewey-Hagborg

Genetic materials, psychoactive plants (morning glories, passion flower, and tobacco), video  
*At the Temperature of My Body*, 2019, Fridman Gallery, NY. [Installation view]

Heather Dewey-Hagborg

*At the Temperature of my Body* is a meditation on intimacy, desire, and spirituality, anticipating a world of emerging biotechnological rituals. The exhibition consists of three works corresponding to three phases of love: desire, attachment, and grief. Through the frame of speculative narrative Dewey-Hagborg introduces us to science that is entirely real.

*T3511* is a four-channel video installation and collaboration with artist and filmmaker Toshiaki Ozawa. The narrative follows the true story of a biohacker who obtains an anonymous donor's saliva online and then proceeds to fall in love with them through their data, and through their cells, ultimately re-identifying the individual and tracking them down.

The work illustrates the vulnerability of genomic information, specifically that which is offered up to commercial companies for direct-to-consumer analysis, and shows how forensic procedures like those which tracked down the Golden State Killer, are increasingly accessible to anyone. *T3511* is further a meditation on the intimacy of all data, and the ways in which biotechnology may mediate our future relationships, as digital technology does today.

*Lovesick*, a literal love virus, is the outcome of the artist's residency with Integral Molecular, a vaccine and drug discovery company based in Philadelphia. Together they invented a custom retrovirus which infects human cells with a gene that increases the production of oxytocin.

The *Lovesick* installation consists of ten vials of the glowing virus contained in small glass sculptures modeled from different energy states of the oxytocin molecule. This is accompanied by video and photographs of microscopic human cells expressing the infection, and a polyphonic ballad intoning the letters representing the proteins from which oxytocin is comprised. A meditative space is created in which the viewer can contemplate consuming a virus that will change their DNA forever.

Finally, *Spirit Molecule* poses the concept of a genetic memorial — a psychoactive plant engineered to contain the DNA of a lost loved one that is consumed as a last journey of intimacy with the other. The work, a collaboration with artist and botanist Phillip Andrew Lewis, is exhibited as an active experiment-in-progress consisting of a living greenhouse of plants with medicinal and psychoactive properties, and a functional do-it-yourself plant engineering lab. Throughout the course of the exhibition the artists and Sebastian Cocioba will attempt to engineer human DNA into common plants with psychoactive properties.

Heather Dewey-Hagborg

***T3511***

*T3511* is a post-genomic love story and experimental documentary. It tells the (mostly) true story of a biohacker who becomes increasingly obsessed with an anonymous donor whose saliva she purchases online. The video and performative installation draws the viewer into an emerging world of ubiquitous genomic sequencing, biobanking, and commodification of human biological materials.

The narrative is not science fiction, but just one example from the emerging market in human fluids, cells, DNA, and biological data that is fueling some of the newest biotechnology companies today. In this new world the body has become just another source of information companies can ingest in mass quantities, analyze statistically, and sell to pharmaceutical companies, silicon valley biotech start-ups, and the medical industry. This market depends on an ever-increasing supply of supposedly de-identified biological data – despite the obvious reality that the more accessible, prevalent, and well understood DNA is, the less anonymous it can ever be. It has been shown time and again that a large percentage of DNA donors can be easily re-identified.

*T3511* builds on this history and research by showing the story of my attempt to re-identify a single anonymous donor (T2305) whose saliva I purchased on the internet. By analyzing their DNA, profiling them, culturing their cells, and writing to them, I develop a form of intimacy. I send the saliva for analysis at 23andMe, one of the many services offering direct-to-consumer genetic testing, ancestry analysis, and genealogy. The story takes a twist when a genetic match contacts me through a social network connected to the donor's profile. Following our email correspondence I begin to investigate the writer's identity, which seems increasingly likely to match the anonymous saliva. It then becomes clear that I need to travel to the lab where the saliva was originally extracted to experience this process for myself. I become donor *T3511*.

A circular field of view from a microscope showing several large, irregularly shaped cells with a granular, blue-tinted interior. The cells are set against a lighter, textured background of smaller, less distinct cells. The lighting creates a sense of depth and highlights the complex internal structures of the larger cells.

*A cell is a history,  
a cell is a home,  
a cell is a hole,  
a cell is a cage.*

*To break the cell  
is to trespass  
the most intimate of spaces.*

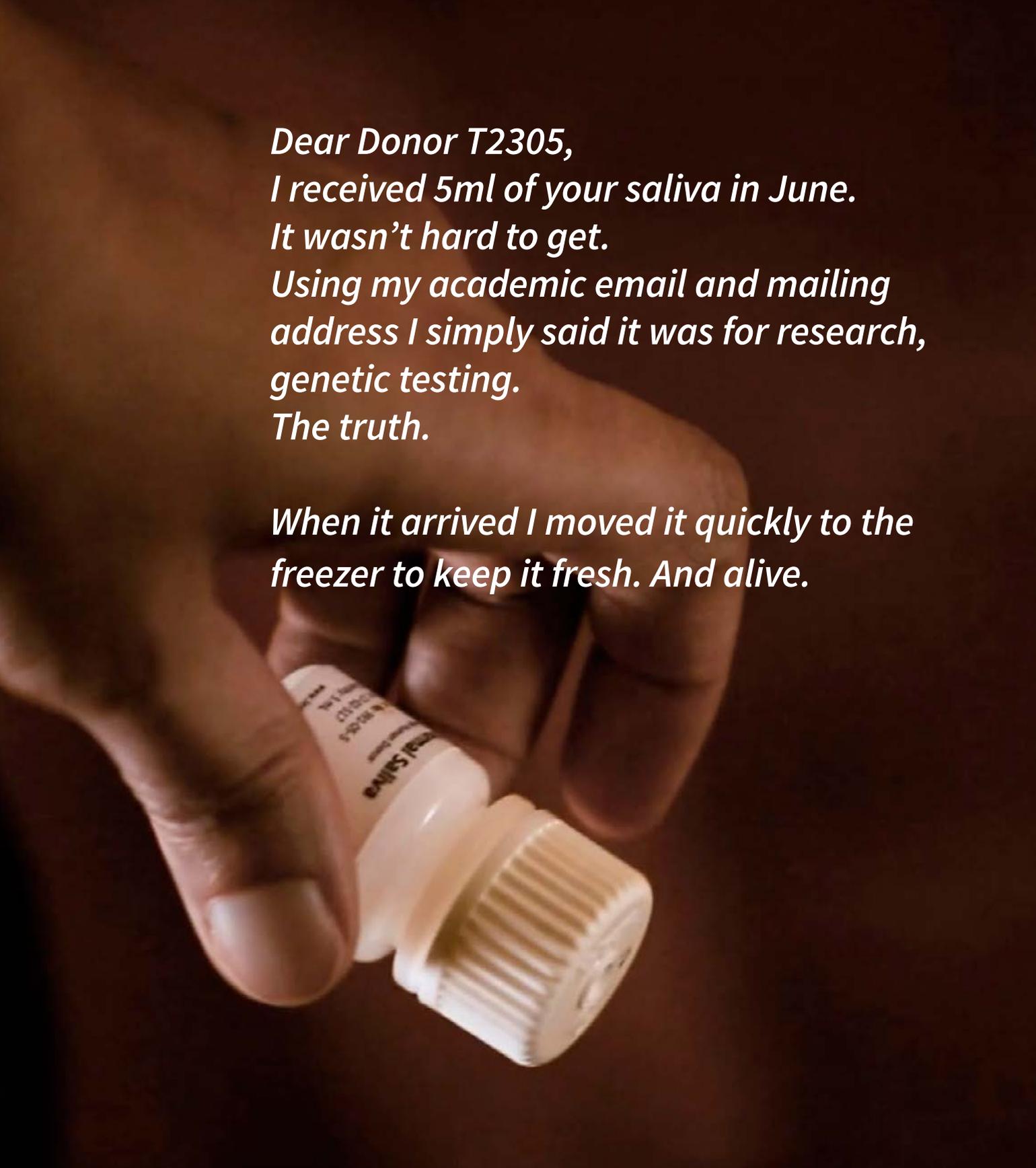
A circular field of view showing a microscopic view of cells. The cells are stained, with some appearing in shades of blue and orange. The background is a light, textured surface. The text is overlaid in the center of the image.

*A cell is an electric fence  
enclosing your legible  
unknown.*

*T3511*, 2018  
Heather Dewey-Hagborg  
Four-channel video, 9:04 minutes  
[Still image]

*Dear Donor T2305,  
I received 5ml of your saliva in June.  
It wasn't hard to get.  
Using my academic email and mailing  
address I simply said it was for research,  
genetic testing.  
The truth.*

*When it arrived I moved it quickly to the  
freezer to keep it fresh. And alive.*





*T3511*, 2018  
Heather Dewey-Hagborg  
Four-channel video, 9:04 minutes  
[Still image]



*T3511*, 2018  
Heather Dewey-Hagborg  
Four-channel video, 9:04 minutes  
[Still image]



*T3511*, 2018  
Heather Dewey-Hagborg  
Four-channel video, 9:04 minutes  
[Still image]



*T3511*, 2018  
Heather Dewey-Hagborg  
Four-channel video, 9:04 minutes  
[Still image]



*T3511*, 2018  
Heather Dewey-Hagborg  
Four-channel video, 9:04 minutes  
[Still image]





*T3511*, 2018  
Heather Dewey-Hagborg  
Four-channel video, 9:04 minutes  
[Still image]



*T3511*, 2018

Heather Dewey-Hagborg

Four-channel video installation, 9:04 minutes

*Genomic Intimacy*, 2018, MU artspace, Eindhoven, The Netherlands. [Installation view]

Heather Dewey-Hagborg

**LOVESICK**

In *Lovesick* I worked in a collaboration with research scientists at Integral Molecular, a biotechnology company specialized in antibody discovery, to create a custom retrovirus which infects its human host with a gene that increases the production of oxytocin. The hormone oxytocin is implicated in feelings of love and bonding, monogamy and devotion, and the promotion of empathy and connection. The work is envisioned as an activist intervention, to spread affection and attachment and to combat the alienation and hate of the present. It is my imagined solution to our post-Trump, post-Brexit crisis.

I designed small glass vials to contain the virus, shaped like different energy states of the oxytocin molecule, that can be broken open and consumed orally. The form expresses the uniqueness of what the person is about to do, and in referencing the style of a cyanide capsule, also conveys the gravity and irreversibility of the act.

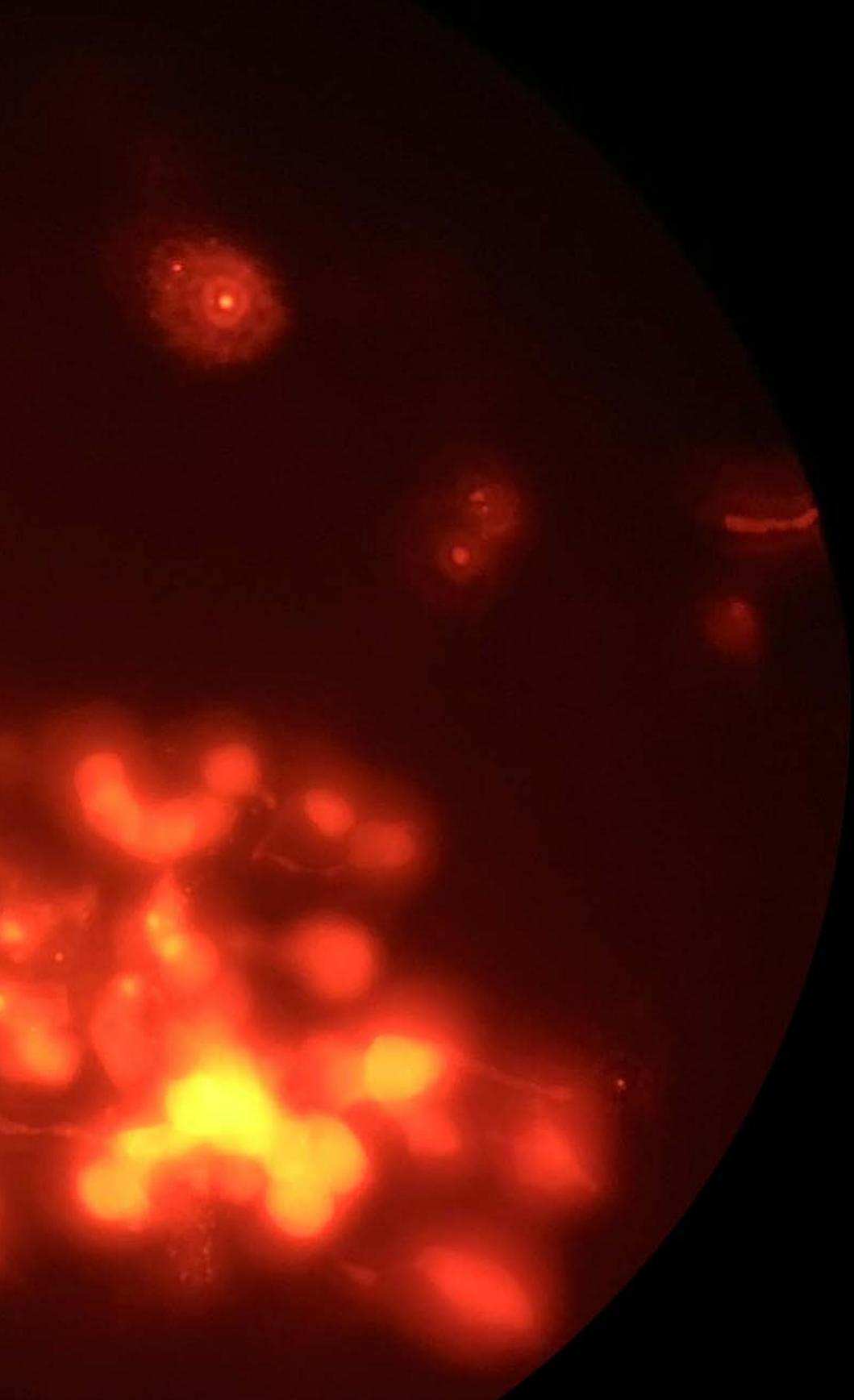
The installation consists of the vials of glowing virus, video of the microscopic cells expressing their infection, and a piece of music based on a 14th century ballad by Francesco Landini that tells the story of a woman struggling with a love that is in vain. I have re-written the song to list instead the letters representing the proteins contained in the oxytocin molecule.

I imagine a lovesick future in which individuals, couples, and groups consume this virus by smashing open the glass vials, pouring the fluid into their mouths, incubating it there for several seconds, then swallowing, while chanting together, or humming to themselves, “CYIQNCPL.”

The installation is accompanied by a series of photographic prints that evidence the work I have done in the lab. Human embryonic kidney cells (HEK293) and human T lymphocyte cells (Jurkat) are presented under both bright field and fluorescent microscopy, at varying magnifications. Under blue or green fluorescent light, you can see the infected cells glow bright red, demonstrating they have been effectively genetically modified by the virus.



*What if love could spread like a virus?*



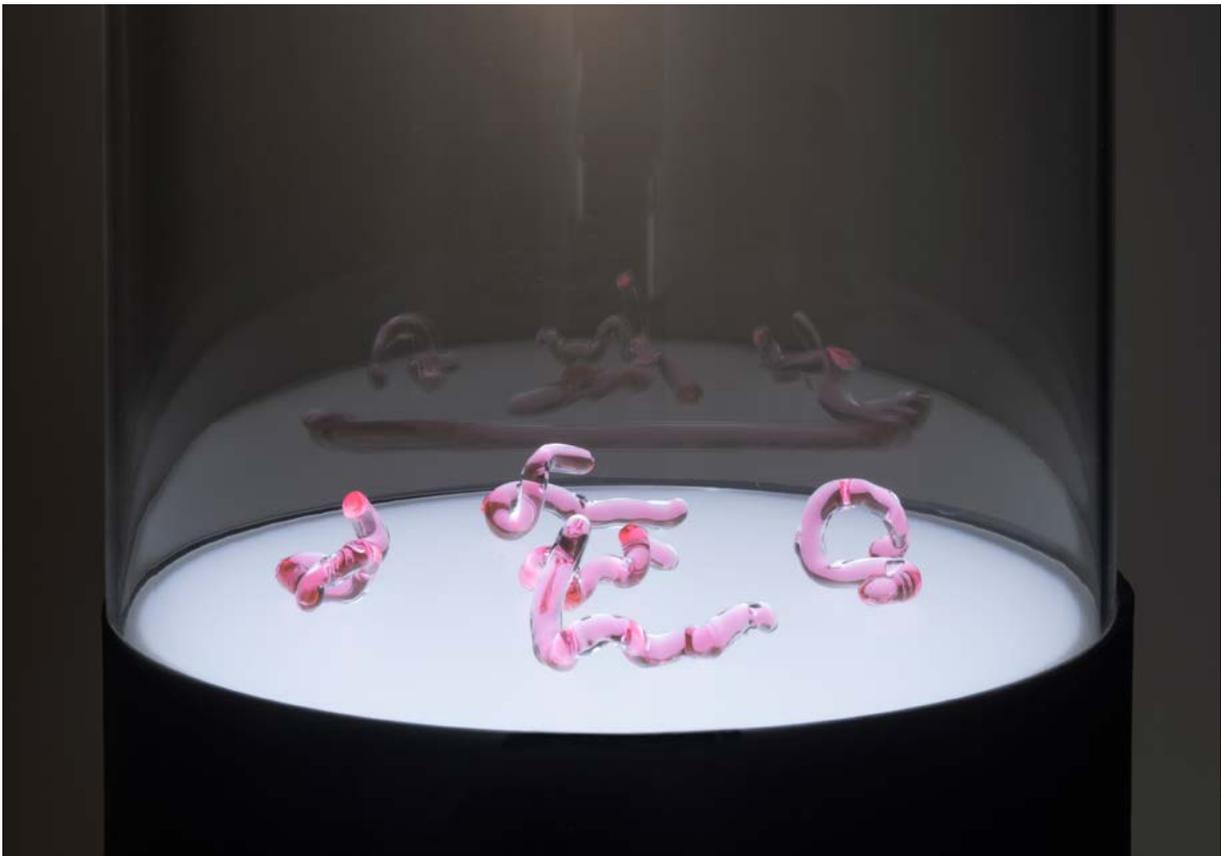
Previous page:  
*HEK293 Producer Cells Expressing RFP 400x Magnification*, 2019  
Heather Dewey-Hagborg  
Archival pigment print mounted on dibond  
24h x 36w inches

*Lovesick*, 2019  
Heather Dewey-Hagborg  
Custom retrovirus in ten glass sculptures  
Approximately 3w x 2d x 1/2h inches each  
Two-channel video, music arranged by the artist

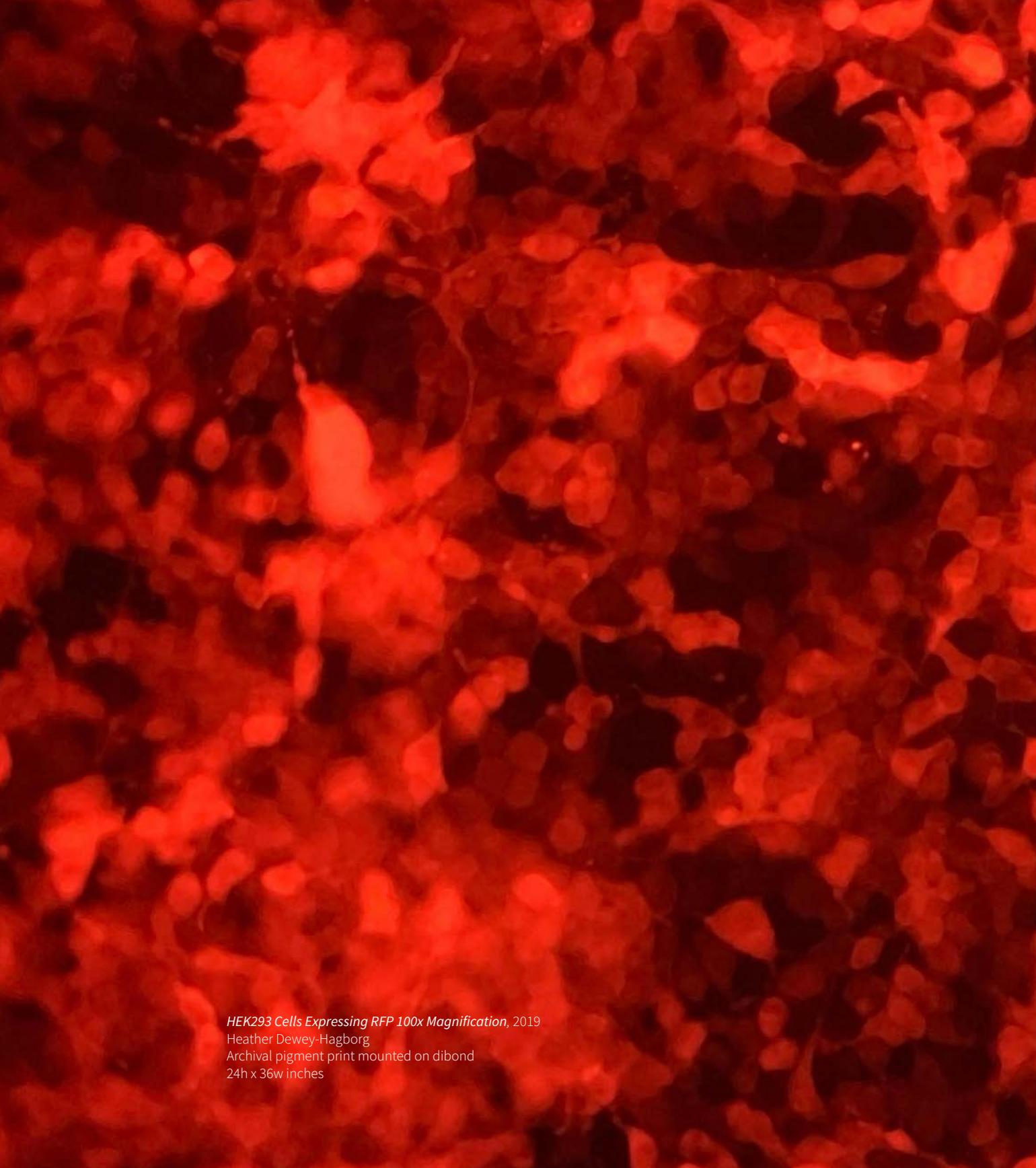




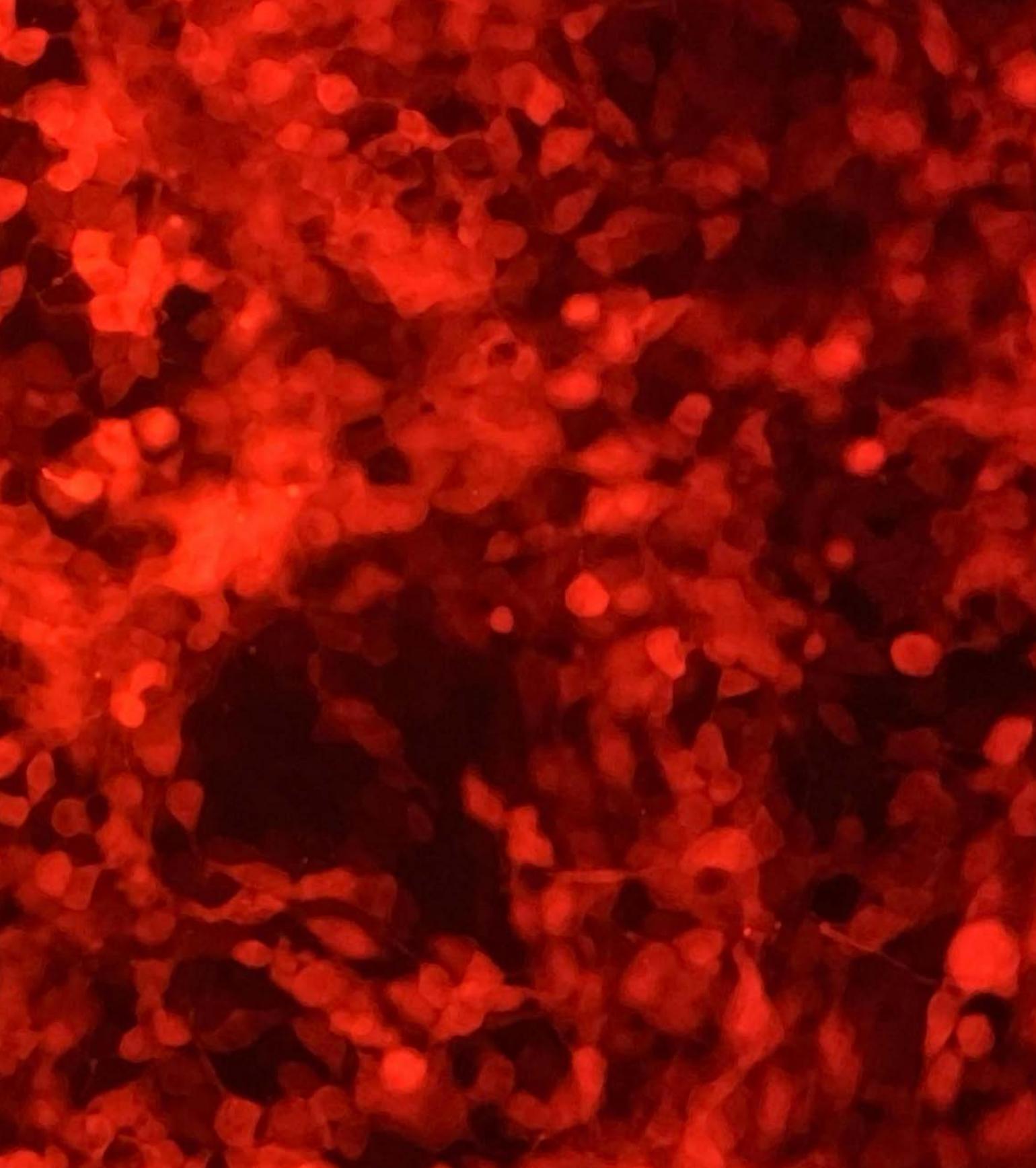
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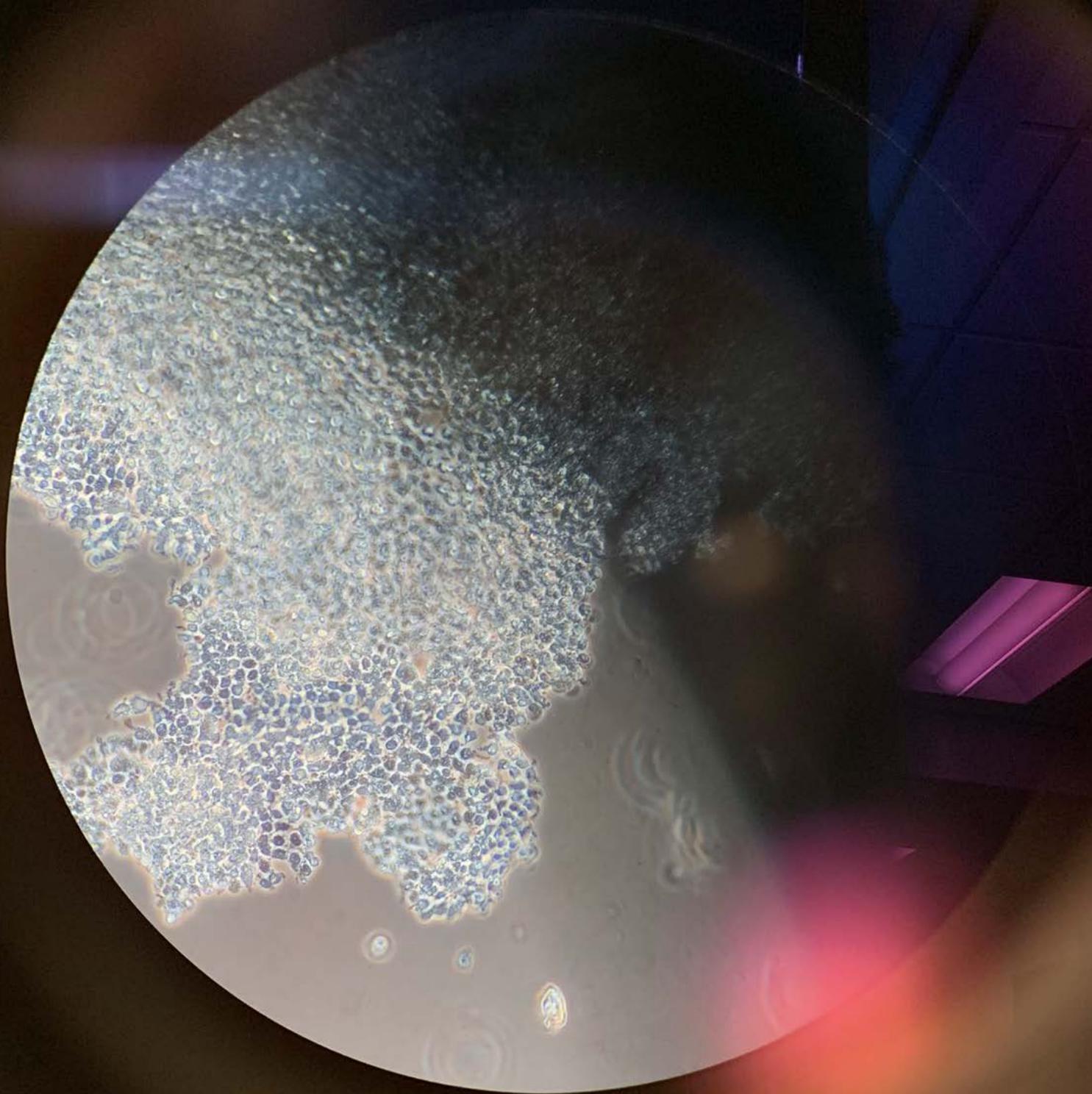




*HEK293 Cells Expressing RFP 100x Magnification, 2019*  
Heather Dewey-Hagborg  
Archival pigment print mounted on dibond  
24h x 36w inches



*Jurkat Cells Brightfield 40x Magnification and Eyepiece Lens*, 2019  
Heather Dewey-Hagborg  
Archival pigment print mounted on dibond  
36h x 24w inches



Heather Dewey-Hagborg

***SPIRIT MOLECULE***

*Spirit Molecule*, a collaboration with artist and botanist Phillip Andrew Lewis, is a series of experiments that imagine a future of biotechnologized mourning as we engineer a lost loved one's DNA into a psychoactive plant that is then consumed in a final journey of intimacy with the other.

The project anticipates a future of genetic memorial plants that might be grown, cared for, and ultimately consumed as representations of spiritual connection.

*Spirit Molecule III* turns the gallery into a living laboratory where legal psychoactive plants like morning glory and passion flower, become subjects of experimentation in genetic manipulation.

In this installation Dewey-Hagborg and Lewis collaborate with scientist Sebastian Cocioba to engineer DNA from Phillip's grandmother into the plants. The sprouts, seedlings, and evidence of these experiments is present in the gallery.

The genetic material which is chosen for implantation is a 400 base pair bit of mitochondrial DNA which is passed down matrilineally, from great-great-grandmother to great grandchildren, grandchildren etc. and is the same DNA that is often used for tracing maternal ancestry.

The single channel film which accompanies the laboratory installation tells the story of one such person who wished to transform their lost loved one, Jinny, into a psychoactive plant, to connect with her one final time.

*Spirit Molecule* invites the visitor to contemplate whether they would like to be transformed into a plant, or perhaps transform their loved one into one such as these.



*in 2015 i lost jinny*



*in her last days*

*in spite of my impulse against superstition*

*i collected  
a few shed hairs*

*from her pillow*

*and gently swabbed*

*the inside*

*of her cheeks*







Page 40 and above: *Spirit Molecule*, 2018-2019  
Heather Dewey-Hagborg & Phillip Andrew Lewis  
Video, 7:29 minutes  
[Still image]

Left: *Spirit Molecule III*, 2018-2019  
Heather Dewey-Hagborg  
Genetic materials, psychoactive plants, greenhouse installation, single channel film  
*At the Temperature of My Body*, 2019, Fridman Gallery, NY. [Installation view]



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Heather Dewey-Hagborg & Phillip Andrew Lewis  
Video, 7:29 minutes  
[Still image]



*Spirit Molecule*, 2018-2019  
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Video, 7:29 minutes  
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*Spirit Molecule*, 2018-2019  
Heather Dewey-Hagborg & Phillip Andrew Lewis  
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[Still image]



*Spirit Molecule III*, 2018-2019

Heather Dewey-Hagborg

Genetic materials, psychoactive plants, greenhouse installation, single channel film

*At the Temperature of My Body*, 2019, Fridman Gallery, NY [Installation view]



Joel Kuennen is an art critic, curator, editor, and artist. Their written work focuses on the intersection of technology, identity, and society. Joel received an MA in Visual and Critical Studies from the School of the Art Institute of Chicago (2010). Joel was a contributing editor for *Theorizing Visual Studies* (Routledge, 2012) and served as an editor at *ArtSlant* (2012-2018). Their work has been published by *Art in America*, *ArtSlant*, *Brooklyn Rail*, *Elephant*, *Frieze*, *THE SEEN*, *Sternberg Press* and others. In 2018, they founded Process Park, a nomadic experimental residency. Joel was the inaugural Critic-in-Residence at Bemis Center for Contemporary Art in April, 2019.

**Dr. Heather Dewey-Hagborg** is a transdisciplinary artist and educator who is interested in art as research and critical practice. Her controversial biopolitical art practice includes the project *Stranger Visions* in which she created portrait sculptures from analyses of genetic material (hair, cigarette butts, chewed up gum) collected in public places.

Heather has shown work internationally at events and venues including the World Economic Forum, the Daejeon Biennale, the Guangzhou Triennial, and the Shenzhen Urbanism and Architecture Biennale, the Van Abbemuseum, Transmediale and PS1 MOMA. Her work is held in public collections of the Centre Pompidou, the Victoria and Albert Museum, and the New York Historical Society, among others, and has been widely discussed in the media, from the *New York Times* and the BBC to *ArtForum* and *Wired*.

Heather has a PhD in Electronic Arts from Rensselaer Polytechnic Institute. She is an artist fellow at AI Now, an Artist-in-Residence at the Exploratorium, as well as Science Center, and is an affiliate of Data & Society.

She is also a co-founder and co-curator of REFRESH, an inclusive and politically engaged collaborative platform at the intersection of Art, Science, and Technology.

**Heather Dewey-Hagborg**

**AT THE TEMPERATURE OF MY BODY**

June 26 - August 9, 2019

Fridman Gallery

169 Bowery

New York, NY 10002

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Essays: Joel Kuennen and Heather Dewey-Hagborg.

Photographs: Sebastian Cocioba (p. 47);

Heather Dewey-Hagborg (pp.14-15, 17, 18, 19, 20, 21, 22-23, 24, 28-29, 34-35, 37);

Heather Dewey-Hagborg & Phillip Andrew Lewis (pp.40-41, 45, 46, 48-49, 51);

Fridman Gallery (p. 44); Adam Reich (pp.6,9, 32-33, 52-53); Hanneke Wetzer (p. 25);

STRP festival (p. 31).

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