



RESEARCH AS
ART
COMPETITION

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 **Thomas Jefferson**
University

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Jefferson's *Research as Art Competition* celebrates all Jefferson faculty, students and staff who have an eye for the beauty in their research or scholarship. For this year's competition, judges selected a winner from two categories: first, life under the microscope, reflecting cellular and molecular work; second, conceptual art that shows renderings of research observations, experiences and concepts in various media. They judged each piece based on aesthetic quality, meaning and originality.

We had 40 researchers and scholars submit nearly 60 entries with representation from disciplines ranging from neuroscience to architecture, engineering to art therapy, and pathology to nursing. Each of the works depict the aesthetic aspects of academic study that often go underappreciated. The images also do something that is rare in research: they invite the novice, the uninitiated, to interact with the topic, to bring their own experiences to bear in the interpretation and appreciation of research as art. We hope you will enjoy this year's images.

LEARN ABOUT THIS YEAR'S JUDGES



MEGAN VOELLER

(they/she) is director of Humanities at Thomas Jefferson University in Center City, where they develop programs that infuse the arts and humanities into health professions education. Previously, Megan was a curator at the USF Contemporary Art Museum. They hold degrees in art, art history and media studies.



LUCY READING-IKKANDA

(she/her) is the graphic designer for the Simons Foundation where she produces explanatory diagrams to illuminate the work of computational research scientists. A graduate of the UC Santa Cruz Scientific Illustration Program, Lucy has worked as an art director for *Scientific American*, art director for *The Scientist* and graphics editor for *Quanta Magazine*.



Uncompromised Compassion

Molly Waldeck

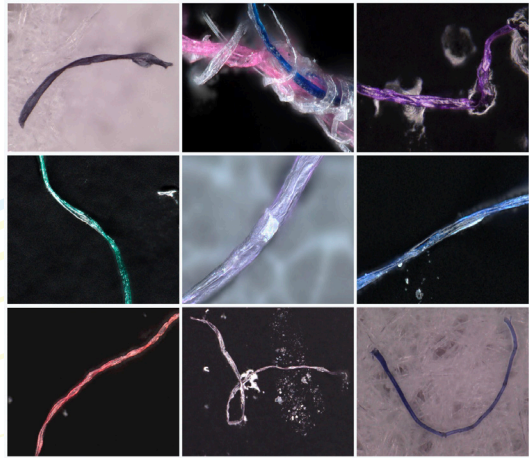
As stress and compassion fatigue weigh on the medical professionals, faculty, and administrative support staff of Jefferson, we look for ways to provide relief. Animal therapy is an expanding resource for emotional and mental health support. Jefferson College of Nursing has Maggie as a dedicated Chief Compassion Officer, who regularly provides relief to students during the rigors of exam preparation and after workforce violence training. Kristen Gilmore and Jessica Smith are leading the charge, researching the beneficial effects animal therapy can provide in Jefferson Health settings.



The Love of Science

Paula McCourt

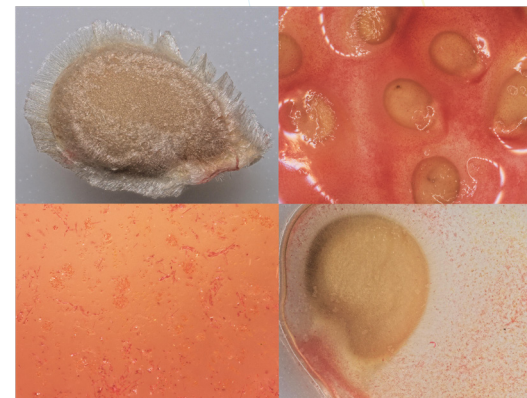
Radial immunodiffusion is a quantitative test often used in serology laboratories to quantify the concentration of a certain antigen or antibody in a patient's serum. Petri dishes used in radial immunodiffusion contain a low concentration of agarose with antigen or antibody dissolved. This image displays a radial diffusion agarose petri dish that was stored at 4 degrees C for one year. The agarose is no longer visible and the antibodies that were dissolved in the agarose crystallized into a beautiful image displaying a heart representing how love can be found anywhere.



The Ubiquitous Nature of Microplastic Fibers

Jeffrey Ashley

A collage of digital microscope images showing a variety of synthetic microfibers (largely textile based) typically found in the Atlantic ribbed mussel (Delaware Inland Bays), a filter feeding bivalve of environmental importance. Microplastics such as these have been shown to be globally ubiquitous, from the deepest reaches of our oceans to the seemingly pristine Arctic region. This research study was the first to evaluate the extent of microplastic levels in this species and assess its ability to act as a biomonitoring tool for microplastic pollution.



The Unseen Tomato

Ashley Clark

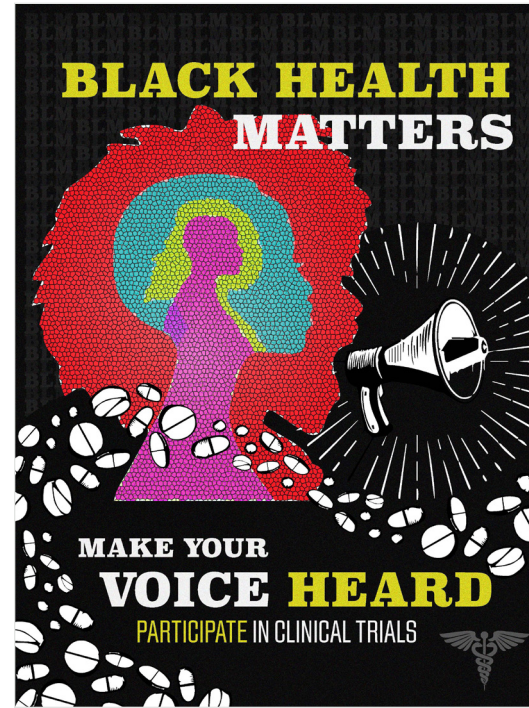
The four images provided are different views of the humble tomato under the microscope. The top left is a dry seed, unexpectedly fuzzy. The top right is a group of seeds, eerily flesh-like. The bottom left is an extremely magnified image showing pigment crystals and microscopic features of tomato flesh. The bottom right is a seed in its original state, where red particulate can be seen beside it. These images together make up a very unique version of the common tomato, one many leave to be unseen.



Not Seen, Not Heard

Makeiah Milbourne

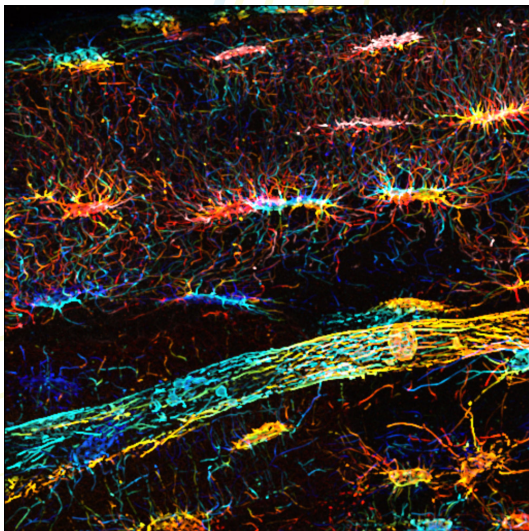
"Not Seen, Not Heard," explores an African-American woman's journey in society. I feel that sometimes we have to speak louder to be heard. We may not even be seen at a bus stop during a normal commute, why not just wear a brown paper bag over our heads... since we are not noticed anyway. Maybe people will start to notice us more, if this brown paper bag was making a statement.



Using a Culturally Tailored Mobile Digital Teaching Tool and Social Media to Improve Engagement of African Americans in Clinical Trial

Gabrielle Santulli, Lisa Whitfield-Harris, Iman Morsy

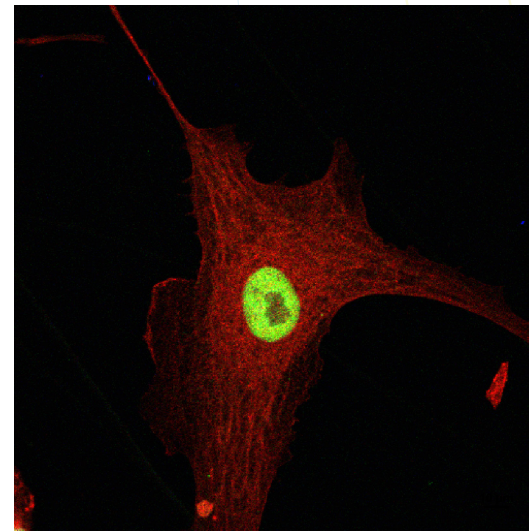
The Stratton Foundation provided the Jefferson College of Nursing with a gift that funded faculty-led health services research pilot projects. To improve research literacy and community engagement, nurse scientists were partnered with Kanbar College of Design and Engineering, MS Health Communication Design students and alumni. Combining research and art resulted in an engaging artistic poster that showcases community, influence and shared experiences among the African-American community, while addressing the mistrust rooted in racism. The important and familiar message of "Black Health Matters" was used to call the community to make their voices heard through participation in clinical trials.



The Galaxies in our Bones

Alexandra Ciuciu

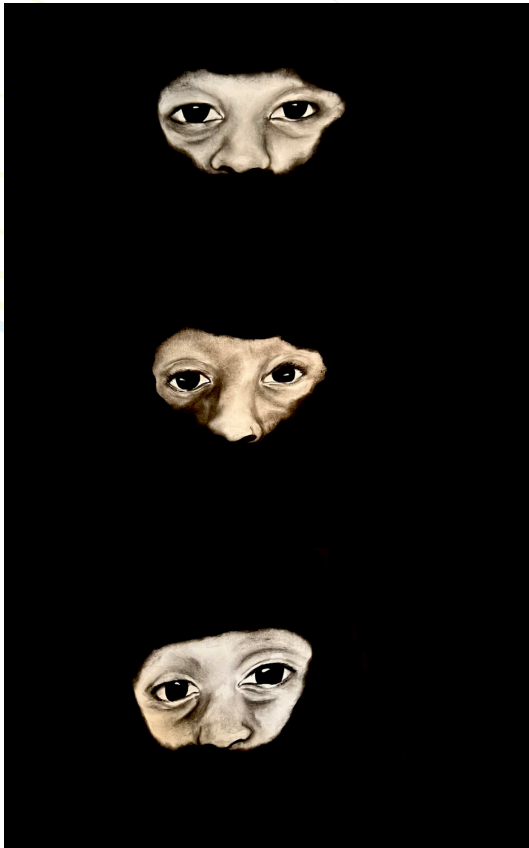
This is a 63x confocal image of osteocytes in cortical bone colored with temporal color coding in FIJI. The different colors indicate the different planes within the z-stack at which different parts of the cells were captured. Osteocytes are bone cells that use dendrites to communicate. Dendrites channel through the mineral of bone and allow osteocytes to coordinate the actions of other bone cells, change the environment around them, and communicate to other parts of the body. These stellate cells fill our bones creating hidden galaxies of cellular activity.



Human Pulmonary Artery Smooth Muscle Cell

Joice Gavali

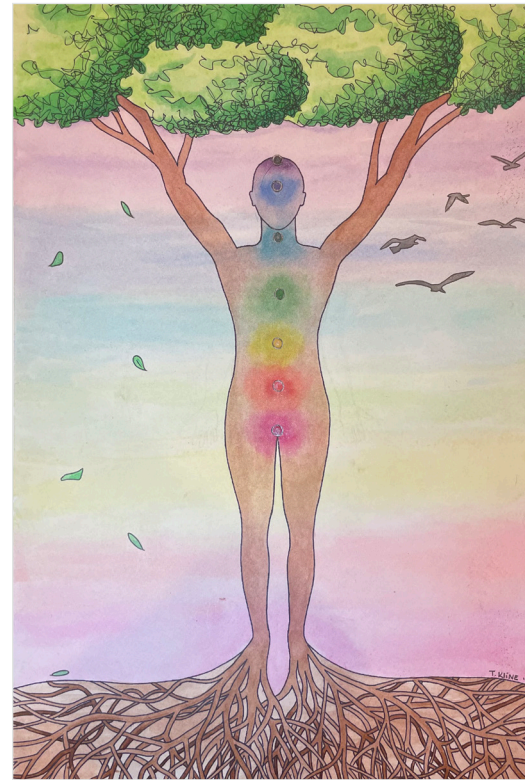
This is an image of human pulmonary artery smooth muscle cells stained with a marker for smooth muscle cells (red) and hypoxia-inducible factor (HIF-1 α , green). We recently bought a hypoxia chamber to induce hypoxia in pulmonary artery smooth muscle cells, and we wanted to see if the chamber works. To do so, we stained the cells with HIF-1 α because it is a well-known hypoxia marker. In general, the HIF-1 α protein translocates from the cytosol to the nucleus in response to Hypoxia. In this image, we clearly see a localization of HIF-1 α in the nucleus (green color) after 24 hours post-hypoxia.



Art As a Relationship

Florence Kyomuhendo

In contemplating art as a relational experience, I explore how artworks can complement one another and narrate personal stories. My perspective on this connection is deeply intimate, inspired by my own emotional relationships. Among these, the estrangement from my siblings stands out. We've drifted apart, our bonds fragmented. Eyes, the windows to our emotions, hold great expressive power. To delve into their depths, I sketched my eyes, my brother's in youth and my sister's and mine now. This visual exploration mirrors the lack of communication and love in our relationship. Charcoal, with its texture and darkness, resonates with my vision. This process served as a therapeutic release, confronting the pain of an ailing sibling bond. The resulting artworks reflect the longing for a healthier, stronger connection.

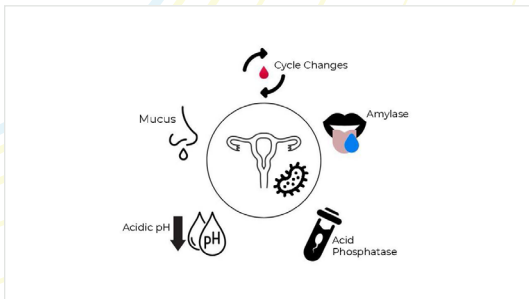


Grounded

Tori Kline

"To ground is to pour your energies back into the earth and feel the warm calm of nature entering your body in exchange." -Anonymous

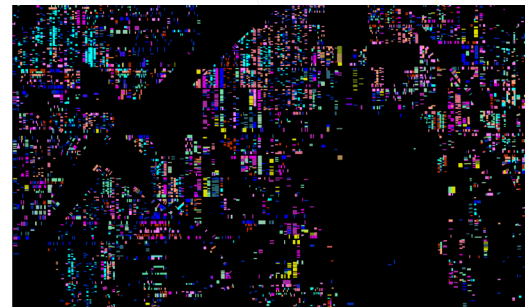
As a clinician, it is important to remain grounded, centered and objective. It is only through our own processes of exploration and reflection that we can learn to effectively support ourselves, so that we can support others. This work is not easy, and requires deep roots, strong supports, openness and flexibility. It is through nature and the connection it provides that I recharge, refresh and support my own wellbeing.



Components of Vaginal Fluid

Dana Macfarlane

Many components of vaginal fluid are shared with other parts of the body, which can make distinguishing it from other fluids difficult. The vaginal microbiome, however, is quite unique and could possibly be used for identification of vaginal fluid in forensic casework.



Vacancy

Craig Griffen

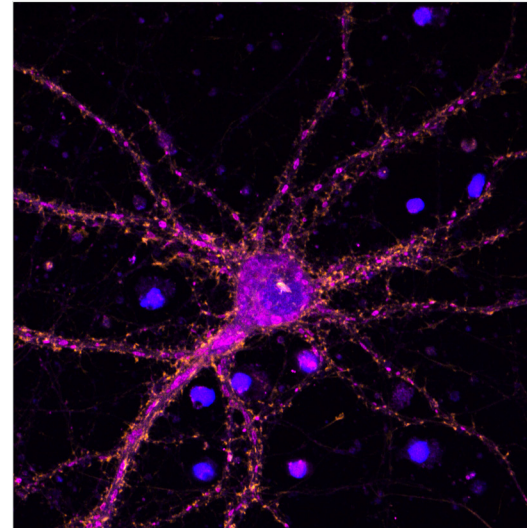
My latest research centers around the design of sustainable, urban infill housing and discovering locations where the design concept could be applied. This image was created by editing a GIS (Geographic Information System) vacancy map of the Lower North District of Philadelphia, (generated by my research assistant Trisha Kawa). Each rectangle represents a vacant residential lot or row house and each color correlates to the dimensional depth of the lot to reveal how many housing units can fit per each site.



The Continuum

Sean Chadwick

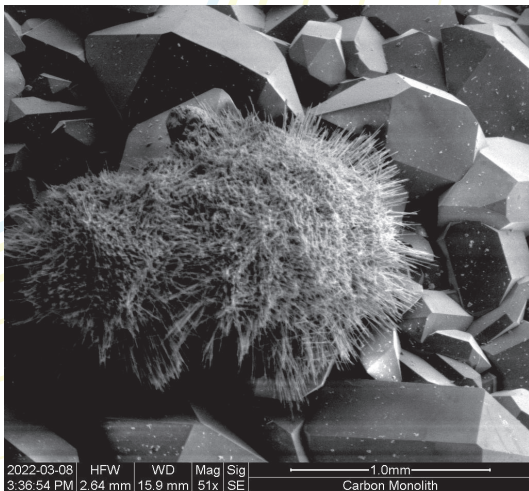
True research is a constant stream of samples to organize, label, test, and analyze. This is from an instance of generating 500 sterile saline tubes to be used for metagenomic studies. The continuum represents how a good researcher's work is never done, but we always are moving forward and making progress while learning.



The Powerhouses of the Mind

Selin Seckin

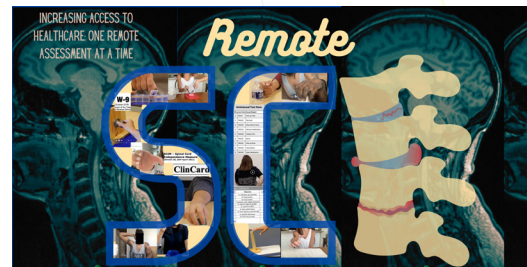
Our brains consume an immense amount of energy to function properly. Mitochondria (magenta, pink color) are the tiny dynamic organelles that travel along the processes of neurons and supply energy where it is needed in the form of a molecule known as adenosine triphosphate (ATP). A single human cortical neuron is estimated to consume about 4.7 billion ATP molecules per second while resting and even more when transmitting electrical signals to communicate with other neurons. Here is a cortical neuron isolated from a mouse brain showing its cytoskeleton (orange), mitochondria and the nuclei of itself and surrounding cells (blue).



The Art Of Geology

Katelyn Hayat

At Delaware County Community College, I participated in research of geodes and other minerals with Daniel Childers, PhD. In this particular project, we visited West Chester University and utilized their scanning electron microscope (SEM) to observe the microscopic shapes of quartz crystals. The element analysis found that the main composition of the specimen shown was silicon dioxide with traces of iron and manganese. My experience during this project was extremely enriching and it was enjoyable beyond words to see the beauty of nature up close and personal.



“faSCInation”

Stephanie Bennett, OTD

Spinal cord injury incidence increases by 18,000 new cases per year. What does this mean? Through increased access to care we can improve quality of life in AT LEAST 18,000 people annually. This art depicts a combination of our scoring sheets, methods, participants, raters and images of our remote processes used to do just that: increase access to health care, impact lives and change the world. This collage of research is laid upon an MRI of this researcher's/artist's brain to show how research is truly within the heart and mind of those who work within.

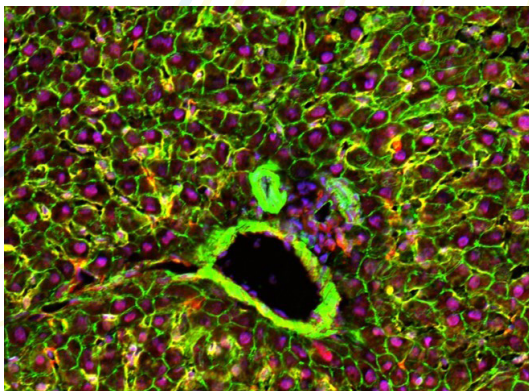


A Tapestry of Life

Severino Alfonso

The Hermitage of San Baudelio de Berlanga is an early 11th-century church in Soria, Spain. It is an important example of Mozarabic architecture for its peculiarities. The 3D scanning of the hermitage's interior resulted in the building's dissection, showing its anomalous frescos and architectonic elements.

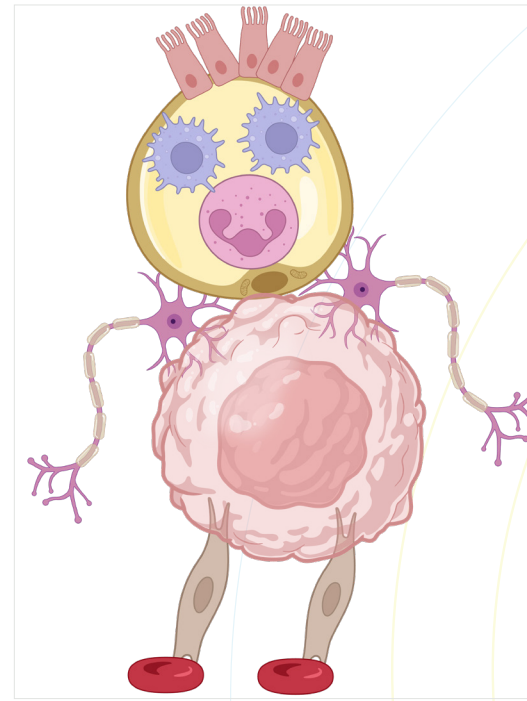
In the realm of dissection's artful gaze, exotic mysteries unravel in a haze, amidst palm trees swaying in the gentle breeze, a canvas painted with the wonders of these. Animals roam, a tapestry of life, intricate as a surgeon's skillful knife, their stories etched in stone, in nature's hands, A history told across expansive lands.



The Ghost in the Liver

Ankita Srivastava

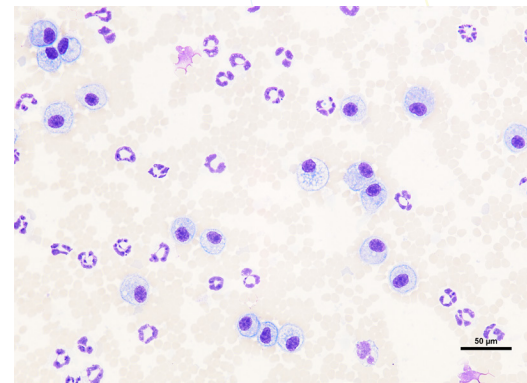
"The Ghost in the Liver" image represents a fluorescent micrograph of a rat liver portal triad, creating a visual of a "ghost." The ghost's eyes symbolize the hepatic artery and the bile duct through which blood and bile flow and the big mouth represent the portal vein, which receives the nutrients absorbed from the digestive system. The portal triad (ghost) distributes the nutrients to the surrounding liver cells (nuclei- blue, cell boundary green) to maintain the liver function.



Cells; The Carpenter of Our Body

Santosh Yadav

This pictorial representation showcases the human body, with various types of cells symbolizing different parts: hair (endothelial cells) head (fat cell) eyes (lymphocyte), nose and mouth (neutrophil), abdomen (megakaryocyte), hand (neuron), leg (muscle cell) and foot (red blood cell).



White Blood Cells in Lung Fluid of Mice with Acute Lung Injury (ALI)

Nopprarat Tongmuang

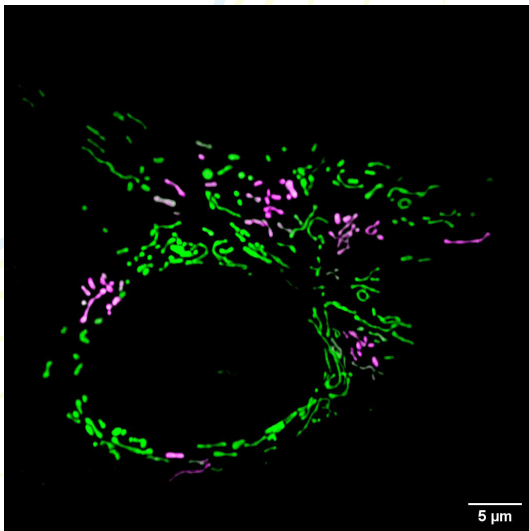
Microscopic image of lung fluid sample staining. Lung fluid of mice with ALI is mainly composed of neutrophils, also known as polymorphonuclear (PMN) leukocytes, and macrophages, which are large and round. During the development of an acute inflammatory lung injury, neutrophils and macrophages play a crucial role in the orchestration of inflammatory responses by releasing and inducing inflammatory mediators. Scale bar = 50 μm



Tectonics

Drake Schaefer

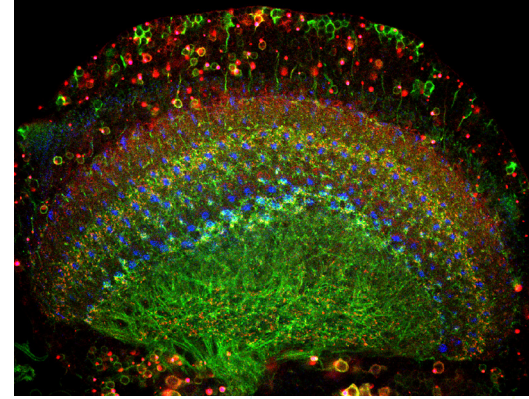
This sectional model invites an insightful exploration into the nuanced intricacies of architectural design. It serves as a tactile blueprint, showcasing the multifaceted layers of the building envelope. It is an exploration of material to showcase the layering of structure, purpose and creative expression in the design-built environment.



Shaping the Mighty Mitochondria

Benjamin Cartes Saavedra

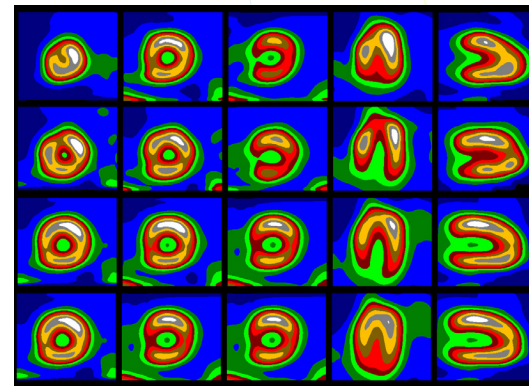
Mitochondria are shapeshifter organelles. They produce most of the energy that the cell and our body consume. As mitochondrial biologists, we can introduce fluorescent proteins into the mitochondria (Green). With the help of a laser and a microscope, we can also change a single mitochondrion's color from Green to Magenta. This image shows a live fibroblast expressing a photo-switched mitochondrial fluorescent protein (Green to Magenta) using a 405nm laser and High-Resolution Confocal Microscope. Using this approach, we can better understand the dynamic processes of this organelle during health or pathological conditions of different cells and tissues.



Optical Wiring

Michael Aimino

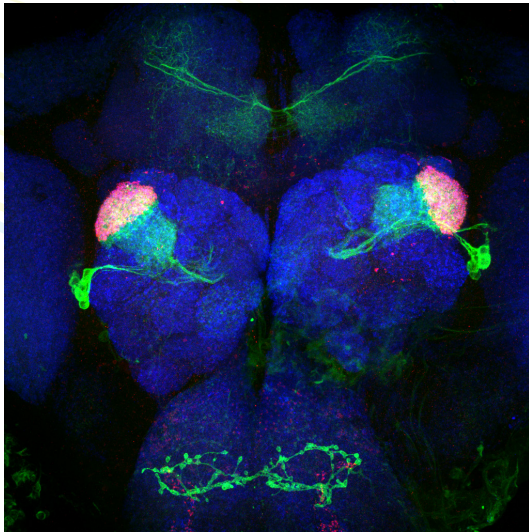
Within the brain, neurons communicate with each other through complex structures called synapses. The formation of numerous synapses between multiple neurons to achieve a specific function leads to the creation of neuronal circuits. This image of a fly eye shows the synapses (blue or red) and neuronal membranes (green) of multiple types of visual neurons. These neurons connect with other neurons of the visual system to form a circuit that relays visual information from the eye into the processing centers of the brain. Visualizing circuits helps us better understand how the nervous system develops and functions.



Where the Heart Meets Art

Nicholas Lim

This nuclear cardiac perfusion scan reveals the vibrant world of the human heart, absorbing radioactive tracers to create a stunning, colorful masterpiece. Reminiscent of Andy Warhol's pop art, it challenges our perception of radiology as merely black and white, offering a captivating and conceptually profound juxtaposition. Just as pop art celebrated mass culture and identity, so does the heart, transcending its physicality to symbolize life's essence. This submission illuminates the beauty and complexity within us, connecting the artistry of pop culture to the vital significance of our beating hearts.



Oh, The Connections You Will Make

Kristen Davis

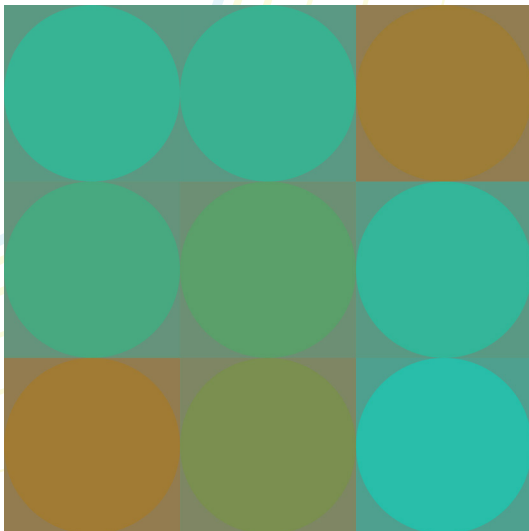
This image shows the pre-synapses of one population of olfactory neurons (red) and the overall structure of their post-synaptic neuronal partners (green). The access to these two specific cellular populations allows us to manipulate genes or express different markers to determine the influence of one cellular population on the other.



Flower 1

Rachel Brandoff

This piece, a painted and sculptural flower constructed from paper, fabric, watercolor, pens and glue is an investigation into the phenomenon of professional networking. Networking may be taken for granted as a common or necessary component of professional and social life; here it was explored as a multi-layered sometimes intentional and often organic support of clinical, research, and consulting professional practice.



Temperature Quilt

Renee Walker

Temperature Quilt utilizes the P5 Java creative coding platform to showcase real-time thermoreceptive data from six global cities. The data is represented by a spectrum of colors, ranging from orange red (hottest) to blue-green (coldest), within the color-light spectrum. Each grid field displays a city with the 'current temperature' as the background color and the 'feels like' temperature as the foreground color. Additionally, this visualization technique aims to highlight global temperature warming. The image here displays city data captured on December 11th, 2023 at 4:56 PM. Cities listed from left to right and row by row, are: Boston, Philadelphia, Chicago, Phoenix, Los Angeles, Seattle, Paris, Dubai, and Melbourne.



Sunrise Over Mountains

Robyn Nichols

Materials: tissue paper, glue, plexiglass. Layers of tissue paper in this landscape portray layers of the earth. Nature mimics humanity in its layers supporting one another.



Ode to Grace Court

Katherine Robbins

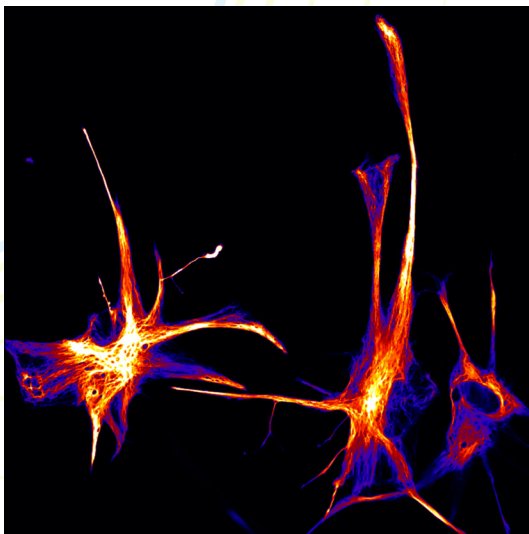
This past July (2023), my family moved out of my childhood home in Long Island, New York. It was a challenging period of time in my life that brought up a lot of emotions for me. As a therapeutic response, I decided to create a cyanotype of my house including hand drawn imagery of seashells. The beach is also a place for me that feels like home and these seashells remind me of Robert Moses Beach in Bay Shore, New York.



What Ecosystem

Ava Sulkowski

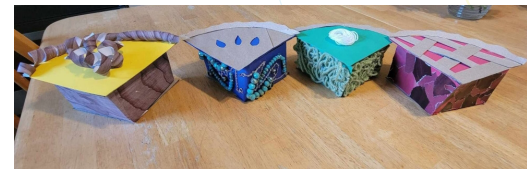
This art piece represents the microbial community map. The human microbiome is referred to as "the genomic content of organisms (microbiota) inhabiting a particular site in the human body." The different sections of the whale ecosystem are intended to represent the different regions of the body having different microbes (such as oral, skin, vaginal, and fecal). This concept resembled an unlikely ecosystem. Therefore, I decided to create an art piece of an unlikely ecosystem.



Raging Dragons: Astrocytes Ablaze in ALS

Shashirekha Markandaiah

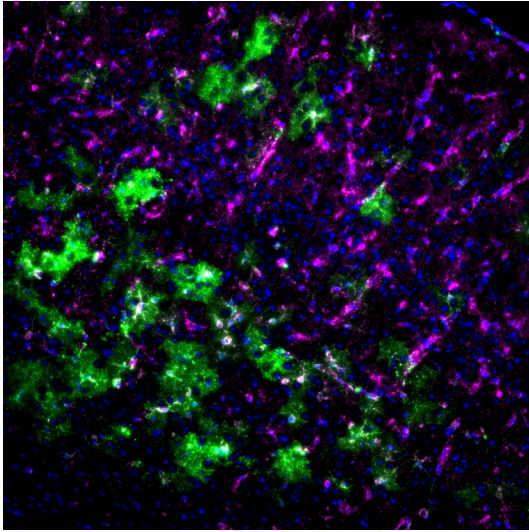
Flashing dragon fire! This image captures astrocytes, star-shaped brain cells that support neurons. When damaged in amyotrophic lateral sclerosis (ALS) aka Lou Gehrig's disease, they ignite in flames of inflammation, visualized here by GFAP labeling in blue-red. Like mythical dragons breathing fire, they signal something is wrong. Understanding astrocyte reactivity provides insight into ALS, a fast-progressing neurodegenerative disease. These raging cells spotlight sites of destruction, lighting the way to possible treatments for this devastating illness. The image was acquired using a 60X objective of a Nikon A1R confocal microscope.



Piece of Me

Grace McCaughey

This sculpture "in the round" expresses how artwork can display the parts of the artists emotions and interests without using words.



GFP Expressing Astrocytes in the Mouse Brain Visual Cortical Layers

Bridget Boyle

This image of the mouse brain visual cortex layers shows green fluorescent protein (GFP) expressing astrocytes, colocalized with astrocyte marker S100beta (magenta) and nuclei marker DAPI (blue). This is three weeks post peripheral injection of an innovative astrocyte-specific adeno-associated virus.



Spectrumgenesis

Pooja Bhoge

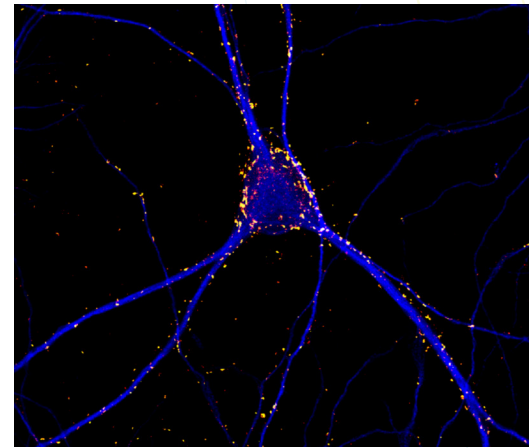
The enchanting transformation of white light into a vibrant array of colors is a captivating natural phenomenon. As light traverses mediums like glass, it gracefully fragments, revealing its true kaleidoscopic essence. This wondrous event is reminiscent of artistry and never ceases to inspire awe. While engrossed in my thesis project on designing therapeutic light, it's a poignant reminder of the magic inherent in white light, its therapeutic potential, and how it impacts the circadian rhythm- enhancing the well-being and healing of a human brain.



Symbiotic Symphony in "G"reen No. 1

Dolores Bartholomew

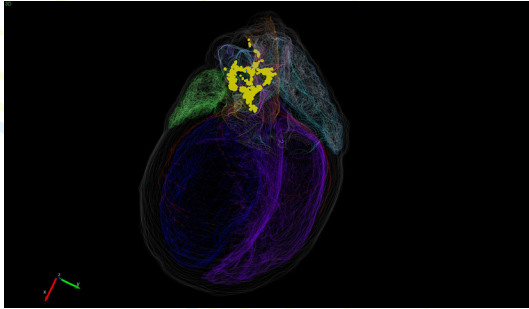
Lichen exists in harmonic symphony of a mutually beneficial relationship of fungi and green algae. The fungi exclusively depends on the alga for survival. Research shows that plants introduced into urban environments either indoors or out, biologically, psychologically, and socially benefit humans. However, the need for care and upkeep causes resistance to introducing plants indoors at work and school. This lichen filled piece is part of a series of preserved and living plant displays to determine which low-maintenance form still creates valuable positive impact on people in urban environments. Like the lichen we are plant-dependent for healthy wellbeing.



Memories Spark at Connections

Karthik Krishnamurthy

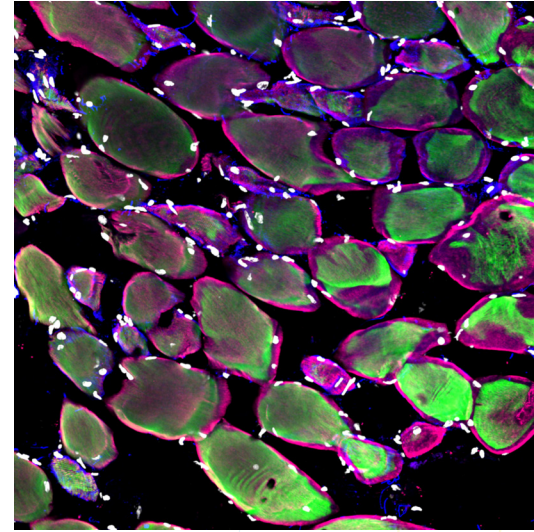
Synapses inside the brain are physical encoders of our memories. This fluorescence image illuminates rat brain cells, labeled with MAP-2 (in blue). Their junctions shine yellow-red with synaptotagmin-1, a protein found where memories link. Glowing blue neuron fibers meet at points labeled yellow-red with synaptotagmin-1, which enables memories at connections. This spotlight exposes the physical substrate of memory: the synaptic links between neurons holding our experiences. By tracing this molecular matrix, we unveil the anatomy underlying recall—a glowing synaptic tapestry encoding recollections in the brain. The image was acquired using a 60X objective of Nikon A1R confocal microscope.



Little Brain of the Heart

Shaina Robbins

By interweaving anatomical, molecular, and imaging data we've created the first 3D atlas of the intracardiac nervous system (ICN), otherwise referred to as the heart's "little brain". The ICN (shown in yellow) is the heart's very own nervous system that has the ability to function independently of the brain. We know it is essential in supporting heart health, but its exact roles are still not completely clear. This ground breaking work bridges the gap between neurology, cardiology, and researchers alike to address questions in a way that were never possible before.



Cobblestones of the Skeletal Muscle

Elham Javed

Murine skeletal muscle stained with nuclear stain DAPI and cytoskeletal markers; actin and vimentin. The image helps us to understand the relationship of the different arrangement of cytoskeletal filaments in relation to each other and how they provide structure to the skeletal cell.

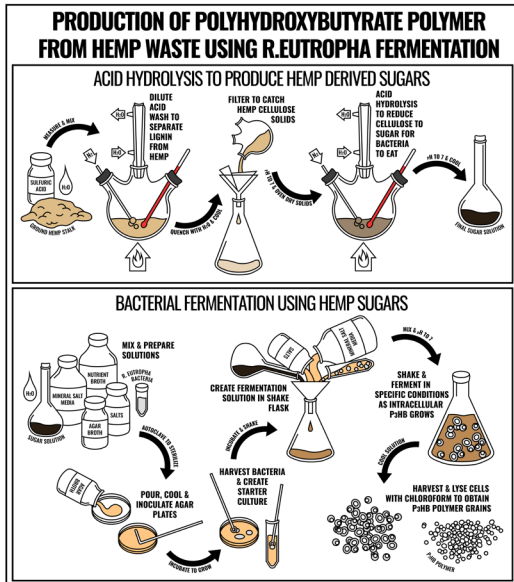
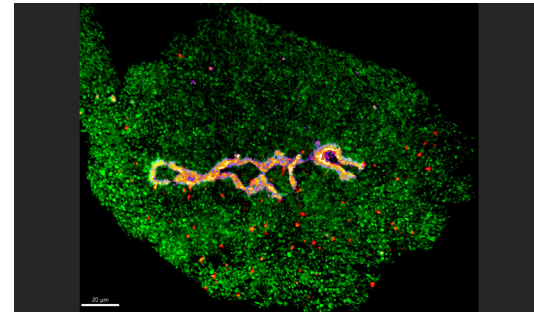


Diagram of Hemp-Fueled Bacterial Production of Polyhydroxybutyrate

Ashley Clark

The diagram described one process the Kander Research Group is currently working to develop. While the actual research is still in progress, creating this illustration of the process helps break down the daunting task of producing a bioplastic and explain the intended methodology.



"The Dragon" Fibrin Rich Center of a Hemostatic Plug

Chris Mansi

The fibrin rich center of a hemostatic plug generated via mouse jugular vein puncture. Here the fibrin forms in a pattern resembling a dragon. Platelets are labeled in green, while fibrin intensity is mapped in fire red.



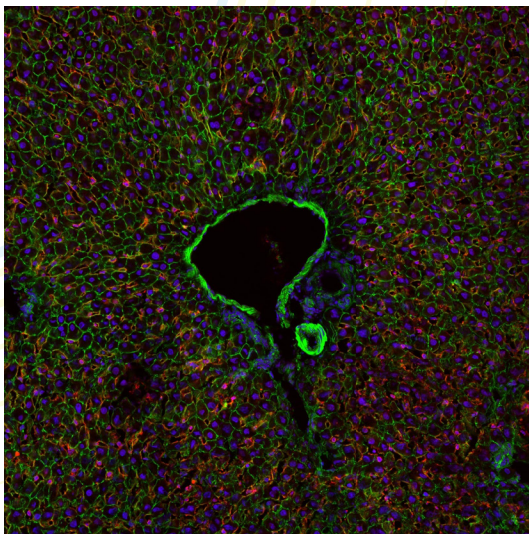
Head of Emotions
Makeiah Milbourne

My interpretation of art perspective from a classmate's verbatim during practicum. While listening to the verbatim, these were some of the words that the client used. She mentioned being accountable for her actions, so I was able to come up with this image which represented my classmate's session with this client.



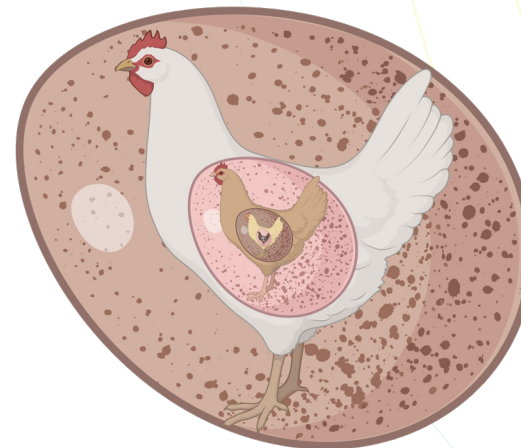
Depression in the Postpartum Period: Exploring a Brief Behavioral Activation Intervention
Gabrielle Santulli, Amy Szajna, Laura Moyer

The Stratton Foundation provided the Jefferson College of Nursing with a gift that funded faculty-led health services research pilot projects. To improve research literacy and community engagement, nurse scientists were partnered with Kanbar College of Design and Engineering, MS Health Communication Design students and alumni. Combining research and art resulted in an engaging artistic poster that brings awareness of postpartum depression to new moms in India which is often not acknowledged. Inspired by traditional Indian folk-art and embroidery, the design informs struggling new moms about the importance of mental wellness and communicating with family and healthcare providers.



The Question
Ankita Srivastava

"The question" image represents a fluorescent micrograph of the rat liver portal triad (green) within a liver lobule, creating a visual of a "question mark." The liver plays a vital role in metabolizing nutrients and removing toxins from the body. By seeking to answer the 'question' of how different liver cells (nuclei- blue, cell boundary green) communicate to regulate overall liver function, we can gain valuable insights into the fundamental mechanisms underlying liver diseases and liver failure.



The Chicken or The Egg ?
Santosh Yadav

Pictorial representation of the chicken-or-the-egg proverb, attempt to count the number of eggs or chickens in the picture. If you can count four, you have normal vision. However, if you can count five, you possess microscopic vision.



Flower 2

Rachel Brandoff

This piece, like its partner, is a painted and sculptural flower constructed from paper, fabric, watercolor, pens and glue. It is an investigation into the phenomenon of professional networking, which can be taken for granted as a common or necessary component of professional and social life. In this piece, I explore it as a multi-layered sometimes intentional and often organic support of clinical, research, and consulting professional practice.



Over the Moon

Grace McCaughey

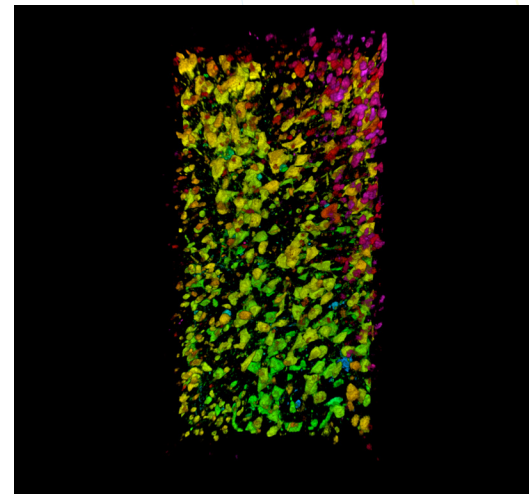
The love for relationships using collaged photoshop techniques.



What Now?

Katherine Robbins

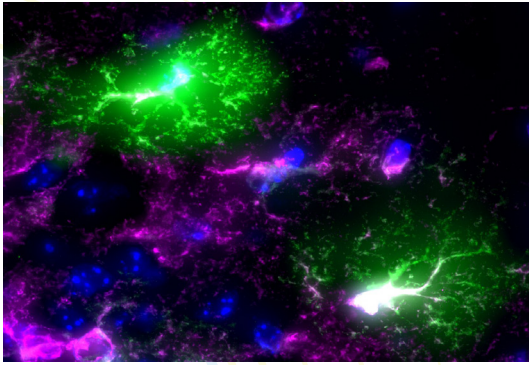
Upon graduation from the University of Delaware in the spring of 2022, I was faced with a lot of "What now?" statements regarding a career path. I received my BFA and felt as if I did not have a ton of direction in my life. This image I created in summer of 2023 is a collage of imagery to describe the uncertainty of that period in my life. There were many different paths I could have taken and I am glad to be a part of the CTC program at TJU.



A Rainbow Roadmap of the Spine

Shashirekha Markandaiah

This mouse spinal cord glows like a rainbow, lighting a path to combat disease. Tissue clearing unveils its inner cosmos—a central channel with shimmering neurons traced in technicolor. Neurons were labeled with Microtubule-associated protein (MAP-2) and imaged using a 20X objective of Nikon A1R confocal microscope. Different layers contain distinct groups, labeled to shine in spectra from violet to red. This molecular atlas exposes healthy pathways damaged in amyotrophic lateral sclerosis or Lou Gehrig's disease, furthering understanding of this devastating illness. Charting the spine's rainbow roadmap guides researchers toward potential treatments.



GFP Expressing Astrocytes in the Mouse Brain Hippocampus

Bridget Boyle

This image of the mouse brain CA1 region of the hippocampus show green fluorescent protein (GFP) expressing astrocytes, colocalized with astrocyte marker S100beta (magenta) and nuclei marker DAPI (blue). This is three weeks post peripheral injection of an innovative astrocyte-specific adeno-associated virus.



Red Superhero Earrings

Robyn Nichols

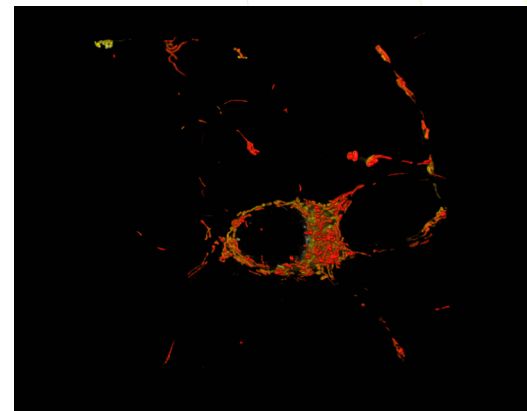
Materials: recycled cardboard, acrylic paint, glue, earring fasteners. Art is a vehicle where thoughts become reality. This pair of earrings is a wearable piece of art that promotes self expression while analyzing gender roles.



Elephant Ecosystem

Ava Sulkowski

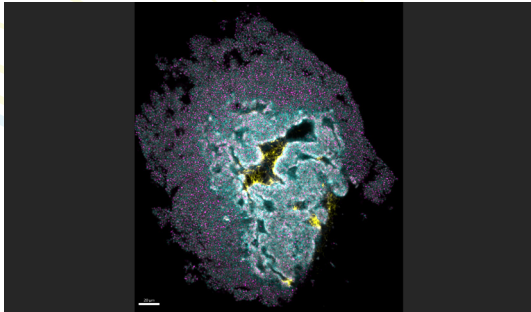
This art piece was created to reflect on the parable of the blind men and the elephant. Blind men approached the elephant (mitochondria) and felt different sections of it in order to come to a conclusion of what it could be. As they did not have sight, all their answers were different based on touch. This watercolor painting addresses perception: what is happening vs. what one assumes is happening.



Zoom in on Neuronal Power Plants

Karthik Krishnamurthy

Super-resolution microscopy illuminates the tiny powerhouses inside human brain cells. These mitochondrial organelles work tirelessly to fuel cognition's constant computation. Labeled with a fluorescent dye (mitotracker deep red), they glow like little fires providing energy across a dark neural landscape. Imaging at 60x magnification, we appreciate mitochondrial intricacy in detail. Their features come into crisp focus, exposing the fundamental source of thought's ceaseless activity: the neuronal power plants driving the mind's illumination. Neurons were imaged with Nikon CSU-W1 SoRa super resolution microscope.



Alpha Granules Deep Within a Large Hemostatic Plug

Chris Mansi

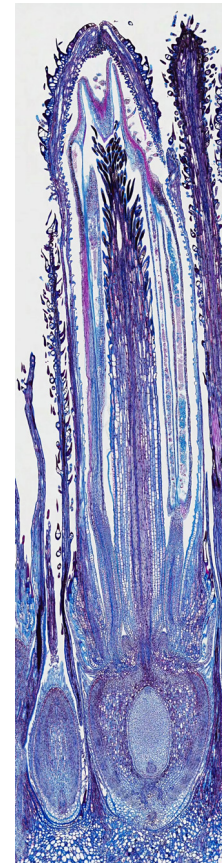
Alpha granules are key to regulating the hemostatic response. Here we see a large hemostatic plug that reveal preserved alpha granules. Platelets are labeled in cyan, fibrin in yellow and alpha granules in magenta.



Permafrosted Genes

Dolores Bartholomew

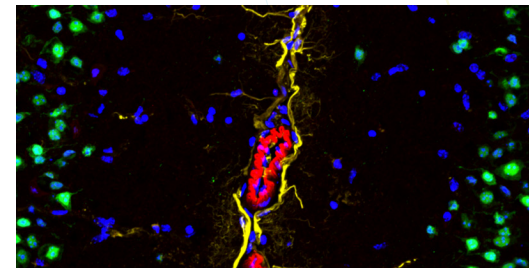
Conservationists agree feeding the predicted 9.6 billion people of 2050 and overcoming plant blindness is necessary for global cooperation to support the science needed to increase food production from 8.4 billion tons a year (BTY) to almost 13.5 BTY. This work is part of a study addressing plant blindness symptoms through SciArt and represents the work of scientists who collected 30,000 year-old fruit from a squirrel's burrow of Pleistocene permafrost; and through tissue culture regenerated plants that produced viable seeds. As students learn that reviving extinct species is possible including ancient grains, they reported optimism and support for plant research.



A Castle of Life

Pooja Bhoge

This intricate microcosm appears as a fortress of life. Its delicate, translucent walls seem to protect the budding seeds within as if guarding nature's secrets. It's like a mother and child relationship, protecting the baby before and after giving birth with numerous shells. But with time, it's slowly perishing the shell one by one from the top- to set it free. This view unveils a surreal world where fragility and resilience coexist, reminding us of the tangled beauty and resilience found within the tiniest wonders of the natural realm inside a disk floret of a sunflower.



The Eye of Sauron

Elham Javed

Murine brain sectioned and stained for neuronal markers and cytoskeletal marker-vimentin.



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