

SYNAPSE

2026
BYU
NEUROSCIENCE
CENTER



Building on Strength: The BYU Neuroscience Center Today and Ahead



I am humbled and excited to serve as the new Director of the BYU Neuroscience Center. This transition also provides a moment to reflect on where the Center has been and to articulate priorities for the years ahead.

First, I wish to acknowledge the exceptional leadership of Jeff Edwards and the dedicated staff of the Neuroscience Center, Rebecca Daines and Heidi Jensen. Having served for a decade as either Associate Director or Director, Jeff played a central role in shaping the current state of the Center; in particular, Jeff was instrumental in transitioning the Center to its permanent home in the College of Life Sciences and in strengthening its resources and sustainability. I am delighted that Rebekka Matheson will continue as Associate Director; her experience, talents, and passion will be critical as we move forward.

The Neuroscience program at BYU is strong by any reasonable metric. Nationally, we are in the 91st percentile in program size among U.S. undergraduate neuroscience programs. Within BYU, neuroscience is the third largest major across the College of Life Sciences and the College of Family, Home, and Social Sciences, the two colleges from which most of our faculty are drawn. Notably, neuroscience also reports the highest student satisfaction of programs in its college.

As of Winter Semester 2026, the program enrolled 626 undergraduate students and 14 graduate students (4 MS and 10 PhD). A few weeks ago, we graduated 137 undergraduate students, along with one MS and one PhD student. Our students pursue a wide range of academic interests, with psychology, gerontology, and business among the most common minors. The 30 faculty associated with the Center come from six departments in four colleges. We acknowledge the departures of Jordan Yorgason, Becca Lundwall, and Daniel Kay and welcome Kaylie Carbine and Nathan Anderson (Psychology) to the faculty.

Looking ahead, the next five years will focus on several strategic objectives. We aim to strengthen unity and collaboration across a diverse faculty, and to create structures that allow faculty to contribute proactively and sustainably to the program. For students, we seek to cultivate a strong sense of covenant belonging, expand opportunities for meaningful experiential learning, and maintain rigorous academic standards aligned with the Aims of a BYU Education.

The success of the BYU Neuroscience Center rests on its people—students, faculty, staff, alumni, and supporters—and I look forward to working together as we build on a strong foundation and pursue these goals with clarity and purpose.

Steven Charles
Director, BYU Neuroscience Center



Shin Scholarship

Page 4

Neuroscience Honored Graduate: Scott Cutler

Page 8

BYU 150: Swimming Toward Discovery

Page 10

Melissa Blotter: Advancing the Science of Seizure Intervention

Page 16

Rawlinson Scholarship

Page 5

Neuroscience Study Abroad

Page 7

2026 Art Contest

Page 13

Zach Valentine: 2025 Schwarzman Scholar

Page 18

Ashley Breinholt: Chinese Bridge Competition

Page 20

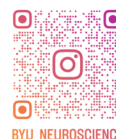
BYU 150

FEEDBACK

We would love to hear from you. Please email your ideas and comments to neuroscience@byu.edu.

FRONT COVER

Artwork is "The Gift of Light" by Alexa Moody. Submission in the 2026 Neuroscience Art Contest.



Welcome New Faculty



KAYLIE CARBINE is the Principal Investigator of the Cognitive Health and EEG/ERP Research (CHEERs) Lab here at BYU. She earned her PhD from Brigham Young University in 2020, where she specialized in cognitive neuroscience and health psychology. In her lab, students learn how to collect EEG data and test the neural mechanisms behind eating behaviors. Her work connects basic cognitive neuroscience with real-world health challenges such as weight management, exercise, and nutrition, bridging theory and everyday life in meaningful ways. As a mentor, Kaylie is deeply committed to helping students thrive. She is especially passionate about supporting minority, underrepresented, and first-generation college students as they pursue their academic and professional goals. Originally from California's Bay Area, Kaylie feels most at home near the water. The beach is her happy place and she loves boating, kayaking, paddleboarding, swimming, and scuba diving whenever she gets the chance. Outside of work, she enjoys dancing, baking, and exploring new towns with her husband and sons.

NATHAN ANDERSON is the director of the Cognition and Neuroimaging Lab at BYU. He completed his undergraduate work at Michigan State University, and earned his PhD from Washington University in St. Louis studying the neural correlates of human episodic memory. He completed a postdoctoral fellowship at Northwestern University Feinberg School of Medicine, pursuing various cognitive neuroscience applications of precision functional brain mapping. His lab studies mental imagery and memory, focusing on understanding how these cognitive processes are supported by different brain networks at the individual level. Nathan loves teaching, both in the classroom and in the lab, and is passionate about BYU's commitment to student learning. Raised in Michigan, Nathan is a Midwesterner at heart, but is happy to be back in the mountainous West after serving his mission in northern Nevada. In his free time, Nathan is an avid reader and loves spending time with his wife and four boys.



Congratulations!

Dr. Rebekka Matheson has joined the **BYU School of Medicine!** She will remain affiliated with the Neuroscience Center and continue serving as Associate Director.

Happy Retirement



REBECCA LUNDWALL

WE WOULD LIKE TO WISH DR. DANIEL KAY
AND DR. JORDAN YORGASON
WELL ON THEIR NEXT ADVENTURES



*DANIEL KAY
UNIVERSITY OF ROCHESTER*



*JORDAN YORGASON
WAKE FOREST UNIVERSITY
SCHOOL OF MEDICINE*

SHIN SCHOLARSHIP RECIPIENTS

Rebeca Acosta
Joanna Ah Nee
Haley Benson
Abby Bent
Tanner Brady
Eva Carr
Tara Christensen
Tyler Cloward
Joe Davis
Edmund (Ed) Ellsworth
Kelsey Gill
Luke Hayes
Matthew Haymore
Trey Jones
Lauryn Moon
Eden Ordyna
Kierra Oyler
Matt Reall
Noureen Salah
Sydney Stuart
Nathan Thornton
James Tran-Khanh-Bichon
Brenton Valentine
Jared Wieland
David Wilcox
Hannah Wilson



The Samuel Injae Shin fellowship was established to honor the memory of Samuel Shin, who graduated with bachelor and master degrees in neuroscience from BYU, but died tragically in a climbing accident in 2016. The Samuel Injae Shin Scholarship is a way to continue his legacy of life-long learning in neuroscience.

SHIN SCHOLARSHIP RECIPIENT STORIES



REBECA ACOSTA has a journey filled with resilience, faith, and determination. As an international student and the daughter of first-generation immigrants, she has navigated financial hardship, rigorous academic demands, and the challenges of living with lupus since childhood. Despite these obstacles, Rebeca has pursued her passion for neuroscience, contributing to research on genomic instability and epileptic phenomena and even co-authoring a published paper. With the support of dedicated mentors and this scholarship, she has been able to persevere through both academic and personal challenges. For Rebeca, this award represents not only financial relief, but a deeply meaningful reminder that her efforts and aspirations are seen and supported.

NOUREEN SALAH brings a unique and powerful perspective to her studies as a Muslim-Egyptian student at BYU. While navigating the challenges of cultural differences and the financial burden of higher tuition, she has remained deeply committed to her education and future in medicine. Studying neuroscience and sociology, Noreen is passionate about addressing health disparities and understanding how social and structural factors shape neurological and mental health outcomes. This scholarship provides her with the opportunity to focus more fully on her studies and continue preparing for a career dedicated to serving underserved communities. Noreen's story reflects both perseverance and a deep desire to create more equitable healthcare systems.



RAWLINSON SCHOLARSHIP RECIPIENTS



Sarah Alvarado-Ruiz

Anna Black

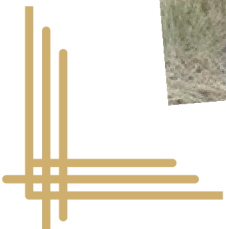
Kevin Gray

Ryan Poland

All recipients are currently pursuing an MS in Neuroscience.



KEVIN GRAY is a powerful example of determination and growth. Through hard work, self-belief, and perseverance what once felt out of reach has become a reality. Today, he is completing a master's degree in neuroscience and preparing to pursue medical school, with the goal of specializing in psychiatry. His journey has been shaped by hard work, self-belief, and the support of those who have invested in his potential. This scholarship represents more than financial assistance—it is a validation of how far he has come and a catalyst for the impact he hopes to make as a compassionate physician.



Faculty Awards

Julianne Holt-Lunstad
Highly Cited Researcher, Clarivate

Jeff Edwards
Outstanding Mentoring Award, College of Life Sciences

Steven Charles
Keith Duffin Teaching & Learning Faculty Fellowship, BYU
Most Influential Faculty Award, Department of
Mechanical Engineering

Garrett Cardon
Top Rated Abstract, International Society for
Autism Research (INSAR)
Research presentation: Toward Overcoming the Double
Empathy Problem: Bridging Autistic and Neurotypical Minds
Through Science and Art



2026 Neuroscience Graduate Student Symposium
Seth Hoffman, Anna Black, Suehelen Garcia, and
Steven Charles (Director)

Student Awards

Ethan Coulter
1st Place College of Life Science Undergraduate Research
Conference: Human Herpesvirus 6 and Risk of Dementia

Alisa Burt
2nd Place Fulton Conference
2nd Place College of Life Science Undergraduate Research
Conference: Identifying Cell Types Within Signal Integration
of the Vestibulo-Ocular Reflex

Lucas Petersen
3rd Place College of Life Science Undergraduate Research
Conference: Left, Right, and Resistant: How Source Bias Fuels
the Persistence of Misinformation

Ryan Poland
Winter 2026 Professional Presentation Award, BYU Graduate
Student Society
Neuroscience Recruiting & Recognizing Graduate Student
Excellence Scholarship Award
Bridging Travel Award, Biophysical Society Conference

Seth Hoffman
1st Place Oral Presentation Neuro Graduate Symposium
Presenter at Society for Neuroscience

Melissa Blotter
1st Place Poster Presentation Neuro Graduate Symposium
1st Place Neuroscience 3 Minute Thesis Competition
2nd Place College of Life Science 3 Minute Thesis Competition

Anna Black
2nd Place Oral Presentation Neuro Graduate Symposium

Morgan Chase
2nd Place Poster Presentation Neuro Graduate Symposium

Suehelen Garcia
3rd Place Oral Presentation Neuro Graduate Symposium



Neuroscience in Europe!

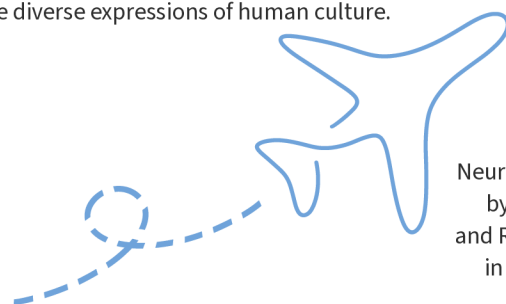
The Neuroscience in Europe study abroad program (affectionately referred to as “Neuro in Euro”) invited students to explore how the brain interprets the world and how culture shapes that interpretation. At its core, the program examines how our sensory systems transform physical energy into electrical signals, and how complex brain networks translate those signals into perception, thought, and meaning, all within a cultural context.

Traveling through England, the Netherlands, Italy, and Austria, students encountered a rich blend of scientific insight and lived experience. In Hallstatt, Austria, they descended into the world’s oldest salt mine, where people have harvested salt for more than 7,000 years. Tasting the mineral firsthand offered a tangible connection to a resource that has shaped human history.

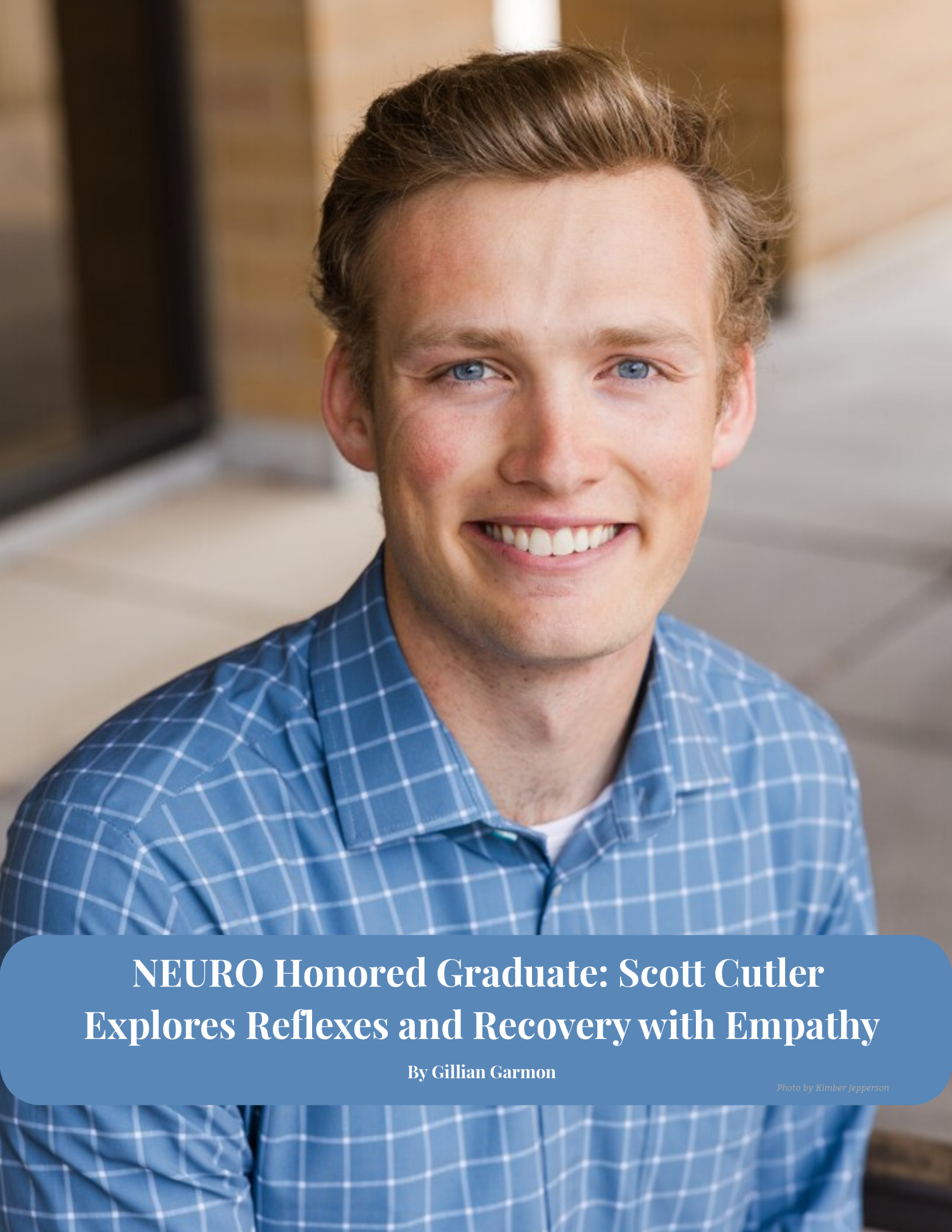
In Milan, Italy, students stepped into the kitchen, learning from local chefs how simple ingredients can be transformed into extraordinary dishes, an exercise in both sensory perception and cultural tradition. In Vienna, Austria, they attended a concert featuring the music of Mozart, joining an international audience drawn together by the emotional power of sound.

The program also emphasized cultural immersion and reflection. In London students visited a Sikh Gurdwara, where they learned about Sikh beliefs centered on service and equality. They participated in preparing and sharing a meal in the Sikh Langar, the community kitchen that serves hundreds (sometimes thousands) of free meals daily to anyone, regardless of religious affiliation.

Together, these experience highlighted a central theme of the program: the brain does not simply perceive the world, it interprets it through layers of culture, history, and shared human experience. For both students and faculty, Neuro in Euro proved to be more than an academic journey; it was a transformative exploration of how we understand, create, and connect through the diverse expressions of human culture.



Neuro in Euro was lead
by Jared Nielsen
and Rebekka Matheson
in 2024 and 2025.



NEURO Honored Graduate: Scott Cutler Explores Reflexes and Recovery with Empathy

By Gillian Garmon

Photo by Kimber Jepperson



Scott Cutler (NEURO '26) leans over a brain model in Dr. Brown's neuroanatomy class, tracing the curves of the cerebral cortex with a practiced finger. Here, Cutler is engaging with medicine in action, pouring over small case studies in order to piece together diagnoses. As he works, Cutler feels a surge of certainty. Nothing brings him alive like science does; he is confident that he's exactly where he needs to be. "I thought to myself, 'Yes, I'm on the right track,'" he says. "This is an area where I can do real good."

The conviction is personal, as Cutler was born with cerebral palsy and has an intimate understanding of the medical system. That understanding has instilled within him a unique empathy and sense of compassion that makes him incredibly well suited to the role of physician. "I plan on specializing in physical medicine and rehabilitation," he explains. "I want to help stroke patients or people with traumatic brain injuries rebuild their lives. I want to be the first face they see when they start to get better, the one that says, 'Okay, let's get you back.'"

That drive to translate knowledge into tangible patient care carries into Cutler's research; in Dr. Stay's vestibular lab, he applies his curiosity and compassion to finding solutions that give patients relief. Cutler is currently focusing on the vestibulo-ocular reflex—the system that stabilizes our eyes while we move. He works with mice in experiments that challenge their senses, where the animal's body spins one way while their visual surroundings move another, forcing their reflexes to adapt.

"We're looking at how these reflexes change across different axes of rotation—vertical, horizontal, and combinations of the two," Cutler explains. "The goal is to better understand vestibular dysfunction, conditions like vertigo or Mal de Débarquement syndrome, where people feel constantly off balance, almost seasick, even when they're standing still." By unraveling these reflexes, Cutler hopes to better understand how the cerebellum and the vestibular system in the inner ear work, ultimately helping patients reclaim stability.

Working in the lab has been rewarding on multiple levels for Cutler, providing him not only with a chance to advance patient care but also invaluable learning experiences. "The professors and students I've worked with have been incredible," he says. "Dr. Stay, in particular, always makes sure our work is grounded in a clear purpose. We isolate variables, test them, and figure out what's really causing something by systematically ruling out other possibilities. It's what I love about medicine—it allows me to apply this methodical approach to actually improving people's lives."

Just as he tackles research in the lab, Cutler tackles the medical school application process with equal care and intentionality. "I've already submitted my applications and am moving through the process step by step," he says cheerfully. Cutler credits his incredible family and his relationship with God for the guidance and support he's received. "I'm really grateful for the support my wife has given me. She has been incredible," he says, "and of course working with the brain has been very testimony-building for me, since the hand of God can so clearly be seen in the human body and nervous system." Cutler's first spark of certainty in the classroom has blossomed into a purposeful mission, one that is centered on helping patients restore their health and independence.



SWIMMING TOWARD DISCOVERY

BY GABE MILLS



With her eye to a microscope, Suehelen Garcia (PhD '28, NEURO) scanned a glass dish containing a tiny zebrafish submerged in a small droplet of water. The fish is genetically modified so that certain neurons glow when activated. For weeks, Garcia and her lab partner, Addie Hamilton (PWS '25), had been searching for signs of multisensory integration—the neural process by which the brain weaves together inputs like sight, sound, and touch. After many attempts, Garcia saw the image on the screen reveal a faint glow, igniting excitement and curiosity within her.

This radiant moment of discovery illustrates what mentored research in the College of Life Sciences is all about. Faculty members in the College guide and collaborate with students like Garcia.

In the Suli Lab at the Neuroscience Center, faculty and students work together to uncover the intricacies of brain development through the rapid growth and genetic versatility of zebrafish. At the heart of this research is a powerful message: developmental differences in humans aren't problems to solve but mysteries to understand.

"Sometimes it's not about fixing something," explains Dr. Arminda Suli. "It's about accepting and understanding each other for the unique people we are." In her lab, students learn to respect and seek to understand neurodivergence. This perspective has profoundly shaped their scientific and personal growth. "We're not trying to get rid of autism spectrum disorder. People who are affected by it have beautiful things to offer," says Allie Dietz (NEURO '24). "It's more about figuring out how we can take everybody's individual strengths and weaknesses and use them together to grow our community."

STUDENT PROJECTS

SUEHELEN GARCIA is profiling multisensory integration neurons in the optic tectum—the same neurons that flickered to life under the microscope—and cataloging how their activation (or lack thereof) influences how the brain reacts to sensory inputs.

KEVIN GRAY focuses his research on how oxidative stress affects the development of neurons in the optic tectum and potentially the superior colliculus.

ISAAC GREENWOOD is targeting a gene in zebrafish that is associated with autism spectrum disorder in humans to determine the behavioral outcomes when the gene is mutated in the optic tectum.

ALLIE DIETZ worked on developing a novel genetic system for gene expression and manipulation in selective embryonic areas to allow scientists to better study embryo development.

BYU | 150



Photo by lapis2380/Adobe Stock

Under Suli's guidance, students study the fundamental processes of sensory integration and neurodevelopment. Their focus is on understanding the superior colliculus, which is responsible for receiving and processing sensory stimuli. Located deep within the human brain, the superior colliculus is difficult to study, so the Suli Lab focuses its research on the optic tectum in zebrafish, which is both structurally and functionally similar.

Each student's project focuses on a different aspect of how the brain processes the world, and their combined research will help them to better understand and assist individuals with sensory processing disorders like autism. "Although we do take very different directions, each project fits together like pieces of a puzzle to tell a cohesive story about brain development," Kevin Gray (MS '26, NEURO) shares.



Photo by RFBSIP/Adobe Stock

“Knowledge is light, and anything that’s of light is of God. So as we do our research with integrity and share it with the world to help others, we can change perspectives and inspire others to try new ideas.”
-Kevin Gray



Photo by Danny Lopez

Beyond scientific achievement, the students see their work as a way to go forth and serve. “Knowledge is light, and anything that’s of light is of God,” Gray says. “So, as we do our research with integrity and share it with the world to help others, we can change perspectives and inspire others to try new ideas.” Isaac Greenwood (NEURO ’26) sees this research as a way to “pass the torch to the next generation of scientists who can help us all understand neurodiversity, ultimately creating a better world.” Dietz acknowledges how the experience has taught her deeper empathy: “Understanding differences and respecting them—that’s something I’ll carry into every aspect of my life.”

The students credit much of their progress to Suli’s mentorship. “Having a professor who believes in me has motivated me to believe in myself,” Dietz explains. Through her encouraging guidance, Suli creates a space for students to learn and grow.

These students are not just contributing to scientific discovery in the lab; they are also deepening their faith in their Creator. “God knows the laws of science perfectly. He’s taught me a lot through science: resilience, determination, and to see His hand all around us,” Gray says. As he explores the complexities of brain development, Gray better understands the intricacies of God. “Anything that brings knowledge and truth is of God, and God is the Master of Science,” he shares.

In the small, glowing neurons of a zebrafish brain, these students glimpse the brilliance of divine design. Their journey, illuminated by faith, compassion, and discovery, shines as a beacon of light for both the scientific community and the world.



WATCH

NEURONS OF EMPATHY & DIVINE DESIGN: UNCOVERING THE MYSTERIES OF NEURODIVERGENCE

A team of BYU student researchers is gaining insights on how to better understand and assist individuals with sensory processing disorders like autism. In this video, students share how studying the optic tectum in the brains of zebrafish has helped them become more compassionate.

2026 ART CONTEST

GIFTS OF LIGHT

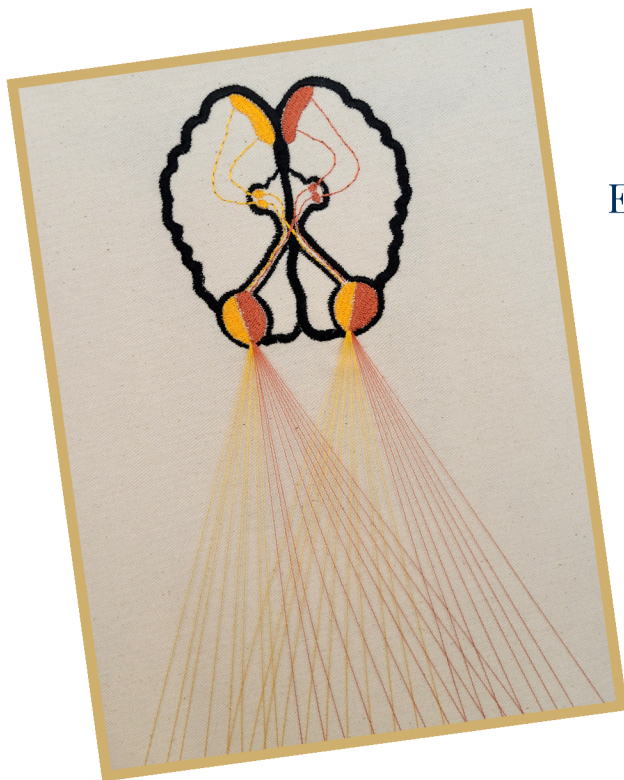


1ST PLACE

UNITED IN LIGHT BY ASHLYN ELDER

This piece represents the human mind illuminated by light with each colored layer of paper representing a different gift, talent, and perspective that individuals bring into the world. Alone, each paper is simple, but together they form something complex and meaningful. The light shining from behind the paper symbolizes the light of Christ that illuminates our minds and guides our gifts. Just as light reveals the full shape of the artwork, Christ's light helps us understand who we are and how we can serve others.

In 1 Corinthians 12, Paul teaches that the Church is like a body made of many parts, with each part being essential to the function as a whole. Every person has different gifts, but each one is profound and valued. No piece can create the whole image alone. When the layers come together they form something greater than any single part. This work reflects the idea that our individual gifts, when illuminated by Christ's light, unite to create a brighter and more complete whole.



2nd Place Epiphany: A Moment of Illumination by Kierra Oyler

This piece is inspired by the pathway of light in the brain. This complex path integrates sensory information with cognitive function and allows us to understand our surroundings. Moments of illumination manifest in many different ways in our lives. Light inspires our minds.

What a gift it is to see.

What a gift it is to think.

What a gift it is to be.

3rd Place The Glory of God is Intelligence, or in Other Words, Light and Truth by Lauryn Moon



There's a lot of symbolism in the scriptures where we are the clay and God is the potter. This brain was made of clay to represent the plasticity of our brains and how it was created by God and molded through experience. He created us with the ability to choose how we think and act. As we fill our minds with the light of Jesus Christ, we are promised that "that body which is filled with light comprehendeth all things" (D&C 88:67).

The flowers represent the intelligence that I gain by study and by faith. When I combine my scientific studies with my understanding of the character of God, I start to uncover wonderful truths that both strengthen my testimony in the Savior and deepen my appreciation for the scientific discoveries that led me to that conclusion. This education glorifies God and gives me greater power to serve His children in my future career.

"For I know the things that come into your mind, every one of them" (Ezekiel 11:5). I hope that when God looks at the things that come into my mind, that He will find my thoughts to be garnished with virtue, "mindful always of his covenant" (1 Chronicles 16:15), and full of all things true, honest, pure, and lovely. So that when "the Lord searcheth all hearts, and understandeth all the imaginations of the thoughts: if [I] seek him, he will be found of [me]" (1 Chronicles 28:9).

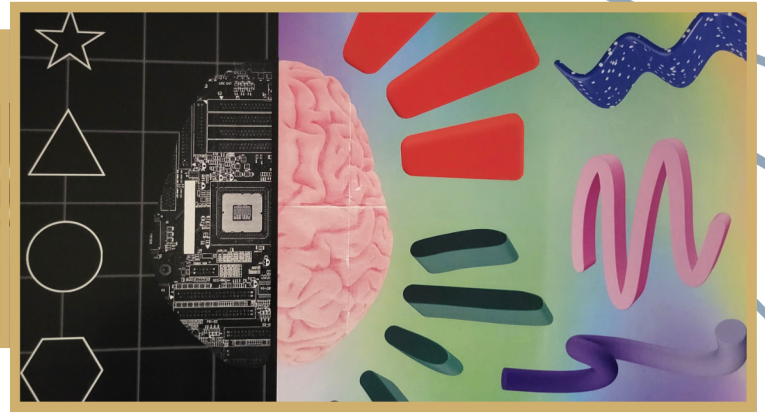


Honorable Mention

Yehi Or (Let there be Light)

by Solei Paget

"And God said, Let there be light; and there was light." (Gen 1:3). What better gift to be given than the ability to touch, to feel, and to connect with our Heavenly Father? Neurons let off tiny quantities of light, making us, in some way, full of our own light. Because of the divine light that has been given to us, we can use our light to shine and help others, perpetuating the neuronal light in which we create.



Honorable Mention

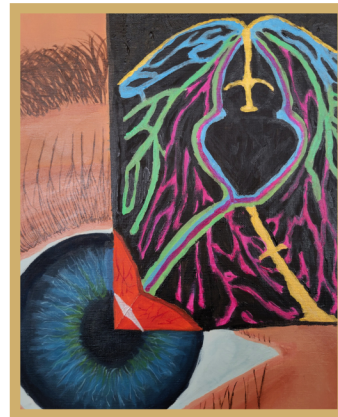
Nothing is Quite Like You

by Zane Elkins

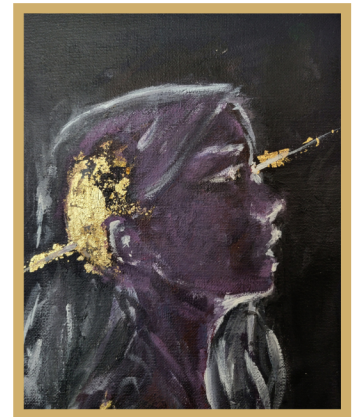
AI can be a helpful tool, but it cannot replace the creativity, individuality, and light that each person has been given by God. In this piece, the left side uses simple shapes and a shadowy color scheme to represent technology: structured, rigid, and an echo of human creativity. In contrast, the right side is filled with bright colors and unique 3D shapes, symbolizing the individuality, creativity, and divine light that make each person different, including you.



The Creator
by Minnet Serrato



Enlightened Perspective
by Oliver Lindsay



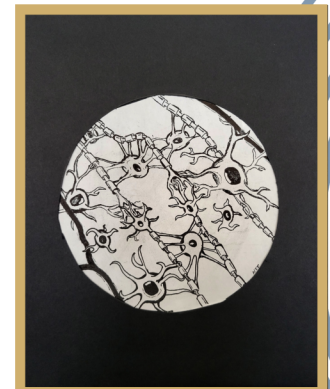
The Gift of Light
by Alexa Moody



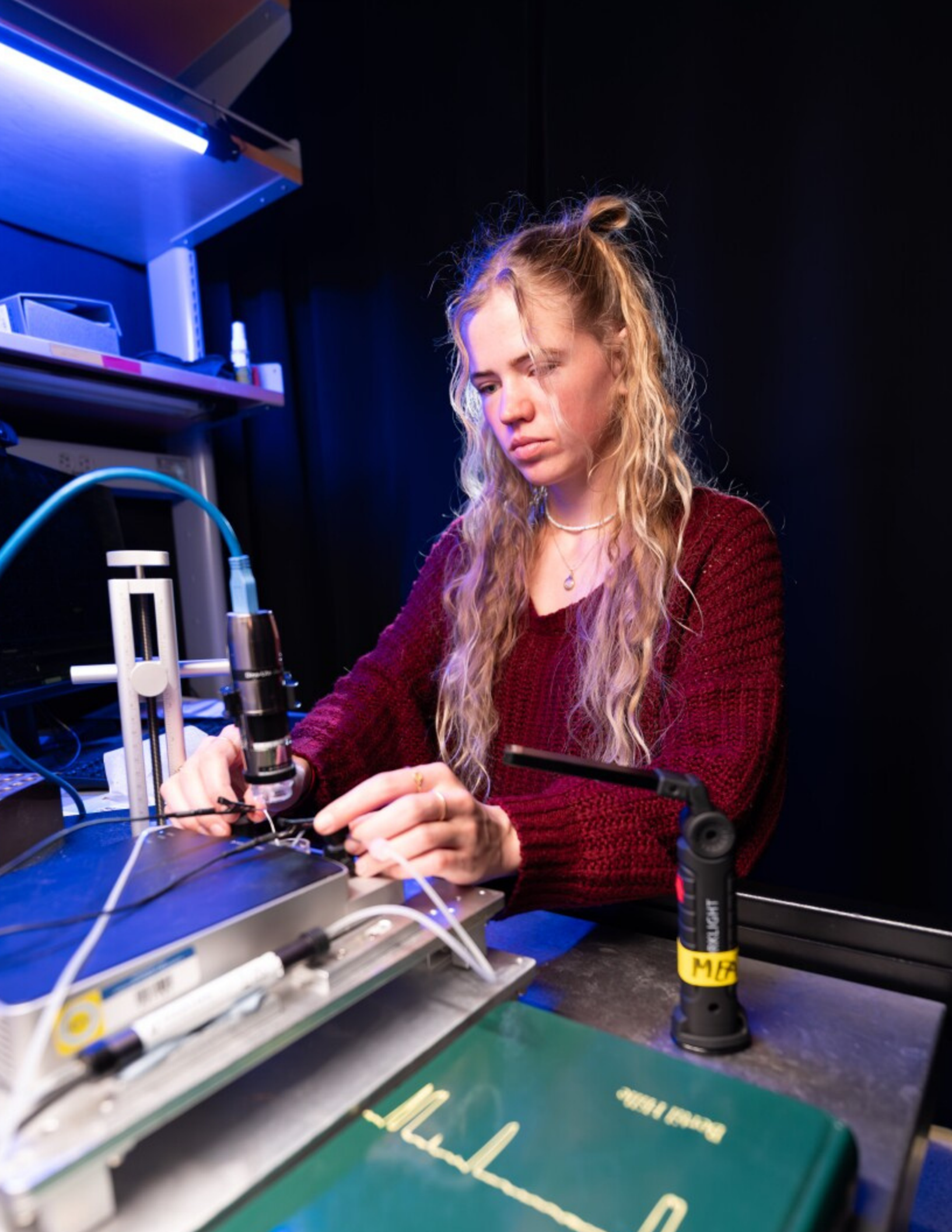
Blessed Being of Light
by Jared Jenkins



The Mind, Illuminated
by Kaitlyn Skinner



Synaptic Shenanigans
Under the Microscope
by Nathan Thornton



Melissa Blotter: Advancing the Science of Seizure Intervention

By Gilliam Garmon

Melissa Blotter (PhD '27, NEURO) gently places a thin slice of neurological matter onto a small sensor chip designed to record brain activity. With a few clicks, she triggers a seizure in the tissue, studying the monitor in front of her as thousands of tiny electrodes begin tracking the explosion of frantic electrical signals spreading across the brain. The chaos is sudden and all-encompassing, a painfully accurate representation of what patients with status epilepticus experience when they begin seizing. These types of prolonged seizures—which anti-seizure medications are not effective against—cause brain cells to expend unsustainable amounts of energy, often resulting in cognitive impairment, a decrease in brain volume, and even death. Blotter's determination to find a solution to this life-altering problem led her to investigate ketone bodies, the molecules produced by the ketogenic diet, as a possible solution. Though further research is needed before this treatment could be used clinically, early experimentation suggests that the injection of ketone bodies may be able to stop the seizures altogether.

For Blotter, curiosity and creativity are not distractions from science; they are part of what makes discovery possible. That same curiosity shaped the beginnings of Blotter's research.

"I began to get curious about the keto diet," Blotter says, "since it has been traditionally recommended to patients with status epilepticus and often decrease seizure frequency and severity." However, Blotter quickly realized the ketogenic diet has two major limitations as a treatment for epilepsy. It is difficult for many patients to maintain, and it cannot help in emergencies like status epilepticus because it only works if someone is already on the diet. "This is frustrating," Blotter explains, "because the ketogenic diet works by increasing the production of molecules called ketone bodies that give cells extra energy. For someone having a seizure, that energy can help exhausted brain cells recover. So, I began to wonder if we could skip the diet and give patients the ketone bodies directly."

Encouraged by Dr. Parrish, Blotter began putting her theory to the test. Initial experiments used slices of brain tissue placed on a sensor chip to record electrical activity. After triggering seizure activity, the team introduces ketone bodies to see whether they can stop it. The results have been incredibly promising, with the ketone bodies terminating all seizure activity with impressive speed and efficiency. "The hope is that in time this research will lead to the creation of a type of seizure medication that could be produced in shot form, like an EpiPen," Blotter says excitedly. "In theory, when someone is having a seizure, you could inject them with ketone bodies to stop them from seizing." In the coming months, Blotter and her team plan to begin experiments with live mice to see whether ketone bodies can stop seizures in a functioning brain.

This level of creative problem solving is not surprising to find in one as enthusiastic as Blotter, who applies every ounce of her zest for life to her PhD studies in neuroscience. A multi-disciplinary student with a deep love for both art and science, Blotter feels strongly that engagement with different fields of study strengthens an individual's personal development and capacity to serve. "Though both art and

science engage with the world differently, both are dedicated to exploring the human experience," Blotter explains with a smile. "I think that's what actually drew me to neuroscience. It's a hard science but it also has these creative ties to psychology."

Today, Blotter brings those two sides together in her work as she leads research aimed at finding new treatments for status epilepticus. "I feel like fun is kind of my big thing," Blotter shares. "Every time I make a presentation, they're very colorful. I choose to speak about science with excitement, and I try to make it exciting for other people as well. When I go to conferences, I wear outfits that are authentic to me. I believe God made us each unique for a reason and gave us agency so that we can be different. So, we should be different!" Her approach to presentations is very effective and landed her second place in the College of Life Sciences Three Minute Thesis Competition. This mindset also shapes the way Blotter approaches her work in the Parrish Lab, where she leads experiments, mentors undergraduate researchers, and remains open to unexpected ideas.

As Blotter reflects on the potential impact of her research for those living with status epilepticus, she expresses deep gratitude. "We encountered challenges during the research process," she admits. "But I always felt that God knew how this worked and that I could figure it out. I knew there was a bigger picture. The solution existed. I just had to keep working toward it." Now, Blotter looks to the future with her trademark enthusiasm.

While she enjoys research, her ultimate goal is to teach at the university level. "Teaching is such a cool way to interact with so many people," she says. "You can help people academically, but you can also play a supportive, encouraging role in their lives." Blotter has already found joy in that role as a teaching assistant and while mentoring undergraduate students in the lab. For Blotter, the goal is not only to make discoveries, but to help others discover what they are capable of.



Zach Valentine

2025 Schwarzman Scholar



By Charlene Fernando

“My main focus is helping provide medical care to underserved communities,” Zach Valentine, 2025 Schwarzman Scholarship recipient, explained.

Valentine, a Neuroscience major in the College of Life Sciences and Chinese minor in the Department of Asian and Near Eastern Languages, exemplifies BYU’s motto: “Enter to learn; go forth to serve.” He is Brigham Young University’s first-ever recipient of the Schwarzman Scholarship. This scholarship funds a Masters of Global Affairs at Tsinghua University in Beijing, China for about 140 students worldwide each year. Valentine hopes to utilize this opportunity to pursue his passion for providing medical care to vulnerable populations. His experiences from his childhood, mission, and BYU have shaped his path as he prepares for a life of service.

SHAPING HIS OWN PATH

Growing up, Valentine watched his mother, a refugee case worker, support individuals and families through the transitions that come with moving to the United States. This early exposure became a precursor to the love Valentine has for underserved communities, which solidified while on a mission for The Church of Jesus Christ of Latter-day Saints.

Valentine was assigned to the New York City Mission, speaking Mandarin Chinese. Serving during the COVID-19 pandemic sparked conversations about healthcare between him and the Chinese-speaking residents. Valentine quickly became aware of the difficulties these communities faced when trying to navigate the U.S. healthcare system. He relates that discussions on insurance, copays, deductibles, or other cultural differences were eye-opening as he saw how those barriers prevent people from actually going to see a doctor.

Valentine always knew he wanted to pursue a medical degree but was not interested in the traditional doctor route. Gratefully, these interactions on his mission helped him home in on his desire to help provide medical care to disadvantaged communities. Upon returning from his mission, he began to pursue this work by volunteering for the International Refugee Committee, where he guides many individuals to the right places for care, helps them through doctor’s appointments, and teaches them how to apply for Medicaid.

As Valentine continues to work toward his career goals, the Schwarzman Scholarship program is a huge step forward. In China, Valentine hopes to take a deep dive into understanding the pros and cons of the Chinese healthcare system. He is excited to visit rural communities and learn from the perspectives of doctors, nurses, and healthcare providers. These outside perspectives will be a catalyst for Valentine to utilize when giving new suggestions or ideas to fill in for deficiencies he sees within the U.S. healthcare system.



Zach Valentine during his missionary service in New York

Read More about
Zach's Story



Ashley Breinholt shines in prestigious Chinese Bridge competition

By Sharman Gill



Often called the “Olympics of Chinese,” the Chinese Bridge competition is a premier international event celebrating Chinese language and culture. This year, preliminary rounds began in February with more than 50,000 university students from 141 countries. The global finals ended on Aug. 24 in China with BYU sophomore Ashley Breinholt [Neuroscience Major] standing as one of the top two contestants in the world.

“I was so grateful to have made it to that point,” said Breinholt. “I was competing against an amazing contestant from Germany, and we went back and forth with a lot of difficult trivia questions. She had more experience taking cultural classes. I feel like I displayed my language abilities pretty well. It came down to a little bit of luck in what questions we got.”

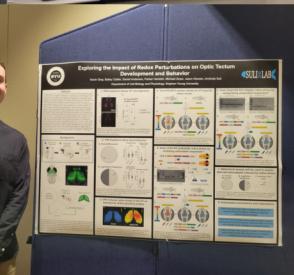
Breinholt ultimately placed second in the global finals by the narrowest of margins—just one question in the quick-response round. This marks the highest placement ever achieved by a BYU student in the competition’s 24-year history, and only the sixth time an American has placed.



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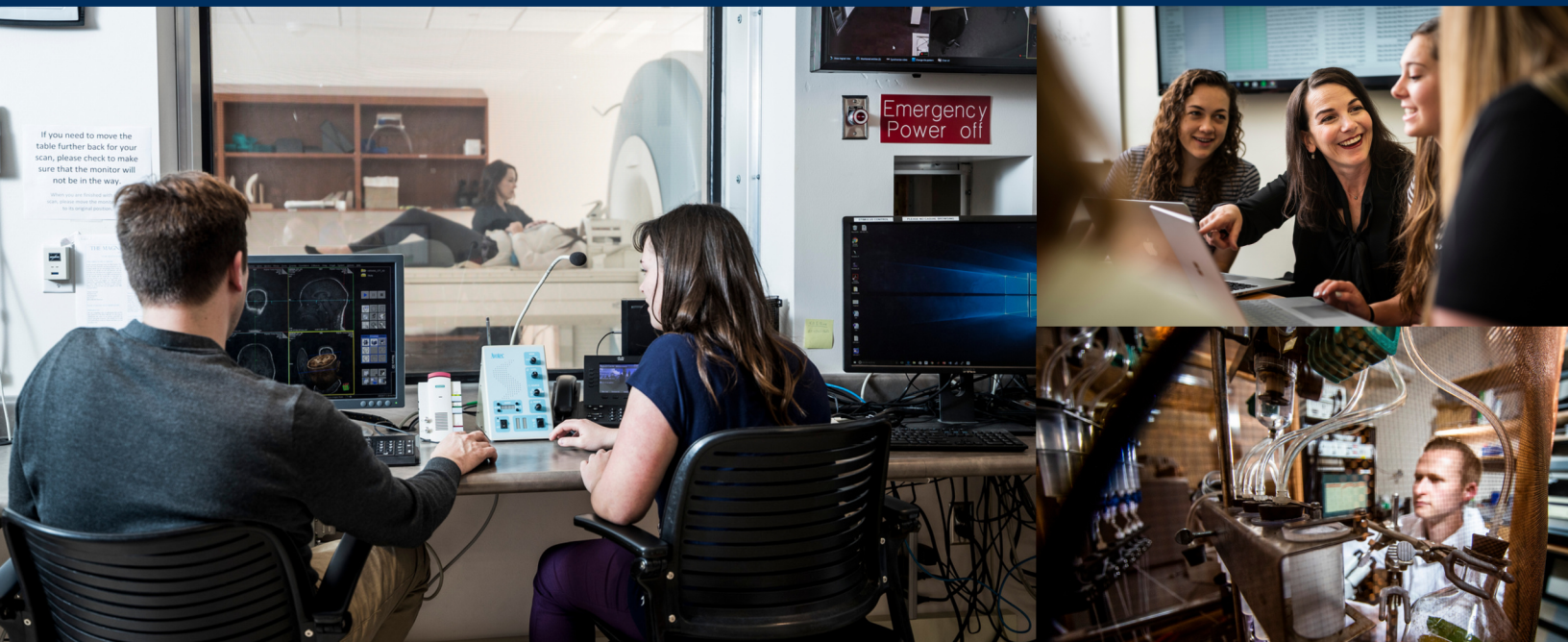
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**“EVERYTHING YOU DO IS BEAUTIFUL ALL ON ITS OWN, BUT
WOW, WHEN ILLUMINATED WITH THE LIGHT OF CHRIST, IT
BECOMES MORE VIBRANT AND MAGNIFICENT, RADIATING
ITS INFLUENCE EVEN FURTHER.”**

~TONYA FISCHIO, BYU DEVOTIONAL, JULY 16, 2024