Scripps Research

Office of Philanthropy
10550 N. Torrey Pines Road, TPC-2
La Jolla, CA 92037

(800) 788-4931
philanthropy@scripps.edu

scripps.edu

Scripps Research | Annual Stewardship Report 2024

Science Changing Life

Scripps Research

Scripps Research
Annual Stewardship Report

2024

Science Changing Life

Scripps Research has always been driven by curiosity. Coupled with a desire to help people live better, this curiosity sparks the groundbreaking medical advances taking place in our labs every day. In 2024, our institute celebrated 100 years since its founding. A century of unbridled curiosity. A century of exploring the frontiers of scientific understanding. A century of working to ensure the human race will flourish for generations to come.

In our first 100 years, Scripps Research established an impressive track record of sparking innovation and creating novel therapies that improve lives. But as science teaches us, progress is never achieved alone. It takes everyone—especially you, our community of advocates.

This report reflects some of the notable achievements made during our centennial year. As you'll see in the following pages, our growth has once again been fueled by the generosity of our donors. In our labs, donor support has propelled researchers toward understanding addiction, regenerating organs and harnessing AI to help physicians. On our campus, we opened the doors to a donor-funded, state-of-the-art building designed to encourage cross-disciplinary collaboration among research groups. Within our education programs, philanthropy empowers the brightest young minds from around the globe, each of whom is drawn to our institute by the same curiosity that drives the Nobel laureates they work alongside.

Our network of committed advocates is vast and growing, with individuals around the world giving toward an array of research areas and for a variety of reasons. Some give in memory of a loved one. Some give to empower the next generation of leading scientists. Some give as a part of their estate, cementing their legacy in our labs. Throughout this report, you'll find a few stories of remarkable members of our donor community. While a broad range of experiences inspires their donations, our advocates all share an underlying motivation to create a healthier world.

Philanthropic gifts ensure scientists and scientists-in-training can continue to show up curious each day and pursue a better future for us all. As we usher in the next century of discovery, we appreciate your support now more than ever.

Thank you.

How you **empower**
Science Changing Life at our institute

INSTITUTE DEPARTMENTS, CENTERS AND INITIATIVES YOU SUPPORTED IN 2024

2024

(*) Indicates a department at Scripps Research

In 2024, Scripps Research celebrated...

An endowment valued at approximately
$500M

150
SUPPORTERS
who gave to the institute for the first time

Our donor community across the globe

SCRIPPS RESEARCH DONORS SUPPORT OUR SCIENCE FROM ALL AROUND THE WORLD

100 YEARS OF SCIENCE CHANGING LIFE

THE OPENING OF OUR NEW RESEARCH BUILDING

Over **100** people dedicating funds in honor or memory of a loved one

RAISING **$18.75 MILLION** in philanthropic support for our scientists

131 current donors who have supported our science for 20 years or more

236
members
of The Science Trust at Scripps Research

120
members
of The Legacy Circle at Scripps Research

Leading with curiosity and generosity

Alice and Doug Diamond, members of The Science Trust at Scripps Research

The Front Row lecture series at Scripps Research not only presents a unique opportunity for people to hear fascinating scientific findings, but it also serves as an invitation for the public to dive into the journey of *Science Changing Life* alongside leading-edge researchers.

For philanthropists Alice and Doug* Diamond engaging with an organization is a valuable part of their experience as donors. "We want not just to support an organization's mission but also learn from them and feel like we are taking part in something with them," says Alice. Always on the lookout for new ways to get involved in the local community, the couple initially began attending the Front Row lecture series a few years ago.

"As a nonscientist, I really enjoy that these lectures bring cutting-edge science out to the public in a way that's very clear," Doug says. Now in its eighth season, the Front Row features presentations by Scripps Research scientists who provide an inside look at the transformative science happening in their labs.

"We're definitely lifelong learners, and that's why we seek out these lectures and other events that are happening in our community. It's sad if you go to bed and you haven't learned anything new that day," Alice says.

The couple appreciates how the researchers present their science as stories. Throughout the presentations, the speaker guides the audience down the pathway of their research, discussing interesting questions that ignited the project, showing obstacles encountered along the journey and explaining the potential impact of their findings.

"These presentations inspire hope," Doug says. "They open doors to ideas that sound quite exciting and promising. The researchers are building toward a better world, and the basic science that they're doing affects all of us."

In 2024, Alice and Doug made their first gift to support the institute, becoming members of The Science Trust at Scripps Research. Unrestricted giving, like theirs, supports a spectrum of essential activities at the institute, including powering the buildings housing the labs, maintaining equipment in the institute's shared core facilities, providing bridge funding for innovative projects and allowing leadership to allocate resources to where they are most needed.

After many years of hard work building successful careers, first in the government and then consulting, the couple views their current stage of life as a time to focus on giving back. For individuals looking to make a difference through donations, Alice says, "Look for areas where you feel your support can have the most impact and truly make the world a better place."

**Sadly, Doug Diamond passed away during the finalization of this report. The institute extends our deepest condolences to the Diamond family.*

To read the full story, scan the QR code.

Making space for more discoveries

Chi-Huey Wong Laboratories for Biomedical Research

In 2024, Scripps Research opened the doors to new discoveries in the state-of-the-art Chi-Huey Wong Laboratories for Biomedical Research. As the institute embarks on its next century, the new 83,000-square-foot building is a physical representation of what lies ahead: bold exploration, creative collaboration and unparalleled innovation. The Chi-Huey Wong Laboratories building is home to the labs of 12 principal investigators, including renowned chemist and the building's namesake, Chi-Huey Wong.

Samuel Yin, Taiwanese businessman and creator of the Tang Prize, provided generous anchor funding to construct the facility. The institute celebrated the new building and the Yin family's incredible support at a dedication ceremony in October 2024. Additional donors contributing to the building include Jim Zolin, whose giving is recognized with the naming of the building's first-floor conference room. Teams within the Chi-Huey Wong Laboratories represent several distinct disciplines across chemical and life sciences, marking a milestone in the institute's efforts to encourage collaboration across traditional disciplines and provide a unique environment for creative ideas to flourish.

To read the full story, scan the QR code.

"We are excited to continue our work in this state-of-the-art space designed to inspire creativity and collaboration as we pursue the next breakthroughs in science."

—**Chi-Huey Wong,** *Scripps Family Chair Professor, Department of Chemistry, Scripps Research*

How you **catalyze** foundational and translational research

Powering every step of discovery with unrestricted funding

Follow the path to learn how donations are woven into the research journey.

When you make an unrestricted gift to Scripps Research, your donation fuels innovation in a variety of ways—from equipping labs and maintaining cutting-edge technology to supporting early-stage research and funding clinical trials.

start

1 "what if...?"

HIGHLIGHTED COSTS:

- Fully equipped workstation
- Data security and storage
- Leading-edge software

2 plan the research

HIGHLIGHTED COSTS:

- Research associate
- Postdoctoral fellow
- Grant specialist

3 laboratory work

HIGHLIGHTED COSTS:

- Lab supplies
- Fluorescence microscope
- Ultra-low temperature freezer
- Biological waste disposal services

4 present the findings

HIGHLIGHTED COSTS:

- Conference registration and travel fees
- Materials for presentation creation
- Journal publishing and subscription fees

5 clinical trials & FDA approval

HIGHLIGHTED COSTS:

- Clinical trials (spanning 10+ years from early testing to approval)
- Patient recruitment and long-term monitoring
- Regulatory, patent and legal fees
- Manufacturing trial batches

6 patient bedside

HIGHLIGHTED COSTS:

- Tracking real-world outcomes
- Follow-up studies
- Drug repurposing studies

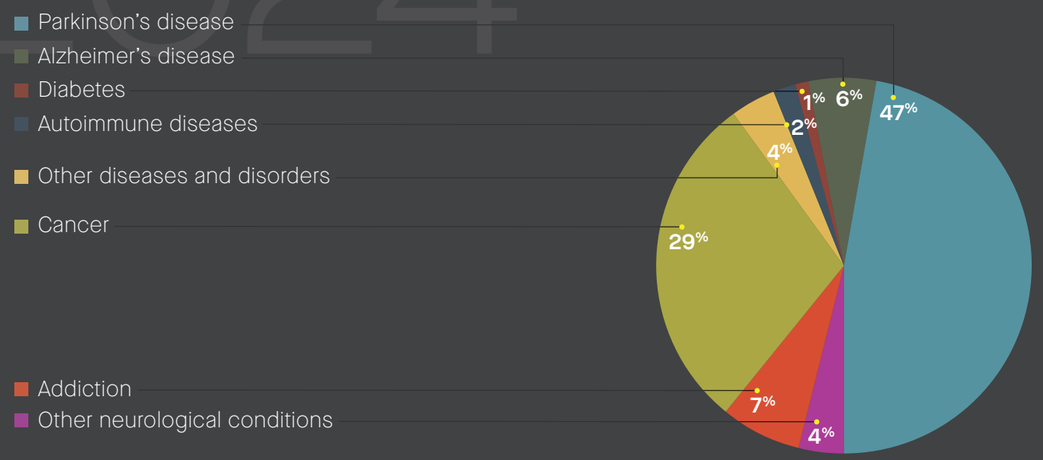
finish

Go back to **START** for the next breakthrough!

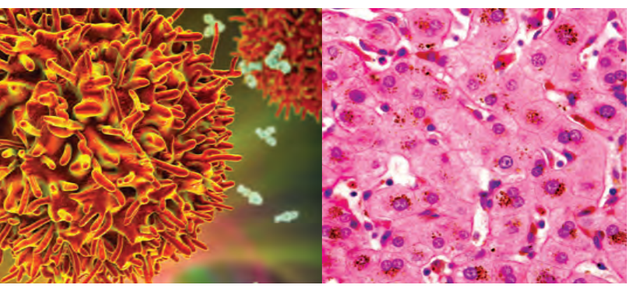
Sparking remarkable scientific discovery

Research highlights from 2024

RESEARCH AREAS YOU SUPPORTED IN 2024



Empowered through your support, our scientists are advancing transformative science every day. Here are some highlights of extraordinary Scripps Research breakthroughs during our centennial year:



Expanding the genetic alphabet

Ahmed Badran and his team expanded the genetic alphabet to create new proteins, involving a novel method that uses sets of four RNA nucleotides—rather than the natural three—to encode new, synthetic building blocks into proteins.

Creating transformative AI models

Hollis Cline and her team created an innovative AI model that processes videos similar to the human brain by employing a method for machine-learning models to recognize complex, changing scenes—a breakthrough that could transform fields from medical diagnostics to autonomous driving.

Mapping cancer proteins

Benjamin Cravatt and his team have mapped more than 300 small molecule-reactive cancer proteins, revealing key protein targets that have the potential to enable more effective and precise cancer treatments.

Developing vaccines to counter addiction

Kim Janda and his team developed a vaccine to block the toxicity of xylazine, an FDA-approved sedative and pain reliever for use in animals. Xylazine has illicitly been added to opioids, like fentanyl and heroin, as well as cocaine—leading to a sharp rise in overdose deaths.

Discovering antibodies toward a universal snake antivenom

Joseph Jardine and his colleagues discovered antibodies that protect against the effects of one of the major lethal toxins in venoms found in a variety of snakes throughout Africa, Asia and Australia—a major step toward creating a universal antivenom effective against all snake venoms.

Examining primordial cells at the origins of life

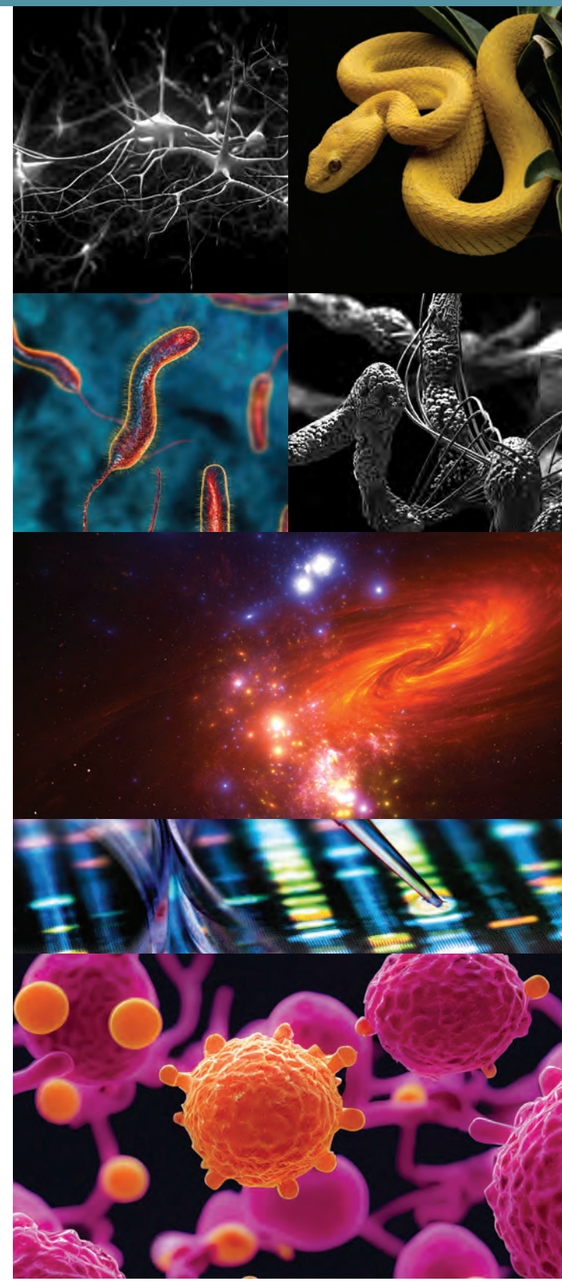
Ramanarayanan Krishnamurthy, Ashok Deniz and their colleagues published findings that a chemical process called phosphorylation may have occurred earlier than previously thought in Earth's history, bringing researchers closer to understanding how primordial cells emerged during the origin of life.

Reducing alcohol dependence

Rémi Martin-Fardon and his collaborators at the Karolinska Institute discovered a compound that selectively blocks the kappa opioid receptor (KOR), which may reduce drinking in cases of alcohol dependence in animal studies.

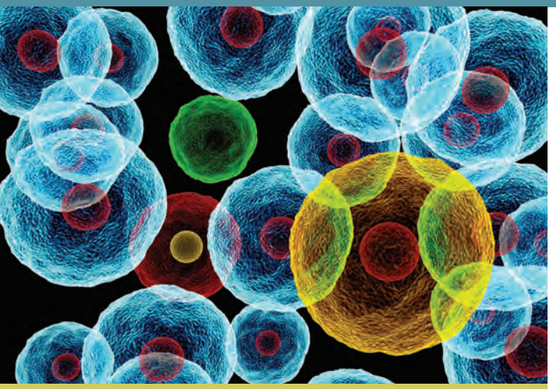
Blocking bacteria's evasive maneuvers

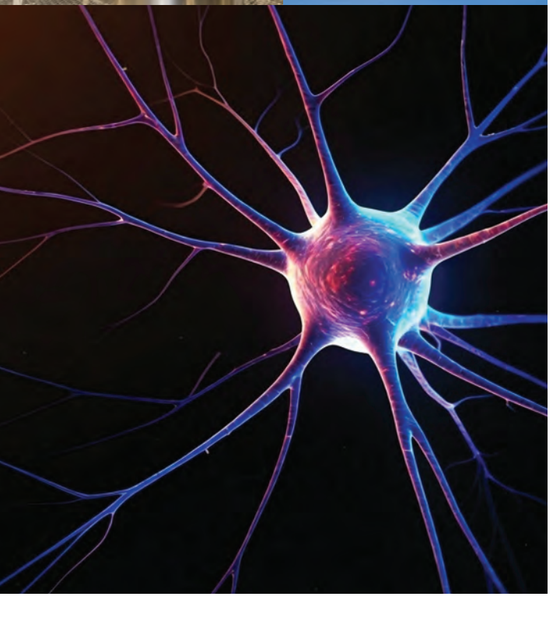
Lisa Racki and her colleagues discovered a method to block long chains of polyphosphates that enable bacteria to enter a resting state, which could eventually help inform the treatment of chronic infections where slow-growing bacteria evade typical antibiotics.



Sparking remarkable scientific discovery

Research highlights from 2024





Exploring immunization regimens for HIV

William Schief, Jon Steichen and their collaborators from IAVI; the Ragon Institute of Mass General, MIT and Harvard; La Jolla Institute for Immunology; and additional institutions published a series of preclinical studies indicating that they're potentially closer to an immunization regimen for HIV that could produce rare antibodies effective against a range of strains.

Synthesizing new compounds for drugs

Jin-Quan Yu and his team devised a new method to more easily create compounds sought after for drug development that are typically expensive and difficult to synthesize. They demonstrated the capabilities of this new method by performing an efficient synthesis of stemoamide, a complex plant-derived compound found in traditional medicines.

Diagnosing heart attacks using AI

Eric Topol, Evan Muse, Giorgio Quer and their colleagues at the Scripps Research Translational Institute (SRTI) developed an electrocardiogram (ECG) platform that, with the help of an AI tool, can diagnose heart attacks using data from only three ECG leads with nearly the same accuracy as the 12-lead ECGs used diagnostically today by cardiologists.

Tracking sleep-related risk factors

Stuti Jaiswal and her team at SRTI launched a digital trial that deployed wearable activity trackers to identify sleep-related risk factors for Alzheimer's disease and other dementias in women.

Managing long COVID symptoms

Julia Moore Vogel, in partnership with CareEvolution, established a remote study that investigates whether wrist-worn devices can help people with long COVID manage and reduce the severity of their symptoms.

Bringing novel therapies to the clinic

The Calibr-Skaggs Institute for Innovative Medicines, the drug discovery division at Scripps Research, continued unprecedented productivity in bringing novel therapies to the clinic. At the close of 2024, 11 investigational new drug (IND) applications had been filed.

Developing a regenerative lung medicine

Pete Schultz, Michael Bollong and their teams developed a first-in-class small molecule therapy to stimulate the growth of lung stem cells to repair tissue damaged by chronic lung diseases like idiopathic pulmonary fibrosis (IPF). It is now in a clinical trial in Germany. This IPF treatment is one example of the innovative therapies in development at Calibr-Skaggs, and, in 2024, *The Wall Street Journal* highlighted the novel methods behind Scripps Research's approach to regenerative medicine.

Expanding sCAR-T for additional diseases

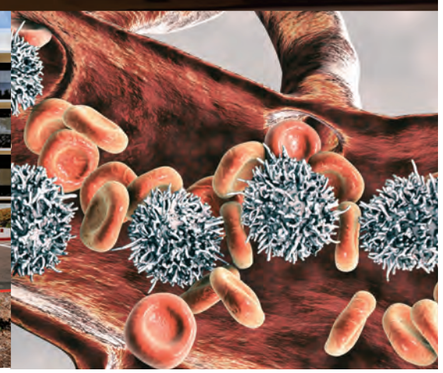
The switchable CAR-T cell (sCAR-T) program at Calibr-Skaggs, after its clinical proof of concept in blood cancers, has also made great progress and will begin clinical trials in 2025 in breast cancer patients. Researchers also plan to begin testing this cell therapy platform in patients with autoimmune diseases, such as lupus, systemic sclerosis and myositis in 2025.

Advancing infectious disease medicines

In partnership with the Gates Foundation, these Calibr-Skaggs programs took significant steps in 2024: A novel malaria drug to prevent seasonal malaria began a phase 1 study in the United Kingdom, and a tuberculosis drug, which could dramatically shorten treatment times, received regulatory clearance to initiate phase 1 trials.

Securing a healthier world through science

Julie Hill, member of The Legacy Circle at Scripps Research



Julie Hill and her late husband Arthur Hill personally witnessed the transformative power of biomedical innovation, making them strong believers in the value of science and longtime supporters of Scripps Research.

Julie, an Alexandrian Greek, met Arthur, originally from Australia, in graduate school at the University of Minnesota. "It was a remarkable marriage, a rich and enduring partnership that spanned many decades and many countries," Julie says.

In 1968, Arthur was faced with a life-threatening disease when he was diagnosed with hairy cell leukemia, a rare blood cancer. The disease progressed rapidly, and he wasn't reacting well to the available treatments at the time. As his condition worsened, he read an article in *The New York Times* covering a publication in *The New England Journal of Medicine*. This piece described Scripps Research's efforts to treat this rare form of leukemia through an innovative treatment called 2-CdA (now marketed as Leustatin®).

Despite living on the East Coast and his doctor's misgivings about trials in general, Arthur moved quickly to contact Scripps Research, and he was able to enroll in the clinical trial for 2-CdA as the 66th patient in a pool of 90 participants.

The results were extraordinary. "After a week of being on the drug, Arthur was told that he didn't have any more leukemia circulating through his body," says Julie. "It was the happiest day of our lives." She attributes her husband's remarkable recovery to the medical research behind the drug and Alan Saven, the clinician at Scripps Health who took over her husband's care when he came to La Jolla. Scripps Research physician-scientists Dennis Carson and Ernest Beutler collaborated on the development of this lifesaving medication.

After experiencing the transformative science at the institute firsthand, Arthur and Julie stayed connected with Scripps Research, getting to know the scientists and trainees around campus and becoming ardent supporters of biomedical research.

> "After a week of being on the drug, Arthur was told that he didn't have any more leukemia circulating through his body… It was the happiest day of our lives."
>
> —**Julie Hill**, *Scripps Research donor*

While Arthur passed away in 2002, his leukemia never returned, and Julie remains grateful for the eleven-and-a-half years the clinical trial gave back to her husband. Making their first gift in 1991, the couple contributed toward many initiatives at the institute over the years, including the building of The Arnold and Mabel Beckman Center for Chemical Sciences, a 165,000-square-foot research facility.

An avid philanthropist, Julie has a heart for many causes, generously supporting education, art, science and other programs across several countries. Today, she recognizes the changing landscape around scientific funding, especially for early-career faculty who must compete for diminishing grant funding for their programs.

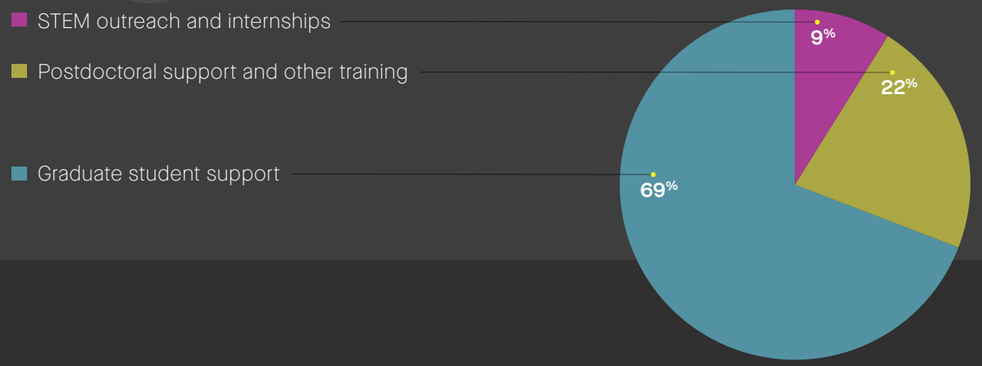
Building on their legacy of support at Scripps Research, Julie and Arthur Hill named Scripps Research in their estate planning, hoping their bequest could help lead to an even better understanding of human disease and the development of more treatments like 2-CdA.

To read the full story, scan the QR code.

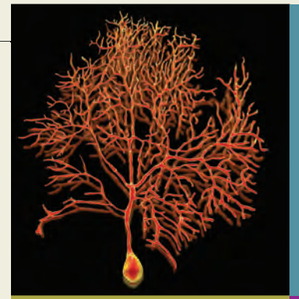
How you **champion** future scientific leaders

EDUCATION PROGRAMMING YOU SUPPORTED IN 2024

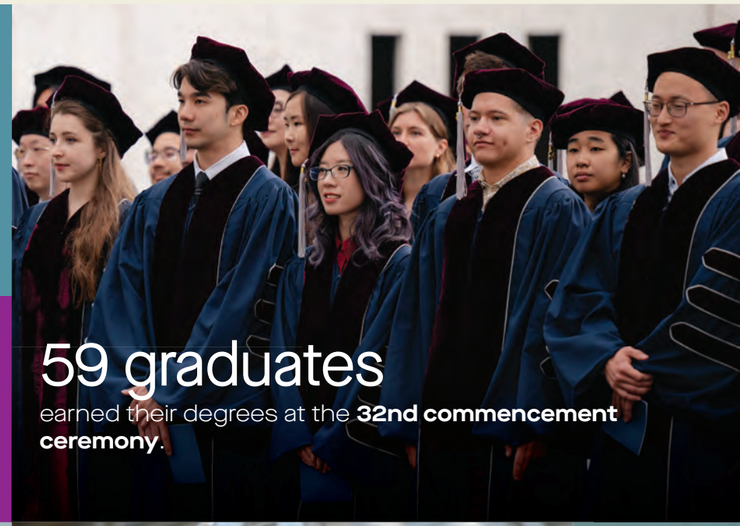
2024



At the Skaggs Graduate School of Chemical and Biological Sciences in 2024:



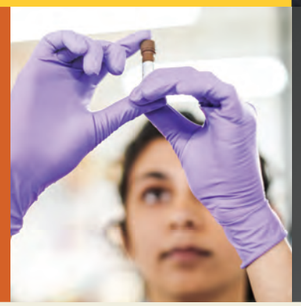
The graduate program remained ranked in the **Top 10** for programs of its kind nationally, according to *U.S. News & World Report*.



59 graduates earned their degrees at the **32nd commencement ceremony**.

OVER **30** **COUNTRIES** were represented by scholars.

Endowed fellowships and awards, established through philanthropy, supported **177** **high school interns, undergraduate researchers, graduate students and postdoctoral scholars**.

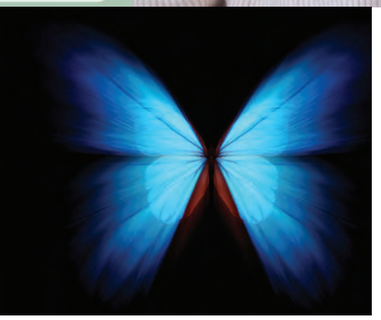


36 alumni partnered with graduate students through the **Alumni Mentorship Program**.

Roughly **400** graduate students were immersed in their research training across the institute.

Seeding a better tomorrow

Liqun Wang and Marco Londei, members of The Science Trust at Scripps Research



"Attending this conference has contributed to my career long-term by helping connect me with potential future collaborators. My research as a graduate student has been supported by collaborators' contributions at every step. As I advance beyond graduate school, building additional connections will become increasingly important to ensure my success."

— **Camille Rubel**, *a graduate student who used the travel award to attend the Graduate Research Conference through the American Chemical Society Division of Organic Chemistry in July 2024*

For Scripps Research supporters Marco Londei and Liqun Wang, science is something they care about deeply. With backgrounds in science and medicine, they recognize the importance of fostering environments where curiosity is encouraged. It's one of the many reasons they look forward to engaging with Scripps Research scientists and trainees—the institute's spirit of bold exploration coupled with a rich tradition of high-quality science.

With their first gift to the institute, Liqun and Marco generously supported travel awards for graduate and postdoctoral trainees. "When we gave toward the travel awards, we recalled ourselves in our early research period," Liqun says. "How did we learn? By being at meetings, mingling and being able to discuss with leaders in the field. Those experiences are so beneficial and eye-opening."

In 2024, Liqun and Marco furthered their investment in Scripps Research by creating the Farfy Foundation Graduate Fellowship Award in the Skaggs Graduate School of Chemical and Biological Sciences. This award will help support one graduate student's studies annually for five years. Through their support of scientific education, Liqun and Marco hope to encourage more talented students to pursue science by removing some of the typical financial barriers.

The new award is named after the couple's foundation, the Farfy Foundation. "Farfy is shortened from the Italian word *farfalla*, meaning butterfly," Liqun says. "A butterfly goes through a transformation, becoming a beautiful creature. And we liked the concept that, through our little contributions, hopefully, we can make a transformational impact on someone."

Liqun and Marco encourage people looking to give to organizations to think big. How could you seed transformation in the long term? What ripple effects might your support create?

"For instance, you have a student who, through a scholarship, goes to college as the first one in their family to do so," Marco says. "Suddenly, that changes the world around them. It changes that person, that family, potentially that community around the family. What people think is possible for themselves shifts. You don't know where the next generation of Nobel Prize winners will come from. We can't close the pool of who can access these opportunities. It's better to open the pool—the more opportunities, the better."

As philanthropists, Liqun and Marco believe that more is always possible and that the science happening at Scripps Research holds immense potential for advances that will benefit society.

"When you create space for people who are exploratory and smart, they will do something to transform the world," Liqun says. "It's why we love the image of the butterfly. Something beautiful can come from this transformation."

"When you create space for people who are exploratory and smart, they will do something to transform the world."

— **Liqun Wang,** *Scripps Research donor*

"You don't know where the next generation of Nobel Prize winners will come from. We can't close the pool of who can access these opportunities. It's better to open the pool—the more opportunities, the better."

— **Marco Londei,** *Scripps Research donor*

To read the full story, scan the QR code.

Fueling a one-of-a-kind education

Notes from philanthropy-supported students

"It's incredibly inspiring to be here at Scripps Research because of its highly interdisciplinary environment, where chemistry and biology intersect in innovative ways. Beyond my specific genomics research, I've enjoyed learning about cutting-edge work in pharmacology, chemical biology and drug discovery, which has broadened my perspective and enhanced my ability to think creatively about scientific challenges."

— ***Britney He,*** *recipient of an Endowed Fellowship in the Skaggs Graduate School of Chemical and Biological Sciences*

"Support through this fellowship has helped allow me to explore research into the fundamental biology of aging and neurodegeneration that would have otherwise been impossible. Support of scientific research remains critical so that we may strive to positively benefit human health for our family members and loved ones."

— ***Ian Levitan****, recipient of the Mary and Michael Reedy Memorial Fellowship in the Skaggs Graduate School of Chemical and Biological Sciences*

"Philanthropic support of scientific research breaks down barriers to research topics that may otherwise be overlooked and, ultimately, allows for the expansion of the frontiers of science."

— ***Pierre Loch-Temzelides****, recipient of the Carlos F. Barbas III Endowed Memorial Fellowship for the Skaggs Graduate School of Chemical and Biological Sciences*

"Receiving this fellowship has been instrumental in advancing my studies and allowing me to explore innovative approaches in cancer biology. I've especially appreciated the opportunity to work with cutting-edge technologies, which have allowed me to uncover novel mechanisms in cancer biology."

—***Lauren Hargis,*** *recipient of the David C. Fairchild Endowed Fellowship in the Skaggs Graduate School of Chemical and Biological Sciences*

Thank **you**

As a nonprofit, the generosity of our community propels innovative ideas, bridges the gaps in scientific funding and educates scientists-in-training. From all of us at Scripps Research, thank you to every supporter who has helped advance *Science Changing Life* at our institute.

Engage with our science

Through the Front Row lecture series at Scripps Research, now in its eighth season, explore groundbreaking scientific discoveries in person or virtually. Reserve your free seat at **frontrow.scripps.edu**.

And gain an inside look at the people behind our extraordinary science through the ***Scripps Research Magazine*** (**magazine.scripps.edu**) and ***Science Changing Life*** **podcast** (**scripps.edu/podcast**).

Learn about the latest discoveries

Become a part of the Scripps Research community through social media. You can follow us now on Instagram, Facebook, YouTube, LinkedIn, X (formerly Twitter), Blue Sky and Threads. Plus, visit our website for recent news and upcoming events: **scripps.edu**.

Scripps Research

Office of Philanthropy
10550 N. Torrey Pines Road, TPC-2
La Jolla, CA 92037

(800) 788-4931
philanthropy@scripps.edu

The Scripps Research Institute is a 501(c)(3) nonprofit charity and donations are 100% tax-deductible within the limits of law.

Charity Navigator FOUR-STAR

Scripps Research Leadership

Board of Directors

John D. Diekman, Chair
Founding Partner, 5AM Ventures

Ron Burkle
Founder, The Yucaipa Companies
Founder and Chair, Ronald W. Burkle Foundation

Gerald Chan
Co-founder, Morningside

Tom Daniel
Chairman, LocanaBio, Inc.

Mark Edwards
Founder and Managing Director, Bioscience Advisors, Inc.

Peter C. Farrell
Founder and Chairman, ResMed

Barbara Kosacz
Former Chief Operating Officer and General Counsel, Kronos Bio

Lou Lange
General Partner,
Asset Management Ventures

Sherry Lansing
Co-founder, Stand Up To Cancer
Founder, The Sherry Lansing Foundation

Gene Lay
Founder, BioLegend

Lillian Lou
President and Program Director,
The John C. Martin Foundation

Claudia S. Luttrell
President, The Skaggs Institute for Chemical Biology

Mark Pearson
Founder and CEO, Altamont Pharma
Co-founder and Vice Chair, Drawbridge Realty Trust

Herbert Wertheim
Founder and CEO, Brain Power Incorporated
Co-founder, Dr. Herbert and Nicole Wertheim Family Foundation

Pete Schultz
Vice Chair of the Board
President and CEO, Scripps Research
L.S. "Sam" Skaggs Presidential Chair

Benjamin Cravatt
Faculty Board Appointee
Professor, Department of Chemistry, Scripps Research
Norton B. Gilula Chair in Biology and Chemistry

Jared Machado
Board Treasurer
Chief Accounting Officer,
Scripps Research

Alanna Rutan
Board Secretary
Chief Compliance Counsel,
Scripps Research

Administrative Leadership

Pete Schultz, President and CEO
L.S. "Sam" Skaggs Presidential Chair

Eric Topol, EVP, Director, Scripps Research Translational Institute
The Gary and Mary West Chair of Innovative Medicine

Marshall Olin, General Counsel

Caroline Moon, Chief Financial Officer

Chinh Dang, Chief Information Officer

Jared Machado, Chief Accounting Officer

Emilie Broderick, Vice President, Academic Planning

Chris Emery, Vice President, Marketing and Communications

Morgan Hoffman, Vice President, Facilities and Campus Services

Academic Leadership

M. Reza Ghadiri, Chair, Department of Chemistry
Darlene V. Shiley Chair in Chemistry

Howard Hang, Chair, Department of Immunology and Microbiology

Keary Engle, Dean, Graduate and Postdoctoral Studies

Anton Maximov, Chair, Department of Neuroscience

Hugh Rosen, Chair, Department of Molecular and Cellular Biology
Pearson Family Chair

Eric Topol, Chair, Department of Translational Medicine
The Gary and Mary West Chair of Innovative Medicine

Jamie Williamson, Chair, Department of Integrative Structural and Computational Biology