




**U**  
RESEARCH  
VICE PRESIDENT FOR RESEARCH

# 2022 ANNUAL REPORT





The Office of the Vice President for Research would like to thank those who collaborated to put this report together: Leadership (Drs. Erin Rothwell, Caren Frost, and Jakob Jensen), Marketing and Communications (Xoel Cardenas, Sonita Claiborne, Jacquelyn Khoe, Tara Mleynek), Accounting and Data (Kimberly Adamson, Eric Johnson, Mike Martineau), The PIVOT Center (Jessie Gallegos, Michelle Hernandez, Carla MacQueen, and Ross James Randall), and the Kem C. Gardner Policy Institute. We'd also like to thank our university's students, faculty, staff, and shareholders who comprise our remarkable and talented research community. We look to the future with optimism on what research and innovations they will bring for the betterment of tomorrow.



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## INTRODUCTORY LETTER FROM OUR INTERIM VICE PRESIDENT

Since its founding in 1850, the University of Utah has been committed to developing innovative research to enhance the lives of our local, national, and international communities. At the Office of the Vice President for Research (VPR), it is our mission to partner with our talented research community to find meaningful discoveries for the betterment of our communities.

For the ninth year in a row, research funding at the U grew, totaling \$686 million in fiscal year 2022. The U's research funding has continued to increase in the midst of a slowing national economy. I foresee our research continuing to expand and potentially help alleviate the economic impact by continuing to generate taxes and opportunities for jobs.

Every generation has its distinct challenges. Thankfully, research has continued to help address the societal issues of today and tomorrow. U Research will lead the way in new discoveries in clean energy, behavioral and mental health, medicine, technology, arts, humanities, and more. In addition, understanding and elevating informatics, data science and outcomes-based financing to support research in societal problems is just one of many initiatives we are currently working on.

We are dedicated to bringing research outside of academia and delivering it to our communities. The VPR Office is excited to see what future discoveries our university and researchers will make, bringing solutions to the global community for generations to come.



Erin Rothwell, PhD  
Interim Vice President for Research  
Office of the Vice President for Research  
University of Utah



# THE VPR OFFICE

## WHO WE ARE

We at the Office of the Vice President for Research (VPR) foster innovation and discovery at the U. Our office oversees numerous research administration units that provide support services, research opportunities, and professional development for researchers, students, and staff on campus.

## WHAT WE DO

In 1968, the Office of the Vice President for Research was created to promote and build research excellence at the University of Utah. Through strategic leadership and planning, the VPR Office is dedicated to providing effective resources that serve the university's research community and drive innovation and discovery at the U.





# OUR CORE VALUES



## INTEGRITY

We value responsible and ethical practices that align with compliance and regulation policies. The importance of honesty and transparency is essential to conducting responsible quality research.

## DIVERSITY

We value diversity in faculty, staff and fields of research. Our efforts are dedicated to creating an inclusive and diverse environment to develop research that represents the global community we serve.

## RESPECT

We value a respectful research culture that encourages civility and consideration of others. We strive to facilitate a welcoming and safe research campus that acts on courtesy, compassion, and awareness of all groups and individuals.

## COLLABORATION

We value collaboration and teamwork that reflects interdisciplinary fields of research. Working together as a unified institution is integral to achieve the university's research mission and goals.

## INNOVATION

We value innovation and creativity to find impactful solutions that address the challenges we face as a society. We are focused on conducting transformative research that will result in groundbreaking discoveries in all fields of study.



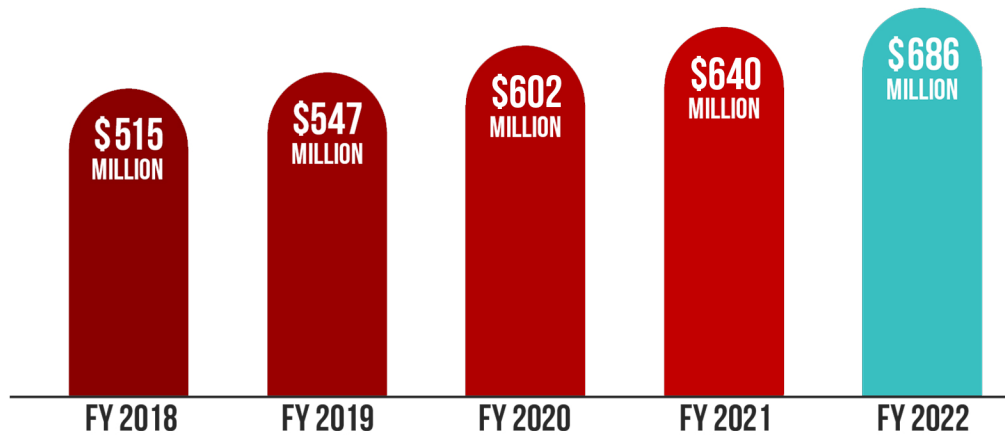
# THE UNIVERSITY OF UTAH SURPASSES \$686M IN RESEARCH FUNDING

## OFFICE OF THE VICE PRESIDENT FOR RESEARCH

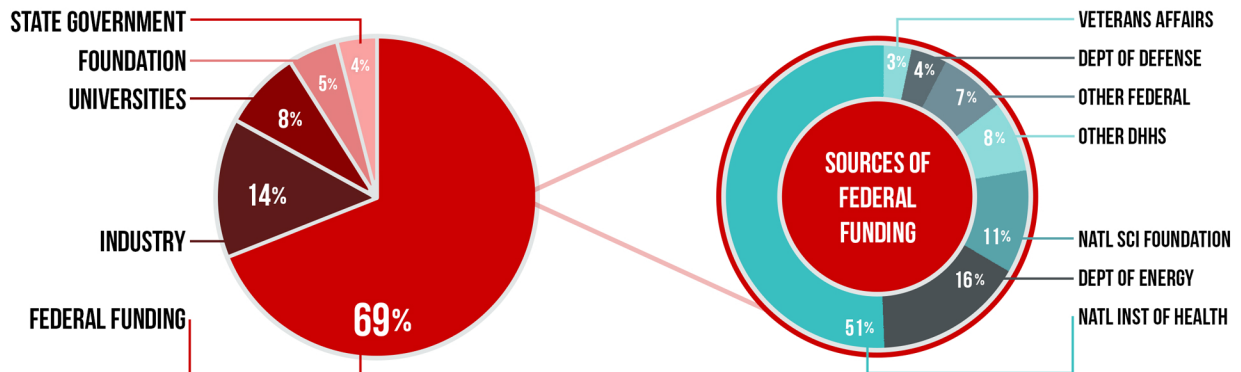
For the ninth year in a row, research funding at the University of Utah grew, totaling \$686 million in fiscal year 2022.

The total is a new record high for the U. From medicine to fine arts, research at the University of Utah spans across many studies, as growth in funding continues moving upward. This fiscal year, research grants were awarded to U of U colleges, centers, and institutes in diverse disciplines across campus.

### 5 YEAR TOTAL FUNDS AWARDED



### SOURCES OF FUNDING





## RESEARCH EMPLOYEES AT THE U

**7951**  
EMPLOYEES

**475**  
POST-DOCS

## TECHNOLOGY VENTURES 2022

91

US PATENT APPLICATIONS FILED

52

US PATENTS ISSUED

4

START-UP COMPANIES

Source - Partners for Innovation, Ventures, Outreach & Technology

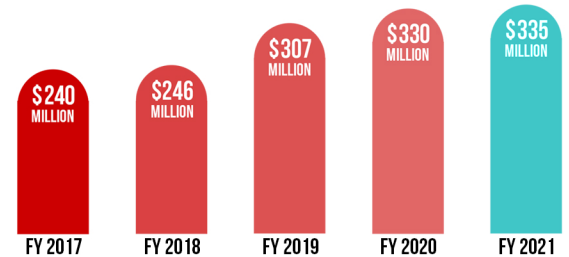
**\$19**  
MILLION

**DIRECTLY SUPPORTED LOCAL UTAH BUSINESSES (FY21)**

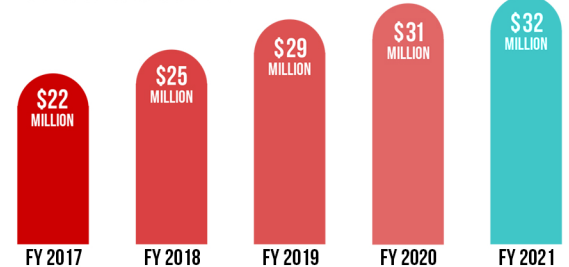
Source - IRIS

## SALARIES & WAGES

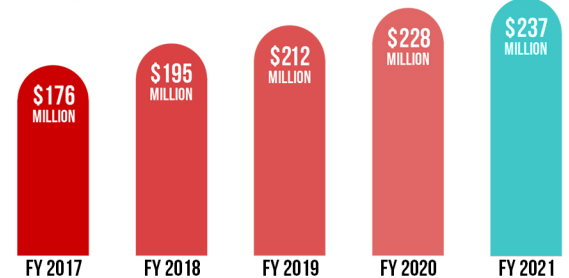
### DIRECT & INDUCED LABOR INCOME



### STATE & LOCAL TAXES GENERATED



### SALARIES ASSOCIATED WITH RESEARCH



Source - University of Utah, Kem Gardner Policy Institute

# DR. ERIN ROTHWELL ON THE IMPACT, INNOVATIONS AND THE **FUTURE** OF RESEARCH



For the ninth year in a row, research funding at the University of Utah grew, totaling \$686 million in fiscal year 2022, which ended on June 30. The U of U research funding has continued to grow in the midst of major national challenges such as the pandemic and concerns about our national economy. Dr. Erin Rothwell, Interim Vice President for Research, knows this could be a challenge for the research community, but she believes research can help.

“Right now, it’s even more important to continue to invest in research to keep our momentum going,” she said.

The U is known for its diverse disciplines in medicine, science, social work, arts and more. “During COVID, research was a bright spot during a dark time,” said Rothwell. “When everything shut down, we still were able to keep this enterprise not only going, but growing,” said Rothwell. “And I think research is going to end up being, again, that backbone that helps us get through future challenges.”

## **Economic impact**

Research continues to help grow and keep the local economy going, and research jobs are the backbone of a growing economy, Rothwell noted. “We have almost 8,000 employees who are paid by research dollars,” she said. “We have almost \$598 million that contributes to the economic engine across the state of Utah. I do foresee our research continuing to grow and potentially help alleviate the economic impact by continuing to generate taxes, to generate opportunities for jobs, and generate direct and indirect induced labor income.”

*Continued on next page-*



### Dedication to finding solutions

The rapid decline of the Great Salt Lake is an issue garnering significant local and national attention. It has also garnered the attention of the research community. Rothwell said the U of U's researchers are committed to bringing solutions to the environmental crisis. "The Great Salt Lake is a Utah symbol, and the U of U is continuing to lead the way in discovering real solutions to this climate and environmental crisis," she said. "President (Taylor) Randall has started a Strike team, composed of investigators across the state and other higher education institutions, to work together to identify immediate solutions."

"A generous 20 million dollar gift from Clay and Marie Wilkes, who are part of our community, created the Wilkes Center for Climate Science and Policy," Rothwell said. "That's not only going to continue our research, but evolve it and bring it to the next level where we can bring in more people to study the impact, use more innovative technologies to try to correct it."

### New ways to fund research

Over the last few years, outcomes-based funding for research has gained momentum. For Rothwell, it could be a gamechanger for funding future research breakthroughs. "In the past, there's (been) this perception in society that research remains within the institution, and then the community or the state doesn't benefit from all these great advancements," she said.

Rothwell added that the VPR Office is working with the Sorenson Impact Center to try and change that. The U is one of the first institutions to try to look at outcomes-based funding in a systematic way, she added. They are creating a program where they will implement potential research interventions on a statewide basis. "We're a flagship institution," said Rothwell, "we need to take what we're doing here and give back to our community."

### The future of research

Societal impact is what gets Rothwell most excited about the future of research at the U. "It's not all about just getting grants and research, and bringing in the grant dollars. It's important, but it's not all about that," she said. "It's about helping people. That's what gets me most excited." For Rothwell, it's the staff, faculty and, in particular, researchers who make being part of the Office of Vice President for Research so fulfilling. All of us are working toward the same goal: For the betterment of the community and the future.

"Every time I'm here in the office, I am energized because we have such a wonderful group of researchers who are all working to bring solutions to the societal problems of today and tomorrow."

*"It's about helping people.  
That's what gets me most excited."*

# ACHIEVEMENTS THAT MAKE AN IMPACT

## VPR ACCOMPLISHMENTS - COMPLIANCE & INTEGRITY



Launched the U's Foreign Influence outreach and educational activities across the institution to increase awareness and compliance of measures to safeguard international relationships



Launched the new myIRB website to create a community-centric way for the public to learn about human subject research and the methods the IRB uses to protect people who join as participants



Created two Quality Compliance networks to provide a forum for people involved in research to share and seek advice from their peers and hear the latest in quality compliance-related issues



Expanded the Research Education NSF grant writing for CAREER grants program



Launched Study Locator in Spanish



Developed Biosafety Level 3 manual, incorporating Standard Operating Procedures, for the new BSL-3 facilities and developed training modules for these facilities



Managed legislative mandates for Genetic and Epidemiologic research to protect the privacy and ensure the data security of personally identifying information of Utah residents



## RESEARCH SUPPORT



Launched the One Utah Research Council to provide direct feedback from the research community



Launched the DATASET Initiative to increase center and program activity



Launched the NSF Training program to increase grant activity

## OUTREACH AND COMMUNICATIONS



Launched the REDI Newsletter to connect researchers on diversity, equity, and inclusivity in research



Led campus-wide town halls to understand needs and perspectives from the research community



Led university-wide writing retreats in February and June



Co-hosted climate event on environmental justice in lower income communities

# NEW ACCOMPLISHMENTS AND FUTURE RESEARCH INITIATIVES FOR THE AVPR

The VPR Office is always looking toward the future and how to better our university's research initiatives.

Dr. Jakob D. Jensen, Interim Associate Vice President for Research (AVPR), oversees several of the office's program units, including the Office of Sponsored Projects, Pre-Award Office, Research Education, and Rio Mesa Bonderman Station.



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## NEW AND INNOVATIVE INITIATIVE

This past year, the AVPR developed and launched the Data Science and Ethics of Technology (DATASET) Initiative. Jensen said the DATASET Initiative is designed to engage foundational questions about the role of data in society.

“From machine learning that enhances our ability to detect problems and health-relevant outcomes, to video games that confront players with moral dilemmas to educational workshops focused on ethical use of algorithms, the primary mission of the DATASET Initiative is to develop transdisciplinary research programs focused on the data challenges of our time,” said Jensen.



To increase faculty input and transparency, the AVPR developed and launched the One Utah Research Council (OURC). The OURC provides direct feedback to the Vice President for Research (VPR) for research matters. The OURC will make recommendations to the VPR for strategic, cross-campus research infrastructure that:

- Empowers the University of Utah campus community to lead innovative and strategic research efforts through shared resources and collaboration;
- Informs, evaluates, and implements elements of the Research Refresh (R2) led by the VPR Office, and;
- Supports efforts to establish the University of Utah as a top 10 Public University with unparalleled societal impact.

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## LOOKING FORWARD TO THE FUTURE

The AVPR will be launching four additional hubs over the next 2-5 years, according to Jensen. The hubs are designed to increase research activity and collaboration.

“Hubs respond to grand challenges by (1) increasing external grant activity, (2) facilitating creative and scholarly work, and (3) developing interdisciplinary research communities,” Jensen said.

To learn more about Jensen and the AVPR units, visit [here](#).





# RESPONSIBLE CONDUCT OF RESEARCH

The mission of the Office of Research Integrity and Compliance (ORIC) is to advance research integrity and compliance through developing, demonstrating, and disseminating innovative processes, tools and outreach that improve scientific outcomes, transparency and accountability through the translational research continuum.

The office has nine units, new services and initiatives to support the research enterprise and responsible conduct of research.

Dr. Caren Frost, Associate Vice President for Research Integrity & Compliance (AVPRIC), is excited to let the public know about her office's successes over the last year.



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## NEW YEAR, NEW ACCOMPLISHMENTS

Some of the many accomplishments from the units within the ORIC include developing a process for reporting unprofessional behaviors in the research context to the National Institute of Health (NIH); creating and launching new trainings across campus about conflict of interest; as well as building community relationships with data contributors and stakeholders.

“Our office also began outreach to socialize foreign influence with departments across campus, and our IRB even participated in ComicCon,” Frost said.



The Office of Quality Compliance (OQC) has launched two mechanisms for sharing and discussing regulatory information: Research Quality Compliance Network (RQCN) and Compliance Cafés discussions. In addition, the OQC offers research climate assessments (RCA), which provides a more qualitative review of how teams and labs are functioning.

The Office of Research Education (REd) has updated its Certificate Programs and implemented rigorous assessments for these programs to determine effectiveness across the UU. In addition, REd has expanded NSF grant writing content to support submissions for CAREER and NRT programs.

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## IT'S ALL ABOUT HELPING RESEARCHERS

Frost says she is proud of all the creative work everyone who is a part of an ORIC unit is doing, and their recent accomplishments are a testament to their dedication to helping researchers and promoting research integrity. “They are national leaders in their fields and have put the University of Utah on the map as an expert in a number of areas related to research integrity & compliance.”

For more information on all the resources the Office of Research Integrity and Compliance offers to researchers, visit their website [here](#).







## **INCREASING OUR RESEARCH COMMUNICATION**

The VPR Office is dedicated to communicating the U's research innovations and discoveries to both our research community and general public.

This upcoming fiscal year, our office will expand its communications across our redesigned website, our social media, and our new blog.

With our updated website, researchers and all readers will be able to navigate all the information and resources we offer.



# RESEARCH NEWS AT A GLANCE



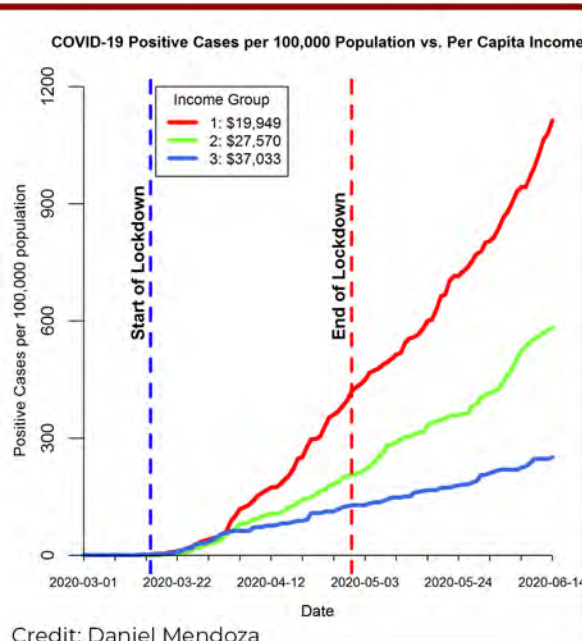
## EXPANDING COLLABORATIVE RESEARCH OPPORTUNITIES COLLEGE OF ENGINEERING

Idaho National Laboratory and the University of Utah have signed an agreement allowing both organizations to collaborate on research and development projects aimed at advancing the nation's energy and security technology.

The newly signed Strategic Understanding for Premier Education and Research, or SUPER agreement, allows the organizations to explore deeper research collaborations and expand opportunities for students, faculty and researchers. The five-year agreement solidifies what had been individual peer-to-peer agreements between laboratory researchers and university faculty members. Those will be replaced with a broad institutional memorandum encouraging greater collaboration including shared academic materials, visiting research scholars and cooperative symposia, seminars, workshops and conferences.

Learn more [↗](#)

Credit: Dan Hixson



## HOW SOCIETY'S INEQUALITIES SHOWED IN COVID OUTCOMES

### COLLEGE OF MINES AND EARTH SCIENCES

Racial minorities comprise around a quarter of Utah's population but represent a third of COVID-19 cases in the state. A similar story has played out across the country. Why have racial minorities been unequally affected by the COVID-19 pandemic?

Researchers are still working out the answer to this question, but a new study from University of Utah researchers, including Daniel Mendoza and Tabitha Benney, explores the hypothesis that variation in income and occupational status, on a neighborhood-by-neighborhood scale, may be the reason.

Learn more [↗](#)

Credit: Daniel Mendoza

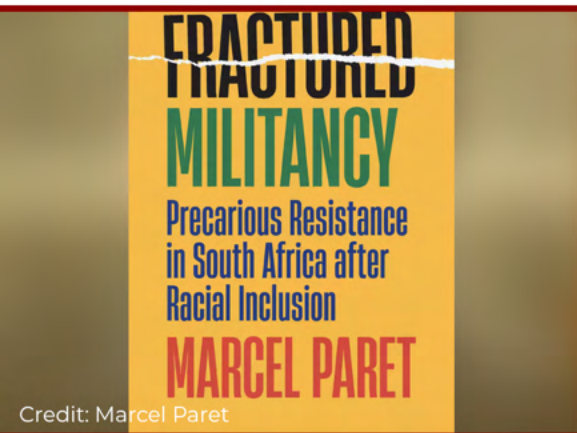




## THE FUTURE OF THE GREAT SALT LAKE COLLEGE OF SCIENCE

University of Utah President Taylor Randall and Brad Wilson, speaker of the Utah House of Representatives, met with legislators, scientists and Great Salt Lake advocates on June 23, to spark conversations to help save the lake, which reached its lowest recorded level last year.

Learn more [↗](#)



## FRACTURED MILITANCY COLLEGE OF SOCIAL & BEHAVIORAL SCIENCE

The College of Social and Behavioral Science (CSBS) sat down with Marcel Paret, associate professor of sociology, in their new interview series CSBS Conversations to discuss his exciting new book which explores social dynamics in post-apartheid South Africa entitled "Fractured Militancy: Precarious Resistance in South Africa after Racial Inclusion."

Learn more [↗](#)



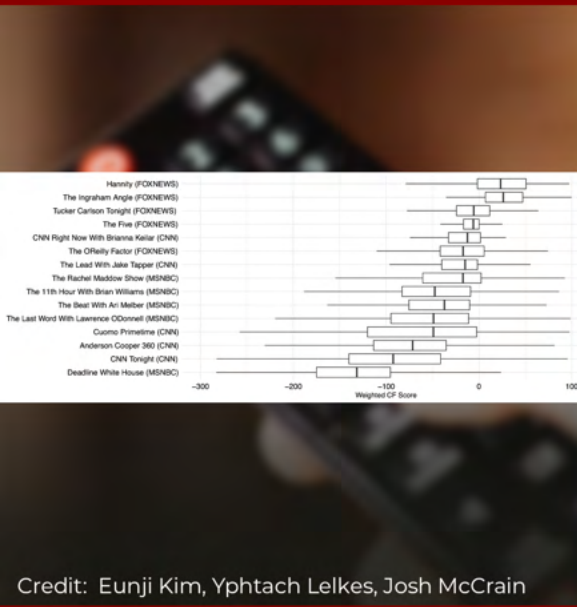
## U TO EXPAND PACIFIC ISLANDS STUDIES WITH MOMENTOUS \$1M MELLON GRANT SCHOOL FOR CULTURAL AND SOCIAL TRANSFORMATION

The University of Utah's School for Cultural and Social Transformation (Transform) has been awarded a \$1,000,000 grant from the Mellon Foundation to support growth and outreach in its Pacific Islands (PI) Studies program. This additional funding will expand current programming to include a graduate certificate, new faculty hires and a Center for Pasifika and Indigenous Knowledges.

Utah has the largest number of Pacific Islanders per capita in the continental U.S. The U is uniquely positioned to support PI communities and create a place where PI-interested students and PI studies scholars can share knowledge and cultural traditions that also dramatically cross-connect with American Indian ways of knowing.

Learn more [↗](#)





## HOW CABLE NEWS POLITICAL LEANINGS CHANGE OVER TIME

### COLLEGE OF SOCIAL & BEHAVIORAL SCIENCES

The political bias of cable news shows is surprisingly dynamic, according to new research investigating the average partisan leans of cable news channels over time. Using a method to measure average political leanings, U political scientist Josh McCrain and colleagues found that even on channels that are well-known for a particular political bias, the strength of that bias can change from hour to hour and from show to show. They also found that the current polarization of cable news channels may be driven by the leanings of the primetime shows.

[Learn more](#)



## MINDFULNESS THERAPY REDUCES OPIOID MISUSE AND CHRONIC PAIN

### COLLEGE OF SOCIAL WORK

Results from a new clinical trial demonstrate that an eight-week mindfulness-based therapy Mindfulness Oriented Recovery Enhancement (MORE) decreased opioid use and misuse while reducing chronic pain symptoms, with effects lasting as long as nine months. This is the first large-scale clinical trial to demonstrate that psychological intervention can simultaneously reduce opioid misuse and chronic pain among people who were prescribed opioid pain relievers.

[Learn more](#)



## SEARCHING FOR SOLUTIONS TO PREVENT AND TREAT EPILEPSY

### COLLEGE OF PHARMACY

The University of Utah College of Pharmacy's Anti-convulsant Drug Development (ADD) Program has been awarded a five-year, \$34 million contract renewal with the NIH's National Institute of Neurological Disorders and Stroke (NINDS) to test and identify novel investigational therapeutics for preventing the development of epilepsy and treating refractory, or drug-resistant, epilepsy.

[Learn more](#)



Credit: U of U Health

## **AI QUICKLY IDENTIFIES GENETIC CAUSES OF DISEASE IN NEWBORNS**

### **SCHOOL OF MEDICINE**

An artificial intelligence-based technology rapidly diagnoses rare disorders in critically ill children with high accuracy, according to a report by scientists from University of Utah Health and Fabric Genomics, collaborators on a study led by Rady Children's Hospital in San Diego. The benchmark finding, published in *Genomic Medicine*, foreshadows the next phase of medicine, where technology helps clinicians quickly determine the root cause of disease so they can give patients the right treatment sooner.

Learn more [↗](#)



Credit: Charlie Ehlert

## **NIH GRANT SUPPORTS CLINICAL TRIAL TO DETERMINE IF VIDEO GAMES CAN RELIEVE LATE-LIFE DEPRESSION**

### **SCHOOL OF MEDICINE AND COLLEGE OF ENGINEERING**

U of U neuroscientist Sarah Shizuko Morimoto, PsyD, and Games and Apps Lab director Roger Altizer, PhD, are developing and testing video games to help older adults combat medication-resistant depression. The games work by “exercising” the brain with an effect of improving cognitive flexibility, working memory and mood. They are developing similar approaches to help combat depression in other age groups, and “brain fog” in people who have undergone chemotherapy.

Learn more [↗](#)



## VPR OFFICE ON SOCIAL MEDIA



[instagram.com/Uofuresearch](https://www.instagram.com/Uofuresearch)



[facebook.com/UofUResearch](https://www.facebook.com/UofUResearch)



[twitter.com/UofUResearch](https://twitter.com/UofUResearch)

## RESEARCHER'S CORNER

Check out Researcher's Corner, our one-stop hub for research news, announcements and resources.

<https://research.utah.edu/researchers-corner/>



## REDI NEWSLETTER

The REDI newsletter includes monthly updates on funding opportunities, resources, and highlights related to diversity, equity, and inclusion for research at the U.

<https://research.utah.edu/edi/redi.php>



