

BENCHMARKS

A newsletter from the Department of Biochemistry

Fall/Winter 2021

THE GIFT OF GIVING Chair's Message from Wes Sundquist



The holiday season always has me thinking (and scrambling!) about giving. Like most of you, our family isn't wealthy but we are in the privileged position of being able to give meaningful personal and charitable gifts, which prompts me to consider what presents I should give?, which causes merit time and money?, and what aspects of giving bring the most satisfaction and why? I've also been reflecting on how greatly our department benefits from the generous

gifts that we receive from our extended biochemistry family. This was a banner year in that regard, as we were the recipients of particularly substantial financial gifts from Bill Rutter, Dana Carroll, Marge Gunn, Kirsia Perez and the Pace and Velick families, as well as many additional generous gifts from other community members. These gifts are all greatly appreciated (!), and they have a disproportionate impact because they allow us to pursue valuable special initiatives, above and beyond the core activities that are funded by our state budget allocation. For example, these new philanthropic gifts are allowing us to reward talented faculty members with endowed funding that fuels their research programs and helps them to pursue creative, "high risk" projects that are hard to fund through conventional mechanisms but that can lead to highly impactful breakthroughs. New gifts are also allowing us to bestow departmental awards on particularly accomplished graduate students and postdocs, enhance our efforts to recruit and support talented scientists from traditionally under-

represented groups, and bring in world-leading scientists to deliver inspiring lectures (e.g., see the separate pieces on the two wonderful McCloskey Lectures that we enjoyed this fall). Thus, these gifts are enabling activities that have an enormous impact on our science, training, and sense of community.

A second class of gifts that is also greatly enhancing our department come from philanthropic foundations. Several years ago, we were awarded a competitive \$2.5M gift from the Arnold and Mabel Beckman Foundation that allowed us to purchase a Titan Krios electron cryomicroscope, which is used by many groups in our department. This state-of-the-art microscope has transformed our ability to determine 3D structures of macromolecular complexes and thereby probe how they function. Excitingly, we have just learned that the Beckman Foundation has now agreed to provide us with a second competitive award of \$1.5M that will allow us purchase equipment that makes it possible to do electron cryomicroscopy of macromolecular complexes in their native cellular contexts. We are certainly grateful that the talent, generosity, and foresight of Arnold and Mabel Beckman have enabled us to become a premier site for advanced electron microscopy! We have also received a generous gift from the Burroughs Wellcome Fund that will fund a "Rising Stars in Biochemistry" symposium next fall, which will bring exceptionally talented postdocs, particularly from underrepresented groups, to campus to tell us about their groundbreaking research.

Happy holidays, and I hope this season brings you the joy and satisfaction that come from both giving and receiving!

MAJOR RECENT GIFTS TO THE DEPARTMENT

A remarkably generous gift from Bill Rutter has endowed a Presidential Chair and also created an endowment fund for new research initiatives. Scott Summers, Ph.D., is the inaugural William J. Rutter Presidential Chair in Biochemistry. Scott also Chairs our Nutrition and Integrative Physiology Department and is Adjunct Professor of Biochemistry.

Bill Rutter is an alumnus of our department and is famous as "the



Bill Rutter (left) awards Scott Summers (right) the inaugural William J. Rutter Presidential Chair in Biochemistry.

father of biotechnology". He was awarded an honorary Doctor of Science Degree at the 2021 University of Utah Commencement, and you can watch the video celebrating his accomplishments and honorary degree at about the 37-minute mark of the [commencement video](#).

Very generous gifts from Leo and Barbara Samuels, the Velick family, and Dana Carroll have combined to create the Dana Carroll Endowed Professorship in Biochemistry. Adam Hughes, Associate Professor



Dickman Graduate Student Travel Fellowship Awardees. From left to right: Zachary Cruz (Kay lab), Seyi Falekun (Sigala lab), Jesse Velasco (Ducker lab), Qian Xue (Roh-Johnson lab).



Lara Rheinemann, awardee of the 2020 Gunn Award for Graduate Student Excellence.

Generous gifts from the McCloskey and Pace families have endowed the James and Kathleen McCloskey Bioscience Endowed Lecture

(joint with Medical Chemistry, and featured elsewhere in this newsletter) and the J.W. and Wanda Pace and Nick and Sheryl Pace Endowed Scholarship in the Department of Biochemistry (which will be given this year by [Dr. Eva Nogales](#), Ph.D. on May 16, 2022.)

of Biochemistry, is the inaugural Carroll Professor.

A series of generous gifts from Marge Gunn have allowed us to create the Marjorie Riches Gunn Associate Professorship in Biochemistry and the Gunn Award for Graduate Student Excellence.

Generous gifts from the Sherman Dickman family and Kirsia Perez, M.D. (in honor of her father, Walter Ephriam Fridal, Jr.) have endowed a Graduate Student Travel Fellowship focused on enhancing the careers of URM scientists, and allowed us to establish a recruiting fund aimed at enhancing our postdoctoral diversity.

Dana Carroll (left) awards Adam Hughes (right) the Dana Carroll Endowed Professorship in Biochemistry.



Dana Carroll (left) awards Adam Hughes (right) the Dana Carroll Endowed Professorship in Biochemistry.

CHANGING THE FACE OF SCIENCE

Julie Kiefer

Adapted from a story that originally appeared [here](#) in the University of Utah Health newsroom.

When Faith Bowman was deciding where to attend graduate school, the University of Utah wasn't exactly at the top of her list. Coming from Wisconsin, she didn't know much about the school or the state. But during her recruitment visit, an informal gathering with students from the all-inclusive [University of Utah SACNAS](#) (Society for Chicanos/Hispanics and Native Americans in Science) chapter helped her see things differently. After talking with them, she knew that if she came, she would be surrounded by a supportive community. She chose the U, and three years later, that prediction has held true.

"To me, SACNAS is a community away from home," says Bowman, now president of the U chapter. "It's a place that has created a sense of belonging for me on campus while helping me to achieve my professional goals."

Bowman's experience isn't unique. The [bioscience graduate programs](#) have collaborated with the U SACNAS community in its annual recruitment activities since 2017. These efforts, which included hosting the 2017 SACNAS National Conference in Salt Lake City, have resulted in tripling recruitment of students from historically underrepresented (UR) backgrounds. UR students now comprise 33% of the domestic class, and racial and ethnic minorities comprise 28%, reflecting the national talent pool.

"Knowing this diverse, all-inclusive community is here helps recruits decide, in parallel to the awesome research, that we are their 'best fit,'" says Jeanette Ducut-Sigala, U SACNAS manager.

The ability to make meaningful change in diversity and inclusion has earned U SACNAS national recognition. In a virtual ceremony held on Oct. 13, the national organization designated the U group "Chapter of the Year" along with six other local chapters of the 133 located in the U.S. and Puerto Rico.



Creating meaningful change

U SACNAS officially launched in 2014 with the goal of training and supporting the next generation of diverse STEM talent. From students to professionals, the parent organization fosters success in attaining advanced degrees, careers and positions of leadership within STEM. The U chapter mainly serves graduate students, postdocs and staff while a sub-chapter centered on main campus is open to both undergraduates and graduate students. Ducut-Sigala, biochemistry faculty Minna Roh-Johnson and Paul Sigala and human genetics facul-

ty Clement Chow operate as advisors.

It's clear that across the country there is a great need for organizations like this one. According to SACNAS, the national STEM workforce is only 6% Hispanic, 4.8% Black, and 0.2% Native American, numbers that are significantly lower than in the overall U.S. workforce. A lack of diversity hurts all of us, the organization explains, because diverse voices bring creative solutions to our world's most pressing scientific problems.

U of U SACNAS helps its members to grow through authentic inclusion: hosting talks by professionals to inspire career aspirations and create connections with role models, supportive peer mentoring, outreach and leadership development. In collaboration with the [University Counseling Center](#), [Health and Wellness Center](#) and [Center for Student Wellness](#), they hold sessions where members can talk through troublesome issues and learn strategies for balancing their lives in and outside of science. Knowing that role modeling can make all the difference, particularly in young children, they also perform outreach with local K-12 schools to show that science is for everyone.



"A community away from home"

The organization has provided a sense of belonging to member Jesse Velasco-Silva, a biochemistry graduate student and the chapter's vice president. "The SACNAS familia always encourages me to bring, show and celebrate my strength, resilience, culture, traditions and science," he says. He explains that being a first-generation Mexican-American immigrant and college student has come with challenges. The guidance and support he's received from the SACNAS community has helped him to overcome them.

As for Bowman, her experience has come full circle. She benefitted from the openness of the U SACNAS community when she was making the difficult decision of where to get her doctoral degree. Now, she does the same for the next sets of prospective students.

"I get to show the recruits, particularly the first-gen BIPOC students, how we belong on campus, belong in our programs, and thrive here because we have a community like SACNAS," she says. "We have a supportive, collaborative environment at Utah and really, a university committed to equity and inclusion."

Julie Kiefer is the Associate Director for Science Communications at University of Utah Health. Photos were provided by Faith Bowman.

TWO JAMES AND KATHLEEN McCLOSKEY BIOSCIENCE ENDOWED LECTURES IN ONE YEAR

Brenda Bass

After the pandemic forced a delay in seminars scheduled for 2020, the Biochemistry and Medicinal Chemistry Departments were delighted to jointly host both the 2020 and 2021 “James and Kathleen McCloskey Bioscience Endowed Lectures” this fall. This lecture series honors the late James (Jim) A. McCloskey, Jr, and his wife Kathleen (Kay), for their invaluable contributions to the University of Utah. The lectures are made possible by a generous gift from Kay, who particularly wanted to highlight a commitment to collaborative bioscience research in the two departments of which Jim was a member. Indeed, by jointly hosting this seminar series, the ties between our department and the Department of Medicinal Chemistry are strengthened.



Gus McCloskey presents Dieter with one of his ceramic art pieces.

Professor McCloskey pioneered mass spectrometry methods for the characterization of modified nucleotides in RNA, and his insight in this regard was light years ahead of its time. Only in recent years has the profound biological significance of RNA modifications become clear. When I arrived at the University of Utah in 1989 as a new faculty, the field was tiny, and I had just stumbled on a new RNA modification; Jim was a big reason I came to the University of Utah. I published my first paper in collaboration with Jim, and he was a close colleague of mine until he retired in 2007. We reveled in our shared enthusiasm for the “RNA world”, and in this regard Jim would have loved the endowed lectures, which showcase speakers doing cutting-edge research in RNA biology. In 2019 Nobel laureate Venki Ramakrishnan gave the inaugural lecture of this series. Venki spoke about the ribosome, a 2.5 megadalton macromolecular machine comprised of protein as well as ribosomal RNA, which contains many of the RNA modifications that Jim characterized. Professor Darrell Davis, current chair of the University of Utah Department of Medicinal Chemistry, hosted our first speaker this fall, in September. Professor Dieter Soll of Yale University, a close friend of Jim’s, gave a whirlwind tour of the fascinating observations his lab has made on tRNA, Jim’s favorite molecule, and one that contains more distinct modifications than any RNA characterized to date, many of which Jim and his colleague Pam Crain discovered.

About a month after Dieter visited us, I had the pleasure of hosting our third endowed lecture, given by Professor Joan Steitz, also of Yale

University. Joan’s talk focused on “Elements of Nuclear Expression”, or ENEs, RNA sequences which fold into fascinating triple helical structures that sequester poly A tails to stabilize RNA. I had just finished teaching our graduate students about RNA structure, and I was elated when Joan discussed the nuances of ENEs, synthesizing many of the things we had discussed in class: bulges, mismatches, stacking, A-minor interactions, and triple-base pairs.

Armed with masks and heavy coats so we could eat outside, both of the fall events were in-person and a real treat after the social distancing of the pandemic. In addition to the wonderful science we hear about at the McCloskey Bioscience Endowed Lectures, the events are also special because we get to visit with Kay and other members of Jim’s family, who also attend the lectures. With each successive lecture we get the pleasure of knowing them better. It is hard work to give a lecture, and to show our appreciation, each seminar speaker receives an extra treat. This year Jim’s son Gus McCloskey, a remarkable ceramics artist, presented one of his creations to Dieter. Joan, who loves the outdoors, was rewarded with a trip to Torrey, Utah with me and my husband Ken.



A celebration dinner: From left clockwise, Kay McCloskey, Joan Steitz, Demián Cazalla, Dana Carroll, Darrell Davis, Brenda Bass and Pam Crain.



In Southern Utah: Joan flanked by Brenda and her husband Ken.

Jim McCloskey majored in Chemistry at the Trinity University in San Antonio, TX, and then earned his Ph.D. with Klaus Biemann at MIT, whom some refer to as the father of organic mass spectrometry. It was with Klaus that Jim began his focus on modified nucleic acids, in particular RNA, and initiated his pioneering methods for their study. After getting his Ph.D. he received an NIH postdoctoral fellowship to study in France at the Centre National de Recherche Scientifique (CNRS) in Gif-sur-Yvette, and upon his return he took a faculty position at Baylor College of Medicine in Houston, Texas. During that period, he took a sabbatical at the National Cancer Center Research Institute in Tokyo, where he began a twenty-year collaboration with Susumu Nishimura in Tokyo, Japan. Lucky for us, in 1974 Jim moved his research efforts to the University of Utah. He was a tenured professor in the Departments of Medicinal Chemistry in the College of Pharmacy, and Biochemistry in the University of Utah School of Medicine. Jim’s beloved wife Kay is also a scholar and had a long history at the University of Utah as a Reference Librarian at Spencer S. Eccles Health Sciences Library, Head of the Hope Fox Eccles Clinical Library in the University Hospital and Public Health and Outreach Librarian for the National Network of Libraries of Medicine, under a contract Eccles Library had with the National Library of Medicine, retiring in 2003.

Jim received numerous honors and awards for his fundamental contributions to the analysis of nucleic acids and modified RNA. These included serving as Secretary, Vice-President, and President of the American Society for Mass Spectrometry, receiving the University of Utah Distinguished Research Award, election as a fellow of the American Association for the Advancement of Science, and receiving the Distinguished Contribution in Mass Spectrometry Award. Jim retired from the University of Utah in 2007. He died at home in Grey Forest, Texas on August 30, 2017, at age 81. An oral history of Jim’s career, Courtesy of Science History Institute, can be found at <https://oh.chemheritage.org/oral-histories/mccloskey-james-a>.

THE UP-CAT PROGRAM

Sarah Hansen, Viplendra Shakya, and Zachary Wilson

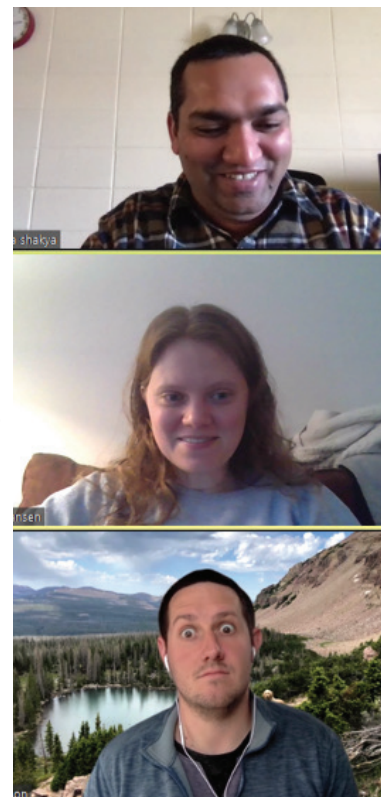
It is as easy as riding a bike. For most, once you learn to ride a bike, you will never forget. But do you remember how you learned? You might remember the falls, the skinned knees, or even the broken bones. But do you remember the moment you learned to balance or how to lean into a turn? This idea highlights a common problem: once we learn something it is very difficult to pinpoint the moment we learned. As postdoctoral researchers, we face a similar conundrum. We have many years of science education and training and we strive to obtain leadership positions that, regardless of the role, will often involve extensive teaching and mentoring. However, we have limited experience designing science curricula and sometimes even limited teaching experience. Enter the Utah Postdoc-Curriculum design And Teaching (UP-CAT) program.

Every year a new group of postdocs work together, under the guidance of Janet Lindsley (Professor of Biochemistry and Assistant Dean of Curriculum for the School of Medicine), to design and teach an upper-level undergraduate biology course focused on helping students learn to read the primary scientific literature. We were the most recent group of postdocs to participate in the UP-CAT program. Because the course is focused on reading the scientific literature, the primary goal every year is predetermined. But the topic can change! Oh, the power. The absolute power! Actually, this was our first challenge. We needed to determine the perfect topic and find the ultimate paper students would read as part of their final assessment. Yes, our initial struggle was the very last assessment students would perform. This moment captures one of our primary developments in participating in the UP-CAT program: learning and practicing the backwards design process. From the outset, we needed to define the primary learning outcomes students should be able to perform by the end of the course and then build the course toward those final learning goals and outcomes.

Our initial struggle defining the course also captures some of the transferable skills we developed that go beyond just teaching. For one, we learned how to build an effective team, combining our talents and experiences to create a course with shared goals, values, and a unified teaching philosophy. In the end, we decided to title the course "The Road to an mRNA Vaccine", where we covered landmark papers that provided the basis for the rapid development of mRNA vaccines against the SARS-CoV-2 virus. This topic was both very relevant and engaging, but it reflected our combined experiences. Sarah is an RNA expert, Viplendra studied host-pathogen interactions, and Zach has virology experience.

As we continued to develop the course and teach it, we learned other pedagogical strategies and Janet helped us refine our teaching styles and in-class activities. As a team, we debated assessment methods, evaluated teaching strategies, honed our communication, and developed trust. But most of our growth happened when we started working with the students. They helped us build a supportive and inclusive learning environment and showed us when and where we failed to do so. They taught us how to create effective learning activities and how to package complex information into a digestible form for a diverse audience. Finally, they taught us to trust them, to watch as they taught each other, to hear them tell us what they needed to learn, and to see them take our guidance and do more than we envisioned.

In reflecting on the UP-CAT program, we did find it more challenging than we had initially expected. But we also found it more interesting, engaging, and far more satisfying than we expected, as well. Our experience practicing backwards design and building an effective team will be valuable beyond teaching, as we will use what we have developed in communicating our ideas, mentoring colleagues, and building our own research programs. In the end, we wish to thank Janet Lindsey for mentoring us, our prior teachers for inspiring us, and the students for a wonderful course. We are still learning how to be effective teachers and mentors, but with the UP-CAT program, we can say that we're on the road to finding our balance.



Snapshot from an UP-CAT Zoom meeting. Top: Viplendra Shakya, center: Sarah Hansen, bottom: Zach Wilson.

FACULTY HIGHLIGHT: MEET JOHN McCULLOUGH



John McCullough, a Research Assistant Professor in the Sundquist lab, grew up on the west coast of Ireland. As a child, he became interested in nature while exploring the countryside of County Clare with his grandfather. For college, John attended the National University of Ireland, Galway, where he completed a bachelors of science in Biotechnology. As part of his undergraduate studies, he spent a summer at the Max Planck Institute of Molecular Physiology in Dortmund, Germany which further piqued his interest

in biological research. This led him to the University of Liverpool for graduate school, where he completed a 4-year Wellcome Trust Ph.D. program working with Sylvie Urbe and Mike Clague on receptor down regulation mediated by ubiquitination.

During his graduate studies, John became interested in ESCRT III proteins, and decided to apply to the Sundquist lab for a postdoctor-

al research position. Since arriving in Utah in 2006, John has made numerous important contributions to our understanding of the structure and function of ESCRT III proteins, which play a central role in deforming membranes during fission.

Since his transition to a research associate in 2012 and a promotion to a research assistant professor in 2016, John has taken on a variety of responsibilities outside of his research, including acting as the scientific manager of the NIH-funded CHEETAH Center for HIV-host structural biology. What makes him happiest, though, is discovering protein assemblies and helping to solve high resolution structures of them.



Model illustrating how spirals of the ESCRT-III proteins, IST1-CHMP1B, can constrict internal membranes. Dark blue: CHMP1B; light blue: IST1.

STAFF HIGHLIGHT: MEET CASSIE CONNELL



Cassie Connell joined the Biochemistry department in early 2020. As our grants and contracts officer, she helps faculty, staff, postdocs, and graduate students with grants and contracts, including managing budgets and progress reports, and ensuring that we follow policy updates.

Cassie is currently working with fifteen Biochemistry faculty and their labs. Prior to joining Biochemistry, Cassie

worked at HCI as a preaward officer, and has also worked in accounting at other places. Having been in the finance world for years, Cassie particularly enjoys learning more about policy and applying her knowledge to solve challenges as they arise.

In her free time, Cassie enjoys spending time with her husband, and 2 daughters: 5-year-old Audrey and 1-year-old Allison. In addition to hiking and glamping with her family, Cassie enjoys reading, doing yoga, and teaching dance. Prior to college, Cassie was involved in dancing and gymnastics, and has taught jazz, ballet, and contemporary dance classes for kids. Her family of "diehard Utes" include 7 members who currently work at the U!

FACULTY HIGHLIGHT: MEET ADAM HUGHES



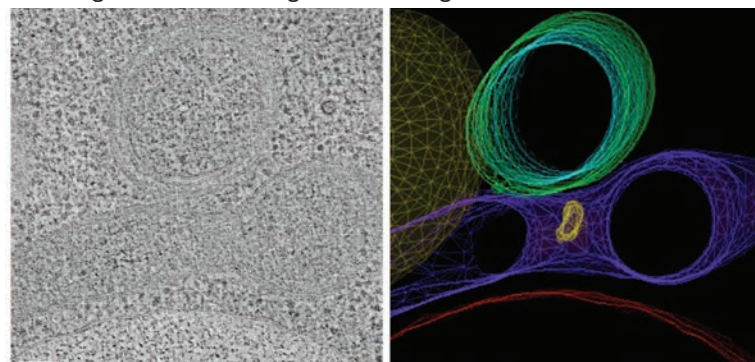
Adam Hughes, who was recently awarded the inaugural Dana Carroll Endowed Associate Professorship, grew up in small towns in Missouri and Pennsylvania. It wasn't until the last couple of years in college, at Indiana University of Pennsylvania, where he developed an interest in research following an internship at Merck.

He completed his graduate studies in the lab of Peter Espenshade at Johns Hopkins, and then moved to Seattle to work with Dan Gottschling at the Fred Hutchinson Cancer Center for his postdoc.

During his postdoc, Adam became interested in understanding how aging impacts organelle function, with a focus on the causes of age-related mitochondrial dysfunction. When he joined the Biochemistry faculty in 2014, his lab was mainly focused on organelle communication, and how a breakdown in communication underlies aging-related disorders. Work in his lab has since uncovered a critical role for amino acid homeostasis and localization in driving mitochondrial decline. As cells age, they lose their ability to organize amino acids into the correct compartments, eventually leading to problems with mitochondrial function. The Hughes lab is now focused on how

cells regulate amino acid homeostasis and localization, and how errors in the system can lead to amino acid toxicities in the cell. New areas of focus for the lab include creating models for inborn errors of metabolism, using the yeast models to understand rare and inherited metabolic diseases.

In his free time, Adam enjoys spending time outdoors with his family. With his wife, Bridget, and two kids, Brady and Lainey, Adam has hiked and camped in Utah's extensive BLM land. He also enjoys cheering on his kids during their soccer games.



Electron tomography of the mitochondrial-derived compartment. A 2D cross section (left) and 3D model (right) of an electron tomogram showing a mitochondrial tubule (purple) forming a mitochondrial-derived compartment (green and cyan). A portion of the yeast nucleus and ER (yellow) and the yeast vacuole (red) are also labeled in the 3D model.

HONORS, GRADUATIONS, AND TRANSITIONS

MAJOR FACULTY AWARDS & RECOGNITIONS

- 2021 Tim Formosa was selected to receive the University of Utah Distinguished Teaching Award for 2021-22.
- 2021 Jared Rutter was reappointed as an Investigator of the prestigious Howard Hughes Medical Institute (HHMI) for seven more years.
- 2021 Adam Hughes was promoted to Associate Professor with tenure, and named the Dana Carroll Endowed Associate Professor of Biochemistry
- 2021 Will Holland was promoted to Adjunct Associate Professor of Biochemistry (paralleling his equivalent promotion in the Department of Nutrition and Integrated Physiology)
- 2021 Scott Summers was named the William J. Rutter Endowed Presidential Chair in Biochemistry.
- 2021 Justin English received a prestigious NIH Directors New Innovator (DP2) award.

MAJOR GRADUATE STUDENT & POSTDOC AWARDS

- 2021 Helen Donelick (Bass and Shen Labs), received a Microscopy and Microanalysis Student Scholar Award and an RNA society conference award to help fund her attendance at these meetings.
- 2021 Raushan Singh, a postdoc in the Bass Lab, was selected to serve as an Early Career Reviewer in Structural Biology and Molecular Biophysics, for eLife.
- 2021 Julio Fierro (Roh-Johnson lab) was selected as one of the University of Utah nominations for the HHMI Gilliam Fellowship
- 2021 Alejandro Pereira, a University of Florida undergrad and summer intern in the Sigala lab with the GSRM program, won a Poster Award at the national SACNAS conference for his presentation on his summer research.
- 2021 The University of Utah SACNAS Chapter was selected as "Chapter of the Year" award – one of only 7, out of well over 100 national chapters.

GRADUATIONS & TRANSITIONS

The following students completed their degrees since the last publication of the newsletter in Spring 2021: Casey Hughes (Hughes lab, Ph.D. 2021), Peng Wei (Rutter lab, Ph.D. 2021), Nai-Pin (Phil) Lin (Chou lab, Ph.D. 2021). We also wished farewell to the following postdocs: Sarah Apple (Kay lab), Sara Nowinski (Rutter lab), Chase Neumann (Ducker lab), Kristen Davenport (Sundquist lab), and Chelsea Kidwell (Roh-John-

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HEALTH
 UNIVERSITY OF UTAH



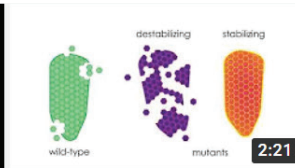
Kay Lab D-Peptide Discovery



Hill lab animation



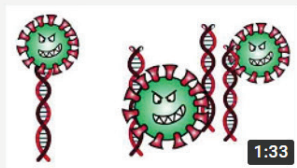
Sigala Lab Video



Sundquist Lab video



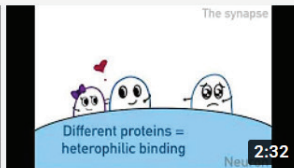
Animation lab video



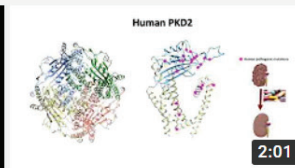
Bass Lab Video



Biochemistry Admin video



Brasch Lab Video



Cao Lab Animation



Adam Hughes lab video



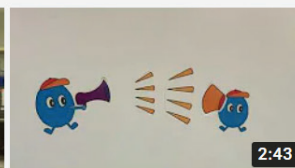
Designing your life workshop video by Janet Lindsley



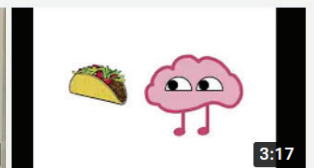
Miller Lab Love Story



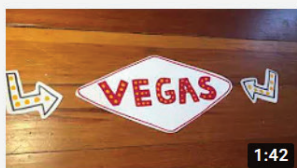
Roh-Johnson Lab video



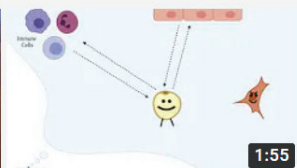
Rutter Lab Animation



Ducker lab animation



English Lab Animation 2021



Hilgendorf Lab Video

During the fall of 2021, trainees in Biochemistry labs created videos to describe their research to broad audiences. We launched a YouTube channel to host these videos, and we have been sharing them on social media. We encourage you to check them out here: https://www.youtube.com/playlist?list=PLQKph9gn_ZOeK5IP4Ier7UZmPfmMneC1wk