



Reaching New Heights

2021-2022





Reaching New Heights

It seems that every year, the UC Riverside School of Medicine reaches new heights, and the 2021-2022 year was no exception. But this year was particularly special because on top of the array of accomplishments within the educational, research, clinical, and community components of the school, we also reached new literal heights in advancement.

With the builders of the School of Medicine Education Building II beginning the fourth floor framework at the end of the academic year, the future of our school and mission look more promising than ever. And with the gradual return to in-person activities mixed with the innovative hybrid structures of curricula and events mastered during the COVID-19 pandemic, we are more optimistic than ever that the School of Medicine is on the right path to continuing its mission to improve the health of the people of Inland Southern California.

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Message from the Vice Chancellor and Dean



Looking back on my sixth year at the UCR School of Medicine, it is hard for me to believe that it has been more than two years since the world-changing outbreak of the COVID-19 pandemic. But despite the challenges, adversity, and uncertainty, I am thrilled that the students, faculty, and staff of our school have risen to every challenge and moved us closer to fulfilling our mission of improving the availability of – and access to – healthcare in the underserved areas throughout Southern California.

In June, we celebrated the graduation of the 69 students who made up the Class of 2022. Of them, 39% remained in Inland Southern California for their residency programs and 77% entered primary care and the much-needed Inland Empire shortage specialties. We also graduated four students from our Biomedical Sciences Ph.D. program.

This year, our residency and fellowship programs had 104 students completing their residencies, including 24 in family medicine, 50 in internal medicine, and 30 in psychiatry; and 27 completing their fellowships in internal medicine, psychiatry, and ob/gyn.

Our faculty continue to make new discoveries in areas that have both local and global impact, as biomedical sciences teams are working with colleagues around the globe to combat COVID-19. Locally, our researchers are also working directly with community members to address challenges they face every day, ranging from inadequate availability of healthcare to the previously unrealized health challenges caused by the drying of the Salton Sea.

Our UCR Health clinical enterprise continues to grow and expand, providing both general and specialty healthcare to the people of the Inland Empire.

It has also been thrilling to watch our school's physical footprint expand with the construction of the new School of Medicine Education Building II, scheduled to open in the fall of 2023. When complete, this five-story structure will allow us to eventually grow our enrollment to 125 students per class per year.

As we turn the calendar to the 2022-23 academic year, we are looking forward to our celebration of the 10th anniversary of the UCR School of Medicine. Several exciting events throughout 2023, including the aforementioned grand opening of SOM Ed Bldg II, will look forward towards our exciting future while we also look back on the long history of medical education at UC Riverside.

We celebrate the successes of all of those who have worked so hard to help the people of California. I am incredibly thankful and grateful for their efforts and hope that, as you read this annual report, you will be as well.

Deborah Deas, M.D., M.P.H.
Vice Chancellor for Health Sciences
Mark and Pam Rubin Dean

By the numbers

Biomedical Sciences **32** Ph.D. students/candidates **16** M.S. students **48** Affiliated faculty from across UCR

Medical Students **328** M.D. students **37%** Underrepresented in medicine **53%** Disadvantaged
31% First in family to complete college **46%** Ties to the Inland Empire

Faculty **335** Clinical faculty **1318** Community-based faculty **21** Biomedical Sciences faculty

SOM Staff **439** Employees

Training Sites **111** LACE sites **87** Clerkship sites
These are community partners who support us in both LACE and clerkship training; many are represented in both numbers displayed.

Pathway Programs **2100+** Pre-Med students reached by pipelines

Graduate Medical Education **131** Residents & Fellows (UCR School of Medicine sponsored programs)

UCR Health Clinical Care **23,827** Patients treated (Excluding hospital patients) **41,500+** Clinic visits

Extramural Funding **\$17.2M** Research grants awarded **\$5.98M** In philanthropic gifts

All numbers presented are as of the end of the 2021-2022 academic year

UC President Drake joins UCR School of Medicine faculty



Along with his faculty appointment within the UCR School of Medicine, he served as the keynote speaker for the school's sixth Commencement and Hippocratic Oath Ceremony, on Friday, June 3, 2022.

In March, it was announced that UC President Michael V. Drake, M.D., had accepted a faculty appointment as a distinguished professor in the Department of Internal Medicine within the Division of Clinical Sciences in the School of Medicine.

"We are extremely honored to have Dr. Drake join our faculty and contribute to our school's strategic mission and vision," said Dean Deborah Deas. "With his extensive leadership experience and public service in higher education, academic medicine, and scholarly research, I know that his presence will greatly benefit our students, faculty, and staff."

As part of the appointment, Drake will provide an annual seminar and consult with UCR leadership, faculty, students, and staff on the vision and strategic plan for the School of Medicine. He will continue to hold a joint appointment as a distinguished professor in the School of Medicine at

UC San Francisco, where he has spent more than two decades as a faculty member.

Drake became the 21st president of the UC system in August 2020. He received his bachelor's degree from Stanford University and his residency, M.D., and fellowship in ophthalmology at UC San Francisco. He boasts an extensive public service record in academic medicine that includes a variety of roles with the American Medical Association, the National Eye Institute, the Association of American Medical Colleges, and the National Academy of Medicine.

READ MORE AT
atu.cr/drakeucr

"IT'S WONDERFUL TO HAVE THE OPPORTUNITY TO BE IN THE CLASSROOM AGAIN AND SUPPORT THE DEPARTMENT OF INTERNAL MEDICINE AT UC RIVERSIDE'S SCHOOL OF MEDICINE. I'M GRATEFUL TO WORK WITH DEAN DEAS TO CREATE A MISSION-DRIVEN LEARNING ENVIRONMENT FOR CALIFORNIA'S FUTURE MEDICAL PROFESSIONALS."

— PRESIDENT MICHAEL V. DRAKE, M.D.

U.S. News and World Report Recognition Endorses SOM's Diversity Mission

The School of Medicine's mission to diversify the workforce of medicine received a ringing endorsement in early April when it was recognized by U.S. News and World Report as the 11th most diverse medical school in the country. UCR SOM tied with UC San Francisco in the annual survey.

In 2021-22, the School of Medicine featured 328 medical students, 35% of whom are from backgrounds underrepresented in medicine and 51% who are from socioeconomically or educationally disadvantaged backgrounds. Thirty-three percent are the first in their family to complete college.

"Receiving this recognition from U.S. News and World Report is a great affirmation of our mission to train a diverse workforce of physicians who will improve the health of the medically underserved in our region," said Emma Simmons, M.D., M.P.H., Senior Associate Dean for Student Affairs and Salma Haider Endowed Chair for the Thomas Haider Program.

The rankings and data are based on reputation and statistical surveys the magazine conducts each year.

U.S. NEWS CONTINUED ITS REVIEW OF U.S. MEDICAL SCHOOL DIVERSITY THIS YEAR AND RATED FOUR UC MEDICAL SCHOOLS IN THE TOP 15, WITH UC DAVIS NO. 3 IN THE NATION; UCSF AND UC RIVERSIDE TIED FOR NO. 11; AND UCLA AT NO. 14.

U.S. NEWS' DIVERSITY INDEX WAS CREATED TO MEASURE PROGRESS IN ENROLLING STUDENTS FROM UNDERREPRESENTED GROUPS AND CREATING A FUTURE HEALTH WORKFORCE THAT BETTER REFLECTS THE GENERAL POPULATION.





Pictured: A rendering of the School of Medicine Education Building II, expected to open in 2023.

Advancement



CONSTRUCTION AS OF **AUGUST 10, 2021**



CONSTRUCTION AS OF **JUNE 30, 2022**

“IT WAS A LITTLE BIT BITTERSWEET TO SEE THE MODULARS TAKEN DOWN, BECAUSE THERE WAS A LOT OF HISTORY IN THEM, DATING ALL THE WAY BACK TO THE EARLIEST DAYS OF THE HAIDER PROGRAM, BUT IT WAS ALSO EXCITING BECAUSE WE KNEW WHAT IS TO COME.”

— SENIOR ASSOCIATE DEAN FOR STUDENT AFFAIRS
EMMA SIMMONS, M.D., M.P.H.

SEE THE LIVE CONSTRUCTION FEED AT
atu.cr/som2cam

Update on New School of Medicine Education Building

Over the first 12 months of work, the construction site for the School of Medicine Education Building II has been a hive of activity, where the only consistent thing from day to day has been change. But in just 365 days the site has gone from the familiar home of the SOM modular units, to an empty lot, to the towering concrete and steel frame of the new home of the School of Medicine.

“Working with Hensel Phelps (HP) and UCR Planning, Design,

& Construction has been great,” said Cynthia Carolina, head of SOM Facilities and Space Planning. “I am excited to see the project starting to come together, we have the first and second floor foundation laid, and each floor is coming up on schedule.”

In fact, the construction process has been remarkably smooth, especially considering the global logistics and supplies challenges facing the construction industry. Carolina said the Hensel Phelps team has done a great job in

anticipating potential delays and supply issues caused by the pandemic and global logistics challenges.

“With COVID, lead times have exceeded the standard delivery times, but HP has worked to make sure that time-sensitive supplies and equipment were ordered ahead of time to ensure there were no delays,” she added.

On October 22, 2021, the School of Medicine hosted a formal groundbreaking ceremony as a

parade of dignitaries, including including Chancellor Kim Wilcox, Vice Chancellor and Dean Deborah Deas, former Chair of the Regents John Perez, UC Health Vice President Cathryn Nation, Assemblymembers Sebrina Cervantes and Jose Medina, State Senator Richard Roth, and Campus Architect Jaquelyn Norman, donned hard hats and reached their blue shovels into a box of fresh dirt to mark the start of the project.

FAST FACTS

- Five stories
- 90,000 gross sq. ft.
- 57,000 assignable sq. ft.
- Room for up to 125 students per class
- Scheduled completion: Fall 2023
- Construction partners: Hensel Phelps Construction/CO Architects

Highlights of the eventful year on the site include:

LATE AUGUST — Remodeling work on the ground floor of the SOM Ed Bldg was completed, allowing study areas and offices to move from the modular units that lay on the construction site.

EARLY OCTOBER — Crews deconstructed the modular units by October 7. On the 11th, crews arrived with a 500-ton crane and two flatbed trucks, relocating them to storage in about five hours.

OCTOBER 22 — About 75 elected officials, faculty, students, staff, and community members attended the formal groundbreaking ceremony.

DECEMBER 2 — The first delivery of steel arrived and crews built a retaining wall on the south wall of the site. This allowed crews to begin the process of removing dirt in order to level the site.

JANUARY 12 — A blue construction fence went up around Lot 40, closing it off for the final time.

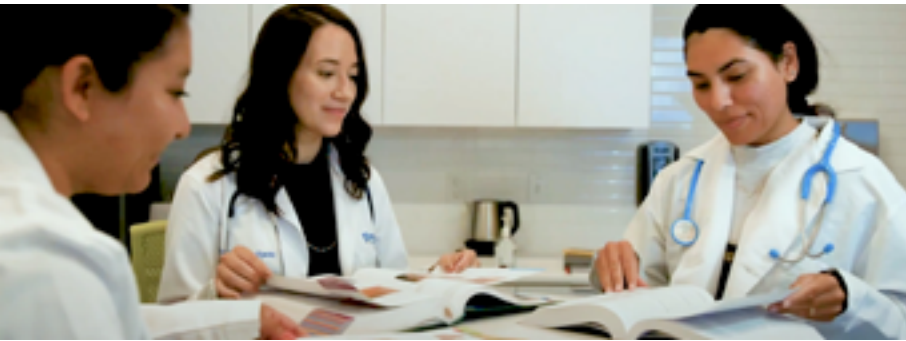
EARLY FEBRUARY — Concrete began to be poured for the foundation, which would continue throughout the month with the footprint of the building slowly growing.

MARCH 14 — Crews began to assemble the 190-foot-high crane with a boom extending 263 feet, allowing crews to bring equipment and supplies to and from any point of the construction site.

APRIL 22 — Most of the ground floor walls were completed. The deck that would become the second floor appeared, and by June 17 the third floor walls began to take shape.

JUNE 30 — Three of the five floors were in place, with the framework for the fourth floor beginning to take shape. With 14 months of work to go before completion, more change is coming.

Celebration of Medical Education Fundraiser Raises Full Mission Award Scholarship



Foundation Board members, I am delighted to announce that we have reached our \$175,000 goal to fund a full, four-year, Mission Award Scholarship," Deas said.

"This is the first year that we were able to raise a full, four-year Mission Award," said Executive Director of Development Edna Yohannes. "It would not have been possible without the relentless support of our friends, and the contributions of School of Medicine students, staff and faculty. Every dollar makes a difference in advancing our mission."

Deas also acknowledged the generosity of the Inland Empire Health Plan (IEHP), which donated \$2.6 million in both 2020 and 2021 to provide 23 Mission Awards to students.

"IEHP has been an outstanding partner and we highly value our relationship with them," she said.

Attendees were treated to a video about the scholarship program that featured first-person accounts of MS2s Alma Esparza Castañeda and Elizabeth Celaya-Ojeda and fourth-year Loma Linda University internal medicine resident and UCR SOM graduate

G. Alden Holmes. That was followed by the keynote address by first-year medical student and Mission Award Recipient Jose A. Morales, a first-generation college graduate from El Centro, California.

The event also featured a video celebration of the life and legacy of entrepreneur and philanthropist Mark Rubin, who passed away on February 13, 2021, at the age of 84. Among their frequent and generous gifts to UC Riverside, Rubin and his wife, Pam, provided the funds necessary to endow the dean's position at the School of Medicine.

Attendees enjoyed a pair of musical performances, including a piano medley of Frank Sinatra hits played by MS1 Katrina Villavert.

 [VIEW THE MISSION AWARD VIDEO AT
youtu.be/xSiidLrbXMg](https://youtu.be/xSiidLrbXMg)

 [VIEW THE MARK RUBIN TRIBUTE VIDEO AT
youtu.be/T3ZnH-dy8SY](https://youtu.be/T3ZnH-dy8SY)

FOR MORE INFORMATION, CONTACT
development@medsch.ucr.edu

TO LEARN ABOUT FUTURE EVENTS AND SUPPORT
OUR MISSION AWARDS, VISIT sommega.ucr.edu

Cecilia Tech donates PPE to UCR campus and School of Medicine

In December, the School of Medicine, The Well UCR, and UCR Student Health Services received a generous donation of medical supplies, including hand sanitizer and wipes, from Cecilia Tech, a medical equipment manufacturer located in nearby Ontario.

"We are grateful to Cecilia Tech and to Sales Manager/Government Contracts Scott Daly for making this generous contribution that will benefit the health and wellness of the students, faculty and staff of UC Riverside during the pandemic," said School of Medicine Executive Director of Development Edna Yohannes. "Scott's father, Robert Daly, left a legacy at UCR with more than a decade of service as an assistant vice chancellor and now Scott and his colleagues are continuing that spirit of service with this gift to the university."

According to Daniel Lopez-Salas, a health educator with The Well, their portion of the materials will be distributed through The Well's Public Health Peer tabling efforts, wellness PPE stations across the campus, and COVID-19 wellness kits that students can order through their website. The SOM portion will be used throughout our academic operations.

Our annual Celebration of Medical Education, our premiere fundraising event, was held on Saturday, November 20.

Highlighting the online celebration, which was attended by more than 100 supporters, was the announcement by Vice Chancellor for Health Sciences and Mark and Pam Rubin Dean Deborah Deas that the event had met its goal of funding a full, four-year Mission Award Scholarship, which provides students with the funds to support their medical education in exchange for their commitment that they will practice as primary care physicians in Inland Southern California for at least five years.

"Because of your support, that of Eric Anderson and Anderson Community Partners match pool, and the contributions of UCR



Top: Elizabeth Celaya-Ojeda (center), Class of 2024, was featured in our video noting the impact that the Mission Award has had on her. Under: Mark Rubin, philanthropist and friend of UCR, was honored in a tribute video during the program.



Education

Pictured: the Class of 2022 medical students before their commencement ceremony. More on page 12.



Twin White Coat Ceremonies Kick Off 2021-22 Academic Year

When pandemic restrictions in the summer of 2020 transformed the Class of 2024's White Coat Ceremony into an online "Orientation Wrap Up" event held over Zoom, Dean Deborah Deas made the students a promise that they would have the opportunity to have a traditional, in-person event in the future.

"Entering medical school during a pandemic is not a small feat," she said. "While this is not the traditional White Coat Ceremony, we do hope to be able to celebrate with your friends and family at a later date."

By the summer of 2021, restrictions had lifted to the point where that promise could be fulfilled, providing the school with the challenge of hosting the regularly scheduled White Coat Ceremony for the new Class of 2025 on Friday, August 6, and the rescheduled ceremony for the Class of 2024 a week later on August 13.

Masking, social distancing, and capacity restrictions were in place for the events, both held at the Student Recreation Center, but that did little to quash the celebratory atmosphere.

The Class of 2025 ceremony welcomed 88 new medical students and five new biomedical sciences students to the school, the largest class to date. Dr. Geoffrey Leung, public health officer for Riverside County Public Health and the ambulatory medical director and chair of family medicine at Riverside University Health System, served as the keynote speaker.

"I want to take a moment to recognize all of your hard work, perseverance, and commitment that made it possible for you to be here today, and also to take a moment to appreciate that your being here today probably involved the occurrence of an unlikely series of fortuitous life events combined with a large number of family, friends, teachers, and loved ones who believed in you and helped to make you who you are today," Leung said, inviting the students to turn and thank those individuals who had helped them reach this milestone in their medical education.

A week later, faculty, staff and administrators joined the Class of 2024 medical and biomedical sciences students for their belated ceremony.

"A year has passed, and it brings me great joy knowing that we can deliver on that promise and host tonight's ceremony that you so rightly deserve," Deas said to the 80 students who participated. "You completed your first year under conditions never experienced by medical students before. This was a major accomplishment, and we should take a moment to celebrate your unparalleled success."



Class of 2022 Medical Students

Sixty-eight members of the UC Riverside School of Medicine's Class of 2022 received their medical degrees on June 3, 2022 at the first in-person Commencement and Hippocratic Oath Ceremony since 2019.

Dr. Michael Drake, the 21st president of the University of California, a practicing ophthalmologist, and a member of the School of Medicine faculty, provided the keynote address. He highlighted the dedication and effort necessary to complete medical school and the students' commitment to a life of service.

"The endurance, focus, and clarity of purpose required to complete this phase of your training, particularly during this horrific pandemic,

deserves special mention," he said. "Throughout it all you had to come to your rotations learning to care and comfort the afflicted and their families all the while protecting yourselves. You saw the value of compassion at times when we all are at our most vulnerable, and you saw the value of hope and perseverance when facing a daunting challenge."

Vice Chancellor for Health Sciences and the Mark and Pam Rubin Dean of the School of Medicine Deborah Deas, M.D., M.P.H., also reflected on the COVID-19 pandemic's impact on the students' medical education. "In spite of the adversity and uncertainty brought on by the COVID-19 pandemic, you persevered, and responded when your communities needed you the

most," she said.

The student address was made by Sana Hadyah, M.D., who grew up in nearby Bloomington before coming to UCR to earn a bachelor's degree in neuroscience. She earned a Mission Scholarship at the School of Medicine and will be going to Riverside Community Hospital for her residency in emergency medicine.

"I see athletes, artists, chefs, and musicians who will go on to become medical school deans, program directors, professors, researchers, a group who will continue to make the impossible possible wherever you may end up," she said. "Please never lose sight of how far you have come, and I cannot wait to see how far we'll go together."

Yasmin Gutierrez: Serving her community

After growing up in Chino, CA and seeing the health disparities and lack of access to medical care in her community, Yasmin Gutierrez had a single-minded goal of becoming a doctor. Her focus on helping underserved communities drew her to our school's mission, however she was still unsure about choosing a specialty and felt naive about the selection process.

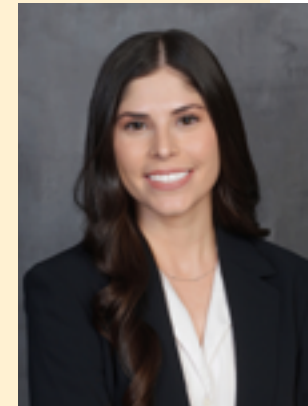
Gutierrez soon developed an interest in dermatology and completed a research year at LAC+USC Medical Center following her third year of medical school. The program not only led to several published research papers, but helped her find her niche in practicing dermatology for underserved populations.

"It felt really good to be able to help patients with diseases that are so visible and that really affect them, and to be able to see them get better and just have their confidence improve from the treatment," Gutierrez said. "That was the moment where I thought, 'okay, this is really exciting.' And it's a specialty where I can help so many people,

and it doesn't have to be limited to cosmetics or aesthetics."

Part of her work during the research year included interpreting for patients and recruiting Spanish-speaking people to clinical trials. "I later realized that's such a huge thing, being able to diversify clinical trials," she said. "It gives you the ability to have medications that you can feel confident to give to patients of diverse backgrounds."

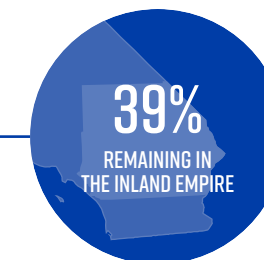
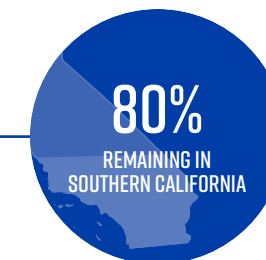
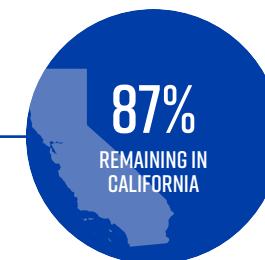
Gutierrez matched at USC and looks forward to continuing working with the same patient population during her residency. After that, she hopes to return to her home community. "I would love in the future to move back to the Inland Empire and give back to the community by serving them through increasing access to dermatologic care," she said.



70 GRADUATES

GOING THROUGH THE MATCH

98% MATCH RATE



77%

MATCHED IN PRIMARY CARE AND IE SHORTAGE SPECIALTIES

15 FAMILY MEDICINE

12 EMERGENCY MEDICINE

10 PSYCHIATRY

6 INTERNAL MEDICINE

5 PEDIATRICS

3 GENERAL SURGERY

2 OB/GYN

7 ANESTHESIOLOGY

2 DERMATOLOGY

2 RADIOLOGY

2 ORTHOPAEDIC SURGERY

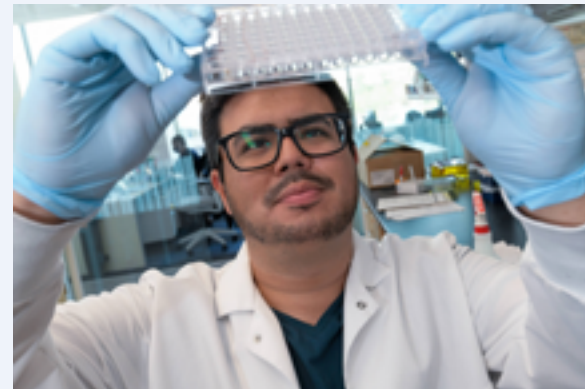
1 INTERVENTIONAL RADIOLOGY

1 PLASTIC SURGERY

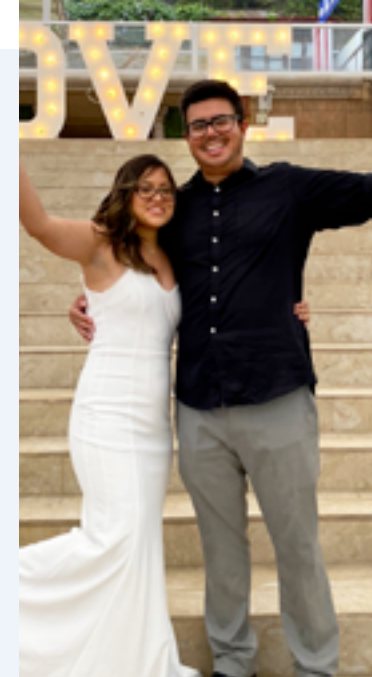
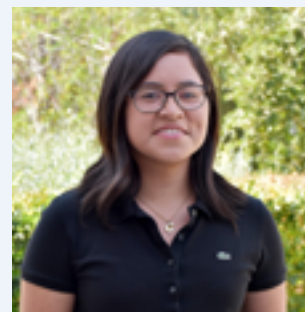
Biomedical Sciences graduates four Ph.D. researchers

On Saturday, June 4, 2022, four members of the UC Riverside School of Medicine's Division of Biomedical Sciences participated in the annual Graduate Division Hooding Ceremony at the Student Recreation Center North.

John Macbeth (pictured bottom-left) studied in Dr. Ansel Hsiao's lab, and defended his thesis titled "The Role of the Gut Microbiome in Shaping Immune Responses to *Vibrio cholerae*" on February 3, 2022.



Allison Peterson (pictured top-right) focused on astrocytes and epilepsy in the lab of Devin K. Binder, M.D., Ph.D. Her thesis titled "Glutamate Uptake Regulation as a Therapeutic Strategy in Epilepsy" was defended on Friday, May 27.



Love & Research

When Stephanie Guardado and Edward Vizcarra joined our school's Division of Biomedical Sciences in 2016 and 2017, respectively, they looked forward to the opportunity

to conduct research and earn their Ph.D.s at a top-flight research university. But by the end of their time at UCR, they had picked up more than their degrees; they also left with each other. The couple, who first met at a BioMed "Pizza Friday" class in late 2017, dated for two years before getting engaged in 2020 and married in 2021.

The two had very different research areas: Stephanie worked with PIs Marcus Kaul and Tara Nordgren on "Lipocalin-2 Regulates IL-10 Levels in a Murine Model of Repetitive Inflammation Induced by Hog Dust Extract Inhalation," while Edward's thesis, "Glutamate's influence on mGluR+ CD8 T cells in Response to Chronic Toxoplasma Infection," was developed in the labs of PIs Emma Wilson and Meera Nair. Beyond their work in the lab, their impact on the biomedical sciences program is evident in comments from their PIs.

"It has been rewarding to witness Edward's development into a truly exceptional scientist, critical thinker, writer, and mentor," said Nair, associate professor of biomedical sciences and the chair of his qualifying exam and co-sponsor of his fellowship.

"I would like to say that I'm proud of Stephanie and how far she has gotten — and I truly am very proud — but the statement almost takes away from how much she has truly done on her own, advocating for herself, seeing and seizing opportunities available to her, and

that tenacity is something I cannot take credit for," said Nordgren, who is now an assistant professor of environmental and radiological health sciences at Colorado State. "I feel honored that I have been able to mentor her and help guide her on this journey."

The last two years have been busy for the couple, who defended their theses in 2022. After getting engaged in the spring of 2020, their plans for an El Salvador wedding were delayed by COVID-19 shutdowns. Instead, they exchanged vows at a small ceremony in the summer of 2021, then returned to El Salvador in July 2022, just five days after Stephanie's defense, for a vow renewal ceremony in front of family and friends who could not make the trip to Southern California.

The Division of Biomedical Sciences, which had 32 Ph.D. students and 16 master's degree students in 2021-22, has developed a close-knit culture where the students and faculty work together and help each other out.

"We definitely appreciate the biomed students. As students, we are a close-knit community, and even the faculty, a lot of them really do care about the students," Stephanie said.

"For years, past students have created a culture of lifting up and supporting the next class," Edward agreed. "We worked hard to pay that forward and to be that resource for classes to come."

"I can say Edward has done exactly what he hoped to achieve; he is an inspiration to his community and made his family extremely proud," said Emma Wilson, associate dean of the Graduate Division and professor of biomedical sciences.

"I have no doubt he and Stephanie will continue to do so and I can't wait to see what's next for them!"

READ THE FULL STORY AT atu.cr/love



Graduate Medical Education Classes of 2022

A total of 104 physicians completed their residencies and fellowships across our 11 UCR-sponsored programs in 2022.

Each year, each program hosts their own event to celebrate its newest graduating class. This year, both the psychiatry and the family medicine residencies each held a celebration at the Mission Inn in Downtown Riverside.



PRIME Program to Train Doctors Versed in the Needs of the ABC Community

A new program at the UC Riverside School of Medicine launched in 2022 to produce physicians better trained in addressing the health needs of the African, Black and Caribbean (ABC) populations in Inland Southern California.

The first faculty director of the program will be Adwoa Osei, M.D. (pictured top-left).

“Being a Black woman and an immigrant in the field of medicine, it has been very lonely and isolating as I have found my way, navigated and carved my own path with the help of amazing mentors and advocates,” she said. “So being able to be part of this program, creating this space for students who may be like me, or taking care of people like me, is very personal and meaningful to me.”

The program features immersion programs, designated emphasis courses in Community Health or Health Profession Leadership, and mentorship from clinicians who are ABC themselves or who work in ABC communities. Fourth-year students will have the option to take a “gap year” and pursue an additional advanced degree.

Upon graduation and completion of the program, the students — who aren’t required to be members of the ABC community — will be expected to not just apply what they have learned but to teach it to colleagues and students as well. “We want these students going on to become mentors and future leaders who will advance excellent equitable care for ABC communities,” Osei said.

“BEING ABLE TO BE PART OF THIS PROGRAM, CREATING THIS SPACE FOR STUDENTS WHO MAY BE LIKE ME, OR TAKING CARE OF PEOPLE LIKE ME, IS VERY PERSONAL AND MEANINGFUL TO ME.”

Beginning with the incoming class of 2026, six selected students will be admitted to the Program in Medical Education (PRIME). The program has been developed in partnership with the UC Irvine School of Medicine Leadership Education to Advance Diversity - African, Black, and Caribbean (LEAD-ABC) PRIME and is one

of several systemwide PRIMES that are hosted at each of the UC medical schools.

“Our vision is that we will build a community of students from both campuses who will interact closely with each other while also pursuing their educational programs at their respective campus,” said Emma Simmons, M.D, M.P.H., senior associate dean for student affairs. “This program really speaks to our mission — focused on increasing diversity and recognizing the need for the inclusion of more students from the African diaspora to ensure a healthier community in Inland Southern California.”

Tactical Combat Medicine at the Center for Simulated Patient Care



In the fall, former firefighter/EMT and Army combat medic Lieutenant Jason Hasegawa, class of 2024, led a tactical medicine course in the Center for Simulated Patient Care. As a former emergency medical technician and combat medic, Hasegawa wanted to bridge the gap between first responders and physicians. Students practiced identifying and treating injuries with limited time and resources, and have the opportunity to gain additional experience through a new student interest group co-founded by Hasegawa, the Disaster Medicine Interest Group (DMIG).

Research



Pictured: Dr. David Lo, director of the Center for Health Disparities, which reached 30 total projects funded and 36 partner community organizations this year since its launch in 2019.

Community projects making a huge difference in Coachella Valley

In February, School of Medicine researchers Evelyn Vázquez, Ph.D. and Ann Cheney, Ph.D. received \$113,514 in funding from the Desert Healthcare District and Foundation Board for a project to “mitigate psychological trauma and mental health disparities in immigrant communities during the COVID-19 pandemic.”

Psychological trauma, which has been heightened by the pandemic, negatively impacts the mental health and wellbeing of undocumented immigrants. Shame, fear of deportation, language barriers, and distrust in government agencies all serve to prevent access to health and social services.

The year-long project is focused on three immigrant communities in the Eastern Coachella Valley, or ECV: migrant Latinx farmworkers, the Purépecha (a Latin American indigenous group from Michoacán, México), and recently relocated Oasis Mobile Home Estates residents.

Vázquez, an assistant professional researcher and principal investigator of the grant, explained that the project builds on statewide efforts to implement restorative circles — culturally sensitive community-based group sessions facilitated by community health workers, also known as promotoras, and mental health

professionals — to help address mental health disparities in the ECV.

A key aspect of the project is to build the capacity of promotoras to address community mental health needs, said Cheney, the grant’s co-investigator and an associate professor.

“Through this project, promotoras will increase their knowledge of trauma in Latinx immigrant communities, ability to ask questions about community mental health needs, and skills to implement an intervention to address those needs,” Cheney explained.

In April, the team of promotoras, led and organized by community researcher Maria (Conchita) Pozar, collected data about the community mental health needs of Latinx immigrant communities during the pandemic. During May and June, they conducted six virtual restorative circles with 79

Latinx community members in the ECV, addressing topics including depression (including postpartum depression), anxiety, tragedies in schools, bullying, domestic violence, psychological

trauma, feelings of loneliness, substance use and addiction, and primary prevention.

Holding the restorative circles on Zoom allowed participants to speak directly with mental health experts and to share anonymous questions and comments about domestic violence and substance use. “For many attendees, it was their first encounter with a mental health professional,” said Vázquez.

These initial successes indicate the project’s value to the community. “Our restorative circles created a collective space for grief and healing, addressed health literacy concerns (via the resources we shared during our interventions), fostered trust in the healthcare system, and increased support and social connectedness,” said Vázquez. “We hope to have the opportunity to engage members of other marginalized communities and work with them to decrease psychological trauma and mental health disparities in the ECV.”



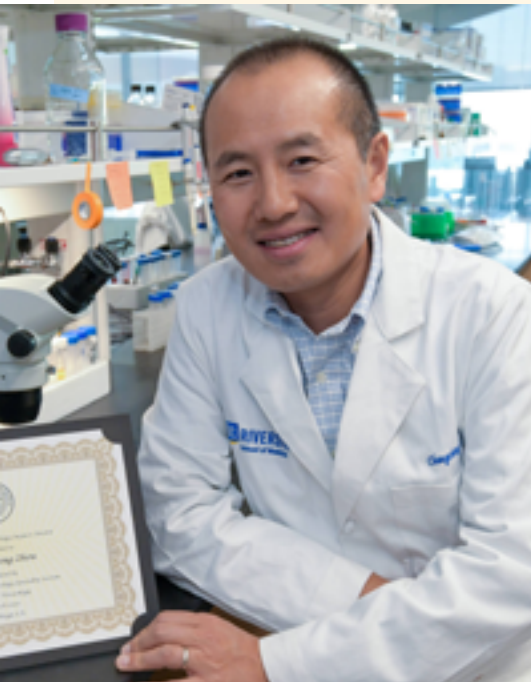
Dr. Evelyn Vázquez is also a faculty mentor in the Coachella Valley Free Clinic (CVFC), a student-led clinic through the UCR School of Medicine.



Top left: Dr. Ann Cheney, who is also director of HABLAMoS (Hispanic And Bilingual Longitudinal Ambulatory Medical Studies) and works with Dr. Vázquez at CVFC. Below: Dr. Cheney and Dr. Vázquez with the team of community promotoras in Riverside.

Research continues for COVID-19

Researchers within our Division of Biomedical Sciences have made great progress in studies focusing on the COVID-19 and Severe Acute Respiratory Syndrome (SARS), thanks to support including collaborations with other institutions and grants from a division under the National Institutes of Health (NIH).



Developing molecular traps for SARS-CoV-2

In January, Professor of Biomedical Sciences Changcheng Zhou, Ph.D. announced that he had teamed up with a researcher from UCLA to engineer novel nanoparticles to serve as “molecular traps” to target the SARS-CoV-2 virus, which causes COVID-19. The traps bind to the virus and prevent it from attacking macrophages — white blood cell that surround and kill microorganisms.

“These nanoparticles can help maintain white blood cells’ regular function to combat virus infection,” said Zhou, who co-led the research with Tzung K. Hsiai, a professor of medicine and bioengineering at UCLA. UCR Postdoc Zhaojie Meng and Ph.D. graduate student Rebecca Hernandez were also involved in the research.

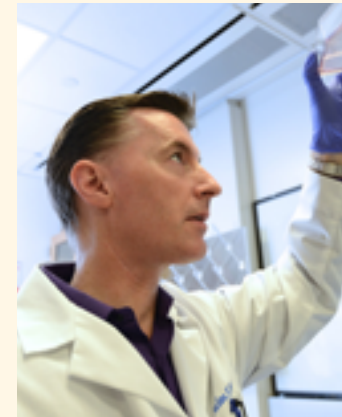
The white blood cells also produce inflammatory proteins called cytokines, which are an important part of the body’s immune response but can become out of control. When the

bloodstream becomes flooded with cytokines, also known as a cytokine storm, it can cause infections that can kill tissue and damage organs.

“Our findings can potentially be used to treat COVID-19-associated diseases, including heart disease,” Zhou said. “In addition to lung inflammation or injury, approximately 15% of COVID-19 patients with pre-existing conditions may develop acute cardiac arrhythmia and myocarditis, and macrophages may play an important role in this process.”

The research paper, appearing in *Theranostics*, is titled “An engineered nano-liposome-human ACE2 decoy neutralizes SARS-CoV-2 Spike-protein induced inflammation in both murine and human macrophages.” The research was funded in part by the American Heart Association and the National Heart, Lung, and Blood Institute.

Grant supports research aimed at alleviating genetic mutation that increases COVID-19 risk



A three-year, \$1.1 million grant to Professor of Biomedical Sciences Declan McCole, Ph.D. will explore how a certain protective gene’s loss of function can increase the risk of infection with SARS-CoV-2.

The grant is from the National Institutes of Diabetes and Digestive and Kidney Diseases, a division of the NIH. McCole’s lab will be supported in this study, titled “Mechanistic Characterization of the IBD Risk Gene, PTPN2, as a Novel Susceptibility Marker for Increased SARS-CoV-2 Infection,” by Tara Nordgren and Meera Nair in the Division of Biomedical Sciences, School of Medicine; and by Rong Hai in the Department of Microbiology and Plant Pathology in the College of Natural and Agricultural Sciences.

McCole’s lab has identified that individuals with protein tyrosine phosphatase non-receptor type 2 (PTPN2) mutations have increased expression of the protein ACE2, which functions as the target on the surface of cells lining the lungs and intestines that SARS-CoV-2 binds to before invading the body. The research award will allow the lab to investigate the mechanism by which the PTPN2 mutations increase the levels of ACE2 and infection by SARS-CoV-2. The study will also determine if this risk can be corrected using clinically approved drugs that could reduce the risk of infection.

McCole explained this work may help to clarify a major area of confusion relating to whether patients with chronic inflammatory conditions are at increased risk of SARS-CoV-2 infection.

“Our study will help determine if this class of anti-inflammatory drugs may in fact reduce rather than increase the risk of infection,” he said. “This will provide mechanistic evidence to support clinicians in deciding to maintain treatment regimens for their patients.”

PLpro may act as treatment for COVID-19 and SARS

In February, a team led by Professor of Biomedical Sciences Scott Pegan, Ph.D. identified a coronavirus enzyme called papain-like protease, or PLpro, as a potential target for drug treatments of the viruses that cause both COVID-19 and SARS.

While the research did not identify the drug itself, it does allow researchers to further zero in on how the virus goes undetected in the early stages of infection and may result in the development of effective therapeutics.

“Our paper highlights that PLpro is not just a valid drug target for the current threat of COVID-19, but for other coronaviruses from that group that could cross from animals to humans in the future,” Pegan said. “Our goal is to open the door to future therapeutic design considerations for targeting PLpro as a strategy for pan-coronavirus subgroup 2b therapeutics.”

Pegan was joined by researchers from the University of Georgia and Wayne State University. The research was funded by the National Institutes of Health

and industry partner Sunshine BioPharma. The structural biology data collection for the project was supported by the Department of Energy.

The research paper, titled “Exploring Noncovalent Protease Inhibitors for the Treatment of Severe Acute Respiratory Syndrome and Severe Acute Respiratory Syndrome-Like Coronaviruses,” appeared in *ACS Infectious Diseases*.





Pictured: UCR Health leadership at the 2021-2022 UCR Health retreat.



Dr. Elizabeth Morrison-Banks

After growing up in a low-income family in New York state, Elizabeth Morrison-Banks, M.D., felt an immediate connection to Riverside when she joined the School of Medicine in 2016.

“In order to make sure that the Inland Southern California region has at least a few neurologists, we have to make sure that we’re offering career opportunities for medical students, for residents, and beyond,” she said. “I’ve always felt that you really have to build a pathway for students all throughout their education.”

Her initial focus was in family medicine, but helping her mother and aunt manage neurological conditions led her to specialize in neurology instead. Her eventual emphasis on multiple sclerosis (MS) and her desire to serve the local community brought her to UCR.

She enjoyed working with small groups of neurology residents, who she said became like a family, but she soon stepped down from her position as director to become associate dean of medical education quality and integration at the School of Medicine. “I’ve always felt that you really have to build a pathway for students all throughout their education.”

While she says the backbone of that service is primary care, she knows that specialties are vital as well — particularly ones like neurology in areas such as Riverside that lack specialized care for the thousands of residents with MS.

The position draws on her knowledge from her teaching background, which includes a master’s degree in education and experience as a pre-doctoral director. In addition to helping the school continue accreditation, she actively works to improve the quality of the medical education program and, in turn, to increase the level of care available to patients in the area.

To help remedy this issue, she founded the UCR Multiple Sclerosis Program, which became the first program of its kind in the Inland Empire (IE) to be recognized by the National Multiple Sclerosis Society as a comprehensive MS center. Besides offering MS-specific care, she applies the findings from her research on caregiver abuse and neglect to help recognize and aid MS patients facing mistreatment.

“If you don’t know the scope of the problem, you can’t solve it,” she said. “Having been involved in that research, I think it makes me want to be attuned to clues that a patient might be in jeopardy, or that there might be more to the story of what’s going on at home.”

Morrison-Banks says she appreciates her ability to contribute to UCR. “I’ve always gravitated to serving the communities that most need it,” she said. “As a clinician, you find yourself in a network of colleagues who also believe in this mission. I’m also continually inspired by our students and their plans to serve the community,” she added. “I think it reminds us as clinicians why we went into medicine in the first place.”

Morrison-Banks also drew on her background in medical education to start a Riverside Community Hospital-sponsored neurology residency program where many UCR School of Medicine faculty teach to help address the shortage of neurologists both in the IE and across the country.

SEE DR. MORRISON-BANKS’ UCR HEALTH PROFILE AT ucrhealth.org/doctor/elizabeth-morrison-banks-md

UCR Health Marketing Partnership Brings New Nursing Facility to Ontario Airport

Nursing mothers traveling through Ontario International Airport (ONT) in Ontario, California are able to take advantage of new, modernized facilities to nurse their babies thanks to an innovative brand partnership between the airport and UCR Health.

The partnership is part of a two-year agreement that provides UCR Health the opportunity to highlight its team of physicians, specialists and healthcare professionals dedicated to improving the health of families throughout the airport’s two terminals, including the two nursing stations.

The rooms feature comfortable chairs for both adults and children, as well as toys,

coloring books, posters and other items that could distract a young sibling while their mother feeds her infant.

Dan Cappell, ONT’s chief commercial officer, said the partnership aligns with Ontario International’s in-house advertising strategy run by Fuse Advancement to work with innovative partners looking to brand their organization and services in unique ways.

“We are thrilled to work with UCR Health in creating a platform to raise awareness of the great work they do, and offering nursing mothers a private, secure and comfortable space,” Cappell said.



Pictured: The SOM admissions team invited admitted incoming students from the 2022 cohort to a recruitment event in April.

Community

Opening doors for primary care for homeless populations

The UCR School of Medicine received a three-year \$600,000 grant from the UniHealth Foundation, a non-profit philanthropic organization based in Southern California, to reopen a clinic for the homeless population of Riverside County. This clinic, the Hulen Place Clinic, is part of the Hulen campus, which is the only full-service homeless facility in the western Riverside County that combines an emergency shelter, respite care, behavioral health services, bridge housing, and a medical clinic. The medical team will also work with housing agencies to identify the housing needs of unsheltered homeless patients.

The grant will support UCR Health in start-up costs, including renovation of the clinic space, and staffing. Homeless individuals will be given primary care and preventive services, and will be able to take advantage of walk-in and same-day appointments.

“These efforts will help improve patient care outcomes and reduce unnecessary emergency room visits and hospital readmissions,” said Edna Yohannes, the medical school’s executive director of development. “We look forward to seeing this partnership have an immediate impact in our region.”

The City of Riverside is home to approximately 20% of the County of Riverside’s homeless population. The clinic is expected to serve up to 4,800 patients annually, including 1,300 chronically homeless. Services will target underserved children and adults in need of preventive care as well as those with chronic health conditions, including asthma, diabetes, heart disease, obesity, and mental health disorders. The clinic will serve pediatric, adult, and geriatric populations.

“Ultimately, we plan to have a federally qualified health center for the homeless,” said Donald Larsen, CEO of UCR Health. “This will allow UCR Health and the medical school to set the foundation for a mission-aligned sustainable healthcare clinic in the City of Riverside.”

Student-led free clinics continue to build community trust

Student-driven free clinics give UCR medical students hands-on training while providing needed quality care to underserved populations in the Inland Empire. The region, which had just 41 primary care physicians per 100,000 people in 2020 according to the California Health Care Foundation, has the fewest primary care physicians by population in all of California.

The School of Medicine’s three clinics — the Riverside Free Clinic, San Bernardino Free Clinic, and Coachella Valley Free Clinic — offer medical, dental, counseling, psychiatry, and optometry services with supervision from UCR faculty. By providing services at no cost to patients and requiring no insurance or ID, they help ensure that everyone can access care.

The clinics are important to patients in the community, some of whom see them not as a safety net but as their primary choice for care. The Riverside Free Clinic, in particular, has been providing services to the community for over 15 years. “A lot of people come to us because they really want us,” said Matt Jason Llamas, M.D., who graduated from UCR SOM in 2022 after serving as the clinic’s medical student manager. “I’ve had times where I’ve tried to refer patients to a federally qualified health center because they can do more than we can, but they say, ‘No, we trust you.’”

The newest location, the Coachella Valley Free Clinic, launched in 2019 as a student initiative. It was inspired by research conducted by Associate Professor Ann Cheney, Ph.D. on the health care disparities among migrant farmworkers in the area. With faculty supervision from Cheney, the clinic seeks to reach members of this community, many of whom may avoid seeking traditional care out of fear of deportation or the lack of bilingual services.

Jasmin Regalado, class of 2025, was drawn to volunteer at the new clinic after finding that her Spanish-speaking skills helped put patients at ease. Growing up translating for her mom at doctor’s appointments in Los Angeles, she knew the importance of providers who speak the patient’s language. “I see patients come in and as soon as they talk to a medical student that can speak Spanish, they just instantly let this barrier down,” said Regalado, who became the clinic’s co-director during her first year of medical school. “That really makes me happy and grateful to be a part of this opportunity, especially because that sort of situation is one of the reasons why I wanted to become a doctor.”

“I’VE HAD TIMES WHERE I’VE TRIED TO REFER PATIENTS TO A FEDERALLY QUALIFIED HEALTH CENTER BECAUSE THEY CAN DO MORE THAN WE CAN, BUT THEY SAY, ‘NO, WE TRUST YOU.’”



Community tours and annual open house

On April 12-15, 2022, the School of Medicine hosted its online Spring Community Open House. The event was held online for the second consecutive year due to the COVID-19 pandemic.

But thanks to the lifting of some in-person restrictions, the School of Medicine was able to invite student groups from local middle and high schools, as well as admitted incoming medical students, to physically tour the School of Medicine Education Building and the new Center for Simulated Patient Care on Saturday, April 9.

On the tour, attendees also had a chance to see the crane towering over the construction site of Education Building II, and the miniature model of the building inside the Education Building's lobby. They were then escorted to the simulation center, where a staff or faculty member would explain its unique features as the largest on-campus simulation center in the UC system.

A few days later, the online sessions for the open house began, and attendees engaged with School of Medicine leadership, staff, medical students, and biomedical sciences candidates as they learned more about the opportunities and future of our school.



WATCH THE SIMULATION CENTER VIDEO AT youtu.be/PT4U_uYzdAk

SEE THE OPEN HOUSE SESSION PLAYBACKS AT medschool.ucr.edu/openhouse

Celebrating Women in Medicine and Science with Lilly Marks

On September 14, 2021, Former AAMC Board Chair Lilly Marks kicked off the annual Celebration of Women in Medicine and Science with a presentation titled "Leadership & Management: Pearls of Wisdom." Marks' keynote touched on gender equity, salary requests, mentorship, and a variety of other topics that Marks learned throughout her 4+ decade career.

The Celebration of Women in Medicine and Science, which is hosted by the UCR SOM Office of Faculty Development, also featured an allyship panel moderated by Julie Youm, Ph.D., the executive director of UCI Health Affairs Office of Education, and a medical student panel moderated by Christina Rangel, the UCR SOM's career services specialist.

The event was then closed out by Guadalupe Federico, Ph.D., associate professor of internal medicine, and assistant dean of Faculty Affairs and Career Development for the College of Medicine-Phoenix (COM-P) at the University of Arizona. Her remarks touched on strategies to turn day-to-day work, learning, and interests into non-traditional and traditional high-quality scholarship.

 VIEW LILLY MARKS' KEYNOTE AT youtu.be/j8alXOQFi84

 VIEW THE ALLYSHIP PANEL AT youtu.be/nAIOhbWWQ8g

 VIEW THE MEDICAL STUDENT PANEL AT youtu.be/40XZJ_LYBYE

 VIEW GUADALUPE FEDERICO'S CLOSING REMARKS AT youtu.be/xlbK35XSxwE

Dr. Byron Ford pioneers the Stroberg Lecture Series

The School of Medicine's very own Byron Ford, Ph.D. was the speaker at the first event of Consilience: The Albert Stroberg Lecture Series on October 28.

The lecture series, which is slated to host multiple events each year, intends to provide a meaningful and engaging forum for the delivery of educational addresses on basic science topics that will be of interest and use to the practicing clinician.

Ford's presentation was titled "Neuregulin-1 for Stroke Treatment: A Journey from the Bench to Clinical Translation" and discussed several stroke-related topics, including the decline in stroke death rates in many US regions since 2013.





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Our Mission

The mission of the UCR School of Medicine is to improve the health of the people of California and, especially, to serve Inland Southern California by training a diverse workforce of physicians and by developing innovative research and health care delivery programs that will improve the health of the medically underserved in the region and become models to be emulated throughout the state and nation.

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