

UC RIVERSIDE SCHOOL OF MEDICINE

# CELEBRATING RESILIENCE

YEAR IN REVIEW  
2019 - 2020





## 2019-2020 CELEBRATING RESILIENCE

For the UC Riverside School of Medicine, the 2019-2020 year truly highlighted the resilience of our school and its people. With resilience at the heart of the school's origins, it may come as no surprise that our students, faculty, and staff applied that same spirit and persistence into this year, from receiving support from the state legislature to proactively helping our communities amidst the COVID-19 pandemic. The progress made this year has been remarkable and only makes us more excited to continue on in our mission to serve Inland Southern California.

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# BY THE NUMBERS

## MESSAGE FROM THE VICE CHANCELLOR AND DEAN



The 2019-2020 year was undoubtedly one to remember for the UCR School of Medicine. While we certainly experienced some daunting challenges, this was also a year full of achievements and milestones that continue to reinforce why I am so proud of all the people who work together to make our mission a reality. Although the year quickly turned into an unprecedented one, the persistence and dedication of the School of Medicine saw no interruptions.


I have been delighted to witness the creativity and resilience on display by our esteemed students, faculty, and staff, whose perseverance embodies the essence of our core values that I so dearly cherish. This year's Year in Review not only highlights all the successes we can proudly celebrate, but also features an additional insert showcasing the many ways that our school responded to adversity in the time of the global COVID-19 pandemic.

While last year's issue highlighted major expansion with the opening of two major research spaces, we continued to push forward this year with the construction of a Clinical Skills and Simulation Suite, as well as the planning for construction of a new medical education building.

I am also excited to announce that the State of California secured \$25 million for our school in the Budget Act of 2020, granting us much-needed funding to expand the School of Medicine by doubling enrollment over the next several years, thus boosting our ability to continue fulfilling our mission.

Our school also received the 2020 Health Professions HEED (Higher Education: Excellence in Diversity) Award from *INSIGHT into Diversity* magazine, marking our third time receiving this honor. While we continually strive to meet the needs of the medically underserved in our communities, this year's award carries even greater significance as we were the only UC health professions school to earn this distinction in 2020. Not only that, our Bridges to Baccalaureate Program also received the magazine's Inspiring Programs in STEM Award, also for the third time.

The generosity of students, faculty, staff, and community members with their time, efforts, and support is what allows me to say that I am proud of where we are as a result of working together. This year has been truly historic for the UC Riverside School of Medicine, and I am confident that the spirit of our values will continue to carry us forward as we strive towards a stronger and healthier community.

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

**BIOMEDICAL SCIENCES**

**37** PH.D. STUDENTS/  
CANDIDATES

**4** M.S. STUDENTS

**38** AFFILIATED FACULTY FROM  
ACROSS UCR PARTICIPATING  
IN OUR PROGRAM

**273** M.D. STUDENTS

**34%** UNDERREPRESENTED  
IN MEDICINE

**51%** DISADVANTAGED

**MEDICAL STUDENTS**

**17%** ENGLISH AS A  
SECOND LANGUAGE

**37%** FIRST IN FAMILY TO  
COMPLETE COLLEGE

**65%** TIES TO THE  
INLAND EMPIRE

**FACULTY**

**336** CLINICAL FACULTY

**1146** COMMUNITY-  
BASED FACULTY

**22** BIOMEDICAL  
SCIENCES FACULTY

**SOM STAFF** **219** EMPLOYEES

**TRAINING SITES** **130** LACE SITES **80** CLERKSHIP SITES  
There are community partners who support us in both LACE and clerkship training; many are represented in both numbers displayed.

**PIPELINE PROGRAMS** **1943** PRE-MED STUDENTS  
REACHED BY PIPELINES

**GRADUATE MEDICAL EDUCATION** **114** RESIDENTS & FELLOWS  
(UCR SCHOOL OF MEDICINE  
SPONSORED PROGRAMS)

**UCR HEALTH CLINICAL CARE**

**6631** PATIENTS TREATED  
(EXCLUDING HOSPITAL PATIENTS)

**25,398** CLINIC VISITS

**EXTRAMURAL FUNDING**

**\$29.3M** RESEARCH GRANTS  
AWARDED

**\$4.85M** IN PHILANTHROPIC  
GIFTS

ALL NUMBERS PRESENTED ARE AS OF THE END OF THE 2019-2020 ACADEMIC YEAR.

# ADVANCEMENT

## THE RESULTS OF INCREASED STATE SUPPORT

### PLANNING FOR INNOVATION AND GROWTH

*A major highlight of last year's Year in Review was the approval of a new medical education building, made possible after state legislators approved \$108M in funding. The new building, which will contain instruction, instructional support, student support and clinical faculty offices, will be built on a plot just south of the current SOM Education Building.*

Since early December, a working group including Senior Associate Deans Emma Simmons and Brigham C. Willis, M.D., M.Ed., Assistant Dean Linda Reimann, M.B.A., Associate Professor Christian Lytle, Ph.D., Planning Manager Cynthia Carolina, and many more faculty, staff, and students has worked with Project Planner Melissa Garrety and Project Manager Mihai Gavan of UCR Planning Design & Construction under instruction of campus architect Jacqueline Norman as well as consultants from infrastructure firm AECOM for a groundbreaking goal of creating a facility that will fulfill the unique educational needs of our school.

Several workshops and individual meetings were held using exercises that allowed participants to articulate how they imagined operating in the new space.

"One of the things we love to do is to sit in a room with people like you, listen to your everyday, and build the spaces around that," said AECOM's Jessica Orlando at a presentation during the February Dean's Town Hall. "We are developing the criteria document from which the next team of architects will design the building.

The criteria documents, also called "basis of design documents," were created by Garrety, Gavan, and the AECOM consultants, taking suggestions from the

workshops that covered visioning, goals, site development, sustainability, design criteria, and design concepts.

The construction of this new building creates an opportunity to form a medical school campus with Medical Education Building 1 and the Clinical Skills and Simulation Suite being built in Orbach Library, all tied together with a central gathering plaza.

"The new building will be a welcome 'home' for our students to relax, spend time with each other in small or large groups, and most importantly for us to all be able to gather as a medical school family," Simmons said. "I can't wait!"

**"THE NEW BUILDING WILL BE A WELCOME 'HOME' FOR [...] US TO ALL BE ABLE TO GATHER AS A MEDICAL SCHOOL FAMILY."**

The next step in the project, whose transition amid the pandemic has gone quite smoothly, is to select Design & Build teams to compete for the project. The design-build process is intended to provide

creative solutions, encourage added space and amenities beyond the basis of design document, and bring the best value to the project.

"The design competition will include multiple steps, during which people from the School of Medicine will have varying roles," Garrety said.

The winning team will be selected through a rigorous scoring process then will need to go the UC Regents for design and California Environmental Quality Act approval, which should take place in March 2021. Once ground is broken, construction is estimated to take about two years.

*This new building will secure our ability to fulfill our mission for decades to come, and eventually expand our total enrollment to 500.*

**"CONGRATULATIONS! THE GOVERNOR HAS SIGNED THE BUDGET ACT OF 2020. THE UC RIVERSIDE SCHOOL OF MEDICINE'S \$25 MILLION IS NOW FINAL."**

These are the first few words of an email that Vice Chancellor for Health Sciences and Mark and Pam Rubin Dean Deborah Deas, M.D., M.P.H. received from a colleague from the UC Office of the President (UCOP) on June 29, 2020.

This email meant that our school would receive much-needed annual support that will allow the school to add faculty and staff, provide more educational facilities and resources, and, eventually increase the annual class size to 125 students per year, or 500 across the full four-year program.

"It was so exciting to receive that email," Deas said. "I couldn't wait to forward it on and share the news. So many people had contributed to the effort over the last two years and every one of them played a role."

The journey toward receiving this support began during the 2019 budget process, when California Senator Richard Roth and Assemblymembers Jose Medina and Sabrina Cervantes sponsored legislation to add \$25M to the state's budget allocation for our school. While the funding did not make its way into the final version of the document, the effort was still seen as a success as there was clear support to provide financial support for the UCR School of Medicine.

"The ultimate issue was not whether or not we should receive funding, but the mechanism by which the funding would come from the state and through the UC Regents," Deas said. "Even though we didn't get the funding, we did get guidance on how to proceed through the process in 2020."

In January 2020, the funding was included in Governor Gavin Newsom's original \$222.2 billion budget proposal. Though its inclusion in the final budget was not guaranteed, its presence in the initial budget was a positive sign. Leaders from UCR and UCOP joined Dean Deas to testify in hearings and lobbied legislators and members of the governor's office in support.

But in March, everything was thrown into turmoil by the COVID-19 pandemic, which forced cuts in and even elimination of many important programs in the state. Initially, it was thought the School of Medicine would not receive anything, but there was news that the school might still receive a portion of the funding. As the pandemic laid bare the need for more healthcare in Southern California, the number started with \$11.3M, but before long was back to the full \$25M.

While little could be done in the midst of the pandemic, legislators recognized that they could make a difference in the long-term by providing the opportunity to teach more doctors.

"The funding is a substantial investment in our future. It puts us in a position to expand our enrollment and double our medical doctors in training in the coming years," Deas said. "I couldn't be more thrilled at the thought of how this funding will allow us to train future physicians who will provide the critical healthcare needed to address the longstanding health disparities in the Inland Empire."

"None of this would have been possible without the support and advocacy of our locally elected officials, including Senator Roth and Assemblymembers Medina and Cervantes, who devoted their time and energy to seeing this come to fruition," she added. "Their leadership has made a lasting impact on our medical school and local community."



READ MORE AT [atu.cr/yir205](http://atu.cr/yir205)

ALLEVIATING SOUTHERN CALIFORNIA'S PHYSICIAN SHORTAGE  
**THANKS TO THE GENEROSITY OF INLAND EMPIRE HEALTH PLAN**

The School of Medicine received a gift of about \$2.6 million from the Inland Empire Health Plan (IEHP) to provide Mission Awards for the school's students, a gift that will support up to 23 students in their medical education.

"UCR School of Medicine's mission and commitment to serve and support Inland Empire communities is no secret," said IEHP Chief Executive Officer Jarrod McNaughton. "We see this

commitment in the framework of their programs and in the hearts of their students. It is our hope that these awards encourage local students to consider careers in medicine and further incentivize qualified students to remain and serve in the Inland Empire."

The generous donation from IEHP is in addition to the \$4.85 million of philanthropic support we received in the 2019-2020 academic year.

## ADDRESSING OUR GROWTH WITH A NEW SIMULATION SUITE

*In April, work began on the School of Medicine's new Clinical Skills and Simulation Suite, a 13,000-square-foot renovation of an existing space in the basement of UCR's Orbach Science Library.*

"Our original simulation rooms were designed in 2010 for a class size of 28, and we had about 1,100 square feet of space. Today, our class size is 80 and projected to grow to 120. Combine that with our post-medical school education and licensure preparation for graduate medical education, we have completely outgrown our current facility," said Christopher Miller, director of operations for the Center for Simulated Patient Care.

integral part of the curriculum. By practicing on lifelike mannequins and real people pretending to have a variety of symptoms, students have the opportunity to step into an actual clinical learning environment that poses no risk to the patient and minimal risk to the learner.

"Simulation offers learners a chance to step into a clinical suite where they may be presented with anything from a simple common cold to a life-threatening cardiac event," Miller said.

As part of the curriculum in the new facility, students will be presented with simulation cases that build upon the foundations of past training.

"Our future simulation cases will be crafted in such a way that the learner can follow a single simulated patient through their healthcare journey; from admittance, to treatment, to discharge, to rehabilitation," Miller said. "All along the pathway to wellness, the healthcare learner will be responsible for writing admittance paperwork, treatment and medication orders, follow-up treatment, etc. — all simulated, all applying learned knowledge and skills and having the opportunity to review those with an educator. This will help them become better doctors."

Scheduled for completion in March of 2021, the project will provide new mock exam rooms, Clinical Skills, Emergency Room and Intensive Care simulation spaces, as well as new office and storage spaces. A new state-of-the-art audio-visual system will connect the training rooms with command centers.

In a little over 20 years, clinical medical training using simulation has gone from a rarity to an



*For naming opportunities, please contact [development@medsch.ucr.edu](mailto:development@medsch.ucr.edu)*

## CYNTHIA CAROLINA KEY LIAISON ON CONSTRUCTION PROJECTS FOR SCHOOL OF MEDICINE

Cynthia Carolina was named our school's facilities and space planning manager in January 2020 and was immediately tasked with two major projects: the construction of the Clinical Skills and Simulation Suite in the Orbach Library and the new Medical Education Building 2, which had just entered a crucial phase in its design process.

But just as she was settling into her new position, the COVID-19 pandemic changed everything. Rather than spending most of her time focusing on these two major projects, Carolina and her team, Debbi Trujillo and Arthur Bernal, found themselves working on new

**"THIS IS AN OPPORTUNITY TO BE PART OF A FAST-GROWING ORGANIZATION THAT IS FORWARD-THINKING, DIVERSE, AND OFFERS OPPORTUNITIES FOR GROWTH."**

health and safety measures for critical workers, including those who make up the UCR Health clinical workforce, as well as planning for back-to-work scenarios.

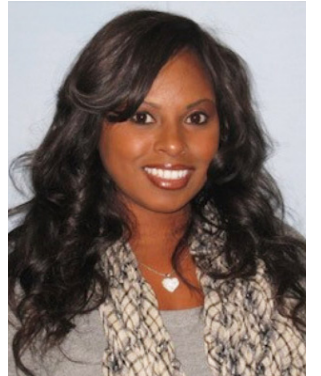
The team also played a major role in the move of the School of Medicine's Family Medicine Residency Program in the spring to St. Bernardine Medical Center in San Bernardino.

"A key role to project managing is building relationships and having good communication," she said. "COVID-19 created a unique situation, but as time went on, we began to feel more

comfortable about our safety measures and, thanks to some great vendors who were willing to work with us, we were able to come together and get the job done." The two major construction projects continued on schedule. In both cases, Carolina worked with faculty and staff within the School of Medicine, vendors, and the UCR Planning, Design & Construction team.

"Most people don't realize the amount of planning that goes into projects like these. Depending on the complexity, projects can take months, even years to complete and the amount of detail, collaboration, and communication is what makes a project successful," said Carolina. "There are so many moving parts to these two projects, starting with initiation and planning to execution and project closure, all while staying on time and within budget."

Carolina, who previously worked at the County of Riverside Department of Social Services for more than nine years, said she saw coming to UCR as "an opportunity to be part of a fast-growing organization that is forward-thinking, diverse, and offers opportunities for growth. I am grateful to be part of this team of talented and caring people."



## NEW ENDOWED CHAIR IN CANCER RESEARCH

The School of Medicine appointed Adam Godzik, Ph.D. as a new endowed chair, effective starting July 2020. Godzik, also a professor of biomedical sciences, is the newly endowed Bruce D. and Nancy B. Varner Presidential Endowed Chair in Cancer Research. He has made outstanding strides especially this past year, and we are grateful for the Varners for recognizing our faculty, their research, and the programs they conduct with the highest accolade a university can bestow upon a professor.

*See page v in the COVID insert for Godzik's recent discoveries of a potential drug target for the SARS-CoV-2 coronavirus.*





## CELEBRATING OUR MISSION

The School of Medicine held its second annual Celebration of Medical Education in late November 2019 at the Riverside Convention Center to garner support for the Mission Award fund, which offsets the cost of medical school for our aspiring physicians who agree to serve in the Inland Empire after they complete their post-M.D. training.

The Mission Awards continue to allow students to navigate through their medical education with less weight on their shoulders and a priceless sense of support and belonging, while assisting our school to fulfill its mission of bringing much-needed physicians to our communities.

Similar to the inaugural event, the program featured a special Mission Award video featuring School of Medicine leadership, alumni, and current students highlighting the significance of the award.

"[The students] are getting a chance to work with people they care about who look like them, and are entrusting their life in these students' hands," said Associate Dean of Assessment and Evaluation Kendrick Davis, Ph.D.



Anica Sayoc is the Biomedical Sciences Doctorate who graduated in winter 2020. Andrew Lapato and Pedro Anthony Perez joined her as they received their doctorate degrees in summer 2020.

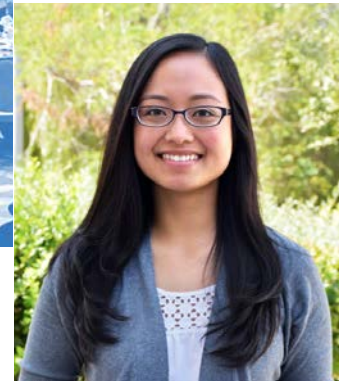
“ THIS SCHOLARSHIP HAS REAFFIRMED MY ‘WHY,’ CONNECTED ME TO A GREATER PURPOSE, AND SERVES AS A SOURCE OF MOTIVATION TO KEEP GOING AND AS A REMINDER OF THE IMPACT OF GIVING BACK TO OTHERS. ”

— Osariemen Ogiamen  
Class of 2023,  
Mission Scholarship Awardee

VIEW THE 2019 MISSION AWARD VIDEO AT [YOUTU.BE/E7ISMZWSMD4](https://youtu.be/E7ISMZWSMD4)

*The Celebration of Medical Education is an annual event that allows attendees the opportunity to engage with mission award students whose lives and experience in medical school have been greatly impacted by the generosity of our supporters.*

FOR MORE INFORMATION ABOUT THE FUTURE EVENTS, VISIT [SOMGALA.UCR.EDU](https://SOMGALA.UCR.EDU)



## CELEBRATING OUR 2020 GRADUATES

The celebrations for all 2020 graduates were particularly unique due to closures that prevented typical in-person ceremonies from taking place.

Our newest class of doctors, the M.D. Class of 2020, had an online ceremony planned by the Strategic Initiatives team. Before the ceremony, each student was mailed a box containing printed materials that attendees traditionally receive at commencement, as well as regalia to wear for the event.

"The students voted on the elements of the traditional ceremony they wanted to keep for the online version," said Kate Dorff, manager of external relations and protocol, who took the lead on planning the commencement ceremony. "Luckily, we were able to make those into something that worked in a Zoom setting."

The biomedical sciences, residency, and fellowship cohorts also each had their own formats of an online-based celebration to celebrate the culmination of their time with the School of Medicine.

The psychiatry residency and the child and adolescent psychiatry fellowship, for example, held an online ceremony via Zoom, opening with slides from the graduates, who also presented Teacher of the Year awards to three recipients. They were able to add a little fun to the ceremony with a movie trailer-inspired video introducing the new PGY-1 class.

**2020 ALSO MARKS THE YEAR THAT 13 MEMBERS OF OUR INAUGURAL M.D. CLASS (CLASS OF 2017) ARE COMPLETING THEIR RESIDENCY TRAINING.**

- 3 BIOMEDICAL SCIENCES DOCTORATES
- 71 DOCTORS OF MEDICINE
- 12 INTERNAL MEDICINE RESIDENTS
- 8 FAMILY MEDICINE RESIDENTS
- 4 CARDIOVASCULAR DISEASE RESIDENTS
- 2 CHILD & ADOLESCENT PSYCHIATRY FELLOWS
- 2 PSYCHIATRY RESIDENTS
- 1 INTERVENTIONAL CARDIOLOGY RESIDENT

One member of our inaugural class, John Costumbrado, M.D., is returning to a very familiar setting, but now in a different position. After completing his emergency medicine residency locally, he is joining the core faculty of the Riverside Community Hospital/UCR Emergency Medicine Residency program as an assistant clinical professor and emergency physician.



"I was drawn to UCR SOM because of its mission. I am staying in the area because of the training I received and to fulfill that mission," Costumbrado says. "Thanks to all the amazing faculty and staff of the School of Medicine for all you have done for me, my family, and our community."

## WHITE COAT 2019

Our M.D. Class of 2023 was welcomed into our school at their White Coat Ceremony in August 2019. This group of 77 students continues to represent our mission well, with 66% of them from Inland Southern California and 44% underrepresented in medicine.



## MATCHING TOGETHER, APART

Another large annual event for Class of 2020 medical students was celebrated with a unique format. Due to the coronavirus outbreak and the stay-at-home order issued in mid-March, the class' Match Day ceremony took place on the video-streaming service Zoom.

A traditional Match Day involves all medical students in the country opening envelopes at precisely the same time to discover if and where they have been accepted into a residency program. This year, they

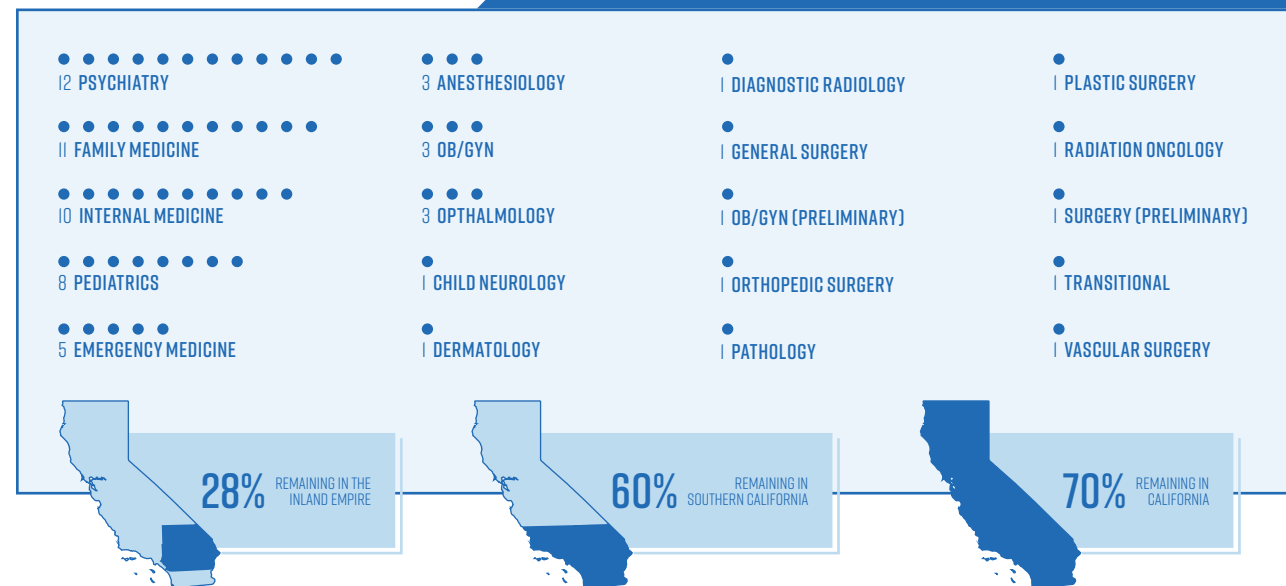
received encrypted emails that were unlocked at the traditional 9 a.m. reveal time.

Our Match Day results are consistent with our classes in past years and continue to be a step in the right direction for the care that our communities need.

READ MORE AT [atu.cr/yir2010](http://atu.cr/yir2010)



77% MATCHED INTO PRIMARY CARE AND/OR SHORTAGE SPECIALTIES



GRADUATE STUDENTS ACQUIRE A BROAD UNDERSTANDING OF HUMAN DISEASE, THERAPEUTICS AND DESIGN OF PREDICTIVE EXPERIMENTAL MODEL SYSTEMS THROUGH AN INNOVATIVE AND RIGOROUS PROGRAM THAT INTEGRATES MEDICAL CURRICULUM WITH MENTORED RESEARCH AND CRITICAL ANALYSIS OF RESEARCH-BASED MODELING OF HUMAN PATHOPHYSIOLOGY.

## BIOMEDICAL SCIENCES GRADUATE PROGRAM

In addition to 33 Ph.D. candidates in our biomedical sciences graduate program, five students joined the terminal master's degree, which was unveiled last year. One of the five is a M.D./M.S. student.



Top left: the nine individuals in who joined the Biomedical Sciences Graduate Program in 2019 (includes Ph.D. and M.S. candidates).

[BIOMED.UGR.EDU](http://BIOMED.UGR.EDU)

## THE FUTURE OF BRAIN DEVELOPMENT RESEARCH

Fifth-year Biomedical Sciences Ph.D. candidate Maham Rais works under the mentorship of Professor Iryna Ethell, Ph.D. and her lab, which studies the pathophysiology of Fragile X Syndrome (FXS), a genetic disorder that affects brain development.

In March 2020, Rais was awarded the F31 Ruth L. Kirschstein Predoctoral Individual National Research Service Award by the National Institute of Health (NIH).

The award includes a grant from the National Institute of Neurological Disorders and Stroke (NINDS) to fund her project, titled "Cellular and molecular mechanisms of auditory processing deficits in a mouse model of Fragile X Syndrome," for two years.

This is just one of many awards that Rais has received over the years. Her research has also been funded

by multiple other intramural and extramural fellowships and grants including the Dorothy M. Pease Cancer Research Fellowship (2018), Wanda Wisner/Jack Kent Cooke Foundation Fellowship (2019), and Graduate Research Mentorship Program Award (2019).

Her work in the lab has led to two first author and three contributing author publications so far. Rais was also appointed as a clinical graduate student researcher in affiliation with the School of Medicine Hospital and Clinician parties for the 2019-2020 year. Outside of research, she has also been an active member of the Biomedical Sciences Departmental Graduate Student Association, serving as social chair for two years before becoming secretary. She is expected to defend her dissertation and graduate in June 2021.

## SOM PARTNERS WITH HAZELDEN BETTY FORD AND EISENHOWER HEALTH ON ADDICTION MEDICINE FELLOWSHIP

The University of California, Riverside Hazelden Betty Ford Eisenhower Health Addiction Medicine Fellowship program has received initial accreditation by the Accreditation Council for Graduate Medical Education (ACGME). In 2019, the School of Medicine received state funding to expand psychiatry and sub-specialty training.

The training sites for the program will be the Betty Ford Center and the Eisenhower Medical Center in the Coachella Valley,

both of which are contributing funding to the program.

“We have reached a key milestone in achieving initial accreditation for this fellowship program,” said Gerald Maguire, M.D., chair of the medical school’s Department of Psychiatry and Neuroscience that oversees the Addiction Medicine Fellowship program. “It is a credit to the hard work of the leadership of our medical school as well as our partners in the Coachella Valley for our success in this effort. We are excited to train fellows in addiction medicine to serve a medically underserved region and to increase the chance that they will choose to stay in Inland Southern California.”

READ MORE AT [atu.cr/yir2012](http://atu.cr/yir2012)



## UCR SOM HOSTS “SUPER PBL”

In December, our Center for Simulated Patient Care partnered with the Riverside City Fire Department and American Medical Response to host an Automobile Accident Extrication Demonstration as part of a “Super Problem Based Learning (PBL) Session.”

Led by Director of Operations Chris Miller, the PBL featured firefighters using real equipment to cut a victim free following a simulated auto accident. Students then worked with their colleagues to diagnose and treat the patient in the PBL setting after collecting patient information from seven other demonstration/participation stations.



WATCH A VIDEO OF THE EXTRICATION DEMONSTRATION AT [YOUTU.BE/USW\\_FQYWDC](https://youtu.be/USW_FQYWDC)



### CHRISTINA GRANILLO NAMED 2020 LATINA OF INFLUENCE

Christina Granillo, Ph.D., was named a 2020 Latina of Influence by *Hispanic Lifestyle* magazine. She is one of 31 inspiring women recognized for making a difference throughout Inland Southern California.

A native of San Bernardino, Granillo is a UCR alumna and the director of academic success at the School of Medicine, providing support to medical students in all areas of academic preparation across their four years. She is also involved in curriculum development and implementation as well as the pipeline programs.



### RAMDAS PAI RECEIVES EDUCATOR OF THE YEAR AWARD FROM CALIFORNIA ACC

Ramdas Pai, M.D., chair of Internal Medicine and Clinical Sciences, was named Educator of the Year by the California Chapter of the American College of Cardiology “in recognition of his long-term collaboration, leadership and training of so many cardiologists.” He received the award from ACC Governors Pranav Patel, M.D. and Ramin Manshadi, M.D. at the annual awards dinner at the Montage Hotel in Beverly Hills on November 15, 2019.



### CLASS OF 2020 STUDENT NAHAL NIKROO RECEIVES AWARD FROM AAEM

Nahal Nikroo, a member of our M.D. Class of 2020, was honored with the Committee Member of the Year Award from the American Academy of Emergency Medicine (AAEM).

She is the first woman to win the award in its four-year history and was honored for her noteworthy and significant contributions toward AAEM committees above and beyond expectations.



### MCLAUGHLIN CO-AUTHORS BOOK ON OBSTETRICS IN FAMILY MEDICINE

Nathan McLaughlin, assistant clinical professor in the Department of Family Medicine, published the third edition of his book *Obstetrics in Family Medicine: A Practical Guide*. The book, which he co-authored with Paul Lyons, former senior associate dean for education and chair of the Department of Family Medicine, covers routine updates as well as advances in prenatal assessment and diagnosis, recommendations for vaccination in pregnancy, assessment and management of infectious disease in pregnancy, and management of chronic disease concurrent with pregnancy.



## DR. BRIGHAM C. WILLIS JOINS SCHOOL OF MEDICINE AS LEADER IN MEDICAL EDUCATION

Following a nationwide search, Brigham C. Willis, M.D., M.Ed., joined the School of Medicine as the senior associate dean for medical education in February. A pediatrician with training in pediatric critical care medicine, Willis is also a passionate educator and a respected leader in academic medicine.

Coming to UC Riverside was a bit of a homecoming for Willis, a Bay Area native who attended UCLA for his undergraduate degree and UCSF for medical school. Willis said that while coming back to California was definitely a perk, it was the mission of the School of Medicine to increase the number of physicians in our underserved region that sold him on the move.

“It is extremely rare to find schools so actively devoted to producing physicians for their area, and focused on admitting students who actually come from the area,” Willis said. “The dedication to underserved populations is real and true, and it is very fulfilling to be working for a school focused on that.”

Willis decided on becoming a pediatrician when he was around 11 or 12 years old. His love for teaching goes back nearly as far, having served as a tutor in high school, college, and medical school and running teaching programs during his residency and fellowship.

“I love being in academics,” he said. “Generating and teaching new knowledge, seeing the passion of students and trainees, and then applying it to patient care. It’s a great combination.”

Prior to coming to UCR, Willis earned a master’s degree in higher education at Arizona State University and taught extensively at medical schools in and around Phoenix. In 2015, the University of Arizona’s Class of 2015 selected him as a master educator, the highest teaching honor bestowed by the institution.

In addition, he has held a variety of administrative education leadership roles at the University of Arizona, Creighton, and Phoenix Children’s Hospital, where he was the chief medical

education officer and ACGME designated institutional official, overseeing all educational programs at the hospital.

Willis had been in his new job at UCR for just a few weeks before the arrival of COVID-19. He credited the members of his education team and the students for their flexibility and fortitude in adapting to and overcoming the upheaval caused by the virus.

“While COVID has obviously been a really difficult challenge for the education team, the positives have been quite inspiring,” he added. “The adaptability of our team, the can-do attitude, and the way everyone came together to achieve something no one had ever done before was awesome.”

His influence did not go unnoticed by the School of Medicine’s Class of 2020, which selected him as the recipient of the Golden Apple Award for “for overall outstanding instruction.”

In the long run, Willis believes that some of these new adaptations will lead to permanent changes in how medical education is delivered.

“This has forced us to become comfortable with new learning delivery platforms and technology as a medium for learning,” he said. “I think in the long run it will be a real improvement in many areas of the curriculum.”

In his free time, Willis is an avid sports fan, supporting both Bay Area and Los Angeles teams, and a sportsman, with a particular love for rock climbing. “I love to get out there and climb. If anyone wants to get out there with me, please let me know,” he said.



### DID YOU KNOW?

Dr. Willis, his wife, Alma Lissett Hernandez and daughter Valeria were featured on the television show “Beach Around the World,” a house-hunting themed show on HGTV that detailed their search for a condominium in Costa Rica. The show, some of which was recorded shortly before Willis arrived at UCR, aired in July.

## CENTER FOR HEALTH DISPARITIES RESEARCH HOSTS INAUGURAL SYMPOSIUM

On February 20, 2020, the Center for Health Disparities Research hosted their inaugural symposium at UCR Palm Desert. About 70 researchers and community members attended the event, which was hosted by center co-directors David Lo and Juliet McMullin.

The symposium featured presentations on research being conducted by center members. Professors Ann Cheney and Tanya Nieri presented research from their Grow Well/Creceer Bien project that is looking at childhood obesity among low-income Latino families in the Coachella Valley, and Cheney, Lo and community organizer Maria Pozar discussed childhood asthma in Latino populations living near the Salton Sea.



 [READ MORE AT atu.cr/yir2015](https://atu.cr/yir2015)

## ANDREA POLONIJO LEADS RESEARCH STUDY FOR TRANSGENDER AND GENDER-NONCONFORMING PATIENTS

Andrea Polonijo, Ph.D., M.P.H., of the Center of Healthy Communities, led a team of researchers with Associate Professor Brandon Brown, Ph.D., M.P.H., who analyzed secondary data from a 2015 survey of 90 transgender and gender non-confirming individuals in the Inland Empire. The study highlighted significant health challenges and barriers to accessing culturally competent care and indicated much room for improvement for medical schools as well as current providers, especially underscoring the need for more health professional training.



Polonijo is a Chancellor’s Postdoctoral Fellow whose current research focuses on addressing barriers to vaccination among U.S. adults. She is also collaborating on an international project that examines how family- and community-level socioeconomic status shape childhood vaccination in Denmark, and in 2021 she will join UC Merced as an assistant professor of sociology.

 [READ MORE AT atu.cr/yir2015b](https://atu.cr/yir2015b)

**“IT IS EXTREMELY RARE TO FIND SCHOOLS SO ACTIVELY DEVOTED TO PRODUCING PHYSICIANS FOR THEIR AREA, AND FOCUSED ON ADMITTING STUDENTS WHO ACTUALLY COME FROM THE AREA.”**



## UC RIVERSIDE-LED STUDY REPORTS HIGH LEVEL OF HAZARDOUS DRINKING AMONG PACIFIC ISLANDER YOUNG ADULTS IN U.S.

A study by Andrew Subica, Ph.D., an assistant professor in the Department of Social Medicine, Population, and Public Health in the UCR School of Medicine, found 56% of Pacific Islander young adults screened positive for hazardous drinking, a level that places people at high risk for accidents, drunk driving, and serious social and health problems. Similarly, 49% of young adults screened positive for active alcohol-use disorders (AUD) more than eight times the national AUD rate.

The study, which is published in the American Journal of Orthopsychiatry, is the first and largest alcohol study of community Pacific Islander young adults in the U.S.

 [READ MORE AT atu.cr/yir2016](http://atu.cr/yir2016)

## BREAKTHROUGHS LEAD TO CLINICAL TRIALS FOR STUTTERING

More than three million people in the United States and 70 million people worldwide are afflicted with stuttering, a psychiatric condition that interrupts the flow of speech. Despite decades of research on the treatment of the disorder, there has never been a treatment that has been approved by the FDA for stuttering. Thanks to the work of Gerald A. Maguire, M.D. and colleagues at the UCR School of Medicine, that may be about to change.

In August 2019, Maguire announced the results of an open-label uncontrolled clinical trial of the medication Ecopipam, which reduced the frequency of stuttering symptoms, shortened the duration of stuttering events, and improved the quality of life of the subjects who stutter after eight weeks of therapy.

The medication, which is also under investigation as a treatment for Tourette's syndrome, blocks the actions of the neurotransmitter dopamine at D1 receptors in the brain. High levels of dopamine are believed to play a role in stuttering, though the exact cause is unknown

"Ecopipam was well-tolerated by the study participants," said Maguire, who is chair of the Department of Psychiatry and Neuroscience at the School of Medicine as well as chair of the National Stuttering Association. "They showed no serious

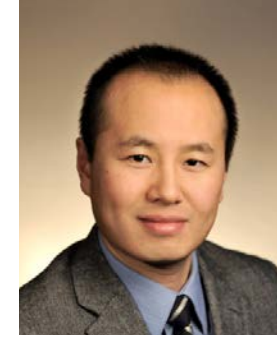
adverse effects; no patient stopped treatment due to adverse events, and there were no signals of weight gain or abnormal movement disorders, events that may accompany other medications that affect the dopamine system."

Details of the pilot trial were subsequently published in an article co-authored by Maguire in the journal Annals of Clinical Psychiatry which concluded that Ecopipam significantly improved stuttering and holds promise as a viable therapy for those who stutter.

The success of the small trial paved the way for a full randomized double-blind placebo-controlled multi-center clinical trial, scheduled to begin in September 2020. If the trial is successful, Ecopipam could begin being prescribed almost immediately, which would be a game changer for millions.

"There are a variety of misconceptions and stigmas against people who stutter, and in some cases, people who stutter are not considered as capable as others," said Maguire, who himself is a person who stutters. "Our hope is that with this treatment, people will be able to function better in a variety of settings, to communicate more freely, and as a result, see an improvement in their quality of life."

**"ECOPIPAM COULD BEGIN BEING PRESCRIBED ALMOST IMMEDIATELY, WHICH WOULD BE A GAME CHANGER FOR MILLIONS."**



## ZHOU PUBLISHES PAPER ON PREGNANE X RECEPTOR

Professor Changcheng Zhou published a research paper in the Journal of Lipid Research that demonstrates that the Pregnane X receptor (PXR) plays an important role in regulating atherosclerosis. This means that PXR might be a potential therapeutic target to combat cardiovascular disease.

The research paper is titled, "Myeloid-specific deficiency of pregnane X receptor decreases atherosclerosis in LDL receptor-deficient mice."

## COLLABORATION ACROSS DISCIPLINES

Last year, the UCR campus opened the doors to its Multidisciplinary Research Building (MRB), a facility fostering interdisciplinary collaboration by housing several labs of researchers from departments across campus, including our Division of Biomedical Sciences.

The following teams of researchers have since made themselves at home, with the 2019-2020 year as their first full year in these labs, which also include faculty and other colleagues from other schools within UCR.

### ENVIRONMENTAL TOXICOLOGY

Sika Zheng, Ph.D.\*

### IMAGING

Devin Binder, Ph.D.  
Monica Carson, Ph.D.  
Iryna Ethell, Ph.D.  
Byron Ford, Ph.D.  
Emma Wilson, Ph.D.

### MIND & BRAIN HEALTH: NEUROINFLAMMATION, NEUROTRAUMA, NEURODEGENERATION

Monica Carson, Ph.D.  
Byron Ford, Ph.D.  
Martin Garcia-Castro, Ph.D.\*  
Seema Tiwari-Woodruff, Ph.D.  
Emma Wilson, Ph.D.  
Sika Zheng, Ph.D.\*

*\* Scheduled to move in Spring 2021 as part of the third wave of move-ins.*

### MOLECULAR, CIRCUIT, AND BEHAVIORAL MECHANISMS OF NEURODEVELOPMENTAL DISORDERS

Devin Binder, Ph.D.  
Iryna Ethell, Ph.D.  
Sika Zheng, Ph.D.\*

### SYSTEMS BIOLOGY OF INFECTIOUS DISEASE

Meera Nair, Ph.D.  
Emma Wilson, Ph.D.



"We are having entirely new conversations, new impactful research insights and entirely new blended multidisciplinary ways to attack the big research problems! MRB benefits all of UCR as we also get to share all of these new connections with our colleagues in our home colleges/schools."

**- MONICA CARSON, PH.D.,  
CHAIR, DIVISION OF BIOMEDICAL SCIENCES**



# CLINICAL

## DR. ASMA JAFRI JOINS SCHOOL OF MEDICINE AS CHAIR OF FAMILY MEDICINE



In May, Asma Jafri, M.D., F.A.A.F.P., M.A.C.M. joined the School of Medicine as the new chair of the Department of Family Medicine and a physician at UCR Health.

Jafri is no stranger to UCR's history, as she was a clinical professor for the UCR/UCLA Biomedical Program from 1999 to 2001 before our medical school was established. She has extensive experience in graduate medical education and has been the program director for two different residency programs in California before joining us.

The UCR School of Medicine is a great fit for Jafri, who has a keen interest in promoting

diversity in the field of medical education and a passion for improving the healthcare of the underserved.

"I wanted to come to UCR because the mission statement for UCR was totally aligned with my lifelong passion to improve access to quality care for the most vulnerable and

underserved in California," said Jafri. "What appealed to me the most was the young age of the medical school and the opportunity to make an impact in developing programs that would be aligned with the school's mission."

In her new position, she looks forward to identifying modifiable barriers to the health of underserved and minority populations. She's also excited to train physicians to be prepared to tackle the complex interplay of the societal and social factors influencing the health outcomes of these populations.

Regarding the time she's spent with the School of Medicine so far, Jafri said, "What I have enjoyed most about working with UCR SOM is the transparency within the organization, and the ability to connect with colleagues in all departments and build programs in a very collaborative manner."

**"THE MISSION STATEMENT FOR UCR WAS TOTALLY ALIGNED WITH MY LIFELONG PASSION TO IMPROVE ACCESS TO QUALITY CARE FOR THE MOST VULNERABLE AND UNDERSERVED."**

## TELEHEALTH AND UCR HEALTH

Telehealth/telemedicine, which allows patients to "visit" a physician remotely via the Internet, was already being used by UCR Health as a tool to bring healthcare opportunities to underserved populations. But what had been a gradual rollout of these virtual visits was met with a new urgency with the arrival of the COVID-19 pandemic.

"We had been planning on growing our telemedicine program, but the pandemic really made us accelerate things. Fortunately we had a good, solid foundation in place and through some really amazing work by our staff we were able to make a major pivot in just about two weeks. It was really remarkable," UCR Health Chief Operating Officer Katherine Hansen said.

See the COVID-19 insert for more information about UCR Health's successes with telehealth.



## NEW UCR HEALTH PEDIATRICS CLINIC OPENS IN LA QUINTA

In October 2019, UCR Health opened up a new pediatric medicine clinic in La Quinta. At this location, we welcomed Jean Russell, M.D. and John Nevin, M.D. to the UCR family. The clinic, which is located at 79430 Highway 111 in La Quinta, provides general care, preventative health care, immunizations, newborn and infant care, wellness child visits, and sick appointments to the Coachella Valley community.

Top-left photo (left to right): Chair of Pediatrics Sasidharan Ponthenkandath, M.D., Chief Executive Officer Don Larsen, M.D., M.B.A., M.H.A., F.A.C.H. of UCR Health, and Mayor Linda Evans of La Quinta at the grand opening.

Left: John Nevin, M.D., and Jean Russell, M.D. pictured between Drs. Ponthenkandath and Larsen.



## WHAT'S UP, DOC?

In the summer of 2019, UCR Health began hosting the What's Up Doc Health and Wellness Seminar Series for community members of all ages to learn more about topics including pain management, pre-diabetes/diabetes, balancing career with family and personal wellness, and more.

Our clinical faculty, in conjunction with partners such as Parkview Community Hospital and UCR's Osher

Lifelong Learning Institute, have dedicated time towards preparing these discussions to help community members deal with their preexisting conditions. The series, which started as in-person seminars, transitioned to virtual sessions in early April, with an average of 45 attendees at each event.

To attend a future What's Up Doc event, check the UCR Health events calendar at [ucrhealth.org/events](http://ucrhealth.org/events) or follow UCR Health on Facebook, Twitter, or Instagram.

UCRHEALTH.ORG

(844) 827-8000

@UCRHEALTH

# COMMUNITY

The UCR School of Medicine continues to be involved in its surrounding communities, through events naturally weaved into our programs, student initiatives, and more. These are just a few instances of our presence in Inland Southern California. For more updates, view our social media channels listed on the back cover.



## SECOND ANNUAL 5K FEATURES MORE THAN 500 RUNNERS

On Saturday, October 5, 2019, UCR Health hosted its second annual Miles for Medicine 5K Run/Walk and Kids' Fun Run. More than 500 participants came to campus to run around the 3.1 mile campus loop course and participate in the vender fair. The event included free flu shots provided by Desert Hospital Outpatient Pharmacy, assembly of 200 Street Medicine hygiene kits to distribute to the homeless in Riverside, and first aid and EMT services provided by Healthy Hearts/Stop the Bleed. Proceeds from the event supported clinical and educational programs including the Street Medicine Initiative, Reach Out and Read Program, and the Mission Scholarship Program.

## "BUTTERFLY EFFECT" EXHIBIT INCREASES AWARENESS OF IMMIGRANT CHILDREN

In November 2019, Class of 2020 medical student Sang Nguyen and a group of fellow medical students who make up the Project Sunshine organization at the UCR School of Medicine hosted an art and activism project called "Butterfly Effect: Migration is Beautiful" at the Orbach Library. The project was part of a national campaign to raise awareness about the plight of the 15,000 immigrant children being held in U.S. detention centers.



## STUDENTS VOLUNTEER AT LOCAL HINDU TEMPLE

In the last week of November, about 10 of our third-year medical students hosted a health fair at the Riverside Hindu Temple under the guidance of Nandini Gowda, M.D., an associate clinical professor with our school. Over five hours, the group provided care to 28 patients and mentored a group of volunteer high school students who plan to become physicians.

Special thanks to our faculty members Prashanth Gowda, M.D. and Padmini Varadarajan, M.D., who also provided their supervision at this event.



# COVID-19



**THE COVID-19 PANDEMIC** has helped reinforce the need for the UCR School of Medicine, not merely in the development of the next generation of physicians, but in other critical areas concerning the well-being of our communities.

Since the emergence of the pandemic, the School of Medicine has provided public health expertise and guidance to campus administrators and local government on dealing with the pandemic, as well as improved access to clinical health care, including a major expansion of UCR Health's telemedicine efforts.

Research by faculty in our Division of Biomedical Sciences has also

sought to identify drugs effective against COVID-19. In an effort to gain a better understanding of health needs on the community level, the school's centers continued public health research on the impact of the pandemic on underrepresented communities. Many efforts are also serving the medical community and the general public through grassroots volunteer efforts.

The pandemic has been a challenge, but our students, faculty and staff have worked together to find new solutions to challenges and demonstrate amazing initiative and leadership over the last few months. Here are just a few of their stories.

# UCR SCHOOL OF MEDICINE AND UCR HEALTH LEND GUIDANCE TO THE COMMUNITY



With such a rapid influx of new information on the COVID-19 virus, it was clear that the campus and the larger Riverside community needed experts in the medical field to help guide decisions that would affect the daily lives of those in surrounding areas. With UCR as a large figure in the community, the School of Medicine was a go-to hub for medical professionals.

First, it began with news outlets reaching out to Brandon Brown, Ph.D., M.P.H., associate professor for our Center for Healthy Communities for his expertise. Soon after, news spread about Adam Godzik, Ph.D., professor of biomedical sciences, identifying a potential drug target for COVID-19. And by early April 2020, UCR had started to form several campus return committees, with leaders from the School of Medicine and UCR Health overseeing three of these working groups.

*Learn more about all the working groups involved in UCR's campus return at [campusreturn.ucr.edu](https://campusreturn.ucr.edu)*

## TESTING

Mark and Pam Rubin Dean, Deborah Deas, M.D., M.P.H., also the UCR Vice Chancellor for Health Sciences, heads the Testing Committee alongside Rodolfo Torres, the UCR Vice Chancellor for Research and Economic Development. With the goal to address operational needs for timely, accurate, organized testing of employees and students, this committee operated with guidance from the UC system-wide Testing and Tracing Committee.

The task force reviewed data and materials from public health authorities, published and preprint literature, recommendations from other industries including the US military, and data

emerging from campus pilot studies, referring to CDC guidance for the definition and identification of COVID-19 symptoms.

**“THE TESTING COMMITTEE’S IMPACT IS IMMEASURABLE. THE GROUP’S INNOVATION AND COLLABORATION WAS CRITICAL TO ENSURING THE SAFETY AND WELL-BEING OF STUDENTS, FACULTY, AND STAFF, AND ESSENTIAL IN FIGHTING THE SPREAD OF COVID-19 ON CAMPUS AND BEYOND.”**

— Denise Woods, D.P.H.  
Assistant Vice Chancellor for Health, Counseling & Wellness  
Member of Testing Committee

## EMPLOYEE HEALTH ASSISTANCE

The Employee Health Assistance Committee, led by UCR Health’s Don Larsen, M.D., M.B.A., M.H.A., F.A.C.H.E. (CEO) and Katherine Hansen, M.H.A. (COO) develop strategies related to individual employee health.

The committee took the lead among UC medical schools by creating an online self-monitoring tool piloted by School of Medicine employees before being rolled out to all UCR employees.

This tool, the daily COVID-19 survey, must be completed by every employee each time they physically come into work on campus. It acts as the symptom-tracking tool used

to guide sample collection and case investigation when needed.

The committee, which also includes staff from UCR Environmental Health & Safety, the UCR Office of Emergency Management, and a testing lab, coordinated on-campus COVID-19 drive-through testing and partnered with Kaiser Permanente to bring flu vaccinations to UCR in the fall.



## PUBLIC HEALTH

The Public Health Committee is led Asma Jafri, M.D., F.A.A.F.P., M.A.C.M., chair of our Department of Family Medicine, and Nate McLaughlin, M.D. The committee provides general guidance and recommendations to preserve the health of the campus community during a phased recovery plan. This includes plans for student housing in the fall, the allowance of clinical faculty to return to work, and reviewing any plans from a campus department that involve the need for groups to gather on campus for essential purposes.



## BRANDON BROWN ANSWERS EARLY CORONAVIRUS QUESTIONS

As rumors began to outpace actual news on the coronavirus, Associate Professor Brandon Brown, Ph.D., M.P.H., an epidemiologist with our Center for Healthy Communities, became a highly-sought expert by the local and national media. Between January and June 2020, he appeared in more than 100 print, radio, and video news reports, including the Los Angeles Times, Washington Post, National Public Radio, USA Today, Reuters News Service, Al Jazeera, and Gizmodo.



## COVID'S IMPACT ON THE MEDICAL CURRICULUM

When the UC Riverside campus closed due to COVID-19, the school's medical education team faced the challenge of migrating our medical students to an online educational environment with a minimal amount of disruption for students and faculty.

On March 17, working on a recommendation from the Association of American Medical Colleges (AAMC), the school replaced all non-clinical group activities with distance and online options. What was originally planned as a solution to a temporary disruption took on more significance as it became clear the pandemic was going to have long-term impact.

While dealing with the challenges of the new normal of working from home, the medical education team worked with the SOM Office of Integrated Technologies to move all non-clinical live lectures and Problem Based Learning (PBL) cases to Zoom and other online platforms.

"Our medical education team really jumped in feet-first. They always asked 'how can we get this done?' rather than worrying about it being impossible. Our team put together a high-quality online and virtual curriculum in a matter of days, and the success of our students

so far has been a testament to their work," Senior Associate Dean Brigham C. Willis, M.D., M.Ed. said. "The students were incredible too, working with us to create curricula, suggest improvements, submitting ideas, and actually teaching in many cases. They were such great partners, dealing with some very sub-optimal circumstances, understanding that daily and sometimes hourly changes were unavoidable, and, in the end, achieving great success."

Working with clinical partner institutions, our third- and fourth- year students were able to return to their in-person clerkships after a short hiatus. Generous contributions of personal protective equipment helped to keep our students safe without impacting the equipment stores of the clinical sites.

The school also took advantage of online patient interaction simulators to help hone review, examination, diagnosis, and documentation skills.

"I am so grateful for the hard work and perseverance of all of our students, faculty, and staff," Willis said. "Online learning is not perfect, but what we were able to accomplish in a matter of days is simply remarkable. I couldn't be more proud."

"WHAT WE WERE ABLE TO ACCOMPLISH IN A MATTER OF DAYS IS SIMPLY REMARKABLE. I COULDN'T BE MORE PROUD."

## POTENTIAL DRUG TARGET IDENTIFIED FOR COVID-19

The bioinformatic group of Adam Godzik, Ph.D., a professor of biomedical sciences at our medical school, performed an initial genome analysis and design of constructs for protein synthesis that led a team of researchers to solve the 3D structure of a potential drug target in a newly mapped protein of SARS-CoV-2, the coronavirus responsible for COVID-19.

The findings from the team of researchers, which also included scientists from the University of Chicago, the U.S. Department of Energy's Argonne National Laboratory, and Northwestern University, suggest that drugs previously developed to treat the earlier SARS outbreak could now be developed as effective drugs against COVID-19.

The protein Nsp15 from Severe Acute Respiratory Syndrome Coronavirus 2, or SARS-CoV-2, is 89% identical to the protein from the earlier outbreak of SARS-CoV. Studies published in 2010 on SARS-CoV revealed inhibition of Nsp15 can slow viral replication suggesting that drugs designed to target

Nsp15 could be developed as effective drugs against COVID-19.

The structure of Nsp15 was solved by the group of Andrzej Joachimiak, Ph.D., D.Sc., a distinguished fellow at the Argonne National Laboratory, University of Chicago professor, and director of the Structural Biology Center at Argonne's Advanced Photon Source, a Department of Energy Office of Science user facility. Mapping a 3D protein structure of the virus, also called "solving the structure," allows scientists to figure out how to interfere in the pathogen's replication in human cells.

Rapid upsurge and proliferation of SARS-CoV-2 raised questions about how this virus could become so much more transmissible as compared to the SARS and MERS coronaviruses. The scientists are mapping the proteins to address this issue.

Godzik and Joachimiak — along with Karla Satchell, Ph.D., a professor of microbiology-immunology



Adam Godzik, Ph.D., is also the newly endowed Bruce D. and Nancy B. Varner Presidential Endowed Chair in Cancer Research.

at Northwestern and CSGID director, and the entire center team — will map the structure of some of the 28 proteins in the virus in order to see where drugs can throw a chemical monkey wrench into its machinery. The proteins are folded globular structures with precisely defined functions and their "active sites" can be targeted with chemical compounds.

The first step is to clone and express the genes of the virus proteins and grow them as protein crystals in miniature ice cube-like trays. The consortium includes nine labs across eight institutions that will participate in this effort.



READ MORE AT [atu.cr/yir20v](http://atu.cr/yir20v)

GODZIK'S LAB WEBSITE IS AT [GODZIKLAB.ORG](http://GODZIKLAB.ORG)



## MEDICAL STUDENTS STREAMLINE PATIENT CALLS



When the pediatrics clinic at UCR Health began receiving a high volume of calls because of the novel coronavirus, a group of medical students swiftly began modifying the Barton Schmitt COVID-19

protocol, a 10-page document densely packed with important information, pulling out key pieces, and reorganized the formatting to create a protocol that was quick and easy to follow.

The students then organized the main patient symptoms into three categories: emergency, high alert, and medium alert, which would dictate the next steps for patients. The protocol developed by medical students Amanpreet Bilg, Ryan Chow, Tin Dinh, and Morcel Hamidy is now in effect at UCR Health and other pediatric clinics.



READ MORE AT [atu.cr/yir20vii](http://atu.cr/yir20vii)

*Gowda says the telehealth appointments have given her a unique perspective into patients' lifestyles in a way that has been quite helpful in their interactions.*



## UCR HEALTH'S TRANSITION TO TELEHEALTH

Telehealth allows clinical teams to use computers and wireless devices to deliver healthcare to patients in their own homes.

When the COVID-19 crisis began to unfold, UCR Health started ramping up telehealth services for its patients. Although UCR Health had been using telehealth tools to reach individuals in underserved communities

for several years, it has now shifted the majority of patient visits to a telehealth model across all its practices.

The growth was staggering. On the week of March 9,

UCR Health facilities saw about 600 patients, all of them in person. The week of March 16, just after Governor Newsom's "safer at home" order, a spate of cancellations caused overall visits to fall to about 360, with about 10% being telemedicine.

Realizing that telemedicine was now urgently needed, the school's Office of Integrated Technology worked overtime to make more infrastructure available. As word got out

about the availability of telemedicine, the number of total visits began to normalize, with the percentage of virtual visits climbing to 61.2% during the week of March 23 and sitting in the 70% range in the weeks thereafter.

A grant of \$162,538 from the US Department of Health and Human Services assisted with that growth. In June, UCR Health had more than 2,500 total patient visits, with about 60% of those being done online.

Nandini Gowda, M.D., a specialist in internal medicine who works at the UCR Health Multispecialty Center at Citrus Tower, said that the telemedicine visits have been a "wonderful resources for many of our primary care patients."

"We have been able to reach more people through these virtual visits, improving continuity of care," Gowda said. "The ones who found it most helpful are my patients with Multiple Sclerosis. They don't need to arrange for or wait for transportation,


they have immediate access to their medications for reference, and they can talk to us from the comfort of their own homes."

Another benefit is that telemedicine gives physicians a glimpse into their patients' home life, which can be informative.

"When I see patients in the office, I used to wonder about their life at home. Now, through telemedicine, I can get a peek at it, which can answer some questions," Gowda said. "For example, I had a patient who was having frequent, recurrent asthma flare-ups and I was wondering about the triggers for her asthma. Seeing her online, I realized that she had dogs, cats and birds that were causing the flare-ups."

"This is a permanent change in how we operate. When the pandemic ends, you will continue to see people using telemedicine," said UCR Health Chief Executive Officer Don Larsen, M.D., M.B.A., M.H.A., F.A.C.H.E. "It's going to be a long-term game across medicine, and UCR Health is proud to be a leader."

**"THEY DON'T NEED TO ARRANGE FOR OR WAIT FOR TRANSPORTATION, THEY HAVE IMMEDIATE ACCESS TO THEIR MEDICATIONS FOR REFERENCE, AND THEY CAN TALK TO US FROM THE COMFORT OF THEIR OWN HOMES."**

 VISIT [YOUTU.BE/J8TJ9GW3TOY](https://youtu.be/j8tj9gw3toy) TO HEAR LEADERS OF UCR HEALTH AND THE SCHOOL OF MEDICINE DISCUSS TELEHEALTH, ITS SUCCESSES, AND OPERATIONS DURING THE TRANSITION.



## A NETWORK OF STUDENT INITIATIVE

In the early days of the COVID-19 pandemic, UCR medical students worked with colleague across the region to coordinate volunteer efforts, bringing resources and equipment to Inland Southern California.

In mid-March, MS2 Lavinia Mitroi and several of her classmates began searching for ways that they could help support their local medical community while serving the general public. And with that, the Inland Empire COVID-19 Student Taskforce was formed.

A grassroots effort of phone calls, text messages, and emails organized medical students from across Riverside and San Bernardino Counties, and soon, guided by a steering committee made up of Mitroi and other UCR students, the task force set out to harness the energy of local students for a variety of volunteer opportunities and community advocacy.

“We worked to crowdsource information about volunteer opportunities onto one platform in order to help students identify opportunities in their communities,” Mitroi



recalled. “As part of our local advocacy and public health education campaign we collected and shared evidence-based research and policy recommendations. And finally, we worked to solicit donations, including medical supplies, for our community.”

One arm of the taskforce consisted of a medical supply drive spearheaded by MS3 Nikita Kadakia. By early May they had brought more than 30,000 surgical masks, 300 N95 masks and 400 face shields to area hospitals, many of which were struggling to provide these resources to their clinical staff.



Mitroi sat down with radio station KVCR News to discuss student volunteer efforts.

“BY EARLY MAY THEY HAD BROUGHT MORE THAN 30,000 SURGICAL MASKS, 300 N95 MASKS AND 400 FACE SHIELDS TO AREA HOSPITALS.”

Another group within the taskforce, led by MS3s Michelle Oberoi and Jennifer Grincer, created a website mapping local

food resources in the Inland Empire, which has since grown to include locations across the country (covid19foodbanks.org).

Meanwhile, MS3s Camila Garcia Paz, Anne Lyon, Rebecca Ocher, and Gurjot Walia worked with New York-based interventional cardiologist Neelime Nadella, M.D., of Mount Sinai on a website that aims to provide quality literature in an organized and consistent way to busy clinicians on the frontlines (covidclinical.org).

The taskforce expanded to as many as 90 members, including students from UCR,



Nikita Kadakia delivers PPE to the Riverside University Health System Medical Center. Photo by Will Lester, Inland Valley Daily Bulletin/SCNG

Loma Linda University, and the California University of Science and Medicine.

Mitroi, who was born in Romania and moved to the San Bernardino area at the age of five, is no stranger to public service. She received a D.P.H. from the Harvard T.H. Chan School of Public Health in 2018 and previously served in AmeriCorps.

“We have really been impressed with the partnerships we have been able to form with local community-based organizations and community members,” she said. “It has been very gratifying to see how engaged these groups and individuals have been about serving their neighbors and friends.”

READ THE FEATURE BY THE PRESS-ENTERPRISE AT [atu.cr/yir20ix](http://atu.cr/yir20ix)

LISTEN TO MITROI'S INTERVIEW WITH KVCR AT [atu.cr/yir20ix2](http://atu.cr/yir20ix2)

READ UCR'S INTERVIEW WITH KADAKIA AT [atu.cr/yir20ix3](http://atu.cr/yir20ix3)

TO LEARN MORE ABOUT THE COVID-19 STUDENT TASKFORCE, VISIT THEM ON TWITTER AND INSTAGRAM @IE\_STUDENTS OR EMAIL [COVID19.STUDENT.TASKFORCE@GMAIL.COM](mailto:COVID19.STUDENT.TASKFORCE@GMAIL.COM).



## CENTER FOR HEALTHY COMMUNITIES USING THE POWER OF SOCIAL MEDIA

As the School of Medicine's role in advising on health practices became more and more prominent, the Center for Healthy Communities (CHC) rose up as an accessible voice. The CHC Instagram account has been posting resources and relevant useful information for more than one year, alerting community members about opportunities to be involved with research, local health-related discussions, suicide prevention resources, and more. But as soon as mid-March hit, CHC began posting nearly every

day about local emergency food distribution sites, tips for mental health practices, COVID testing sites, and more information relevant to the struggles that our communities are facing under quarantine. Staying true to its mission to reach the culturally diverse communities of the Inland Empire, CHC also posts much of their content in Spanish to ensure crucial information reaches minorities that are disproportionately affected by this pandemic.

*FOLLOW THE CENTER FOR HEALTHY COMMUNITIES @CHC\_UCR ON INSTAGRAM AND TWITTER*

### IMPACT ON CONSTRUCTION

The COVID-19 pandemic has both hindered and helped the construction of the Clinical Skills and Simulation Suite, according to Senior Project Manager Fernando Canon of UCR Planning, Design and Construction.

"Because there were a minimal amount of UCR personnel in the building due to the pandemic, we were able to have an easier flow of workers and materials," Canon said. "However, our productivity has been affected by fewer workers in the facility due to social distancing, material delays caused by supplier reductions and closures, and labor availability."

*See page 6 in the main Year in Review for more about the construction project scheduled for completion in March 2021.*

### CONTINUED SUPPORT FROM THE HAIDERS

Dr. Thomas and Salma Haider, long-time supporters of the UC Riverside School of Medicine, once again demonstrated their support for medical education by donating a combination of 2,500 protective face shields and N95 respirators that will protect our third and fourth-year medical students as they return to their rotations in local clinics and hospitals.

Brigham C. Willis, M.D., M.Ed., senior associate dean of medical education, accepted the donation on behalf of the SOM on Thursday, April 30.



## MAINTAINING PATHWAYS FOR PRE-MED STUDENTS

The School of Medicine's ten pipeline programs, which allow high school students and college undergraduates interested in medicine and health to start the part to their career early, reaches more than 1100 students each year in volunteer opportunities, internships, workshops, and other activities. Luckily, each of these unique programs were able to seamlessly transition into socially distant formats, with many even increasing enrollment and participation.

The Future Physician Leaders (FPL) program, for example, a leadership-based mentorship program that allows participants to educate more than 1300 community members on health-related topics each year, hosted information sessions to promote the program's new format throughout April. With a 10% enrollment increase for 2020, participants were able to conduct their traditional health education presentations on digital platforms.

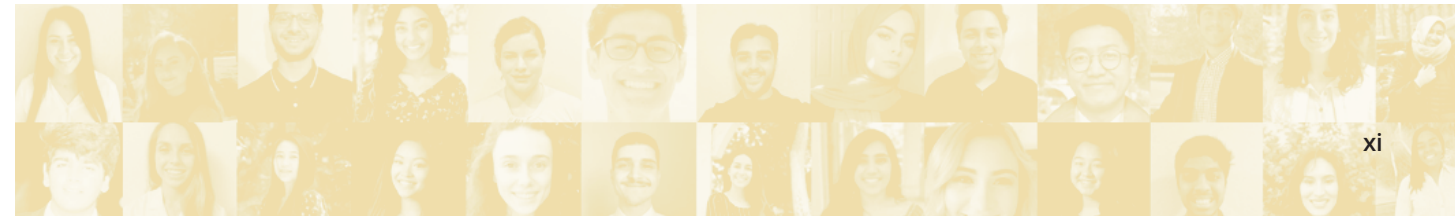
In April, the Health Coach Program (HCP) had 13 "health coaches," as HCP participants are called, write essays comparing COVID-19 responses of other countries to create pandemic preparedness response plans. Simultaneously, Esmeralda Trejo, assistant director for our pipeline programs, arranged and conducted a system of multiple virtual interviews for applicants. A similar format translated to the virtual workshops held in May dedicated to supporting health coaches'



*The Health Coach Program held a virtual end-of-the year celebration in June 2020.*

career and wellness goals. The Riverside University Health System (RUHS) further supported our more than 30 health coaches by giving them the opportunity to coach 1116 high-risk patients using chronic condition self-management goals using motivational interviewing. Nine of these health coaches will return next academic year to mentor and train the new cohort.

Through even more impressive strategies, the pipeline programs all exemplified a spirit of resilience, from creating daily office hours with medical student mentors in the Medical Leaders of Tomorrow program and initiating a new book club focused on current events in the Medical Scholars Program, to offering a six-week MCAT prep course within the Premedical Postbaccalaureate Program.



# CHANGCHENG ZHOU JOINS TEAM EXPLORING HOW COVID-19 AND CARDIOVASCULAR DISEASE ARE LINKED

READ MORE AT [atu.cr/yjr20xii](http://atu.cr/yjr20xii) 

Professor Changcheng Zhou of the Division of Biomedical Sciences has joined a multidisciplinary team that will study the impact of COVID-19 on the cardiovascular system.

The team, which is led by Tzung Hsiai, M.D., Ph.D. at UCLA, received funding from the American Heart Association. It will aim to address unanswered questions following the long-term effects of the coronavirus crisis on cardiovascular and cerebrovascular health.

Zhou will investigate how the SARS-CoV-2 infection induces inflammatory responses and cytokine releases in the cardiovascular system.



*Allen has been a long-time advocate for the well-being of detained immigrants.*

## SCOTT ALLEN TESTIFIES BEFORE CONGRESSIONAL COMMITTEE ON COVID-19 RISKS IN CORRECTIONAL AND IMMIGRATION DETENTION SETTINGS

Professor Emeritus Scott Allen, M.D. continued his work in advocating for the health and well-being of detained immigrants, joining fellow whistleblowers in expressing concern over the health risks presented by the spread of COVID-19 in correctional and immigration detention settings.

On June 2, Allen testified before the US zSenate’s Committee on the Judiciary on the health risks posed to prisoners, immigrants, workers, and the public, warning that the conditions constituted a “tinderbox scenario” for the spread of the disease due to “gaping holes” in Centers for Disease Control and Prevention guidelines.

“And the fact is, in the real world, use of those guidelines has been associated with failure,” Allen told members of the Senate Judiciary Committee. “I think we’re underutilizing some of our best tools. We need to get more aggressive with our testing strategies.”

Allen also co-authored opinion pieces in the Washington Post about ways to lessen the spread of COVID in jails and prisons by releasing prisoners and in USA Today expressing concern about the administration’s use of COVID-19 as an excuse for a “zero tolerance” immigration policy and re-implementing family separation policies.

WATCH THE HEARING AT [atu.cr/yjr20xii2](http://atu.cr/yjr20xii2)  
ALLEN’S TESTIMONY BEGINS AT THE 2 HOUR 50 MINUTE MARK. 

## 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.

[MEDSCHOOL.UCR.EDU](https://medschool.ucr.edu)



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