



UC RIVERSIDE SCHOOL OF MEDICINE

BREAKING NEW GROUND

YEAR IN REVIEW: 2018-2019

SCHOOL OF MEDICINE
RESEARCH BUILDING

UCR
School of
Medicine



2018-2019

BREAKING NEW GROUND

The UC Riverside School of Medicine truly broke new ground in the 2018-2019 academic year, both literally and figuratively. Between completing new lab space in different areas of campus, earning approval for a brand-new medical education building, and a long list of inaugural classes, celebrations, and more, our school is truly making progress in fulfilling its mission to serve Inland Southern California.



To expand your reading experience while being respectful to the environment, several QR codes are placed throughout this

document that will take you to further content about select highlights. If your phone has a system earlier than iOS 11 or Android 9 (Pie), you may have to download a QR scanning app or instead use the links provided to access these features.

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MESSAGE FROM THE DEAN

The 2018-19 academic year was a truly memorable one for the UCR School of Medicine, filled with many new beginnings, achievements, and milestones.

In November, we celebrated breaking new ground with 18,887 square feet of new lab and office space in our School of Medicine Research Building. Shortly after, the innovative Multidisciplinary Research Building (MRB) opened on campus, welcoming our biomedical sciences researchers to newer possibilities of discovery in the most sophisticated facility on campus.

I am also excited to announce that our state legislators in Sacramento authorized a new medical education building, included in the State Budget Act of 2019. The building is now in the planning stages, and I am eager for you to learn more about the process of its approval in the Advancement section of this publication.

Our groundbreaking strides have not only been physical, as our school continues to pursue a stronger and healthier community. At the end of 2018, we formally established an affiliation with Eisenhower Health in the Coachella Valley, and our school took part in advocating for greater state support for expanding residency and fellowship training opportunities in areas like ours. We held our inaugural Celebration of Medical Education Gala in support of our Mission Scholarships so that our medical students can commit to providing clinical care in our community.

For the second year in a row, our Bridges to Baccalaureate Program received the Inspiring Programs in STEM from INSIGHT Into Diversity magazine, and we are excited to continue encouraging and assisting students from underrepresented groups on their path to medical school. This is one of our pipeline programs empowering careers in medicine featured in page 15.

These are only a few highlights of yet another successful year for the School of Medicine, and I am not exaggerating when I say that the achievements of the School of Medicine could not have been reached without the support and contributions of our students, faculty, staff and community members. I am truly grateful for the support we are receiving in pursuit of fulfilling our mission.



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



THE UC RIVERSIDE SCHOOL OF MEDICINE

BY THE NUMBERS

MEDICAL STUDENTS

245 MEDICAL STUDENTS

68% TIES TO THE INLAND EMPIRE

34% UNDERREPRESENTED IN MEDICINE

45% DISADVANTAGED

32% FIRST IN FAMILY TO COMPLETE COLLEGE

18% ENGLISH AS A SECOND LANGUAGE

BIOMEDICAL SCIENCES

32 STUDENTS 22 FACULTY

GRADUATE MEDICAL EDUCATION

279 RESIDENT PHYSICIANS AND FELLOWS (INCLUDING AFFILIATE PROGRAMS)

PIPELINE PROGRAMS

1350 PRE-MED STUDENTS REACHED BY PIPELINES

FACULTY

263 CLINICAL FACULTY

1174 COMMUNITY-BASED FACULTY

TRAINING SITES

220 TRAINING AGREEMENTS

Our school works closely with our community partners to support a robust clinical education platform. This number represents those who have agreed to support us in LACE and/or clerkship training.

SCHOOL OF MEDICINE STAFF

214 STAFF EMPLOYEES

UCR HEALTH CLINICAL CARE REACH

19,915 PATIENTS TREATED

EXTRAMURAL FUNDING

\$9.3M RESEARCH GRANTS AWARDED

ADVANCEMENT

EXPANDING OUR SCHOOL

In the State Budget Act of 2019, state legislature approved ongoing financial support for the construction of a new School of Medicine medical education building. This building, which our school had long been advocating for, would allow us to accommodate class sizes of up to 125 students per year.



The ask for support was officially put into motion in January, when Senator Richard Roth put forward Senate Bill 56, and Assembly Members Jose Medina and Sabrina Cervantes followed with Assembly Bill 1740. The bills directed the legislature to provide \$25M in general operating support for the school as well as approximately \$80M in funding for construction of a dedicated medical education facility on the UCR campus.

“State funding to support the medical school has been limited to \$15M per fiscal year, impacting the school’s ability to fulfill its public mission,” Roth said to the committee. “Expansion of the UCR Medical School is urgently needed to increase the supply of primary care physicians up and down the state.”



In March, Dean Deborah Deas and Francisco Farias (Class of 2019, pictured left) travelled to Sacramento to testify in front of the California State Senate Education Committee in support of a pair of bills intended to provide much-needed ongoing financial support and infrastructure for the School of Medicine.

In his testimony, Farias, a first-generation college student who grew up in Riverside County, told the committee, “I am part of a diverse and brilliant group of individuals who are all striving to improve the health of our surrounding communities... When I heard that UCR was opening their very own medical school, I was ecstatic because it would not only afford me the opportunity to learn and practice medicine, but also give back to the community that raised me.”

The School of Medicine Education Building at the White Coat Ceremony in 2014, which welcomed the Class of 2018. This class is the largest graduating class in SOM history, a record we are eager to top in the near future.

SB 56 was voted out of committee as favorable, but it was ultimately not included in the Budget Act. It did, however, bring attention to the need for increased financial support for the school. The new building was approved by UC Regents months later and is now in its planning stages.

To watch the hearing with Farias and Dean Deas, visit atu.cr/yirmse



DELIVERING ON OUR MISSION

In November 2018, more than 200 School of Medicine faculty, staff, students and supporters were in attendance as our school hosted its inaugural Celebration of Medical Education Gala to support the Mission Award fund.

The **Mission Award** is one of the many efforts that the School of Medicine uses to deliver on its mission. The award offsets the cost of two or four years of tuition and fees for medical school for select mission-fit students who agree to serve in the Inland Empire after they complete their post-M.D. training. There are currently about 40 students who have received the Mission Award.



Watch our mission video to hear from more Mission Award recipients on the impact and importance of the Mission Award. Scan the code or visit atu.cr/yirmav

“This scholarship is so much more than a means to an end. It means that I have people cheering me on and wishing for my success. I now have a newfound confidence about achieving one of my lifelong dreams, which is to help heal my community.”

- Lina Omary

UCR School of Medicine Class of 2020,
David W. and Nina P. Mitchell Mission
Scholarship Awardee

A NEED RECOGNIZED

The Final Report of the California Future Health Workforce Commission, published in February 2019, recognized the expansion and funding of the UCR School of Medicine as essential to addressing concerns of physician shortages in California.

“Although all California medical schools are preparing and training future physicians for practice, UC schools overwhelmingly serve California students and have a record of success graduating physicians who practice in California, particularly when those graduates complete residency training in the state. [...] **Expanding enrollment at UCR [School of Medicine ...] closely align[s] with regional workforce needs and interests in expanding medical student educational opportunities and aligning these efforts across a continuum, from pipeline to practice.**”

From *Meeting the Demand for Health: Final Report of the California Future Health Workforce Commission*, page 113.
To see the full document, visit <https://atu.cr/yircwc>



KEEPING PHYSICIANS IN THE REGION

In early 2019, Kathy Eiler from UCR Government and Community Relations represented the School of Medicine in Washington, D.C. to take part in urging for the Resident Physician Shortage Reduction Act of 2019, which would prioritize programs affiliated with medical schools like ours that emphasize community-based training. An expansion of GME training slots in the region would lead to the best chance of increasing the number of physicians practicing here.

ENDOWED CHAIRS

During the year, the School of Medicine appointed two new endowed chairs. Monica Carson, Ph.D. (pictured right) is the newly endowed S. Sue Johnson Presidential Endowed Chair. Emma Simmons, M.D., M.P.H. (far right) was appointed for the new position of the Salma Haider Endowed Chair for the Thomas Haider Program. An endowed chair not only recognizes an outstanding faculty member for the research and programs they conduct, but also the donor who will be honored in perpetuity for their support. We are grateful to Mrs. S. Sue Johnson and Mr. William R. Johnson, and to Dr. Thomas Haider and Mrs. Salma Haider, for their foresight in establishing these chairs, the highest accolade a university can bestow upon a professor.



GROWING SUPPORT

Philanthropic support provides the UCR School of Medicine with the resources and tools necessary to support students, research, clinical services and capital projects – all benefiting our mission of providing excellence in healthcare to diverse and underserved patient populations. We are grateful for all who continue to recognize our impact and support our growth.

PHILANTHROPIC GIFTS RECEIVED
FY 2017-2019



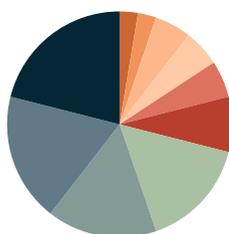
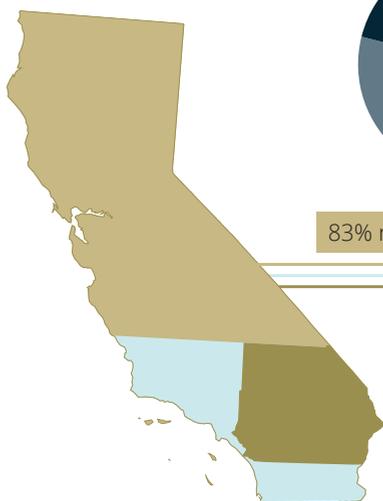
Contact the development office at (951) 827-2767 or development@medsch.ucr.edu for more.

EDUCATION

Location of post-M.D. training is the primary driver of where physicians practice.

With 66% of our 2019 M.D. class staying in Southern California and growth in our GME programs, we are on our way to fulfilling our mission and fostering medical educations that bring better health to Inland Southern California.

CLASS OF 2019 MATCH DAY STATS



- 8 Emergency Medicine
- 7 Internal Medicine
- 6 Psychiatry
- 6 Family Medicine
- 3 Diagnostic Radiology
- 2 Pediatrics
- 2 Ob/Gyn
- 2 Anesthesiology
- 1 Surgery (PRELIMINARY)
- 1 Dermatology

82% of the class matched into shortage specialties of the IE (emergency medicine, family medicine, internal medicine, ob/gyn, pediatrics, psychiatry)

39% of the class matched into primary care specialties (family medicine, internal medicine, pediatrics)

Match Day is a pivotal moment in a future physician's career. Soon-to-be M.D. graduates find out where they will be practicing their residencies, something that is likely to affect where they choose to practice. The fact that

82% of our 2019 graduates matched into a specialty that the Inland Empire has a dire need for is a huge step in the right direction for what our communities need.



Read more about Match Day 2019
Scan or visit atu.cr/yirmd

CLASSES OF 2019

In 2019, the School of Medicine conveyed degrees to 39 new medical doctors (pictured right). The next day, three students in our Ph.D. program in Biomedical Sciences received their degrees. Our program also graduated new family medicine residents.



As a child, Hurnan Vongsachang, M.D., (far left) from the class of 2019, was rushed to an emergency room in the middle of the night with difficulty breathing. The lasting memory from the experience was the care and kindness of the physician who treated her. "Her compassion truly made a difference."

Now, nearly two decades later, the 2019 graduate has started her residency in emergency medicine at Los Angeles County+USC Medical Center with a goal to advocate for underserved communities and the right for people to live a fulfilled and healthy life.

Learn more about Vongsachang's story at atu.cr/yirflm

FIRST-CLASS GRADUATES

In June 2019, the School of Medicine celebrated the inaugural matriculation of the following:

- One resident from our Psychiatry Residency Program
- Two fellows from our Child & Adolescent Psychiatry Fellowship
- Four fellows from our Cardiovascular Fellowship

The programs added talented physicians to much-needed specialty areas here in Inland Southern California.

GRADUATE MEDICAL EDUCATION

The School of Medicine continued to grow its Graduate Medical Education programs to 104 sponsored and 175 affiliated positions, including those in Family Medicine, Internal Medicine, Pediatrics, and Psychiatry.

Moving forward, we will work to expand these programs, adding more teaching hospitals and bringing new physicians to Inland Southern California.

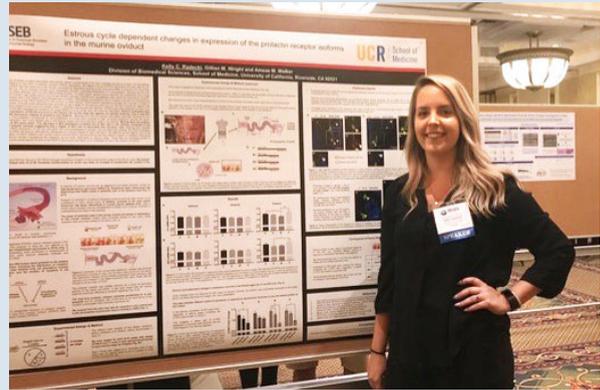
THE NEXT GENERATION OF CANCER RESEARCH

Kelly Radecki is a fourth-year biomedical sciences Ph.D. candidate researching cancer biology, endocrinology and reproductive health. Radecki was awarded the Mary Galvin Burden Fellowship in Biomedical Sciences, Intramural Divisional Fellowship in the spring of 2019. That summer, she was awarded a travel grant to give a talk on her research at the Federation of American Societies for Experimental Biology (FASEB) Science Research Conference: Growth Hormone/Prolactin Family in Biology & Disease in West Palm Beach, Florida.

Radecki was also one of many graduate students who represented the UCR School of Medicine Biomedical Sciences Program at Cedars-Sinai Medical Center for the 7th Annual 2019 Southern California Biomedical Sciences Graduate Student Symposium, where she won first place for outstanding poster.

"I was lucky to find a lab and principal investigator (PI) that supported me," says Radecki. "I very much

wanted my research proposal to be involved with the cancer projects in the lab. My PI, Dr. Aamee Walker, supported me 100% and we developed a whole new project investigating prolactin in serous fallopian tube carcinomas. I want to continue cancer research in a postdoctoral fellowship following completion of my degree, hopefully remaining in women's health."



BIOMEDICAL SCIENCES

Our graduate students are uniquely positioned to help bridge the gulfs that exist between clinical medicine and basic science research.

The Biomedical Sciences graduate program welcomed 14 new students in 2019, the largest cohort in our school's history.

The program also unveiled a terminal master's degree in Biomedical Sciences for students arriving in 2019.

*Learn more about the
biomedical sciences
graduate program.
Scan or visit
biomed.ucr.edu*

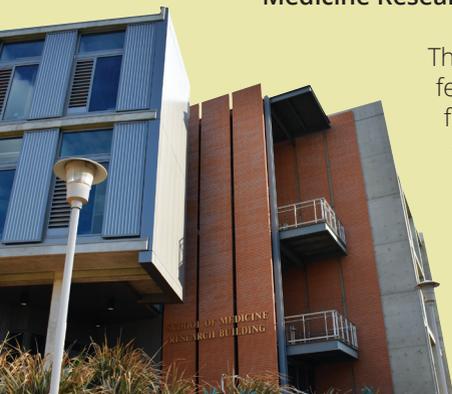


RESEARCH

ROOM FOR RESEARCH

In November, the biomedical sciences research teams of Qi Chen, M.D., Ph.D.; Erica Heinlich, Ph.D.; David Lo, M.D., Ph.D.; and Christian Lytle, Ph.D. moved into the newly completed floor space of the **School of Medicine Research Building**.

The facility added 18,887 square feet of space made up of seven faculty offices and labs, three write-up spaces for post-doc and graduate students, a new conference room, autoclave room, multiple support rooms, including cell culture space, and an equipment corridor providing emergency power to ultra-low freezers and cold storage.



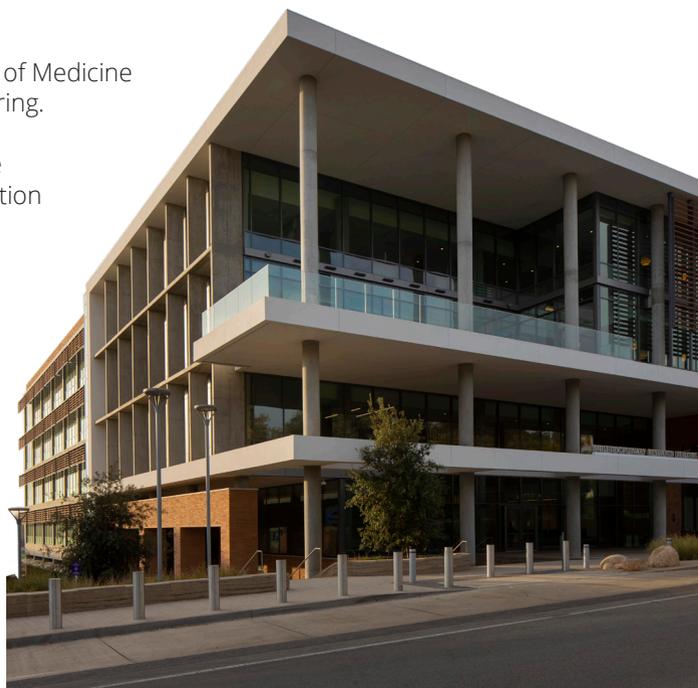
FOSTERING COLLABORATION

In January, the campus celebrated the grand opening of the Multidisciplinary Research Building (MRB), with several School of Medicine Biomedical Sciences researchers moving in during the late spring.

The MRB is an innovative facility that promotes a collaborative approach for our researchers to share knowledge and innovation with colleagues from departments across campus. At five stories and 179,000 square feet, it is the largest and most sophisticated research building on campus. It features large, open lab bays and communal sitting areas where research teams can work together toward encouraging new science, research and technology.



*Read about the opening of the MRB.
Scan or visit atu.cr/yirmrb*



Emma Wilson, Ph.D. (pictured right) moved her lab along with more than 20 other faculty from across campus, into the MRB in the late spring.

Other faculty members from the School of Medicine working in the MRB include Devin Binder, M.D., Ph.D.; Monica Carson, Ph.D.; Iryna Ethell, Ph.D.; Byron Ford, Ph.D.; Choukri Ben Mamoun, Ph.D.; Meera G. Nair, Ph.D.; Seema Tiwari-Woodruff, Ph.D.; Sika Zheng, Ph.D. for studies including environmental toxicology, imaging, neuroscience, neurodevelopmental disorders, and infectious diseases.



UPCOMING: CENTER FOR HEALTH DISPARITIES RESEARCH

The National Institutes of Health (NIH) proposal for a Center for Health Disparities Research at UCR (HDR@UCR) as a new Research Center in Minority-Serving Institutions (RCMI) received a very strong score in the Spring of 2019, and we subsequently learned that it was awarded in August. The Center was awarded about \$16 million over five years from the National Institute on Minority Health and Health Disparities.



The HDR@UCR will bring together environmental scientists, biomedical scientists, and social scientists to study health disparities in Inland Southern California.

“We think the knowledge the center produces will inform approaches to address health disparities that Latino communities and marginalized populations experience elsewhere in the country,” said Dr. David Lo (left), director of the center and senior associate dean for research.

The center will support a number of research projects, including two key projects based in the medically underserved eastern Coachella Valley.

The first will focus on the impact of aerosolized particulates on health and the second on infant feeding styles and practices and the relationship to infant growth and obesity.

*Read more about HDR@UCR.
Scan or visit atu.cr/yirchd*



TREATING STROKE

Two years ago, we featured Byron Ford, Ph.D., professor of biomedical sciences and director of the graduate program in biomedical sciences, in our Year in Review when he and his team were still examining the role of neuregulins in regeneration after stroke and protection from traumatic brain injury.

He has now developed a stroke treatment that moved toward clinical trials in the spring of 2019.

The treatment focuses on neuregulins, a family of naturally occurring proteins that has shown promise for treating stroke, a leading cause of death in the United States and the major cause of long-term disability.

During stroke, blood supply to the brain is interrupted, often because an artery to the brain gets blocked by a clot or because a blood vessel ruptures. With no blood — and therefore no oxygen or nutrients — reaching the brain, cells in the brain begin to die locally, at the “core,” within a couple of hours. The core cells then burst, causing a dramatic inflammatory response in the surrounding area. This area, called the ischemic penumbra, dies over the course of several hours or days. Neuregulin-1, or NRG-1, one of four proteins in the neuregulin family, prevents this inflammation and cell death.

“Cells in the core die by getting overexcited and exploding,” said Ford, a professor of biomedical sciences at the UCR School of Medicine, whose company, Brain-Gen, has patents for the use of NRG-1 to treat stroke. “This happens, we believe, to prevent the whole brain from dying. An analogy: imagine a grenade is flung into a crowded theater, and a few people throw themselves on the grenade. They will die, but due to their sacrifice, others may very likely be spared.”

Brain-Gen is co-owned by his brother Gregory Ford, a neuroscientist and the dean of the College of Arts and Sciences at Fort Valley State University in Georgia. They signed an agreement with a Shanghai-based company named Zensun Biotech to collaboratively move a form of neuregulin called Neucardin toward clinical trials for stroke and to



form a joint venture. They plan to approach the Food and Drug Administration (FDA) to expand the use of Neucardin for stroke and to explore the possibility of securing funding from the NIH with the aim of joining its StrokeNet clinical trials program, which would involve more than 200 hospitals in the country.

“A stroke is like a heart attack in the brain,” Ford says. “To our advantage, Zensun has already completed phase I and phase II clinical trials for heart failure and shown that Neucardin is safe and improves heart function in patients.”

If successful, Neucardin can benefit the yearly count of nearly 800,000 Americans who have a stroke. The only current FDA-approved drug that treats stroke is one that melts the clot but has no effect on brain cells, and can only be used within a three-hour window from the witnessed time of stroke onset. Ford states that Neucardin could be given to a patient more than 12 hours after a stroke, and is even safe enough to be given before it has been determined if a stroke took place.

“All this significantly boosts our hope for treating stroke,” says Ford.

*Read more about Ford's
developments involving stroke.
Scan the code or visit
atu.cr/yirbf*



CLINICAL CARE



BRINGING HEALTH HOME

As part of our goal to deliver quality health care to our growing communities, UCR Health continues to bring new physicians and much-needed routine, preventive and specialty medical services to our clinics across the Inland Empire.

In 2019, UCR Health expanded to accept more than 33 different types of insurance and continues to add new doctors to the team.

UCR Health treated 19,915 patients in 2018-19, with a projected 30% increase to 22,500 in 2019.



In June, UCR Health physicians began offering new Eskatamine treatments for patients with severe depression.

In January, UCR Health expanded infusion treatments for patients with Multiple Sclerosis.



Read up on more health-related tips, insights, and news on the UCR Health blog webpage



BRINGING HEALTH **HOME**

Mallory Stuparich, M.D., is one of many new physicians at UCR Health reshaping the landscape of healthcare in our region by transforming how patients perceive their health and well-being.

Stuparich is the first minimally invasive gynecologic surgeon in UCR Health. Physicians from this specialty are empowering patients to question if large incisions are truly necessary, and

if there are alternative approaches that are also less invasive. She wants to ensure that all her patients gain an in-depth understanding of their medical condition and treatment options.

"I am very passionate about empowering women to make educated decisions about their own health. I joined UCR Health because of the opportunity to bring comprehensive gynecologic care and surgery to the deserving and rapidly growing patient population of the Inland Empire."

- Mallory Stuparich, M.D.
Ob/Gyn Specialist, UCR Health



LEARN MORE INFORMATION OR BOOK AN APPOINTMENT



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COMMUNITY IMPACT

EMPOWERING CAREERS IN MEDICINE

Pipeline programs allow high school and undergraduate students to begin working toward their interest in pursuing a career in medicine. Each year, our various pipeline programs reach over a thousand students in the community. Fifty of our current medical students were previously in a pipeline program.

Patrick Samones '23 was a four-year member of the Mini Medical School, a student-run pipeline program that provides professionally approved medical- and health-related information to the community to help bridge health disparities.

For more information about pipeline programs, visit atu.cr/yirpp

"Mini Medical School was impactful in my decision to pursue medicine, as I fostered bonds within the Inland Empire community that raised me, directly seeing the impact that peer-led education and preventative medicine could impact health disparities. Through my unforgettable experience in MMS, I found the answer to 'why medicine?'"



- Patrick Samones
Former Mini Medical School Media Coordinator
UCR School of Medicine Class of 2023



SPRING COMMUNITY OPEN HOUSE

The School of Medicine Education Building opened its doors to the community for its sixth Spring Community Open House in April 2019. More than 450 guests including multiple local school groups toured our facilities to learn about our students' experiences and the resources they have that help them in their training to become experts in their field.

If you are interested in receiving news regarding our upcoming open house, scan the code or visit atu.cr/yirohi





Watch a video recap of the 2018 5k.
Visit atu.cr/yir5k

INAUGURAL 5K

On October 13, 2018, community members joined UCR Health for its inaugural Miles for Medicine 5k Run/Walk at the California Citrus State Historic Park in Riverside. The 5k took attendees on a scenic run through citrus groves followed by a health expo and kids' activities at the finish line.

IMAGINING A MORE JUST AND **HEALTHY** FUTURE

On March 9, 2019, the medical student-led Health Equity and Structural Competency Collective hosted the inaugural How We Heal: Confronting Health Inequity with Structural Competency Conference. The day-long conference, which was the brainchild of collective co-founder and fourth-year medical student Annie Le, M.P.H. '19, brought together speakers, panelists and trainers who addressed topics of health and social inequity. Keynote speakers included Helena Hansen, M.D., Ph.D., Assistant Professor of Psychiatry & Anthropology at NYU, Seth Holmes, M.D., Ph.D., associate professor of Medical Anthropology, Society and the Environment at UC Berkeley and Co-chair of the Berkeley Center for Social Medicine.

Watch keynotes and panel sessions from the conference.
Visit atu.cr/yirscp

STREET MEDICINE

People of UCR Health and the School of Medicine came together in December to pack and distribute 200 care packages to the homeless in Riverside.



This community outreach program was featured in the 2019 Center for Healthy Communities (CHC) Impact Report, which features the many ways in which CHC is serving the needs of the Inland Empire's culturally, linguistically and economically diverse communities and how we bridge the gaps to improve health outcomes in those communities.

View the Impact Report.
Scan the code or visit
atu.cr/yircir







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

Produced by Ross French, Paulina Laroya,
and the Office of Strategic Initiatives, UC Riverside School of Medicine