A Family Legacy: Expanding Pomegranate Production at UCR

Carrying on work of his grandfather, a UC Riverside graduate student is working to better understand the commercial potential of little-known pomegranate varieties

By Sean Nealon

John Chater remembers the day vividly. He was about two years old. His grandfather gave him a dark, purplish pomegranate. Happily, he opened it and started eating.

He quickly realized his mistake. He was wearing his new light brown suede shoes. The pomegranate juice quickly found the shoes, leaving a permanent scar.

“That was my first experience, that I remember, with pomegranates, and it involved getting in trouble,” Chater said. “Because it was so delicious, I didn’t realize it would stain.”

More than 30 years later, Chater is a Ph.D. student at the University of California, Riverside, with a focus on pomegranate research and a 2016 University of California Global Food Initiative student fellow. He is building on the work of his grandfather, S. John Chater, who was a maintenance worker at a hospital but developed a cult following among rare fruit growers in California for developing new varieties of pomegranates.

The younger Chater, working with varieties selected from the National Clonal Germplasm Repository in Winters, including several developed by his grandfather (who died in 2002), is working to better understand the commercial potential of these varieties.

Currently, 90 to 95 percent of pomegranates are one variety: Wonderful, Chater said. (In addition, California grows more than 95 percent of pomegranates in the United States, he said.)
Working under Don Merhaut, UC Cooperative Extension specialist for ornamental and floriculture crops at UC Riverside, Chater has set up pomegranate variety trials in Riverside and Camarillo.

They have planted 12 pomegranate varieties, 15 trees per variety, to evaluate their establishment, precocity (flowering and fruiting), usefulness to growers and desirability to consumers.

Of the 12 varieties, 10 are edible (Parfianka, Desertnyi, Wonderful, Ambrosia, Eversweet, Haku Botan, Green Globe, Golden Globe, Phoenicia and Lofani) and two are ornamental (Ki Zakuro and Nochi Shibori). The ornamental varieties, whose flowers look like carnations, could be of interest to the floriculture industry, Chater said.

The researchers want consumers to be able to go to supermarket, and, like apples and citrus, be able to buy different varieties of pomegranates that vary in sweetness, seed hardness and color. (The varieties Chater is studying range in color from green to yellow to pink to orange to red to nearly purple.)

Chater set up the trials in Riverside and Camarillo to evaluate the difference between the cooler coastal climate and the warmer inland climate.

The prevailing thought is that more acidic varieties do better in inland conditions because the high summer temperatures reduce the acidity before the fruit is picked in the fall.

For example, a variety such as Wonderful, which is high in acidity, is grown commercially in the Central Valley. But, Eversweet, which has a lower acidity, does well on the coast.

Related to color, some researchers believe that pomegranates color up because of cool night time temperatures. Therefore, trees planted on the coast tend to color up faster.

All that said, it is believed no one has done a comprehensive study, such as the experimentally-designed one Chater has set up, in the United States. It will allow him to study the interplay of variables including size, color, sweetness, acidity, antioxidant activities, and seed hardness in different climate conditions.

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**Young Oak Kim Center Inspires Recognition of Riverside Site as the First Korea Town in the United States**

*Recognition as the city’s first Point of Cultural Interest acknowledges the historical significance of Pachappa Camp. No original structures remain, so the site is not eligible for historic landmark status*

By Bettye Miller

Groundbreaking research by UCR’s Young Oak Kim Center for Korean American Studies resulted in the Riverside City Council declaring the site of the nation’s first Korea Town a Point of Cultural Interest on Dec. 6.

The resolution to recognize “Pachappa Camp: Site of the First Organized Korean American Settlement” is an important development in rewriting Korean American history and the legacy of Ahn Chang Ho, who established numerous organizations to support Korean independence from Japan early in the 20th century, said Edward T. Chang, director of the YOK Center and professor of ethnic studies. The YOK Center submitted the application seeking recognition of the 3-acre site at Cottage and Commerce streets, near downtown Riverside.

Recognition as the city’s first Point of Cultural Interest acknowledges the historical significance of Pachappa Camp. No original structures remain, so the site is not eligible for historic landmark status.
“I am really proud, and pleased, and feel a sense of accomplishment about the role the Young Oak Kim Center played in achieving the Point of Cultural Interest designation,” he said. “More than 70 people attended the council meeting. They shouted when the City Council approved the designation. It got wide coverage from Korean media in Los Angeles and the Yohan News wire service in Korea, whose coverage was picked up by several daily newspapers there.”

Historical references to Ahn’s activities in the U.S. rarely mention Riverside, focusing instead on Korean American communities in Los Angeles and San Francisco, Chang said. But the Riverside community was significant in the Korean independence movement, Chang said.

Visitors often referred to the Riverside settlement as “Dosan’s Republic.” (Ahn adopted the pen name Dosan, which means island mountain, perhaps inspired by Hawaiian volcanoes he observed on a stopover from Korea to California.)

“Korean laborers in Hawaii were dispersed to the plantations to work,” Chang said. “San Francisco was a landing destination, however, because of anti-Asian sentiment and lack of job opportunities, Korean immigrants did not stay.”

Over the past 18 months Chang uncovered previously unexamined documents at Riverside’s Calvary Presbyterian Church, Korean headstones in city cemeteries, and newspaper articles in English and Korean, all of which make it clear that Pachappa Camp was the first established community of Korean Americans in the United States.

Ahn Chang Ho arrived in Riverside on March 23, 1904, and established a Korean labor bureau, which was key to attracting Korean workers to the city, Chang said.

“Korean immigrants could easily find work, especially in the citrus groves. Women worked in packinghouses, in service-related industries, as maids, and at the Mission Inn. They began to congregate at Pachappa Camp,” Chang said. “There were all kinds of community activities – Korean and English language classes, church services, weddings, baptisms, and other activities. Between 1905 and 1918 Pachappa Camp was a vibrant, thriving Korean settlement.”
Pachappa Camp originally housed Chinese immigrants who built the Santa Fe Railroad in the 1880s. Those workers left when the railroad was completed and were followed by Korean immigrants. Japanese Americans began moving into the camp in the 1920s, followed by Mexican workers in the late 1930s.

The camp, composed of approximately 20 buildings, was razed in 1952 to make way for a Fisher Oil Storage facility and a meat market, according to the Cultural Point of Interest application. Sempra Utilities and Mobil Oil Corp. occupy the site today.

Chang said he hopes the recognition of Pachappa Camp as the first Korea Town in the United States will inspire young Korean Americans to learn about their history and use that information as a source of identity and pride.

“Riverside is a city that celebrates its rich cultural diversity,” he said. “We are grateful that the city of Riverside is embracing this designation.”

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**Staff Assembly is Making Waves on Campus**

*Awards, meetings, campuswide events, and more, are all part of the work Staff Assembly leads at UCR*

By Sandra Baltazar Martinez

The end of the quarter turned out to be one of the busiest times for UCR’s Staff Assembly team.

They surprised an employee with the “Get Recognized” award; hosted a 29-member delegation from the Council of University of California Staff Assemblies; and put the finishing touches on their latest creation: Sawubona Award of Appreciation, which recognizes the teamwork of a particular department.

This work is above what they do in their daily UCR assignments. Their dedication to boosting morale and resources for UCR staff receives ongoing funds from the Chancellor’s office. And Staff Assembly raises its own support through Society ’54. The money is reinvested on staff via awards, training or campuswide activities. Their next campuswide event is the annual Holiday Hoedown, scheduled for Dec. 16, 3-5 p.m. at HUB 302.

**Get Recognized**

December’s Get Recognized recipient was Teresa Villarreal, a campus apartments lead in the Campus Apartment Resident Service Office.

On Friday, Dec. 2, Villarreal, who has worked at UCR for 13 years, was called into a mock meeting with her supervisor; in the meantime, Villarreal’s colleagues and Staff Assembly members gathered near her desk to surprise her with a certificate and balloons. Get Recognized is Staff Assembly’s monthly peer-to-peer recognition program.

Amy Henderson, the coworker who nominated Villarreal for the award, said Villarreal can calm upset customers and her compassion even made her rush out of the office to help an elderly man who nearly fainted in a parking lot on a hot summer day. “She put his arm around her shoulder and assisted him into the car once the wife got there,” Henderson wrote in the nomination letter.

Henderson said Villarreal treats residents as if they are her family. “There have been countless times where residents and customers come into the RSO angry and screaming, and after speaking with Teresa for a few minutes they are laughing and making small talk,” Henderson wrote.
Doing the job is almost effortless, said Villarreal. She’s learned to love the campus, the students, and her colleagues, she said. Get Recognized was the first award she’s received during her time here, although she has been nominated before. She shared the news with her two daughters and husband, John Herrera. In her off time, she and her husband spend time on horse rescue efforts in the high desert region.

“I’m so honored, so grateful. It made my heart soar,” she said. “It was wonderful. I’m blessed to be part of this organization.”

**Sawubona Award of Appreciation**

For Staff Assembly co-directors of involvement and recognition, Jamal Myrick and Frank Figueroa, this past quarter has been about thinking outside the box. What is an appropriate way to recognize positive office culture and contributions by an entire team?

By saying *sawubona*, of course. Sawubona in the south African language, Zulu, means “I see you.”

Recognizing a team’s impact for the campus, can be translated into motivation and productivity, Myrick said. “It is imperative that staff understand that they are the lifeblood of a campus culture for our students and each other,” Myrick said.

Myrick and Figueroa are currently looking for nominations. Write to them and explain why an entire team, department or office deserves to be recognized.

They are at: Jamal Myrick: jamal.myrick@ucr.edu; and Frank Figueroa: frank.figueroa@ucr.edu.

**CUCSA on Campus**

The Council of University of California Staff Assemblies (CUCSA) meets on a quarterly basis, but with 10 campuses, UC Office of the President, UC Agriculture and Natural Resources, and the Berkeley Lab to rotate, it had been about three years since the last time the CUCSA team met at UCR.

From Dec. 7-9, 29 CUCSA members visited UCR to talk about priorities, including: advocacy, mental health, financial literacy, and diversity.

During the three days, UCR Staff Assembly President Robert Wolfer and Vice President Julie Salgado were hosting the CUCSA team, and brought in several UCR administrators to speak on the four key topics.

“We are all doing our part, it’s just like an ecosystem,” said Lina Layiktez, director of Conference and Event Services at UC Davis.

Nick Everson, Berkeley Lab chief operations officer, said last week was his first time visiting UCR. He said being a CUCSA member has allowed him to better understand the UC system and how to better connect the lab with all the other campuses.

Walen Ngo, a program manager at UCLA Extension, said the CUCSA meetings are a great way to exchange ideas and work to improve the lives of all staff members.

“The more we know, the more we can work together. It’s powerful to know that you are part of this bigger system and that you can make a difference, that you can make an impact for everyone,” Ngo said.

Throughout the conference Wolfer and Salgado made sure the delegation also got a taste of UCR. They includ-
Best-Selling Author John Elder Robison to Speak at UC Riverside

In his latest book, Robison shares his experience in an experimental study designed to improve emotional insight in people with autism spectrum disorder

By Sarah Nightingale

John Elder Robison, a New York Times best-selling author, an adult living with Asperger syndrome, and an autism advocate, will share insights from his latest book, “Switched On: A Memoir of Brain Change and Emotional Awakening,” at a public event on Sunday, Jan. 8 at the University of California, Riverside. The free talk is open to the public.

Robison, who grew up with undiagnosed Asperger syndrome, wrote about his inability to read others’ emotions in his best-selling 2007 memoir “Look Me in the Eye: My Life With Asperger’s.” He is also the author of “Be Different: A How-to Guide for Grown Ups with Autism” and “Raising Cubby,” the story of raising his son, who has also been diagnosed with autism spectrum disorder (ASD).

ASD, a developmental disability that can cause significant social, communication and behavioral challenges, now affects 1 in 68 children, according to the Centers for Disease Control and Prevention. A diagnosis of ASD includes several conditions that used to be diagnosed separately, including autistic disorder and Asperger syndrome.

In 2008, as he entered his fifties, Robison was recruited into a pioneering study investigating the use of transcranial magnetic stimulation (TMS) to improve emotional insight in people with ASD, who often struggle to make emotional connections and read social cues. TMS, a noninvasive procedure in which areas of the brain are stimulated with electromagnetic fields, is currently used as a treatment for some forms of severe depression.

In Switched On, Robison shares how TMS enabled him to read emotions and experience empathy for the first time, yet it also brought unanticipated problems and new struggles as his emotions were awakened overnight.

Jan Blacher, distinguished professor of education, UC Presidential chair, and director of the SEARCH Family Autism Resource Center in UCR’s Graduate School of Education, points out that Robison’s personal experiences provide rare insight into the life of an adult with Asperger syndrome and the challenges faced by people with all levels of autism and their families as they seek treatments and resources.

“We are delighted that John Robison will be here to share his experiences with the UCR community. It is a wonderful opportunity for parents, educators, medical practitioners, and scholars in education, psychology, and neuroscience to hear John and to meet him in person,” Blacher said.

The public talk will be Sunday, Jan. 8, from 4-5 p.m. in the Highlander Union Building (HUB) Room 302 on the UCR Campus. This event is jointly sponsored by UCR’s Graduate School of Education and the School of Medicine. Attendees should RSVP to: searchcenter@ucr.edu
UCR’s SEARCH Family Autism Resource Center provides no-cost diagnostic and referral services for low-income families in the Riverside-San Bernardino community.

The Top: UCR Moments Around the World

A collection of pictures from #UCRAroundTheWorld showcasing how far UCR students can go

By Shannon Koga

This week, we are highlighting the top moments of UCR students as posted during the #ucraroundtheworld campaign. Whether it be during a study abroad program, finals week, or summer break, Highlanders are posting on Instagram from here and around the world.

If you have something you’d like featured in The Top or an activity you’d like to share, email kris.lovekin@ucr.edu.

(Photo above) The UCR Summer Study Abroad program brought students and staff to Gijon, Spain. This is a UCR faculty led program, created and led by Covadonga Lamar Prieto, assistant professor in the Department of Hispanic Studies. Photo via ucr_in_gijon

To see all the photos, visit: ucrtoday.ucr.edu/42059.
Did You Know?

Lactation Accommodation Program Expands

UC Riverside’s Human Resources announced that effective immediately faculty, staff, and students have access to six lactation rooms and alternative options to ensure nursing mothers have a private space.

On campus the three private lactation rooms are located:

- Sproul Hall, room 2113
- Pierce Hall, room 2214B
- Human Resources University Village, suite 208 room A

Each room is equipped with a table, electrical outlet, mini refrigerator, microwave, comfortable chair and a multi-user hospital grade Medela breast pump.

Three additional restricted access locations are also available to faculty, staff, and students in these locations:

- Child Development Center
- Center for Environmental Research & Technology (Ce-Cert)
- UCOP IntelliCenter

FarmShare Program Partners With Sage Mountain Farms

Beginning Jan. 12, UCR’s FarmShare program begins its new season. This time, participants will receive fruits and vegetables from Sage Mountain Farms, located in Anza, a community about 20 miles east of Temecula off Highway 371.

A small box, for two to three people, starts at $120. To sign up: sagemtfarm.csaware.com/store.

Pickup days/time: Thursdays, 4-8 p.m. during the UCR Farmer’s Market.

For more information, email: UCRFarmersMarket@ucr.edu.

UCR Extension Center Participates in Binational Cultural Exchange Program

A four-week cultural exchange program at UC Riverside came with an unexpected surprise for Antonio Carrillo, a 22-year-old college student at Universidad Tecnológica de Jalisco in Mexico. Upon his arrival in November, he was expecting to stay with a Mexican host family. Instead, he was welcomed by a Filipino family. And Carrillo loved it.

“It was not what I expected, and it was amazing. The family was wonderful,” said Carrillo, one of 24 total Mexican students from Jalisco and Puebla. They were part of Mexico’s Proyecta 100,000, an academic and scientific cooperation between Mexico and the United States. Students concluded their stay on Dec. 2 with oral history projects, all presented in English.

Proyecta 100,000 is an effort by President Enrique Peña Nieto to send 100,000 Mexican students to the United States, and receive 50,000 U.S. students in Mexico by 2018. This is aligned with President Barack Obama’s
100,000 Strong in the Americas initiative, which supports student mobility between the U.S. and countries in the Western Hemisphere. More than two dozen U.S. higher education institutions across the country are participating in this binational partnership, including the UC system.

“Between 2014 to now, the UC system has received 454 Proyecta 100,000 students,” said Veronique Rorive, assistant director of UC-Mexico Initiative, housed at UCR. The UC-Mexico Initiative was launched in January 2014 to stimulate development of new programs and partnerships involving academia, government, corporations and foundations on both sides of the border.

These students participated in four-week programs at UCR, UC Davis, UC Los Angeles, and UC San Diego. The first year UCR offered two four-week sessions, hosting about 200 Mexican students, Rorive said.

Read the full story: [ucrtoday.ucr.edu/42824](ucrtoday.ucr.edu/42824).

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**Awards & Honors**

**Creative Writing Professor Katie Ford Judges National Book Award in Poetry**

Creative writing professor and poet Katie Ford served as one of five judges for the 2016 National Book Award in Poetry, an experience she described as “unforgettable.”

Ford, who joined the UCR faculty in 2014, was invited to judge the competition by the sponsoring National Book Foundation. She also directs UCR’s M.F.A. in Creative Writing and Writing for the Performing Arts program.

“I was surprised I got the call from the foundation’s executive director,” she said. “I have judged chapbook competitions, but nothing like this.”

The invitation to judge in the prestigious National Book Award competition reflects Ford’s growing prominence in American poetry, said Andrew Winer, chair of the Department of Creative Writing.

**Distinguished Professor Reza Abbaschian Named Honorary AIME Member**

The Minerals, Metals, and Materials Society (TMS), with approval from the American Institute of Mining, Metallurgical, and Petroleum Engineering (AIME) Board, has selected Bourns College of Engineering Distinguished Professor Reza Abbaschian as an honorary member of AIME.

The recognition is the highest honor AIME can bestow upon an individual.

Abbaschian was selected “for pioneering contributions in solidification processing, materials education, and leadership in materials science and engineering worldwide,” BCOE indicated on their home website announcement. Abbaschian will be presented with a ceremonial medallion, shadow box, and pin at TMS’ reception in Feb. 2017 in Nashville, Tenn.
Research & Scholarship

Discrepancy Between Parents’ and Teens’ Views of Parenting Style Contributes to Teens’ Behavior Problems


Sound familiar? Perhaps you’re a parent with a teenager at home who partakes in “problem behaviors.” Researchers at UC Riverside may be able to help.

In a new study, published in Journal of Youth and Adolescence, Misaki Natsuaki, psychology professor at UCR, and Laura Dimler, a graduate student in psychology at UCR, found that when teens viewed their parents’ parenting tactics more negatively than parents did, they showed elevated levels of aggressive behaviors.

“Most, if not all, parents agree that they and their teenage children hold different views about how parenting is going at home,” Natsuaki said. “In some cases, teens perceive parenting to be harsher than how their parents intend to—and in other cases, teens perceive parenting to be more lenient than how parents intend to. With this study, it’s become clear that both the teens’ and parents’ views of how parents manage their teens’ difficult behaviors were uniquely important in predicting teenage problem behaviors.”

The researchers of the study, called “Parenting Effects are in the Eye of the Beholder: Parent-Adolescent Differences in Perceptions Affects Adolescent Problem Behaviors,” focused on how parents manage their teenagers’ challenging behaviors (e.g., anger) and examined teen-parent discrepancies in views about those behaviors. Using data from 220 families, the researchers found that, when teens viewed parenting more negatively than parents did, they showed more elevated levels of problem behaviors, such as aggression.

Mechanism in Human Cells Could Help Treat Diseases Caused by Viruses, Including Influenza and Ebola

A team of researchers, co-led by a UC Riverside professor, has found a long-sought-after mechanism in human cells that creates immunity to influenza A virus, which causes annual seasonal epidemics and occasional pandemics.

The research, outlined in a paper published online in the journal Nature Microbiology, could have broad implications on the immunological understanding of human diseases caused by RNA viruses including influenza, Ebola, West Nile, and Zika viruses.

“This opens up a new way to understand how humans respond to viral infections and develop new methods to control viral infections,” said Shou-Wei Ding, a professor of plant pathology and microbiology at UCR, who is the co-corresponding author of the paper.

The findings build on more than 20 years of research by Ding on antiviral RNA interference (RNAi), which involves an organism producing small interfering RNAs (siRNAs) to clear a virus.

Research Finds Clues in RNA-binding Proteins in Brain Cells

It remains unclear to scientists why almost every RNA-binding protein has a sibling— or “paralog.” While such sibling proteins have the same origins and are similar to each other in a number of ways, they are presumed to fulfill different functions in the cell.
Focusing on two such sibling RNA-binding proteins – PTBP1 and PTBP2 – that are important for the nervous system, a team of researchers has found that these proteins serve both redundant and unique functions in the developing brain when neural stem cells are changed into neurons – cells that process and transmit information through electrical and chemical signals.

“PTBP1 is expressed in neural stem cells, and PTBP2 in differentiating neurons,” said Sika Zheng, an assistant professor of biomedical sciences in the School of Medicine at UC Riverside, who led the research project. “Their expressions are almost mutually exclusive. During brain development, cells switch expression of PTBP1 to PTBP2. This contributes to the neuronal differentiating process, and can offer us insights into understanding what makes a neuron a neuron.”

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**Who Says?**

*UCR staff and faculty weigh in on the issues of the day via media outlets at home and abroad*

“This study identifies nitrogen abundances as a potential tool to detect remnants of life on Mars... It is possible to make organic carbon even in the absence of life.”

*Eva Stüeken, astrobiologist, on new developments in studying nitrogen fixation as a biosignature of life on other planets, new research of which can be found in the paper, ‘Nitrogen in Ancient Mud: A Biosignature?’*  

**SPACE.COM**

“This opens up a new way to understand how humans respond to viral infections and develop new methods to control viral infections.”

*Shou-Wei Ding, professor of plant pathology and microbiology, on the mechanisms in human cells that enables immunity to the influenza virus, research outlined and published in the journal Nature Microbiology*  

**MEDICAL NEWS TODAY**

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