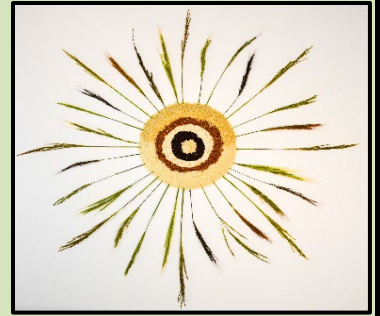




**Dale Bumpers National Rice Research Center  
USDA-ARS  
Stuttgart, Arkansas**



**MAY 2022**

**MONTHLY RESEARCH HIGHLIGHTS**

**For More Information: Dr. Yulin Jia, Acting Research Leader/Center Director**  
[yulin.jia@usda.gov](mailto:yulin.jia@usda.gov)

- **Technology Transfer**
- ✓ **Rice Germplasm Distributed**

During the month of May, 75 rice genetic stocks were shipped to researchers in Italy and the United States.

- **Education and Outreach**

On May 17, 2022, Dr. Yulin Jia welcomed two undergraduate students Mr. John Mitchell and Mr. Isaiah Young from the University of Arkansas at Pine Bluff, an 1890 historically black University and their faculty advisor Dr. Sathish Ponniah at Dale Bumpers National Rice Research Center, Stuttgart, AR. The students discussed their research interests and potential projects for the summer of 2022 with Dr. Jeremy Edwards and Dr. Jai Rohila. After the discussion the visitors had a tour of greenhouses and labs.



***Pictured left to right: Dr. Yulin Jia, Dr. Jeremy Edwards, Mr. John Mitchell, Mr. Isaiah Young, Dr. Jai Rohila and Dr. Sathish Ponniah.***

On May 20, Dr. Yulin Jia was named as **Mentor of the Year** for 2021 cohort for career development program (CDP) of Federal Asian Pacific American Council (FAPAC, <https://fapac.org/>) during 2021 graduation and opening ceremony for 2022 class. Dr. Jia has been a mentor for CDP since 2016 and was also named as a mentor of year for 2020 class. The CDP is six-month mentoring opportunity for all federal, military and the District of Columbia employees with permanent career status at all levels. The CDP mentors and mentees must be able to participate in all program components including orientation, mutually scheduled one-on-one mentoring sessions, professional development workshops, a mid-term progress review, leadership projects, and graduation. The role of a mentor is to foster caring and supportive professional relationships, encourage mentees to develop to their full potential, provide resources to strengthen personal goals and career planning, and prepare participants for career advancement opportunities.

<https://www.linkedin.com/feed/update/urn:li:activity:6937440204781731840>

**Dr. Jai Rohila** is a Research Agronomist with the Dale Bumpers National Rice Research Center, Stuttgart, AR since 2016 and adjunct Professor at Oklahoma State University since 2017. At the ARS, he conducts research to understand abiotic stress tolerance in rice and uses this newly generated knowledge for improving rice germplasm to tolerate such stresses effectively. Few examples that he is currently focused on are alternative and wetting dry (AWD) irrigation, salt, and heat stress.

Jai Rohila hails from India. He earned his B.S. in Agriculture, M.S. in Plant Breeding, and Ph.D. in Genetics while working on doubled haploid rice via anther culture for fixing of segregating genes in a relatively shorter period compared with the conventional method. Dr. Rohila remembers and cherishes his one-to-one meetings with Dr. Norman Borlaug (Noble Laureate) during his B.S. and Dr. Toshio Murashige (inventor of MS media widely used in plant tissue culture) during his Ph.D. – both meetings inspired and motivated him to pursue career in agricultural research. The Rockefeller Foundation selected and funded his research proposal to continue his research interests in molecular biology of abiotic stress tolerance in rice under late Dr. Ray Wu at Cornell University. As time progressed, he started building greater interests in learning molecular mechanisms of stress tolerance in rice and joined the labs of Dr. Michael Fromm, University of Nebraska, Lincoln and later Dr. Yinong Yang, Pennsylvania State University to gain more in-depth molecular knowledge of stress



tolerance in rice. Before USDA-ARS, Dr. Rohila was a Professor at South Dakota State University and was teaching Molecular Genetics to Undergraduate students and Molecular Plant Physiology to graduate students. In South Dakota, his abiotic stress tolerance research was mainly focused on wheat, soybeans, and switchgrass. He enjoyed mentoring M.S. and Ph.D. student, but he was missing something – and probably it was the rice crop. Soon he found the place – DBNRRC - to work on his favorite crop and the favorite research topic.

Dr. Rohila enjoys traveling and has visited 7 countries. Showing his international leadership, he has collaborated extensively with scientists around the globe and for that he was awarded “Faculty Award for Excellence in Global Research” by the South Dakota State University. Dr. Rohila served Sigma Xi, The Scientific Research Honor Society – SDSU chapter in the capacity of Treasurer, Secretary, and the President. He volunteers his time to serve on grant panels, editorial board of scientific journals, and peer reviewer for several journals of his research field.

Dr. Rohila is married to Suman whom he met when both were Ph.D. students in India. Suman works for the ARS at Booneville, AR.

**Tiffany Sookaserm**, currently a senior Biological Science Technician in abiotic stress lab for Dr. Jai Rohila, joined Dale Bumpers National Rice Research Center in 2006.

Tiffany was born in Kengsadok, Laos but moved to the US during her childhood. Remembering her childhood Tiffany recalls that her parents, uncles, and aunties helped each other with glutinous rice farming. They farmed sweet rice not for sale to the market, but as their staple food source. It was their way of life and without producing rice on their farm, they would not have rice to eat. Tiffany still cherishes those old memories - walking along the rice levees, as a child, trying to catch frogs and spending many nights in the woodshed with her parent as they kept watch over the water buffalo and rice fields. Also, she would go foraging for food with her mother catching fish, crabs, snails, and frogs in rice paddy. In 1980, Tiffany and her family crossed over to Thailand as refugees in search for a better life. They stayed in a refugee camp in Nongkai, Thailand until they were selected to come to the United States in 1982. They arrived in Fort Smith, Arkansas, and in 1987, her parents bought a small farm with 3 broiler houses (chicken houses) where they raised chickens for Tyson Food. Tiffany helped family in maintaining broiler houses as well as extending help in taking care of cows, pigs, ducks, goats, and even peacocks on the farm.





Tiffany was good at science and art since high school, and in 1998 she earned her BS in Biology and Microbiology from the University of Arkansas at Fayetteville. She is proud of being a first-generation college graduate. Tiffany was accepted to College of Nursing of University of Arkansas Medical School but was instead drawn back to work on rice and joined Dale Bumpers National Rice Research Center in 2006 and assisted the Breeder and Germplasm lab with planting, harvesting, and many more aspects of fieldwork. In 2007, Tiffany joined USDA-ARS as the Biological Science Laboratory Technician for the Germplasm lab. She involved herself both research and service work. Some of the service work and research experiments included: seed distribution (international and domestic) to research labs, rejuvenating rice germplasm that was collected from all around the world and evaluating many agronomic traits for NSGC, genotyping the Core collection, developing mapping populations for blast and straighthead, creating milled rice chalk color class for use on the Winseedle system, sheath blight project, cold tolerance, and arsenic uptake with collaboration with Pine Bluff University and Texas A&M and many other. Over the many years working in the Germplasm lab under the supervision of Drs. Yan and McClung, Tiffany learned many useful skills and knowledge.

Subsequently, in 2016, she was offered a new job assignment in the Plant Stress Tolerance Lab under the supervision of Dr. Rohila, and she turned her focus on conducting abiotic stress tolerance research experiments in the lab, greenhouse, and field setting. She regularly conducts a variety of rice research, including hydroponic salinity studies, Straighthead, heat and AWD or limited irrigation stress studies, development of mapping population for AWD breeding, salt, drought, and heat stress tolerant lines, LI 6800 Portable Photosynthesis system to collect physiological data in the greenhouse and field, collaborate with OSU on NFS grant, Clemson University on NIFA grant for salt tolerance, and much other research collaboration with scientists in the building. Also, she helped hosted 10 or more international students and doctors and helped them with their research projects while working on several extramural funded grants.

Rice is a staple part of Tiffany's life. It's an important aspect of her career, family history, and culture. Tiffany loves eating rice especially sticky rice with Ping Gai (grilled chicken), Laap (beef salad), and Tum Mak Hoong (Lao papaya salad). Every April, she looks forward to celebrating Boun Pi Mai (Lao New Year) with her family and friends. During Lao New Year, Tiffany and her family dress in traditional Lao clothing, visit Temple to make offerings to the monks, eat a variety of Lao food, watch Lao traditional dances, and listen to Lao songs as they welcome the new year. Also in her spare time, she likes to work in the vegetable garden, hunt mushrooms, and fishing.

See the web version of all DBNRRRC research highlights at: <https://www.ars.usda.gov/southeast-area/stuttgart-ar/dale-bumpers-national-rice-research-center/docs/monthly-research-highlights/>