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

January 2018

MONTHLY RESEARCH HIGHLIGHTS

For More Information: Dr. Anna McClung, Research Leader/Center Director
anna.mcclung@ars.usda.gov

- **Technology Transfer**

  - ✓ **Interactions with the Research Community**

January 13th - 17th, 2018, Dr. Yulin Jia attended the 2018 International Plant and Animal Genome Conference (PAG XXVI) in San Diego, CA. As the US organizer of 2018 Rice Functional Genomics workshop Dr. Jia presented the update on the USDA ARS Genetic Stocks *Oryza* collection, GSOR. Since 2004, GSOR has distributed over 80,000 rice genetic stocks, including 24,000 putative Katy deletion mutants that Dr. Jia developed. With collaborators, a graduate student, Bed Prakash Bhatta, and faculty members, Drs. Sathish Kumar Ponniah and Muthusamy Manoharan of Department of Agriculture, University of Arkansas at Pine Bluff, Dr. Jia also presented research results regarding validation of a candidate blast resistance gene at the conference.

January 13- 17, Dr. Jeremy Edwards also attended the Plant and Animal Genome meeting in San Diego, CA and presented a poster entitled "Association analysis using USDA diverse rice (*Oryza sativa* L.) germplasm collections to identify loci influencing grain quality traits." At the meeting, Dr. Edwards organized the Allele Mining workshop hosting six speakers.

On January 23, 2018, Drs. McClung, Edwards, Eizenga, Gealy, Jia, Pinson and Rohila attended the Southern Rice Breeders meeting in Stuttgart, AR. A report on grain quality and genetic marker analyses as determined by the DBNRRC on the elite breeding lines evaluated in the Uniform Regional Rice Nursery was presented to the southern rice breeders. Also at this meeting, Dr. Xueyan Wang, Postdoctoral Research Associate with Drs. Yulin Jia and Yeshi Wamishe of University of Arkansas shared an update of rice blast research. Funding for Dr. Wang's research was provided by a USDA-AFRI multi-

institutional project aimed at developing innovative methods to manage rice and wheat blast diseases. Research results presented by Dr. Wang will enable US rice breeders to better select effective rice blast resistance genes for deployment via a marker assisted selection approach.

Dr. David Gealy attended the annual meeting of the Weed Science Society of America in Arlington, Virginia, Jan. 29 - Feb. 1, 2018, and presented a research talk entitled 'Crop Characteristics and Weed Interactions of Diverse Recurrent Inbred Lines (RILs) from a Weed-Suppressive x Non-Suppressive Rice Mapping Population'.

January 30, 2018, Dr. Jinyoung Barnaby attended the steering committee meeting of the Korean Women in Science and Engineering (KWiSE) NIH-DC chapter held at NIH/NIAAA in Rockville, MD. The KWiSE NIH-DC joint symposium is held annually, and the purpose of the symposium is to provide women researchers in the greater DC area with opportunities for sharing career information and advices, exchanging research ideas, and networking with each other. During the meeting, detail plans (i.e. speaker selection for science/engineering and career development section as well as mentoring programs) for the upcoming KWiSE NIH-DC joint symposium, which will be held on May 5, 2018, were discussed.

✓ **Rice Germplasm Distributed**

During January, 83 rice accessions from the Genetics Stocks *Oryza* (GSOR) collection were distributed to researchers in the US, Belgium, Canada, and Germany.

- **Stakeholder Interactions**

January 19, 2018, Dr. Chen advised a private breeder in Texas using a WinSeedle image analysis system to determine percent chalkiness in milled rice.

- **Education and Outreach**

Two high school students have been mentored by Drs. Yulin Jia and David Gealy over the last few months as they conducted research in preparation for a science fair competition. Ms. Emily Sookaserm (on right in picture) is comparing rice genotypes in a greenhouse study to determine if differences in physiological and agronomic traits are related to the ability to suppress weed growth. Ms. Mary Jia (on left) is comparing rice seedlings that have been mutagenized using different methods to determine which is the most effective for generating genetic mutants for further study.