



STEM Center for  
Mathematics and Science Education

## **Rice: Genetic Variation Student & Teacher Workshop** **8-12<sup>th</sup> Students and Teachers** **July 21 - 24, 2019**

**Seeking 1-4 teachers from the Arkansas Delta Region to bring up to 8 students.**  
**\*\*\*Workshop limited to a total of 8 students and 4 teachers\*\*\***

**Tentative Schedule: Sunday 5:00pm - 7:00pm, Monday & Tuesday 8:30am - 3:30pm, and  
Wednesday 8:30am - 12:30pm**

**Workshop Location: UA STEM Center for Math and Science Education, 346 N West Ave.,  
Suite 202, Fayetteville, Arkansas**

Each student and teacher participant will receive:

- \$500 stipend
- Break snacks, breakfasts, lunches, and dinner
- Lodging at a local hotel – 4 students per room
- Travel expenses - mileage
- Teachers: 18 hours of ADE-certified PD

**For more information, contact Shawn Bell, UA STEM Center Director, [seb010@uark.edu](mailto:seb010@uark.edu)  
or 479-575-3875**

### **Genetic variation in plants offers a future in their improvement**

In natural populations in the wild or in their places of origin, many variants of a plant type can be found. Humans have selected the best variants for their uses and these plants have given rise to our cultivated plants. Genetic variation is therefore the key to be able to improve plants to diseases, stresses like drought/heat, eating quality or higher yield.

8-12<sup>th</sup> grade students will attend a summer workshop, funded by the National Science Foundation, laboratory and greenhouse experiments where such genetic variation can be studied using many scientific methods. The plant systems have been characterized at the DNA sequence level and have improved characters or traits that might make them useful for selection and development of crop plants.

The workshop will be held at the University of Arkansas (Fayetteville campus), introducing students to the study of genetic variation at multiple levels of analysis, from the phenotype to analysis at the DNA and compositional levels. Students will learn some basic tools to distinguish differences between plant, methods and information that are representative of variation in any living system. Students will be introduced to many interesting experimental methods and results, that will give them an experience of the fun and excitement of experimental science.