

# Education Research & Outreach Newsletter

August 2021

Volume 4

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## Hard Work and Summer Fun with the EROL

The Education Research and Outreach Lab has had a busy summer. From publications to graduations, there has been plenty of cause for celebration! Through all the hustle and bustle, we have found time to connect with each other, whether over dinner, at the park, and even at the vineyard (see the picture below)!



You can stay connected with us by following our work in this latest newsletter – new volume coming in October!



DONALD DANFORTH  
PLANT SCIENCE CENTER



## Looking for AREs & CUREs? Say hello to Dr. Kate Parsley!

The Education Research and Outreach Lab is excited to introduce our new postdoctoral researcher, Dr. Kate Parsley! You can follow her work on Twitter [@KathrynMParsley](https://twitter.com/KathrynMParsley), Instagram [@kathrynpmarsley](https://www.instagram.com/kathrynpmarsley), and her website, [www.kathrynpmarsley.com](http://www.kathrynpmarsley.com).

Kate is the coordinator for Authentic Research Experiences (AREs) and Course-based Undergraduate Research Experiences (CUREs). Our lab offers a number of AREs and CUREs that can engage students at a wide range of grade levels.

If you are an educator interested in implementing an ARE, click [HERE!](#) 20 spots are available, offered on a first-come, first-served basis. Contact Kate at [KParsley@danforthcenter.org](mailto:KParsley@danforthcenter.org) with questions.



## Agricultural Science at JJK FAN-I Center

This summer, our lab has enjoyed visiting with students at the Jackie Joyner-Kersey Foundation's FAN-I Center to explore agricultural science together. At our first visit, Taylor Harris, a graduate student in Dr. Rebecca Bart's Lab, talked with students about careers in ag. science.

At our second visit, the JJK Foundation students evaluated three different corn varieties, made predictions regarding which variety would grow the tallest, and planted each of the three varieties. We're looking forward to checking on the corn later this summer!



During the third visit, the students got to dissect corn kernels and play the "Corn or No Corn" game, where they learned just how many products have corn in them. This variety of interactive lessons was a fun way of engaging the JJK Foundation students in agricultural sciences.

## Connect with Us on Social Media!



<https://www.facebook.com/DDPSCERL>



<https://twitter.com/DDPSCERL>



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<https://ddpscerl.home.blog/>





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## June 21<sup>st</sup> – 24<sup>th</sup> STEM Education Workshop in Plant Biology

June 21<sup>st</sup> – 24<sup>th</sup>, 2021, the lab hosted a free workshop to introduce STEM educators to a wide variety of useful programs, methods, and resources for their classrooms. Each of the four days of the workshop covered a different subject:

- **Day 1, Mutant Millets** - Discover a mutant grass that can provide scientists with new tools to model climate change, breed new and better food crops, and understand the genetic control of mutations.
- **Day 2, Augmented and Virtual Reality (AVR)** – Explore plant science through AVR educational tools and learn to develop plant science curricula for AVR technology.
- **Day 3, Plants Fight Back** – Learn about a program that helps scientists understand how peptides can prevent fungal infections in tomato plants.
- **Day 4, Informal Inquiry** – Collaborate with other educators to consider new possibilities and develop frameworks for teaching.

These and other workshops are offered by our lab on a regular basis. Check the newsletter and our social media regularly for updates about future events, or contact us at [Education@Danforthcenter.org](mailto:Education@Danforthcenter.org).

*An educator tries out the Oculus Quest, a self-contained virtual reality headset, during the Augmented and Virtual Reality (AVR) workshop.*

*If you are interested in bringing AVR technology into your classroom, contact Sandra Arango-Caro at [SArango-Caro@danforthcenter.org](mailto:SArango-Caro@danforthcenter.org).*



*Educator attendees watch as members of the Shah Lab at the Danforth Center demonstrate how to carry out procedures for the Plants Fight Back program.*

*If you are interested in facilitating the Plants Fight Back program for your students, contact Ruth Kaggwa at [RKaggwa@danforthcenter.org](mailto:RKaggwa@danforthcenter.org).*

## New Publications

We are excited to share the first of many publications on *Setaria* mutants from the long-lived Mutant Millets program! This article includes a teaching module that engages classes in authentic research:

**[Exploring Grass Morphology & Mutant Phenotypes Using \*Setaria viridis\*](#)**

Ruth J. Kaggwa; Hui Jiang; Rita A. Ryan; Justin Paul Zahller; Elizabeth A. Kellogg; Terry Woodford-Thomas; Kristine Callis-Duehl

This article highlights the need for both pedagogical and crisis-specific training to prepare faculty for future emergency remote teaching events like the COVID-19 pandemic:

**[Training Faculty as an Institutional Response to COVID-19 Emergency Remote Teaching Supported by Data](#)**

Lisa L. Walsh, Sandra Arango-Caro, Emma R. Wester, and Kristine Callis-Duehl



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