

# **Creative Representations Of Research Impact Awarded By SIUE Graduate School**

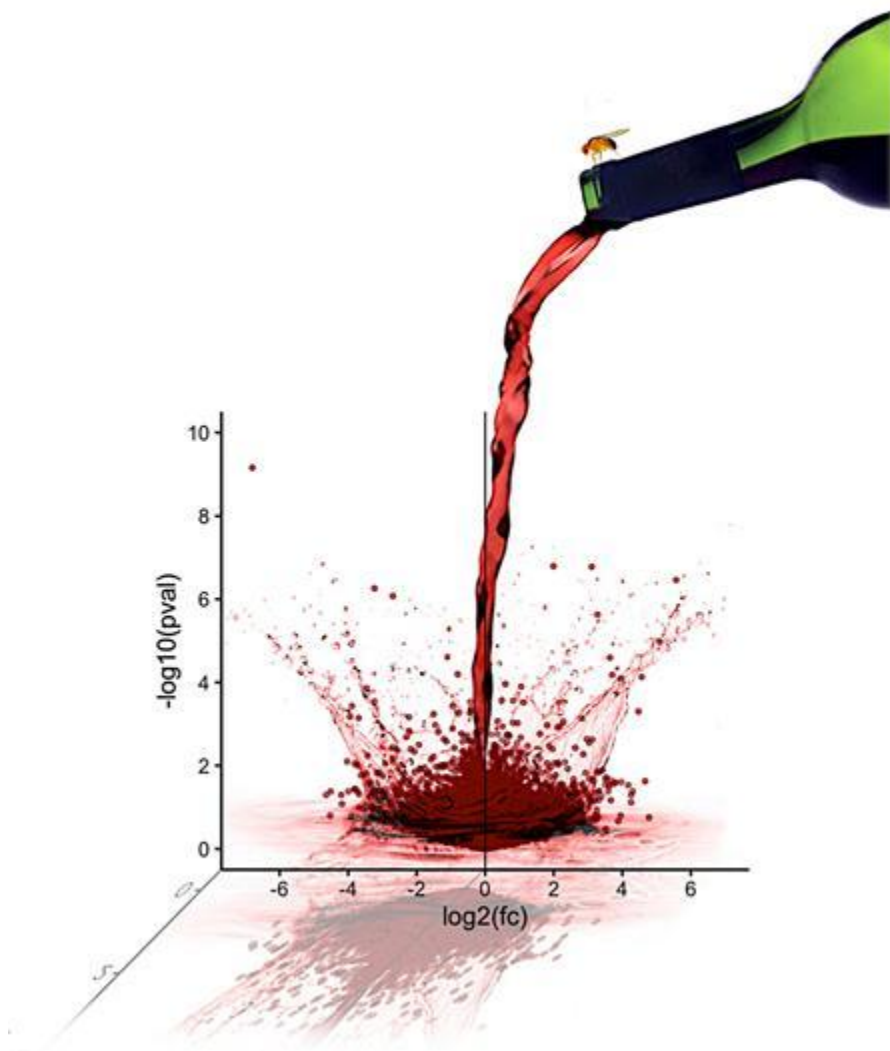
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EDWARDSVILLE - The Southern Illinois University Edwardsville (SIUE) Graduate School has announced the winners of the 2021 Visualizing Research Impacts (VRI) competition, which encourages SIUE scholars to share the impacts of their research through images.

This year's recipients are Emily Petruccelli, PhD, assistant professor in the Department of Biological Sciences, and Jocelyn DeGroot, PhD, professor and assistant chair in the Department of Applied Communication Studies. Their works were selected from a pool of 25 student and faculty entries that depicted a diversity of disciplines throughout the University.

- Most Creative Representation of Research Impact: "Octomom" by DeGroot
- Best Representation of Research Impact: "Pouring efforts in alcohol research" by Petruccelli



"Our alumni judges come from diverse disciplines and always enjoy the opportunity to review the range of VRI entries," said Susan Morgan, PhD, associate dean for research and graduate studies. "They were uniformly impressed with the caliber of these two images."

DeGroot and Petruccelli each received a \$1,500 award to further support their research and creative activities. Additionally, both recipients will be featured in the Graduate School's annual *Research and Creative Activities* magazine.

DeGroot's recent research on motherhood, co-directed with Tennley Vik of the University of Nevada, Reno, explored how mothers perceive, experience, and describe the domestic workload inequity and challenges related to motherhood.

"Mothers engage in invisible labor preparing meals, cleaning, shopping, scheduling for the family, emailing teachers, making health decisions, and doing numerous other activities that often go unnoticed," DeGroot said. "Our research indicates that mothers feel the intense burden of performing motherhood flawlessly as they project a positive self-image, avoid sharing challenges, and discuss only positive experiences. This results in women's domestic labor being further hidden from view.

"'Octomom' recognizes the invisible labor accomplished by mothers and aims to begin conversations about workload inequity," she explained.

Petruccelli's research explores the molecular mechanisms underlying Alcohol Use Disorder (AUD). Using RNA-sequencing, her team identifies and tests specific gene transcripts differentially expressed in *Drosophila* (fruit flies) that show addiction-like behaviors.

Each data point on the graph is one of the 17,561 genes in the fly genome. By comparing control animals to those previously exposed to repeated bouts of ethanol, gene expression changes can be observed. Relative fold change is represented on the x-axis and the inverse of the statistic's value, so that highly significant changes are higher in the plot, represented on the y-axis.

"Our research has highlighted conserved molecular pathways hijacked by alcohol in the nervous system," Petruccelli said. "This allows for further testing to aid in the development of novel, more effective AUD therapies."