



UMD Department of Chemistry & Biochemistry  
Fall 2020 Seminar Series  
Friday, December 4, 2020  
3:00 p.m. Remote

## **KATELYN FRANCE**

**UMD CHEMISTRY AND BIOCHEMISTRY UNDERGRADUATE STUDENT  
HOST: DR. VENKATRAM MEREDDY**

### ***New Solutions to Old Problems: Addressing the Care in Healthcare***

If you believe you can make the world a better place, why aren't you doing that right now?" These are the words that inspired 15-year-old Katelyn France to begin her work as a biomedical engineer. In the six years that follow, Ms. France has continuously worked to improve equality and accessibility in the fields of medical technology and pharmacogenomics. This seminar will explore two main projects and their significance in addressing healthcare disparities commonly associated with rural communities. The first project of focus is "Anaphylactic Shocker!", the creation of a novel system of QR code-based medical bracelets and related technology that allows bystanders to provide the basic life-saving medical attention crucial to the first several minutes of medical emergencies. The second project explores the relationship between cytochrome P450 2C19 and 2D6 genotypes and the relative metabolic rates of sertraline (Zoloft) in children and adolescents, and how genetics-based dosage adjustments can significantly improve both physical and mental health. Together, these projects work to provide viable solutions to rural healthcare inequities by addressing the centralized statement, "Just because a community is underserved does not mean it is undeserving."