

2021 Metro Richmond STEM Fair

VSSEF Winners

Senior Division

1st Place **Cameron Sharma**

Physics & Astronomy

Aero2Aqua - A Novel Bioinspired Atmospheric Water Harvester

2nd Place **Mrunal Kute**

Animal Sciences

Analyzing Blue Light on Dugesia tigrina Regeneration to Model Human Epidermal Growth Processes

2nd Place **Perisa Ashar**

Biomedical and Health Sciences

Identification of Novel Extracellular Vesicle Plasma and Tumor miRNAs for Rapid, Inexpensive Detection of Lung Cancer via Next Generation Sequencing, Bioinformatics, and In-Vitro Analyses In Conjunction with Machine Learning Classification

2nd Place **Chirayu Nimonkar**

Biomedical Engineering

The Effect of Rat Brain Phantom Construction on Mimicry of the True Brain Model

3rd Place **Emily Lionberger**

Animal Sciences

The Effect of Oxygenator Design on the Survival Rate of Culex tarsalis Larvae

Honorable Mention **Sania Jain**

Mathematics

Multiple Regression Modeling to Predict Changes in US GDP Using Stock Market Volatility and Unemployment Rates