Abstract

Troy High School BioBuilder 2024

The presence of harmful bacteria in drinking water suggests that water often contains pathogens that can lead to disease. It is important to be able to identify unsafe drinking water to determine particular substances that may lead to illness. Our purpose is to create a functional and self renewing biosensor that can be made to become accessible and cost-effective. We plan to transform yeast to express an antibody that binds to E. coli. To analyze its results, we will perform an ELISA assay to determine its effectiveness. Understanding the capability of producing a biosensor is essential to ensure safe drinking water and effective water filtration methods. This critical first step is also needed to better understand waterborne pathogens.