

Heme Expression from *Caulobacter Crescentus* in *E. coli*

Gloriana Tokgozoglu, Ashish Kumar, Taihao Yang, Salete M. Newton, Phillip E. Klebba

Presenter: Gloriana J Tokgozoglu

Major: Medical Biochemistry

Mentor: Dr. Phillip E Klebba

Abstract:

The focus of my research is to create a clone of a Heme transporter from *Caulobacter crescentus* and transformed into *E. coli* OKN359 and fluorescently label it so that it can detect Heme in the environment. This sensor will be combined with others in a fluorescence assay to analyze pathogenic bacteria and identify drugs that are the most effective in inhibiting their iron transport. To do so, I used Gibson cloning and made a hybrid gene, pITS27, that contains a small initial portion of an *E.coli* gene *fepA* followed by the full *Caulobacter crescentus* gene *hutA*. The initial portion of the *E.coli* gene was necessary to ensure proper insertion of the *Caulobacter crescentus* HutA protein in the outer membrane.