

Focus on Transcription and Translation “How a Gene Works”

- explores how to move a gene into a harmless bacteria with a protein result

Teachers gathered at NIST on a snowy afternoon after school for an informal lecture on Transcription and Translation (How a Gene Works). Dr. Alison Kraigsley talked about her background, her work at NIST, and the tools that scientists now have to visually and quantitatively distinguish among DNA, RNA, and protein. The availability of green fluorescent protein (GFP) has revolutionized our study of cell biology and gene expression.



Dr. Kraigsley, a postdoctoral fellow at NIST led the teachers in going through the steps in the lab activity: transforming *E. coli* with the Green Fluorescent Protein gene, and then growing the bacteria so that they produce GFP. Sounds easy doesn't it?



Carolyn Holcomb of the Visitation Academy tries selecting just one or two colonies from the plate.



Success! Next step: lead students in the transformation of *E. coli* and expression of GFP.