

My name is Nikita Varde. I visited Poole's Lab from M. S. University Baroda, one of the participating labs in the India-UK Nitrogen Fixation Centre, from 16<sup>th</sup> July 2018 to 10<sup>th</sup> September, 2018.

My project involved

**1. Identification of Pyrolo Quinoline Quinone (PQQ) gene cluster in different *Rhizobium* sps using bioinformatic tools**

Literature and gene sequences of different *Rhizobium* sps were searched for occurrence of PQQ gene cluster. In total 8 different *Rhizobium* species PQQ gene cluster was found.

**2. Cloning of PQQ gene clusters from three different bacteria in pLMB509 plasmid using BD cloning technique**

PQQ gene cluster of three different bacterium *Acinetobacter calcoaceticus*, *Sinorhizobium fredii* NGR234 and *Sinorhizobium meliloti* 1021 were selected for cloning in pLMB509 plasmid. pLMB509 plasmid is an expression vector utilizing the inducible taurine promoter (*tauAp*) developed in Poole lab. Primers were designed for cloning and sequencing of gene clusters.

**3. Understanding the basics of Golden Gate Cloning technique**

I was introduced to basics of golden gate cloning, different modules of cloning thoroughly.

It was a great learning experience I became well aware of Golden gate cloning technique.