

The Spliceosome complex is unique and intrinsic to eukerotic cellular function. The spliceosome, which is a large protein/RNA complex that splices out (introns) non-coding regions from pre-messenger RNA, is composed of five small nuclear ribonucleoproteins (snRNPs) and many non-snRNP cognate protein factors. Not much is know about the structural dynamics of the spiceosome, the focus of the research done in Professor Melissa Jurica's lab, which I am currently an undergraduate fellow in, is to combine different techniques such as x-ray crystallography and biochemical facility to help give insight into the overall shape of the spliceosome. My current project involves coming up with a system to make SF3b proteins, which are an integral part of the machinery of the spliceosome in relation to RNA processing. The goal of this project is to create co-expression in the form of vectors to enable the synthesis of the three SF3 protiens associate with the spliceosome together. The methods used to create these vectors are PCR ( polymerase chain reaction) and non-ligase combinate of destationation and donor vectors associated with the Human Gateway System. I am currently creating each of the vectors I will be needing through