

## **Abstract**

This thesis deals with interaction of Protein and Nucleic Acid. We have done MD simulations for STAR domain of Quaking protein in presence of bound mRNA. We have already known that all 17 conformations of APO (2BL5) form of Protein binds with mRNA. But we need to investigate which of the conformations are most likely to HOLO (4JVH) form of the Protein

The first chapter of the thesis deals with the introduction of STAR Domain Proteins or Quaking Protein and introduction of methods used for simulation.

The second chapter of the thesis deals with all the methods which we have used during our project.

The working principle of the techniques have been illustrated.

In the third chapter, we have done analysis for shorter (1ns, 10ns) and longer (100ns) run simulation.