Proteins are essential for:
- Maintaining life
- Defense
- Replication and Reproduction

The function of a protein is determined by the biochemistry of its domain
- The function of a protein is completely reliant on the structure of the protein
  - The structure comes from the different arrangements of the amino acids
  - If the amino acids change so does the shape effecting the function of the protein
- Depends on physical and chemical parameters of the protein

A protein is used under certain conditions
- Viruses and bacteria will change their antigens to prevent detection; this works because the cells will find and bind to the viruses or bacteria depending on their antigen.
- If proteins work under any condition, it makes it too easy for them to be activated and this would be bad for the cell and even worse for the human body
  - If proteins are activated easily, they can end up attacking healthy cells
  - If proteins don’t get activated, the body could lose essential proteins that need to be produced

A lot of research goes into determining which specific domains will bind to which proteins
- Determining under what conditions a protein works

Bibliography: