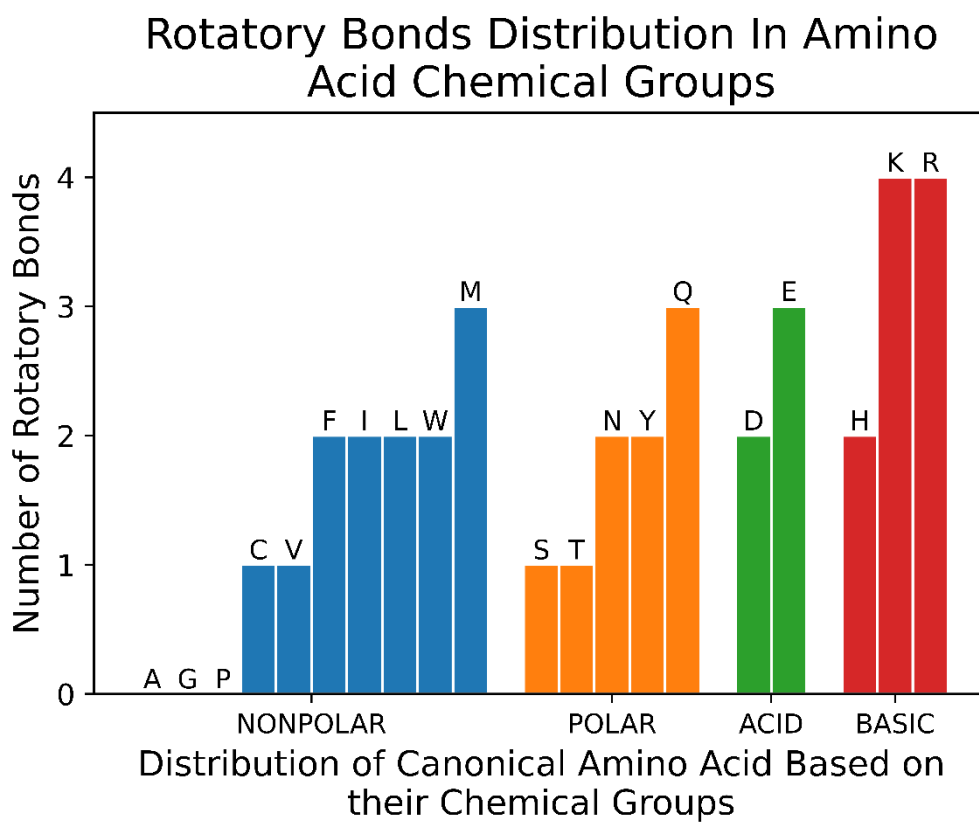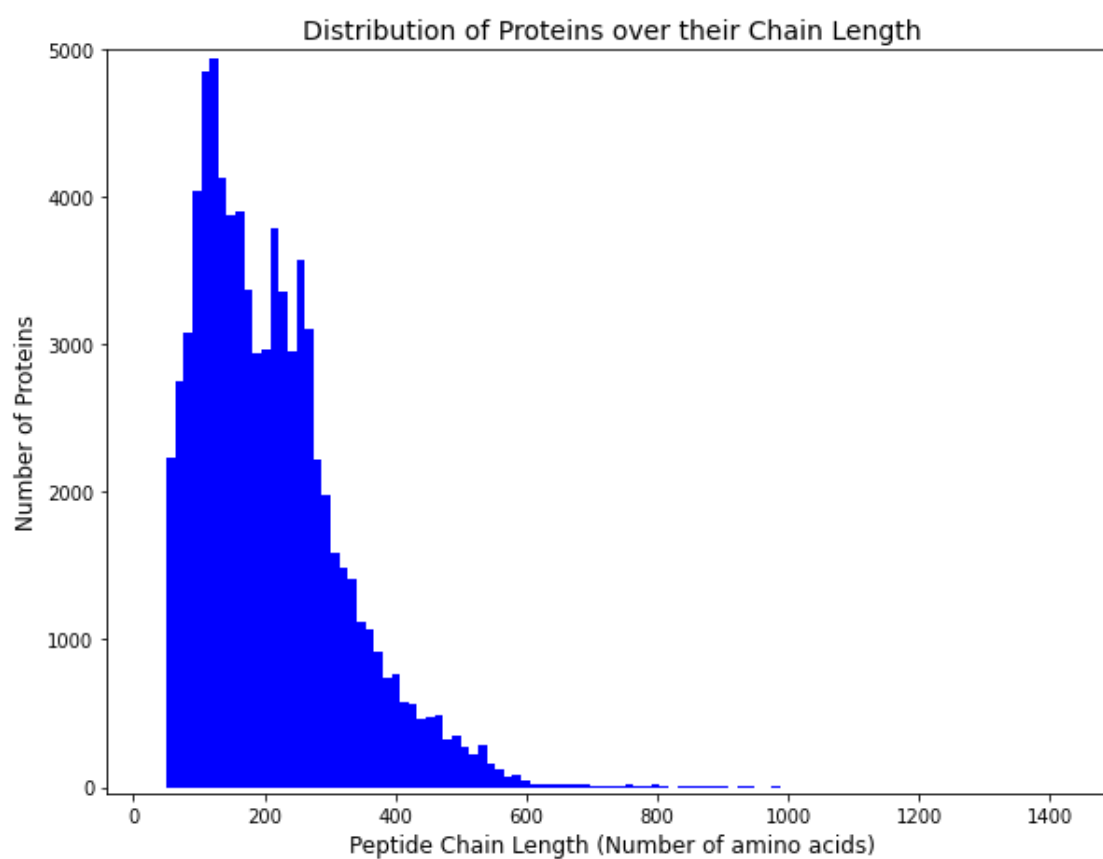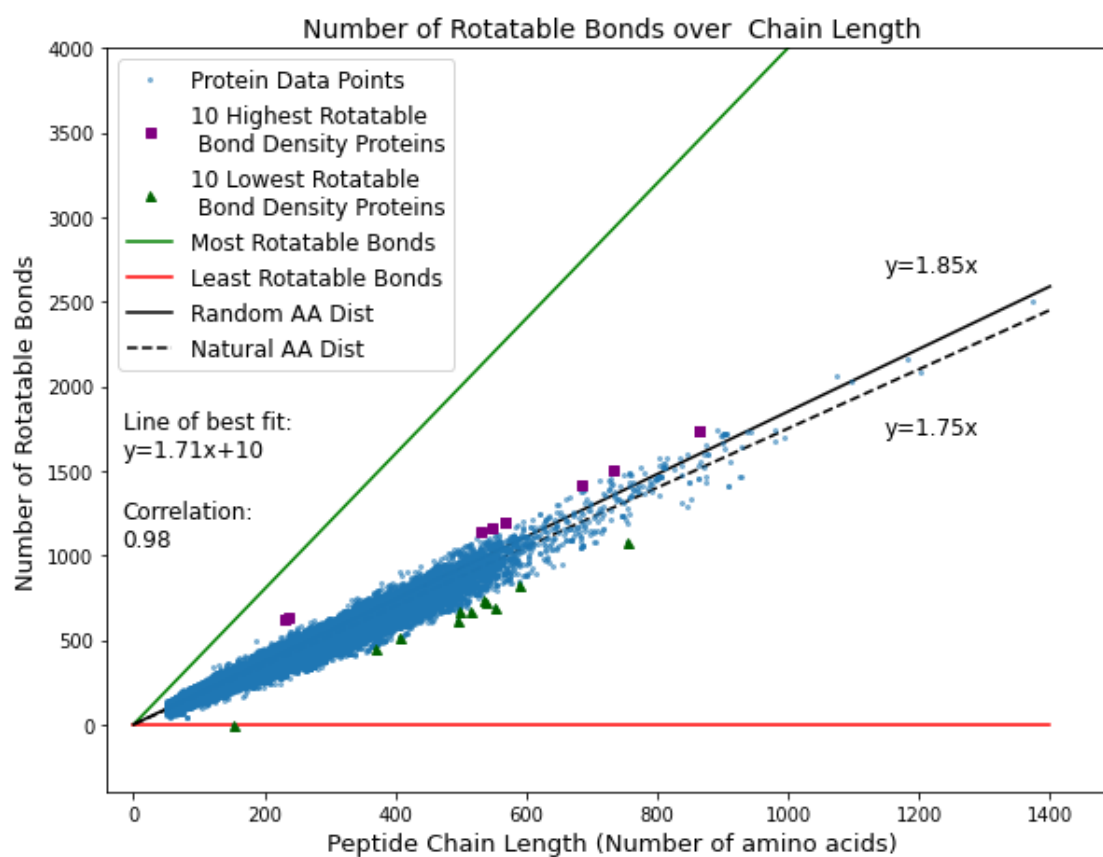# Data Figures
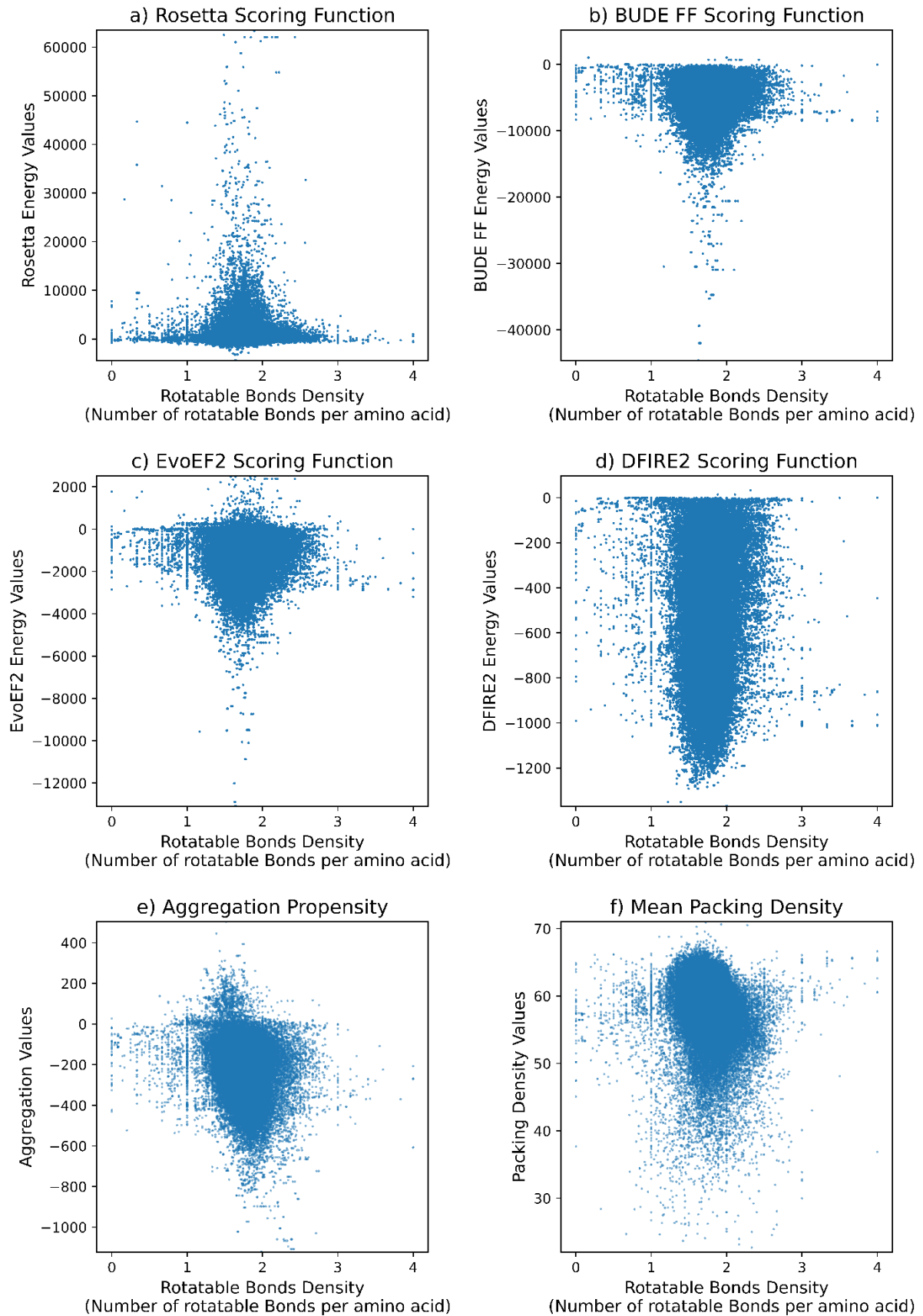
This document contains the main 6 figures created during the data analysis of this project.

Rotatory Bonds Distribution In Amino Acid Chemical Groups

Analysis of DE-STRESS Proteins based on their Rotatable Bonds

Number of Rotatable Bonds over Chain Length

Legend:
- Protein Data Points
- 10 Highest Rotatable Bond Density Proteins
- 10 Lowest Rotatable Bond Density Proteins
- Most Rotatable Bonds
- Least Rotatable Bonds
- Random AA Dist
- Natural AA Dist

y=1.85x

y=1.75x

Line of best fit:
y=1.71x+10

Correlation:
0.98

Number of Rotatable Bonds (y-axis)

Peptide Chain Length (Number of amino acids) (x-axis)

Distribution of Proteins over their Chain Length

Number of Proteins (y-axis)
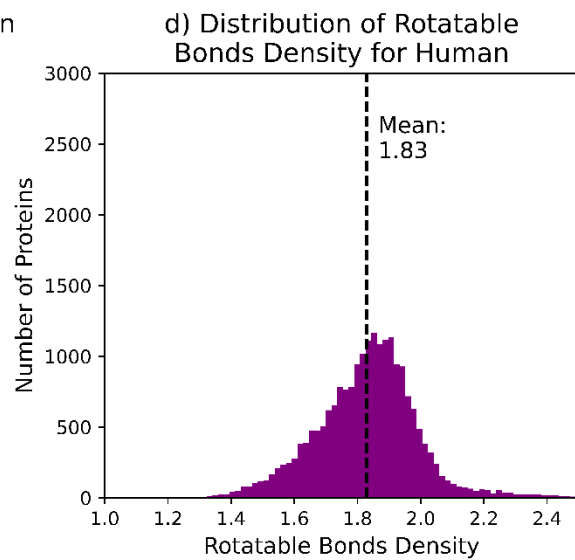
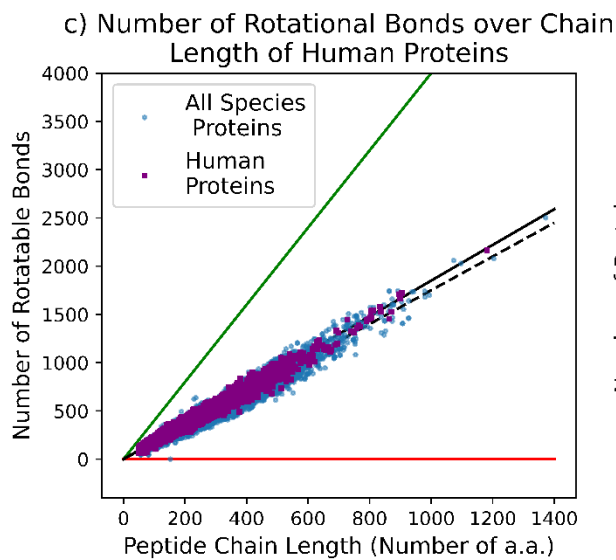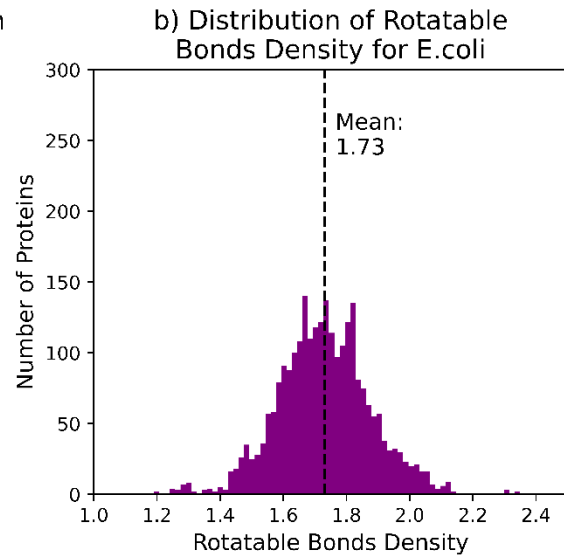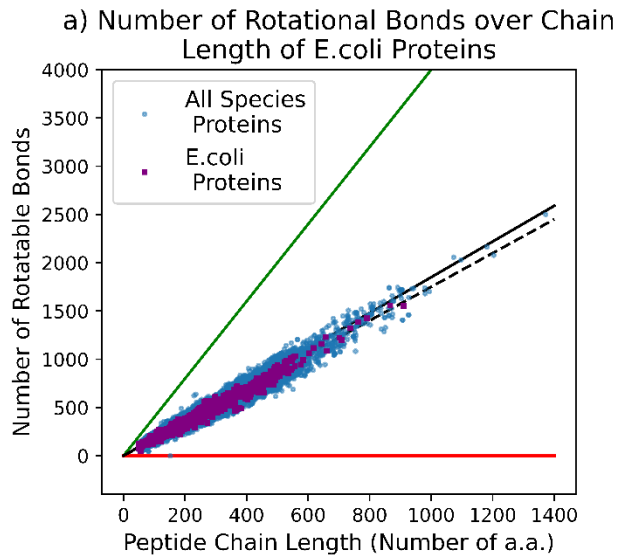Peptide Chain Length (Number of amino acids) (x-axis)

Distribution of Protein Rotatable Bond Density over different DE-STRESS Parameters

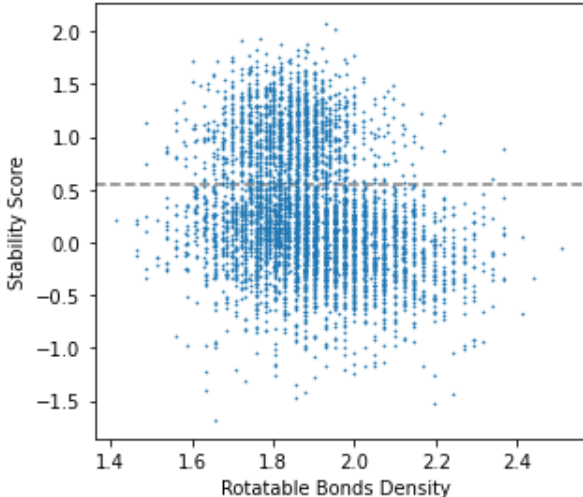# Distribution of Different CATH Classes Based on Their Rotatable Bond Density
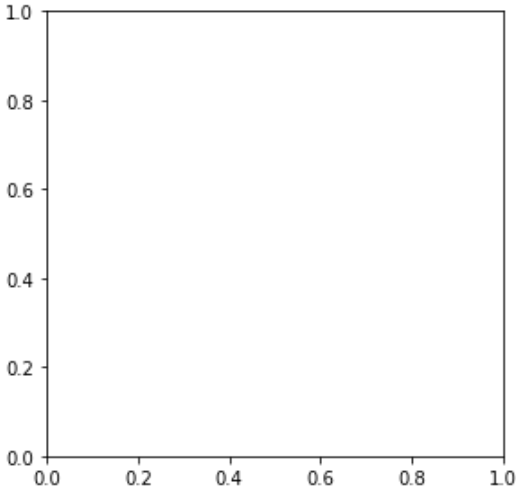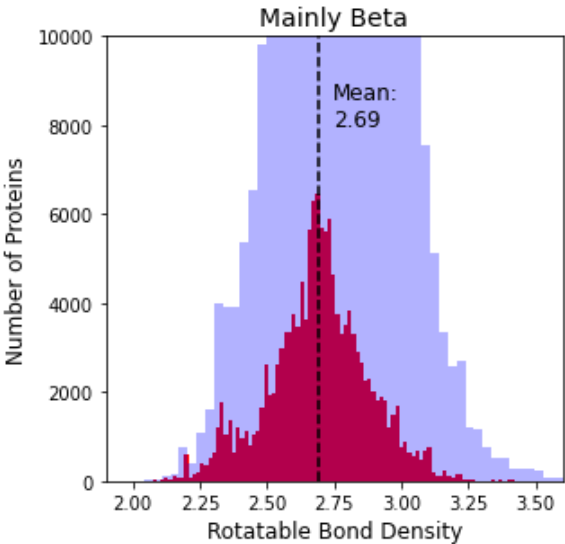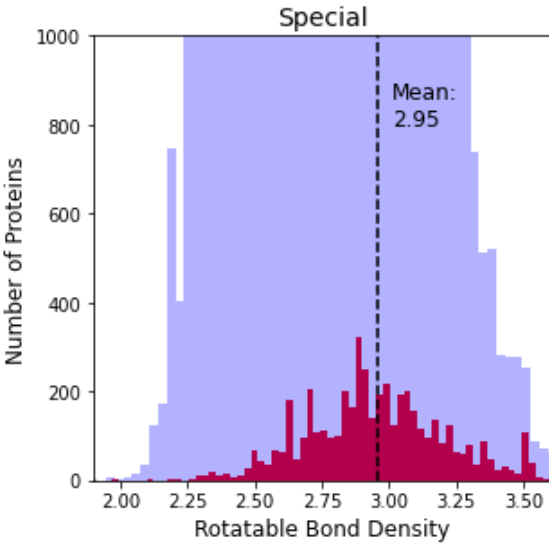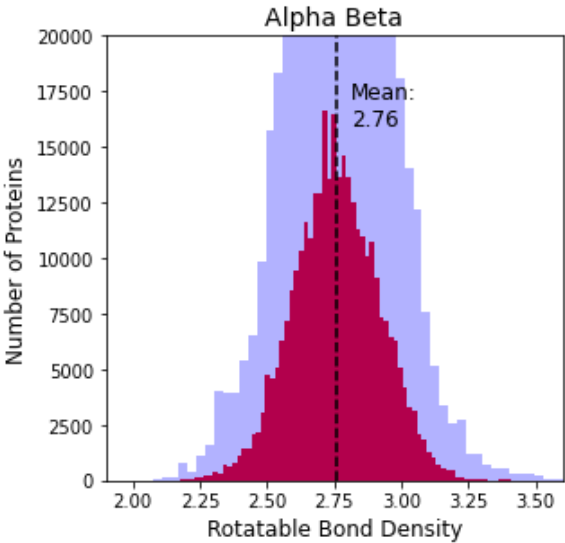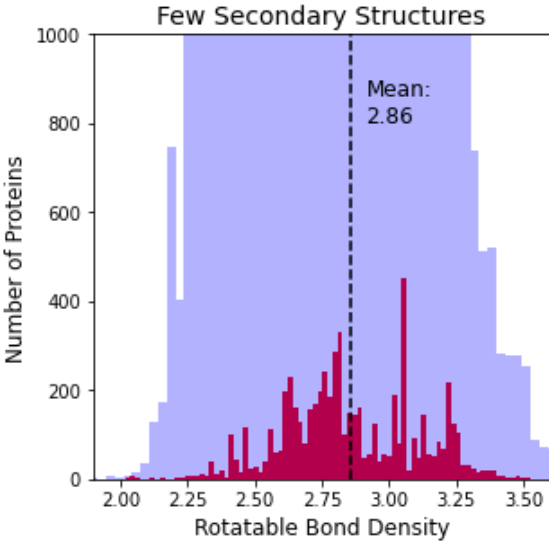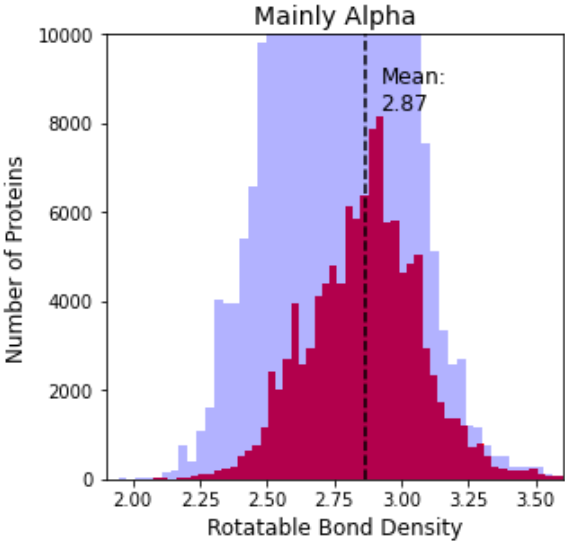
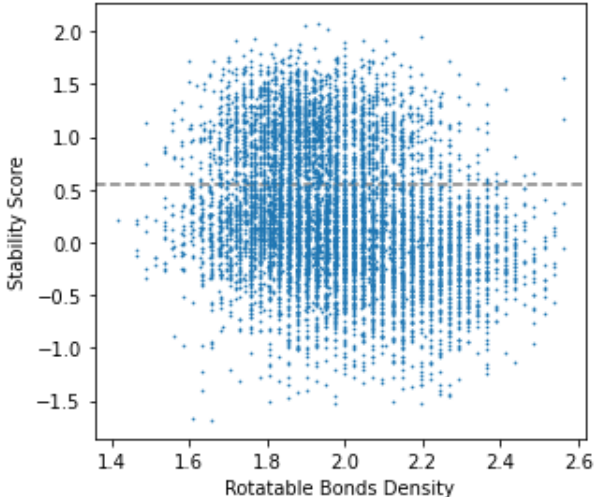# Distribution of Rotatable Bond Density for different Organism Proteins in DE-STRESS
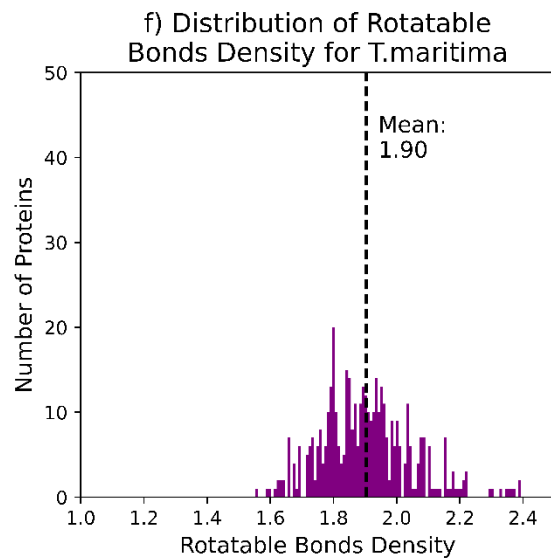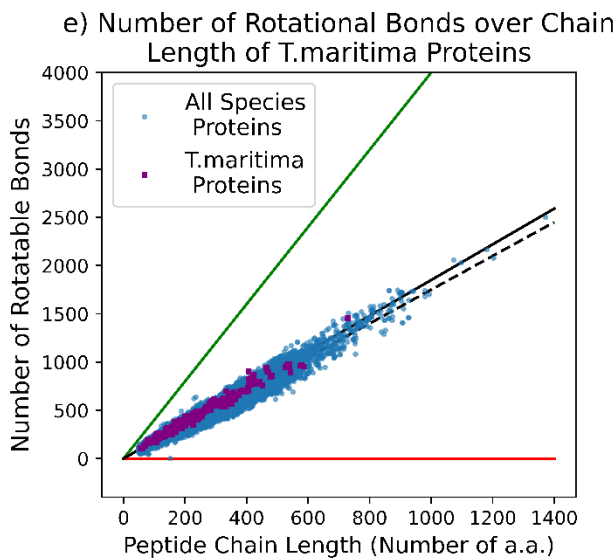
Relation between Rotatable Bonds Density and Stability of
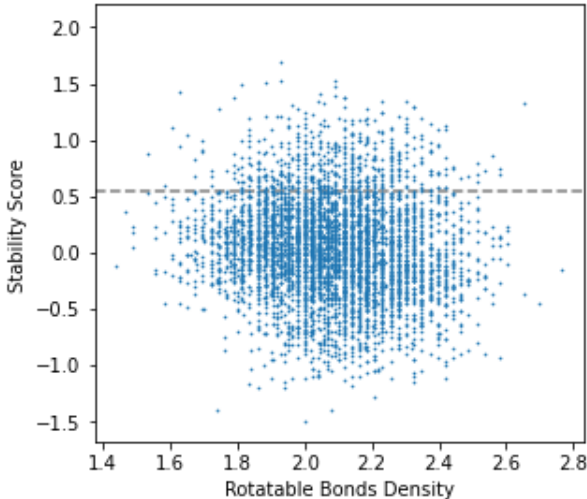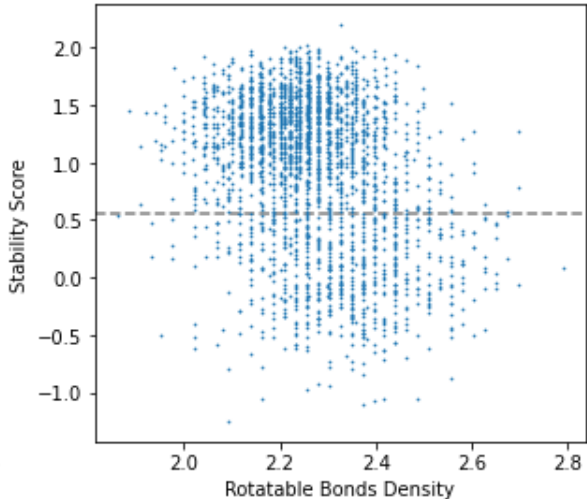Mini-Protein Designs with different Topologies