

**Title of the Project:** Structural studies on Papain precursor protein

Summary:

The primary objective of the project is to understand and establish the role of pro-peptide region in the regulation of activity/specificity of papain. The final goal is to construct tailor-made variants of papain with altered activity and specificity by introducing mutation(s) in the pro-peptide region of papain. The pro-papain crystal structure (a stable variant of papain will be used) will be solved initially and based on that structure, amino acid residues which interact and block the subsites of the mature domain will be identified which will cause the desired changes in specificity/activity.