

## Poster Presentation

MS081.P09

*Crystal structure of AtGet3ΔL, a chloroplast Get3 from Arabidopsis thaliana.*

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Guided Entry of Tail Anchored protein (GET) pathway is known to be the targeting machinery for C-terminal single pass membrane proteins (TA proteins). GET pathway components (GET1, GET2, GET3, GET4 and GET5) and its accessory proteins ensure the precise delivery of TA proteins. The mechanistic basis of this pathway is investigated considerably in *Saccharomyces* spp. *Arabidopsis thaliana* has four variants of GET3. Out of the four variants, AtGet3L, a chloroplast Get3 is being characterized in our study. This is the first Get3 structure from plant system. Crystal structure of AtGet3ΔL was solved at 2.5Å resolution by molecular replacement method. The crystals of AtGet3ΔL belonged to space group P1 21 1 with unit cell parameters a= 59.25, b= 67.05, c= 99.40 Å, α= 90, β= 97.81 and γ=90°. The AtGet3ΔL structures is a dimer and share high degree of structural similarity with AII4481 protein from *Nostoc* sp. PCC 7120. Presence of C-terminal HSP domain makes AtGet3ΔL unique among all reported Get3 structures and may be bypassing the interactions required for cytosolic Get3 for TA protein targeting.

[1] Mateja, A. et al. (2009). *Nature*, 461, 361-366.

[2] Chartron, J. et al. (2010). *PNAS*, 107, 12127-12132.

**Keywords:** [Get3](#), [Arabidopsis thaliana](#), [protein targeting](#)