



Category: Bioinformatics

## Characterization of novel Phosphatase from the genome of *Genlisea aurea* – An *in silico* approach

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### Abstract

Insectivorous plants use enzymes to digest their prey. These plants found in the tropical areas like forest of east India. Mostly insectivorous plants produce their own digestive enzymes to digest their captured insects and small animals diverge from protozoa to invertebrates. The plants need extreme sunlight and rainwater to sustain. These plants consume insects to suck the nutrients from the prey since the plant grows in nutrient less soil especially in nitrogen and potassium. The studies have shown the digestive enzyme from the plants has the proficiency to fight against the various diseases in human like Cancer, Diarrhea, Cholera, Hepatitis, Digestive process related diseases also the phytochemicals found in the insectivorous plants shows resistance against the various metabolic targets of numerous human diseases. Our study has collected 810 putative digestive enzymes with blast hit and domain search; we have characterized the full enzymes using partial sequence as a template and predicted the function. The structure modelling has done for the phosphatase enzymes using I-Tasser server. Our future study includes *in vitro* identification of digestive enzymes in *Genlisea aurea* and its further application in degrading the waste materials.

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