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A new eukaryotic protein expression system

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New Delhi, April 09: A study was undertaken at Agharkar Research Institute, Pune aiming to develop an **indigenous, cost-effective, and efficient eukaryotic protein expression system**. It was hypothesized that free-living, non-pathogenic, axenically culturable amoeba-based protein over-expression is an excellent alternative system for the production of recombinant eukaryotic proteins. Protozoa have complete eukaryotic protein expression machinery with post-translational modifications, including glycosylation and disulfide bond formation. This study also developed *Acanthomeba* protein expression vector with TBP promoter. Further, it is demonstrated the expression of luciferase genes in *Acanthomeba* cells. Results indicate that *Acanthomeba* can be an excellent alternative for the production of recombinant protein in the eukaryotic system.

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