

CHAPTER 4

BIOCHEMISTRY

Doctoral Theses

029. GUPTA (Garima)
Studies on Purification, Characterization and Molecular Cloning of Acetoxy Durg : Protein Transacetylase from Mycobacterium Smegmatis
Supervisors : Prof. H. G. Raj and Prof. Mridula Bose
Th 15218

Abstract

The transmission and scanning electron microscopy confirmed bactericidal activity by revealing indented cell wall surface in the mycobacterial cells treated with sub inhibitory concentrations of PA. These results substantiated the antimycobacterial property of PA through activity of M. TAase. The M. TAase protein exhibited similarities to the mycobacterial GS. Thus, M. TAase gene was cloned in an inducible expression system i.e. pTrcHis A to prove conclusively its identity with M. segmatis GS. The recombinant M. TAase was purified through Ni-NTA affinity column. The purified recombinant M. TAase demonstrated all the properties of TAase as well as mycobacterial GS, leading to the conclusion that TAase is a novel, hitherto unknown function of mycobacterial GS.

Contents

1. Introduction. 2. Review of Literature. 3. Objectives. 4. Materials and Methods. 5. Results. 6. Discussion. 7. Summary, Conclusion, Bibliography and Appendix.
030. RATHORE (Shailendra Singh)
PEGylated Liposome-Mediated Delivery of Ricin to Human Tumor Cells.
Supervisor : Prof. Prahlad C. Ghosh
Th 15219

Abstract

Demonstrates that liposomal monensin is very effective in enhancing the cytotoxicity of liposomal ricin. It has also been shown that the efficacy of monensin has improved following intercalation into liposomes as compared to free monensin. These results clearly showed that liposomes could be used for the delivery of monensin for the enhancement of the cytotoxicity of liposomal ricin for elimination of tumor cells.

Contents

1. Introduction and review of literature.
2. Aims and Objectives.
3. Materials and Methods.
4. Results.
5. Discussion.
6. Summary, Conclusion and Bibliography.