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## **Valorization of Labeo visceral waste by procurement of a potent cell dissociating enzyme**

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The escalating human population and the massive amount of waste generated from the same is receiving particular attention towards valorization of waste. According to the annual report of FAO, (2018) the human consumption of fish protein has reached 87% in 2016 from 67% during 1960s. Aquaculture alone has contributed to 5.8% annual growth rate among food sectors in the past decade. In this milieu, disposal of fish visceral waste is becoming a major menace to fishery industries exerting a great economic and environmental impact. Being perishable in nature, the organic portion of the waste decomposes rapidly and acts as a breeding ground for microbes. Moreover, the hefty and indiscriminate use of antibiotics and disinfectants in farmed animals is developing resistant strains, thus raising environment and ecological concerns. In order to solve such problem, the present investigation focused upon employing the visceral trypsin as a cell dissociating agent. The efficacy of trypsin obtained from viscera of *Labeo rohita* upon KB cell line (Doubling time 50 hrs) was assessed in terms of cell viability. The cytotoxic effect of the visceral trypsin at 0.01%, 0.1% and 1% concentration were investigated at three time points

(10 sec, 15 sec and 20 sec). Commercial (bovine) trypsin (SS) was considered as control. A time dependent decrease in cell viability upon gradually increasing the concentration was observed in all groups of treatment. Cell viability at 0.01% concentration was found to be 82%, 80% and 75%, viability at 0.1% concentration was found to be 95%, 90% and 97%, and viability at 1% concentration was 93%, 98% and 98% respectively at three time points. The lowest reduction in cell viability (2%) was observed with 1% concentration at 15 sec and 20sec. Although, commercial trypsin was found more efficient than trypsin isolated from waste during this study but the potency of visceral trypsin observed cannot be ruled out. Thus, the application of this enzyme as a cell-dissociating agent suggested it as a comparable candidate with commercial trypsin.

### **Biography**

Charu Batav has completed her Ph.D. at the age of 30 years from Barkatullah University, Bhopal M.P. India. She is the Guest Faculty at the Department of Biotechnology Barkatullah University, M.P. India, since 2013. She has currently 6 publications, and has been serving as a reviewer of the journal Waste Management, Elsevier.

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