

## UNIVERSITY OF NORTH BENGAL

DEPARTMENT OF BIOTECHNOLOGY DARJEELING-734 013, WEST BENGAL, INDIA

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## **CERTIFICATE**

The research work presented in this thesis entitled "Exploring physiology of an exopolysaccharide (EPS) producing facultatively oligotrophic bacterium Klebsiella pneumoniae PB12 with special emphasis on structure-function analysis of EPS" has been carried out under my supervision and a bonafide research work of Mr. Amit Kumar Mandal. This work is original and has not been submitted for any degree or diploma to this or any other University or Institution.

Date: 05.10.2015

(Ranadhir Chakraborty)

Supervisor and Head

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