



Department of Biotechnology
Har Gobind Khorana School of Life Sciences
ASSAM UNIVERSITY, SILCHAR
(A Central University established by an Act of Parliament)
Silchar - 788 011, Assam, India

CERTIFICATE

Certified that the thesis entitled **Antioxidant and immunomodulatory analysis of mercury and cadmium induced modulation of non specific host defense in fresh water fish *Channa punctatus*** for award of the Degree of Doctor of Philosophy in Biotechnology is the outcome of a bonafide research work by Moriom Begam. This work has not been submitted previously for any other degree of this or any other university. It is further certified that the candidate has complied with all the formalities as per the requirements of Assam University, Silchar. I recommend that the thesis may be placed before the examiners for consideration for award of the Ph.D. degree of this university.

(Dr. Mahuya Sengupta)
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