

**ANTIOXIDANT AND IMMUNOMODULATORY EFFECTS
OF LEAD ACETATE AND SODIUM ARSENITE EXPOSURE
ON MACROPHAGE RESPONSE IN FRESHWATER FISH**

Channa punctatus

*A thesis submitted to Assam University, Silchar in partial fulfillment of the
requirements for the award of
Doctor of Philosophy (Science)*

By

NILANTIKA PAUL

(Regn no- Ph.D 807/2009 of 17-8-2009)



**Department of Biotechnology
School of Life Sciences
Assam University
Silchar- 788011
Assam, India**