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Date: 8th May, 2009

CERTIFICATE

This is to certify that the thesis entitled “**Characterization of Transplasma Membrane Electron Transport System and Plasma Membrane Bound P-type ATPase in *Leishmania donovani* Promastigote**” submitted by **Nihar Ranjan Bhuyan**, Asst. Prof., Himalayan Pharmacy Institute, Majhitar, East Sikkim-737136 for the award of the Degree of Doctor of Philosophy (Pharmacy) of University of North Bengal is absolutely based upon his own work under the supervision of **Dr. Bishnu Pada Saha**, Professor and Head, Department of Pharmaceutical Chemistry, Himalayan Pharmacy Institute, Majhitar, East Sikkim-737136 and that neither this thesis nor any part of it has been submitted for any degree/diploma or any other academic award anywhere before.

Date: 08.05.2009

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Date : 05.05.2009

CERTIFICATE

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