

Title: The control of hyperglycemia by a novel trypsin resistant oral insulin preparation in alloxan induced type I diabetic mice.

Authors: Sarbashri Bank^{1,2}, Arjun Ghosh¹, Suman Bhattacharya¹, Smarajit Maiti², Gausal A Khan³, Asru K Sinha^{1§}

**Affiliation: ¹Sinha Institute of Medical Science & Technology
288-Kendua main road, Baishnabghata, Garia, Kolkata-700084, India**

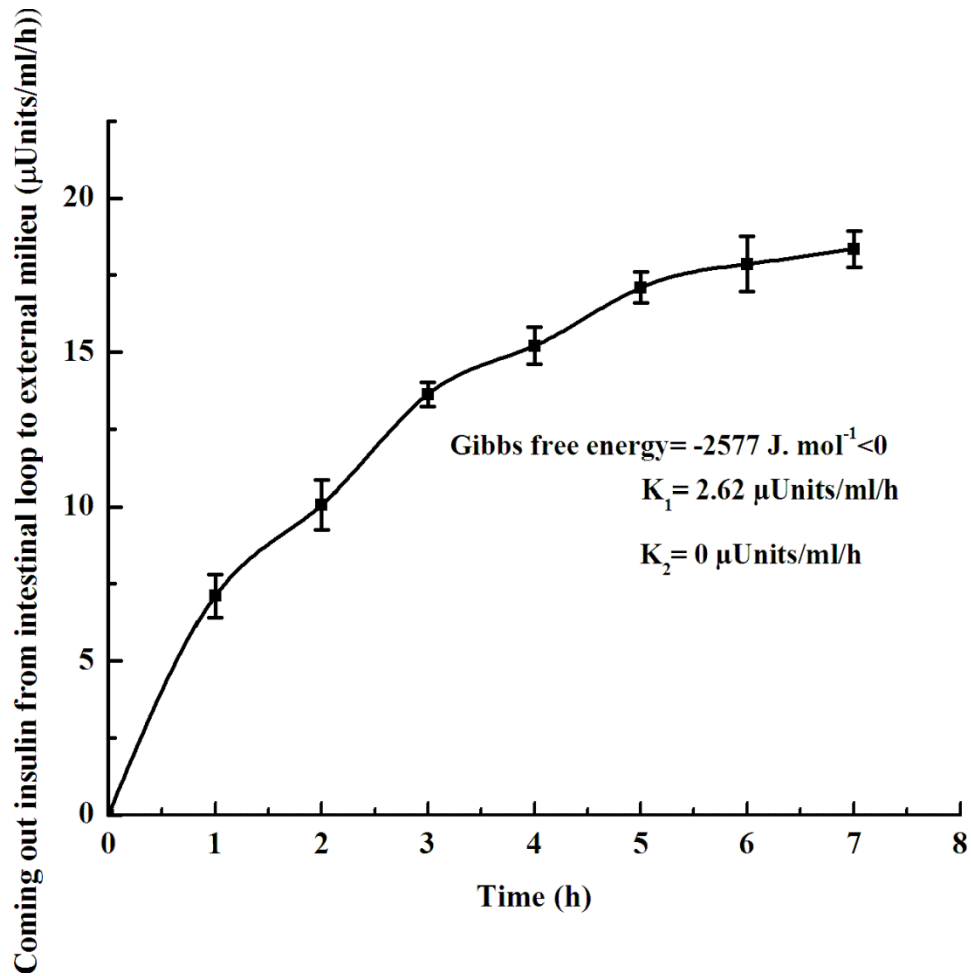
²Cell & Molecular Therapeutic Lab, Dept. of Biochemistry, Vidyasagar University², Midnapur-721102

³Department of Physiology, Defence Institute of Physiology and Allied Sciences³, Timarpur, Delhi, India.

§Corresponding author:

Prof. Asru K Sinha, D.Sc.

**Sinha Institute of Medical Science & Technology
288-Kendua main road, Baishnabghata, Garia, Kolkata-700084
Phone-+919038975945, India
Fax: 033-28371048
Email: asruksinha@yahoo.com**



Supplementary Fig. S1: Coming out of milk-insulin preparation from the intestinal loop to the external milieu was a facilitated diffusion

The amount of insulin came out from intestinal loop to the external milieu was analyzed by enzyme linked immunosorbant assay using insulin antibody. From the assay, it was found that the rate of coming out of insulin (K_1) from the intestinal loop was continuously increased in each hour (2.62 μ Units of insulin/ml/h) and the backward movement K_2 was undetectable (0 μ Units of insulin/ml/h) was found like a hyperbolic curve which demonstrated that the phenomenon was

not a simple diffusion but energy independent thermodynamically favored ($\Delta G = -2577 \text{ J. mol}^{-1}$, $\Delta G < 0$ indicating a spontaneous reaction) facilitated diffusion transportation.