

Name: Dr. Saptak Banerjee
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Dept: Immunoregulation and Immunodiagnostics



Research Experience:

Doctoral (2009- 2014): Submitted doctoral thesis under the guidance of Dr. Rathindranath Baral, Senior Scientific Officer, Department of Immunoregulation and Immunodiagnostics (IRID), Chittaranjan National Cancer Institute, Kolkata-700026.

Thesis title: “Studies on the modulation of tumor angiogenesis process by neem leaf glycoprotein in relation to the activation of different immune cells.”

Post-Doctoral work (2015-2016): Worked under guidance of Dr. Vineeta Bal, Department of Immunology-1 (IB-1), National Institute of Immunology, New Delhi. DBT funded project “To study the relative role of T cell intrinsic and extrinsic factors in Th1 and Th2 differentiation, survival and memory.”

Scientist-C(2016–2018): Worked in collaboration with Dr. Annapurna Vyakarnam (CIDR, IISC, Bangalore) and Dr. Mohan Natarajan (NIRT, Chennai) in National Institute of Research in Tuberculosis, Chennai. Project: MRC-DBT “Cambridge-Chennai Center Partnership on Antimicrobial resistance Tuberculosis: Focus on Novel Diagnostics and Therapeutics.”

Current Research Interest:

- Effect of metabolic regulators on Cancer stem cells (CSCs) and its effect on immune landscape
- Status of CD4/CD8 memory T-cell (central and effector) and tissue resident memory T-cell features in cancer and effect of chemotherapy

Selected Publications:

Goswami KK, Sarkar M, Ghosh S, Saha A, Ghosh T, Guha I, Barik S, **Banerjee S**, Roy S, Bose A, Dasgupta P, Baral R. Neem leaf glycoprotein regulates function of tumor associated M2 macrophages in hypoxic tumor core: Critical role of IL-10/STAT3 signaling. *Mol Immunol*. 2016; 80:1-10.

Banerjee S, Ghosh T, Barik S, Das A, Ghosh S, Bhuniya A, Bose A and Baral R. Neem leaf glycoprotein prophylaxis transduces immune dependent stop signal for tumor angiogenic switch within tumor microenvironment. *PLoS One* 2014; 9:e110040.

Das A, Barik S, **Banerjee S**, Bose A, Sarkar K, Biswas J, Baral R, and Pal S. A monoclonal antibody against neem leaf glycoprotein recognizes carcinoembryonic antigen (CEA) and restricts cea expressing tumor growth. *J Immunother* 2014; 37: 394–406.

Barik S, **Banerjee S**, Mallick A, Goswami KK, Roy S, Bose A, Baral R. Normalization of tumor microenvironment by neem leaf glycoprotein potentiates effector t cell functions and therapeutically intervenes in the growth of mouse sarcoma. *PLoS One* 2013;8: e6650.

Bose A, Barik S, **Banerjee S**, Ghosh T, Mallick A, Bhattacharyya Majumdar S, Goswami KK, Bhuniya A, Banerjee S, Baral R, Storkus WJ, Dasgupta PS, Majumdar S. Tumor-derived vascular pericytes anergize Th cells. *J Immunol*. 2013; 191: 971-81.

