Dr. Biswarup Basu (M.Sc , Ph.D)
Senior Scientific Officer-II
Department of Neuroendocrinology & Experimental Haematology
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Professional Experience

Cittaranjan National Cancer Institute, Kolkata (Scientist)	Nov 2018- Present
Amity University Uttar Pradesh,Noida (Assistant Professor-III)	April 2015-Nov 2018
Apeejay Stya University, Haryana (Assistant Professor-II)	Dec 2013-April 2015
National Cancer Institute (NIH),USA (Postdoc fellow)	March 2011-Dec2013
Chittaranjan National Cancer Institute (Ph.D fellow)	April 2005-Dec 2010
Bose Institute, Kolkata(Project Assistant)	August 2004-April 2005

Education:
Ph.D (Life Science & Biotechnology), Jadavpur University
M.Sc (Zoology), University of Calcutta, India
B.Sc (Zoology) ,University of Calcutta, India

Present Research focus:
Basu lab is working with transdisciplinary approaches to integrate biomedical advances into healthcare solutions, particularly cancer care. Major thrust area of department is to understand dysregulations of neuronal-endocrine-immune axis and interrelation with pathological manifestations like cancer. Furthermore, we aim to evaluate preventive and therapeutic potential of natural compounds and efficacy of synthetic drugs in breast and ovarian cancer. We're also engaged in biomarker identification in oral cancers, combinational chemotherapy with autophagy regulators, development of affordable technologies like AI based digital pathology, biomimicking nanomaterials for better drug delivery and scar free wound healing, mitigating adverse effects of cancer treatments like chemotherapy induced peripheral neuropathy and radiation wounds.

Students undergoing Ph.D : **3**

Openings in our research group:
Highly motivated students (for Ph.D) who have secured own fellowships are encouraged to apply directly to my email (biswarup.basu@gmail.com) with a letter of intent along with CV. Ph.D. holders may contact for research associateship for postdoctorate / Women Scientist position similarly.

Extramural Projects:
1."Study on effect of Dopamine/Dopamine D2 agonist treatment with IGF-1 to regulate angiogenesis and normalize blood vessels in Diabetic Retinopathy"(Co-PI, SERB, 2017-2020)
2."Evaluation of effect of Neem leaf extract treatment in cancer stem cells(CSC) and epithelial to mesenchymal transition (EMT) in breast cancer" (PI, DST , 2015-2018)

Awards and Honors:
NET (CSIR-JRF), June 2004, NET (L.S) December 2003
GATE 2004(92.88 percentile), SLET 2004
CSIR-NEHRU postdoctotorate fellowship,2010
NIH postdoctorate fellowship ,2011
SERB-YSS grant (2015-2018)

Academic & administrative affiliations:
1. Peer reviewer in journals of ELSEVIER, Nature publishing group and funding agencies
2. Life Member, Indian Association for Cancer Research
3. Life Member, Indian Science Congress Association
4. Life Member, Zoological Society of India
5. Member, Central Research Instrumentation Facility committee, CNCI

Selected Publications:

Original articles

1. Bacterioboat, a novel tool to increase the half-life period of the orally administered drug. *Kaur P, Ghosh P, Gadhave K, Garg N, Bhowmick A, Ghosh A,* ***Basu B*,*** *Choudhury D**.**Science Advances. 2021 (Accepted)**

2.Ellagic Acid-Loaded, Tween 80-Coated, Chitosan Nanoparticles as a promising therapeutic approach against Breast Cancer: In-vitro and In-vivo study. *Kaur H, Ghosh S, Kumar P,* ***Basu B****, Nagpal K** **Life Sciences .2021(Accepted)**

3. Electrospray based fluorescent nanoparticle synthesis from pyrene butyric acid-functionalized poly (D,L-lactide-coglycolide) polymer for the efficient delivery of anticancer drug and selfmonitoring its effect in the drug-resistant breast cancer cells. *Chatterjee M, Maity R, Das S, Mahata N,* ***Basu B*,*** *Chanda N**.**Materials Advances. 2020, 1(8), 3033**

4. Multi-Component approach for synthesis of quinolinyl-1,4-dihydropyridines, evaluation of cytotoxicity against MCF7 and molecular docking studies. *Suresh S, Das S, Waidha K, Maity R,* ***Basu B*,****Saravanakumar R**.**Chemistry Select. 2020, 5(34), 10501**

5. Novel Nano-insulin Formulation Modulates Cytokine Secretion and re-epithelialization to Accelerate Diabetic Wound Healing. *Kaur P, Sharma AK, Nag D, Das A, Datta S, Ganguli A,* ***Basu B****, Chowdhury D**.**Nanomedicine. 2019 Jan;15(1):47**

6. A novel triazole NMK-T-057 induces autophagic cell death in breast cancer cells by inhibiting γsecretase-mediated activation of Notch-signaling. *Das A*, Narayanam MK, Paul S, Mukherjee P, Ghosh S,Ghosh Dastidar D, Chakrabarty S, Ganguli A,* ***Basu B****, Pal M, Chatterji U, Banerjee SK, Karmakar P,Kumar D, Chakrabarti G**.**Journal of Biological Chemistry. 2019,26;294(17):6733**

7. Sustainable synthesis of single crystalline sulphur-doped graphene quantum dots for bioimaging and beyond . *Sangam S, Gupta A, Shakeel A, Bhattacharya R, Sharma AK, Suhag D, Chakrabarti S,* ***Basu B****, Garg SK, Dutta MK, Mukherjee M**
.**Green Chemistry , 2018,20**: **4245**

8. Dopamine Regulates Angiogenesis in Normal Dermal Wound Tissues.*Shome S, Rana T, Ganguly S,* ***Basu B****, Choudhury S, Sarkar C, Chakroborty D, Dasgupta PS*, Basu S.* **PLoS One. 2011;6(9):e25215**

9. D1 and D2 Dopamine receptor mediated inhibition of activated normal T cell proliferation is lost in Jurkat T leukemic cells. ***Basu B****, Sarkar C, Chakroborty D, Ganguly S, Shome S, Dasgupta PS*, Basu S**.**Journal of Biological Chemistry, 2010, 285(35): 27026**

10. Dopamine by acting through its D2 receptors inhibits IGF-I induced gastric cancer cell proliferation by upregulating Krüppel like factor 4 through down regulation of IGF-IR and AKT phosphorylation. *Ganguly S,* ***Basu B****, Shome S, Jadhav T, Roy S, Majumdar J, Dasgupta PS*, Basu S**.**American Journal of Pathology ,2010 ,177(6):2701**

11.Stimulation of Dopamine D4 Receptors Induce T Cell Quiescence by Up-Regulating Kru¨ppel- Like Factor 2 Expression through Inhibition of ERK1/ERK2 Phosphorylation. *Sarkar C, Das S, Chakroborty D, Chowdhury UR,* ***Basu B****, Dasgupta PS*, Basu S*.* **Journal of Immunology,2006, 177: 7525**

Reviews articles

1.The Immunoregulatory Role of Dopamine:An Update. *Sarkar C,* ***Basu B****, Chakroborty D, Dasgupta PS*, Basu S*.* **Brain,Behavior and Immunity, 2010, 24(4):525-528**

2.Catecholamines Regulate Tumor Angiogenesis.*Chakroborty D, Sarkar C,* ***Basu B*** *, Dasgupta PS*, Basu S*.*
Cancer Research, 2009, 69, (9), 2009: 3727-3730

Book chapters

1. ***Basu B****., Ghosh S., Das S., Das A.* (2021) Implications of Phosphoinositide 3-Kinase (PI3K) Signalling in Cellular and Molecular Mechanisms of Respiratory Diseases. Targeting Cellular Signalling Pathways in Lung Diseases. Springer, Singapore. https://doi.org/10.1007/978-981-33-6827-9_282.

2. *Das S., Ghosh S., Bhattacharyya P.,* ***Basu B.(***2021) Implications of Oxidative Stress and Epigenetic Drivers in Progression and Therapy of Ovarian Cancer. Handbook of Oxidative Stress in Cancer: Therapeutic Aspects. Springer, Singapore (Accepted)

Academic collaborations:

IIT Mandi, Himachal Pradesh
National Institute of Biomedical Genomics, Kalyani
CSIR-CMERI, Durgapur
VIT , Chennai
Amity University Uttar Pradesh ,UP
Apeejay Stya University, Haryana
IICB, Kolkata
Bose institute ,Kolkata
Delhi University, Delhi
Thapar University , Punjab
Amity University Haryana ,Haryana
Shoolini University ,Himachal Pradesh
Kolkata Gynecological Oncology Trials & Translational Research Group, Kolkata