

**Dr. Subhadip Hajra, M.Sc., Ph.D**  
**Senior Scientific Officer (Grade II)**  
**Dept. of Cancer Chemoprevention**  
**CNCI, Kolkata**



### **Academic Summary**

- **Senior Scientific Officer, Grade II** (2018) at Department of Cancer Chemoprevention, Chittaranjan National Cancer Institute, West Bengal, India.
- **Young Scientist** (2014-2018) at Dept. of Cancer Chemoprevention, Chittaranjan National Cancer Institute, West Bengal, India.
- **Ph.D in Life Science** (2012) at Dr. Hari Singh Gour Central University, Sagar, M.P. India.
- **M.Sc. in Microbiology** (2007) at Jiwaji University, Gwalior. M.P. India.
- **B.Sc in Microbiology** (2005) at Vidyasagar University, West Bengal, India.

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### **Research Interest:**

- Evaluation of the chemoprotective efficacy of naturally occurring phytochemicals against the chemotherapeutic drug induced toxicities.
- Deciphering the role of TNBC stem cells (CSCs) in EMT progression and anoikis resistant in presence of exosome mediated co-delivery of phytochemical and chemotherapeutic drug.
- Deciphering the role of anoikis resistant circulating tumour cells (CTCs) and cancer stem cells (CSCs) in breast cancer metastasis in presence of exosome mediated co-delivery of phytochemical and chemotherapeutic drug.

## **Extramural Projects**

<b>Principal Investigator</b>	<b>Project Title</b>	<b>Funding Agency</b>
<b>Dr. Subhadip Hajra</b>	Natural resources to increase the safety and efficacy of conventional chemotherapy by doxorubicin.	Science and Engineering Research Board (Completed).
	Regulation of crosstalk between EMT pathways and pathways maintaining anoikis resistant CSCs in triple negative breast cancer by exosome mediated co-delivery of 3,3'-diindolylmethane (DIM) and doxorubicin (DOX).	Science and Engineering Research Board (Ongoing).

## **Selected Publications:**

1. Bhowmik A, Biswas S, Hajra S, Saha P. **2021**. In silico validation of potent phytochemical orientin as inhibitor of SARS-CoV-2 spike and host cell receptor GRP78 binding. *Heliyon*. 7(1):e05923.
2. Patra AR, **Hajra S**, Baral R, Bhattacharya S. **2020**. Use of selenium as micronutrients for future anticancer drug: a review. *The Nucleus*. 63:107-118.
3. **Hajra S\***, Patra AR, Basu A, Saha P, Bhattacharya S. **2018**. Indole-3-Carbinol (I3C) enhances the sensitivity of murine breast adenocarcinoma cells to doxorubicin (DOX) through inhibition of NF- $\kappa$  $\beta$ , blocking angiogenesis and regulation of mitochondrial apoptotic pathway. *Chemico- Biological Interactions*. 290:19-36. [IF: 5.192]
4. **Hajra S\***, Patra AR, Basu A, Bhattacharya S. **2018**. Prevention of doxorubicin (DOX)-induced genotoxicity and cardiotoxicity: Effect of plant derived small molecule indole-3-carbinol (I3C) on oxidative stress and inflammation. *Biomedicine & Pharmacotherapy*. 101: 228-243. [IF: 6.529]
5. Patra AR, Roy SS, Basu A, Bhuniya A, Bhattacharjee A, **Hajra S**, Hossion SK, Baral R, Bhattacharya S\*. **2018**. Design and synthesis of coumarin-based organoselenium as a new hit for myeloprotection and synergistic therapeutic efficacy in adjuvant therapy. *Scientific Reports*. 8: 2194. [IF: 4.379]
6. **Hajra S\***, Basu A, Roy SS, Patra AR, Bhattacharya S. **2017**. Attenuation of doxorubicin-induced cardiotoxicity and genotoxicity by an indole based natural compound 3,3'-diindolylmethane (DIM) through activation of Nrf2/ARE signaling pathways and inhibiting apoptosis. *Free Radical Research*. 51(9-10): 812-827. [IF: 2.839].
7. Basu A, Bhattacharjee A, **Hajra S**, Samanta A, Bhattacharya S\* (**2016**). Ameliorative effect of an oxovanadium (IV) complex against oxidative stress and nephrotoxicity induced by cisplatin. *Redox Report*. 22(6):377-387. [IF: 2.737].