

# CHITTARANJAN NATIONAL CANCER INSTITUTE

## TITLE:

### Signal Transduction & Biogenic Amines

Head of the Department: Dr. Nabendu Murmu

M.Sc, Ph.D

Senior Scientific Officer,Gr.-I

## Recent Publications:

- 1) Patra T, Mandal S, Alam N and Murmu N. Clinicopathological trends of colorectal carcinoma patients in a tertiary cancer centre in Eastern India. *Clin Epidemiol Glob Health*. 2017. doi: 10.1016/j.cegh.2017.04.003.
- 2) Sarkar D, Ghosh P, Gharami S, Mondal TK, Murmu M. A novel coumarin based molecular switch for the sequential detection of Al<sup>3+</sup> and F<sup>-</sup>: Application in lung cancer live cell imaging and construction of logic gate. *Sensors and Actuators B: Chemical*. 2017. 242: 338–346.
- 3) Bhattacharyya S, Sekar V, Majumder B, Mehrotra D. G., Banerjee S., Bhowmick A. K., Alam N, Mandal G. K., Biswas J, Majumder P. K., Murmu N. CDKN2A-p53 mediated antitumor effect of Lupeol in head and neck cancer. *Cell Oncol (Dordr)*. 2016 Dec 30. doi: 10.1007/s13402-016-0311-7.
- 4) Rauth S, Ray S, Bhattacharyya S, Mehrotra DG, Alam N, Mondal G, Nath P, Roy A, Biswas J, Murmu N. 2016. Lupeol evokes anticancer effects in oral squamous cell carcinoma by inhibiting oncogenic EGFR pathway. *Molecular and Cellular Biochemistry*. 417(1-2): 97-110.
- 5) Mitra S, Bhattacharyya S, Ray S, Saha R, Ghosh P, Rauth S, Mandal S, Banerjee S, Murmu N. 2016. Resveratrol alleviates Cadmium induced damage and overexpression of EGFR and its downstream signalling proteins in male reproductive system of Swiss albino mice. *Journal of Environmental Pathology, Toxicology and Oncology*. 35(1):73-90.
- 6) Bhattacharyya S, Maji T, Ray DK, Bhowmick AK, Murmu N. 2015. Ionizing Radiation Increases the Circulatory Endothelial Progenitor Cell Population in Glottic Cancer Patients. *Journal of Nuclear Medicine & Radiation Therapy*. 6(5): 1000251.
- 7) Mitra S, Saha R, Bhattacharyya S, Kar KK, Verghese A, Choudhury MD, Nandi P, Roychoudhury S, Murmu N. 2015. Cannabis Smoke Causes Up-Regulation of Akt and Bax Protein in Subfertile Patient's Sperm Cells. *Journal of Addiction & Research Therapy*. 6(4): 1000247.
- 8) A. Roy, D. Ghosh, G. K. Mandal, K. Datta, N. Murmu, P. Tudu, P. Nath, S. Mandal. 2015. Expression of Molecular Markers and Risk Categorization in Pre-neoplastic and Non-neoplastic Cervical Lesions. *Journal of Cancer Research and Treatment*. 3(1):11-18.
- 9) Bhattacharyya S, Mandal S, Banerjee S, Mandal GK, Bhowmick AK, Murmu N. 2015. Cannabis smoke can be a major risk factor for early-age laryngeal cancer – A molecular signalling-based approach. *Tumor Biology*. 36(8): 6029-36.
- 10) P Nandi, AC. Varghese, MC Das, P Banerjee, N Murmu, SK Banerjee. 2015. Lead, Cadmium and Arsenic content in seminal plasma and its effect on seminogram. *International Journal of Science Engineering and Technology*. 3(1): 204-208.
- 11) Sudipta Ray, Jyotirmay Adhikari, Sayantan Bhattacharyya, Sumanto Adhikari, Samir Banerjee and Nabendu Murmu, Inhibition of HepG-2 hepatic cancer cell growth and CCL4 induced liver Cytotoxicity in Swiss Albino Mice by Mahua Extract. *Journal of Environmental Pathology, Toxicology and Oncology*. 33(4):295-314. 2014.
- 12) Nabendu Murmu: Wnt/ $\beta$ -Catenin and its Downstream Signalling as a Biomarker at transcriptional and post transcriptional level in Liver Cancer. *Molecular Cancer Biology*, Vol 2, No 2, 2014.

## Extramural Projects:

### Ongoing:

Name of P.I.	Project Title	Funding agency
Dr. Nabendu Murmu	Molecular Signaling Mechanism in Oral Cancer: Effect of Lupeol in Oral Squamous Cell Carcinoma at Transcription and Post-Transcription Level.	SERB

### Completed:

Name of P.I.	Project Title	Funding agency
Dr. Nabendu Murmu	Downstream target of EGFR and NF-kB Expression: Inhibition of COX-2 at the transcription and posttranscriptional levels of mRNA stability and translation in oral squamous cell carcinoma by Lupeol and Paclitaxel.	CSIR
Dr. Nabendu Murmu	Effect of Heavy Metals and Pesticides on Male infertility and Testicular Carcinoma In Situ: Resveratrol, Coenzyme Q10 Targeting the Therapeutic Machinery of Pre-cancerous cellular conditions.	DBT-Twining

### Ongoing Students' Projects:

Name of the Student	Project Title	Funding agency
Sayantana Bhattacharyya	Molecular Signaling Mechanism in Laryngeal Carcinoma: Synergistic Effect of Lupeol and Ionizing Radiation at the Transcription and Post-Transcription Levels in In-Vivo and In-Vitro Model.	DST-INSPIRE
Sudipta Ray	Study of Different Signalling Mechanism in Oral Squamous Cell Carcinoma and Lymph Node Metastasis in Different stages of Oral Cancer Patients: Role of Anti Metastatic Protein and Chemopreventive Agent in inhibiting These Signalling Pathways in Invivo and Invitro.	UGC
Paramita Ghosh	Study of mTOR and its downstream target translation inhibitory protein on pre and post treated hepatic carcinoma patient's sample: The effect of lupeol and resveratrol in liver cancer in invivo and invitro model.	UGC
Dr. Deblina Sarkar	Development of new fluorescent molecular probes for in vivo and in vitro recognition of trace metal ions in various cancerous cells	SERB
Dr. Tapas Patra	The Role of Intestinal Microbial Metabolism in Pathogenesis of Colorectal Cancer.	ICMR