

Dr. SUBHAYAN SUR



- **Designation:** Associate Professor
- **Email ID:** subhayan.sur@dpu.edu.in subhayansur18@gmail.com
- **Qualification:** M.Sc, Ph.D
- **Area of Specialization:** Cancer Biotechnology
- **Research Interest:**

ORAL ONCOLOGY: UNRAVELING MOLECULAR MECHANISMS AND ADVANCING CHEMOPREVENTION STRATEGIES

Oral cancer or Oral Squamous Cell Carcinoma (OSCC) is a prevalent type of head and neck cancer, impacting millions globally. India bears a significant burden, ranking second globally in oral cancer cases. Despite medical advancements, survival rates remain stagnant due to late detection, lack of early diagnostic markers, and treatment limitations. Thus, India faces a pressing need to understand oral cancer better and develop improved diagnostic and therapeutic approaches to tackle this formidable disease. For this my area of research is divided into three topics:

- 1) Identification of new oral cancer diagnostic biomarkers in Indian patient samples
- 2) Evaluation of molecular mechanism of oral cancer: an exploration of new field of long non-coding RNA (lncRNA):
- 3) Prevention of oral cancer by natural compounds: an alternative approach

EDUCATIONAL QUALIFICATIONS:

<i>Exam/ Degree</i>	<i>Board/ University</i>	<i>Year of Passing</i>	<i>Subjects</i>	<i>Class/Division</i>
Post doctorate	Saint Louis University, MO, USA	2022	Cancer Biology	<i>Not applicable</i>
Ph.D	Calcutta University, Kolkata, India	2016	Biotechnology	<i>Not applicable</i>
M.Sc	Jadavpur University, Kolkata, India	2009	Biotechnology	1st class
B.Sc	Scottish Church College (Calcutta University), Kolkata, India	2007	Microbiology (h), Chem, Botany	1st class

ACADEMIC AND RESEARCH EXPERIENCE:

Research Fellow

2010 - 2011 | Chittaranjan National Cancer Institute (CNCI), Kolkata, India

- Investigated the role of black tea in modulating the bioactivation and detoxification of carcinogens, with a focus on its potential to prevent tobacco-associated reactive oxygen species (ROS) generation (funded by NTRF, India).

Junior Research Fellow (JRF)

2011 - 2014 | Institute Fellowship, CNCI, Kolkata, India

- Studied molecular mechanism of the effects of natural compounds tea and tea polyphenols (EGCG and TF) and Amarogentin on stem cell self renewal pathways during oral and liver carcinogenesis

CSIR-Senior Research Fellow (SRF)

2014 - 2016 | CNCI, Kolkata, India

- Investigated the effect of tea polyphenols EGCG and TF on stem cell renewal pathways during oral and liver carcinogenesis induced by the tobacco-related carcinogen NDEA (funded by CSIR, India).

Research Fellow

2016 - 2017 | Research Fellow, CNCI, Kolkata, India

- Performed immunohistochemical analysis of PCNA, LIMD1, VHL, and HIF-1 α across different stages of Renal Cell Carcinoma, exploring their clinicopathological implications.

Postdoctoral Experience:

Post Doctoral Fellow

2017 - 2022 | Saint Louis University, MO, USA

- Explored the molecular mechanisms of cancer with a focus on non-coding RNA and its emerging role in cancer biology (funded by NIH, USA).
- Investigated cancer prevention strategies through natural compounds as an alternative approach to conventional therapies (funded by NIH, USA).
- Studied pathogenesis of Hepatitis C virus (HCV) and SARS-CoV-2 (funded by NIH, USA).

Professional Experience:

Scientist-In-Charge

2022 | Indian Institute of Science Education and Research (IISER) Kolkata

- Managed the setup of a new BSL2 animal facility and supervised the design and execution of animal-based scientific experiments
- Conducted molecular evaluations of Gap Junction Communication in glioma models and developed stable luciferase-expressing cancer cell lines for in-vivo imaging.
- Coordinated hands-on training for certificate courses in laboratory techniques.

Current Position:

DBT-Ramalingaswami Re-entry Fellow (RRF)

2022 - Present | DBT, Govt. of India

- Studied a DBT-funded research project entitled "Comprehensive Evaluation of Long Non-Coding RNAs in the Diagnosis and Therapeutic Strategies for Oral Squamous Cell Carcinoma."

Associate Professor

2024 - Present | Dr. D. Y. Patil Biotechnology and Bioinformatics Institute, DPU, Pune

- Focused on oral oncology, unraveling molecular mechanisms, and advancing chemoprevention strategies to improve outcomes for oral cancer patients.

AWARDS AND ACHIEVEMENTS:

- **GATE-** Life Sciences, 2009
- **Research fellow-** NTRF, India, 2010
- **Junior Research Fellow (JRF)-** Chittaranjan National Cancer Institute, Kolkata, India, 2011
- **Senior research fellow (SRF)-** CSIR, India, 2014
- **Post Doctoral fellow-** Saint Louis University, USA, 2017
- **Scientist In-Charge** – IISER- Kolkata, 2022
- **DBT-Ramalingaswami Re-entry Fellowship (RRF)** 2022

- **'INTERNATIONAL BEST RESEARCHER AWARD'** in Molecular Cancer Biology, ISSN International Research Awards and Congress 2024 on 23rd June 2024, at Tiruchirappalli, Tamil Nadu, India
- **'INTERNATIONAL Best Researcher of the Year Award'** in Molecular Cancer Biology, International Science, Technology & Research Awards (ISTRA 2024) in association with American Chamber of Research, United Medical Council, Times of Research, and Chronicles Time at Tamilnadu, India on 20 October 2024
- **Associate Professor** at Dr. D. Y. Patil Biotechnology and Bioinformatics Institute, Pune on 2024

REVIEWER:

- **BMC:** Cancer, Cancer Cell International, Journal of Experimental & Clinical Cancer Research
- **Cell Press:** Heliyon
- **Elsevier:** Life Sciences
- **Frontiers:** Frontiers in Oncology (Board Member), Frontiers in Immunology, Frontiers in Pharmacology, Frontiers in Genetics, Frontiers in Bioengineering and Biotechnology, Frontiers in Cell and Developmental Biology
- **Hindawi:** International Journal of Endocrinology
- **IET Digital Library:** IET Nanobiotechnology
- **Mary Ann Liebert, Inc:** Cancer Biotherapy and Radiopharmaceuticals
- **MDPI:** Cancers, Genes, International Journal of Molecular Sciences, Medical Sciences, Pharmaceutics, Pathogens
- **Nature:** Scientific report
- **NISCAIR Online Periodicals Repository:** Indian Journal of Traditional Knowledge
- **Oncotarget**
- **SAGE Publications:** Technology in Cancer Research & Treatment
- **Spandidos Publications:** Molecular Medicine Reports
- **Wiley Online Library:** FEBS Open Bio

SCIENTIFIC COMMITTEE MEMBER:

- Society of Biological Chemists (SBC), India
- World Research Council [www.worldresearchcouncil.org/]
- American Chamber of Research [www.americanchamberofresearch.org/]

PUBLICATIONS:

- ORCID: orcid.org/0000-0002-4208-9694;
- Google scholar: <https://scholar.google.com>;
- LINKEDIN: [linkedin.com/in/dr-subhayan-sur-48495078](https://www.linkedin.com/in/dr-subhayan-sur-48495078);
- NCBI Bibliography: <https://www.ncbi.nlm.nih.gov/myncbi/subhayan.sur.1/bibliography/public/>

Research Articles:

- [1] Debolina Pal, **Subhayan Sur**, Shyam Sundar Mandal, Sukta Das, Chinmay Kumar Panda. (2012) Regular black tea habit could reduce tobacco associated ROS generation and DNA damage in oral mucosa of normal population. **Food and Chemical Toxicology**. 50(9):2996-3003. doi: 10.1016/j.fct.2012.06.005. [IF:4.679]
- [2] Debolina Pal, **Subhayan Sur**, Suvra Mandal, Ashes Das, Anup Roy, Sukta Das, Chinmay Kumar Panda. (2012) Prevention of liver carcinogenesis by amarogentin through modulation of G1/S cell cycle check point and induction of apoptosis. **Carcinogenesis**. 33(12):2424-31. doi: 10.1093/carcin/bgs276. [IF:4.944]
- [3] **Subhayan Sur**, Debolina Pal, Kaustav Banerjee, Suvra Mandal, Ashes Das, Anup Roy, Chinmay Kumar Panda. (2016) Amarogentin regulates self renewal pathways to restrict liver carcinogenesis in experimental mouse model. **Molecular Carcinogenesis**. 55(7):1138-49. doi: 10.1002/mc.22356. [IF:4.784]
- [4] **Subhayan Sur**, Debolina Pal, Syamsundar Mandal, Anup Roy, Chinmay Kumar Panda. (2016) Tea polyphenols epigallocatechin gallate and theaflavin restrict mouse liver carcinogenesis through modulation of self-renewal Wnt and hedgehog pathways. **Journal of Nutritional Biochemistry**. 27:32-42. doi: 10.1016/j.jnutbio.2015.08.016. [IF:6.048]
- [5] **Subhayan Sur**, Debolina Pal, Rituparna Roy, Atish Barua, Anup Roy, Prosenjit Saha, Chinmay Kumar Panda. (2016) Tea polyphenols EGCG and TF restrict tongue and liver carcinogenesis simultaneously induced by N-nitrosodiethylamine in mice. **Toxicology and Applied Pharmacology**. 1; 300:34-46. doi: 10.1016/j.taap.2016.03.016. [IF:4.219]
- [6] **Subhayan Sur**, Arun Kumar Maurya, Anup Roy, Tyson V. Sharp, Dilip Kumar Pal, Chinmay Kumar Panda. (2017) Over expression of HIF1 α is associated with inactivation of both LimD1 and VHL in renal cell carcinoma: clinical importance. **Pathology Research and Practice**. 213(12):1477-1481. doi: 10.1016/j.prp.2017.10.009. [IF: 3.25]
- [7] **Subhayan Sur**, Robert Steele, Rajeev Aurora, Mark Varvares, Kate Schwetye, Ratna B. Ray. (2018) Bitter Melon prevents the development of 4-NQO carcinogen-induced oral squamous cell carcinoma in an immunocompetent mouse model by modulating immune signaling. **Cancer Prevention Research (Phila)**. 11(4):191-202. doi: 10.1158/1940-6207.CAPR-17-0237. [IF:3.491] **{Best cited article in Can Prev Res}**
- [8] So Hee Shim, **Subhayan Sur**, Robert Steele, Carolyn J. Albert, Chunfa Huang, David A. Ford, Ratna B. Ray. (2018) Disrupting cholesterol esterification by bitter melon suppresses triple-negative breast cancer cell growth. **Molecular Carcinogenesis**. 57(11):1599-1607. doi: 10.1002/mc.22882. [IF: 4.784]
- [9] **Subhayan Sur**, Reina Sasaki, Pradip Devhare, Robert Steele, Ranjit Ray, and Ratna B. Ray. (2018) Association between MicroRNA-373 and Long Noncoding RNA NORAD in Hepatitis C Virus-Infected Hepatocytes Impairs Wee1 Expression for Growth Promotion. **Journal of Virology**. 92(20). pii: e01215-18. doi: 10.1128/JVI.01215-18. [IF: 5.103]
- [10] Debolina Pal, **Subhayan Sur**, Rituparna Roy, Suvra Mandal, Chinmay Kumar Panda. (2018) Epigallocatechin gallate in combination with eugenol or amarogentin shows synergistic chemotherapeutic potential in cervical cancer cell line. **Journal of cellular physiology**. 234(1):825-836. doi: 10.1002/jcp.26900. [IF: 6.384]

- [11] Rituparna Roy, Debolina Pal, **Subhayan Sur**, Suvra Mandal, Prosenjit Saha, Chinmay Kumar Panda. (2019) Pongapin and Karanjin, furanoflavanoids of *Pongamia pinnata*, induce G2/M arrest and apoptosis in cervical cancer cells by differential reactive oxygen species modulation, DNA damage, and nuclear factor kappa-light-chain-enhancer of activated B cell signaling. **Phytotherapy Research**. 33(4):1084-1094. doi: 10.1002/ptr.6302. [IF: 5.882]
- [12] Sandip Pramanik, **Subhayan Sur**, Biswabandhu Bankura, Chinmay Kumar Panda, Dilip Kumar Pal. (2019) Expression of proliferating cell nuclear antigen and Ki-67 in renal cell carcinoma in eastern Indian patients. **International Surgery Journal**. 6(10):3687-3693. DOI: http://dx.doi.org/10.18203/2349-2902.isj20194425.
- [13] Reina Sasaki, **Subhayan Sur**, Qi Cheng, Robert Steele, Ratna B. Ray. (2019) Repression of MicroRNA-30e by Hepatitis C Virus Enhances Fatty Acid Synthesis. **Hepatology Communications**. 3(7):943-953. doi: 10.1002/hep4.1362. [IF: 5.073]
- [14] **Subhayan Sur**, Hiroshi Nakanishi, Robert Steele, Ratna B. Ray. (2019) Depletion of PCAT-1 in head and neck cancer cells inhibits tumor growth and induces apoptosis by modulating c-Myc-AKT1-p38 MAPK signalling pathways. **BMC Cancer**. 19(1):354. doi: 10.1186/s12885-019-5562-z. [IF:4.4]
- [15] **Subhayan Sur**, Hiroshi Nakanishi, Colin Flaveny, Joseph E. Ippolito, Jane McHowat, David A. Ford, Ratna B. Ray. (2019) Inhibition of the key metabolic pathways, glycolysis and lipogenesis, of oral cancer by bitter melon extract. **Cell Communication and Signaling**. 17(1):131. doi: 10.1186/s12964-019-0447-y. Erratum in: Cell Commun Signal. 2019 Nov 19; 17(1):151. [IF:5.712]
- [16] **Subhayan Sur**, Robert Steele, Xingyi Shi, Ratna B. Ray. (2019) miRNA-29b Inhibits Prostate Tumor Growth and Induces Apoptosis by Increasing Bim Expression. **Cells**. 8(11). pii: E1455. doi: 10.3390/cells8111455. [IF:6.6]
- [17] Mustafa Nazzal, **Subhayan Sur**, Robert Steele, Mousumi Khatun, Tapas Patra, Nancy Phillips, John Long, Ranjit Ray, Ratna B Ray. (2020) Establishment of a Patient-Derived Xenograft Tumor From Hepatitis C-Associated Liver Cancer and Evaluation of Imatinib Treatment Efficacy. **Hepatology**. 72(2):379-388. doi: 10.1002/hep.31298. [IF: 17.425]
- [18] **Subhayan Sur**, Hiroshi Nakanishi, Robert Steele, Dapeng Zhang, Mark A Varvares, Ratna B Ray. (2020) Long non-coding RNA ELDR enhances oral cancer growth by promoting ILF3-cyclin E1 signaling. **EMBO Reports**. 21(12): e51042. doi: 10.15252/embr.202051042. [IF:8.8]
- [19] Mousumi Khatun, **Subhayan Sur**, Robert Steele, Ranjit Ray, Ratna B Ray. (2021) Inhibition of long noncoding RNA Linc-Pint by hepatitis C virus in infected hepatocytes enhances lipogenesis. **Hepatology**. 74(1):41-54. doi: 10.1002/hep.31656. [IF: 17.425]
- [20] **Subhayan Sur**, Mousumi Khatun, Robert Steele, T Scott Isbell, Ranjit Ray, Ratna B Ray. (2021) Exosomes from COVID-19 Patients Carry Tenascin-C and Fibrinogen- β in Triggering Inflammatory Signals in Cells of Distant Organ. **International Journal of Molecular Sciences**. 22(6):3184. doi: 10.3390/ijms22063184. [IF: 5.923]
- [21] **Subhayan Sur**, Robert Steele, T Scott Isbell, Kalyan Nagulapalli Venkata, Mostafa E Rateb, Ratna B Ray. (2021) Momordicine-I, a Bitter Melon Bioactive Metabolite, Displays Anti-Tumor Activity in Head and Neck Cancer Involving c-Met and Downstream Signaling. **Cancers (Basel)**. 13(6):1432. doi: 10.3390/cancers13061432. [IF: 6.639]
- [22] Debolina Pal, **Subhayan Sur**, Rituparna Roy, Suvra Mandal, Chinmay Kumar Panda. (2021)

Hypomethylation of LIMD1 and P16 by downregulation of DNMT1 results in restriction of liver carcinogenesis by amarogentin treatment. **Journal of Biosciences**. 46:53. DOI: 10.1007/s12038-021-00176-0. [IF: 1.826]

[23] **Subhayan Sur**, Robert Steele, Ben C B Ko, Jinsong Zhang, Ratna B Ray. (2022) Long non-coding RNA ELDR promotes cell cycle progression in normal oral keratinocytes through induction of a CTCF-FOXM1-AURKA signaling axis. **Journal of Biological Chemistry**. 298(5):101895. doi: 10.1016/j.jbc.2022.101895. [IF: 5.157]

[24] **Subhayan Sur**, Robert Steele, T. Scott Isbell, Ranjit Ray, Ratna B. Ray. (2022) Circulatory Exosomes from COVID-19 Patients Trigger NLRP3 Inflammasome in Endothelial Cells. **mBio**. 13(3):e0095122. doi: 10.1128/mbio.00951-22. [IF: 6.784]

[25] **Subhayan Sur**, Pradeep Bhartiya, Robert Steele, Michelle Brennan, Richard J. DiPaolo, Ratna B. Ray. (2024) Momordicine-I suppresses head and neck cancer growth by reprogramming immunosuppressive effect of the tumor-infiltrating macrophages and B lymphocytes. **Molecular Cancer Therapeutics**. 23(5):672-682. doi: 10.1158/1535-7163.MCT-23-0718. [IF: 5.7]

Review articles:

- [1] **Subhayan Sur** and Chinmay Kumar Panda. (2017) Molecular aspects of cancer chemopreventive and therapeutic efficacies of tea and tea polyphenols. **Nutrition**. 43-44: 8-15. [IF: 4.008]
- [2] Debolina Pal, **Subhayan Sur**, Prosenjit Saha, and Chinmay Kumar Panda. (2017) Tobacco-induced Carcinogenesis and Chemoprevention by Some Natural Products. **Journal of Radiation and Cancer research**. 8(1): 35-43.
- [3] **Subhayan Sur**, Ratna B Ray. (2020) Bitter Melon (*Momordica Charantia*), a Nutraceutical Approach for Cancer Prevention and Therapy. **Cancers (Basel)**. 12(8):2064. doi: 10.3390/cancers12082064. [IF:6.639]
- [4] **Subhayan Sur***, Ratna B Ray. (2021) Diverse roles of Bitter melon (*Momordica charantia*) in prevention of oral cancer. **Journal of Cancer Metastasis and Treatment**. 7:12. <http://dx.doi.org/10.20517/2394-4722.2020.126>. doi: 10.20517/2394-4722.2020.126. [IF: 1.9]
- [5] **Subhayan Sur***, Ratna B Ray. (2021) Emerging role of lncRNA ELDR in development and cancer. **The FEBS Journal**. 289(11):3011-3023. doi: 10.1111/febs.15876. [IF: 5.54]
- [6] Saurabh Dey, Bini Biswas, Angela Manoj Appadan, Jaladhi Shah, Jayanta K. Pal, Soumya Basu and **Subhayan Sur***. (2023) Non-Coding RNAs in Oral Cancer: Emerging Roles and Clinical Applications. **Cancers (Basel)**. 15(15), 3752; doi: <https://doi.org/10.3390/cancers15153752>. [IF:5.2]
- [7] **Subhayan Sur***, Ratna B. Ray. (2023) Emerging Potential of *Momordica's* Bioactive Phytochemicals in Cancer Prevention and Therapy. **Biomed Pharmacol J**;16 (4), 1867-1884. [IF: 0.198]
- [8] **Subhayan Sur***, Dimple Davray, Soumya Basu, Supriya Kheur, Jayanta Kumar Pal, Shuchi Nagar, Avinash Sanap, Bhimappa M. Rudagi, Samir Gupta. (2024) Novel insights on oral squamous cell carcinoma management using long non-coding RNAs. **Oncology Research**. 32(10):1589-1612. doi: 10.32604/or.2024.052120. (IF: 3.1)
- [9] Jayanta Kumar Pal, **Subhayan Sur***, Smriti P. K. Mittal, Saurabh Dey, Monali Prakash Mahale & Arijit Mukherjee. (2024) Clinical implications of miRNAs in erythropoiesis, anemia, and other

hematological disorders. **Molecular Biology Reports**. 51, 1064. <https://doi.org/10.1007/s11033-024-09981-w> (IF: 2.6)

(*Corresponding author)

BOOK CHAPTERS:

- Sangeeta Ballav, Amit Ranjan, **Subhayan Sur**, Soumya Basu. Organoid Intelligence (OI): Bridging Artificial Intelligence for Biological Computing and Neurological Insights. Technologies in Cell Culture - A Journey From Basics to Advanced Applications. INTECHOPEN. Published: 08 March 2024. DOI: 10.5772/intechopen.114304
- **Co-Editor** in Book Title: Technologies in Cell Culture - A Journey From Basics to Advanced Applications [Working Title] [Internet]. Biochemistry. IntechOpen; 2023. <http://dx.doi.org/10.5772/intechopen.107775> [2024]

CONFERENCE PROCEEDINGS:

1. **S Sur**, R Steele, RB Ray. Bitter melon extract modulates immune signaling in prevention of tobacco associated carcinogen induced oral carcinogenesis. Cancer Research, 78 (13_Supplement), 5203-5203. **2018**
2. **S Sur**, R Steele, RB Ray. Depletion of PCAT1 in head and neck cancer cells limits tumor growth by regulating c-Myc, AKT1 and MAPK signalling pathways. Cancer Research, 79 (13_Supplement), 1813-1813. **2019**
3. **S Sur**, R Steele, RB Ray. Single-cell transcriptome analysis reveals functional changes in tumor-infiltrating macrophages after nutraceutical momordicine-I treatment in head & neck cancer. Clinical Cancer Research 29 (18_Supplement), PO-087-PO-087. **2023**

RESEARCH SKILL COURSES:

- I. Attended a one-day Faculty Development Program on "ICT Training and Blog Writing" on January 6, 2023, at Dr. D.Y. Patil Biotechnology and Bioinformatics Institute, Pune.
- II. Participated in a one-day workshop on "Grant Writing & Funding Opportunities at India Alliance" organized by Dr. D.Y. Patil Biotechnology and Bioinformatics Institute and DBT/Wellcome Trust India Alliance on February 3, 2023.
- III. Participated in a two-day workshop on "Problem-Based Learning" conducted by Prof. Dr. Lakshman Samarnayake at Dr. D.Y. Patil Dental College & Hospital on February 8-9, 2024.

CONFERENCES/ WORKSHOPS:

- [1] 7th workshop on “Tea and health” organized by National Tea Research Foundation, Tea Board, Kolkata on August, 2010.
- [2] Poster presentation on research topic entitled “Development of new oral cancer mouse model system induced by tobacco associated carcinogen N-nitrosodiethylamine to understand the carcinogenesis” in 30th Annual Convention of Indian Association for Cancer Research (IACR) and International Symposium on Signaling Network and Cancer, from 6th- 9th February’ 2011 at Indian Institute of Chemical Biology, Kolkata.
- [3] Poster presentation on research topic entitled “Tea polyphenols EGCG and TF modulate Wnt/ β -Catenin signaling to prevent liver carcinogenesis” in 81st Annual Meeting of Society of Biological Chemist (SBC, India) and Symposium on “Chemistry & Biology: Two Weapons against Diseases” on 8th- 11th November’ 2012 at Science City, Kolkata.
- [4] 9th workshop on “Agro-aspects, Biochemical, Tea Machineries & Human Health” organized by National Tea Research Foundation on 19th December 2012 at Kolkata.
- [5] 1st Annual Conference of Calcutta Consortium on Human Genetics (CCHuGe) in Diamond harbor, South 24 Parganas, West Bengal on 21st September, 2013.
- [6] 1st Annual Conference on “Recent Trends in Cancer Research, Early Diagnosis, Prevention and Therapy”, organized by Chittaranjan National Cancer Institute, Kolkata, on 7th and 8th February, 2014.
- [7] Poster presentation on research topic entitled “Amarogentin regulates self renewal pathways to restrict liver carcinogenesis in experimental mouse model” in 33rd Annual Convention of Indian Association for cancer research (IACR) on “Discovery, Innovation and Translation in Cancer” on 13th- 15th February’ 2014 at Kollam, Kerala, India.
- [8] Poster presentation on research topic entitled “Tea polyphenols epigallocatechin galleate (EGCG) and theaflavin (TF) modulate self renewal Wnt pathway during prevention of mouse tongue carcinogenesis” in Cancer Awareness Day symposium organized by Chittaranjan National Cancer Institute (CNCI), Kolkata and IACR, West Bengal Chapter on 7th November, 2014 at CNCI, Kolkata.
- [9] Poster presentation on research topic entitled “Tea polyphenols epigallocatechin gallate and theaflavin prevent mouse tongue carcinogenesis by modulating self renewal Wnt pathway” in UGC- sponsored National level Seminar organized by Department of Microbiology, Ramakrishna Mission Vidyamandira, in collaboration with the CSIR- IICB, Kolkata on 20- 21 November, 2014.
- [10] 10th workshop on “Crop Improvement, Integrated Pest Management & Human Health” Agro-aspects, Biochemical, Tea Machineries & Human Health” organized by National Tea Research Foundation on 19th – 20th May, 2015 at Kolkata.
- [11] Participation in RUSA- Funded International Level Seminar on “ Recent Trends in Microbiology” organized by Department of Microbiology, Ramakrishna Mission Vidyamandira, Belurmath, India on January, 2017
- [12] Poster presentation on research topic entitled “Bitter melon extract modulates immune signaling in prevention of tobacco associated carcinogen induced oral carcinogenesis” in American Association for Cancer Research (AACR) on 14- 18 April, 2018 at Chicago, USA.

- [13] Poster presentation on research topic entitled "Depletion of PCAT1 in head and neck cancer cells limits tumor growth by regulating c-Myc, AKT1 and MAPK signalling pathways" in American Association for Cancer Research (AACR) on March 29- April 3 at Atlanta, USA.
- [14] Poster presentation on research topic entitled "Bitter Melon's sweet promise: a novel chemopreventive agent by rejuvenating immune system and reprogramming of metabolism in oral cancer" in Trans NCI-NIH Conference on International Perspectives on Integrative Medicine for Cancer Prevention and Cancer Patient Management, October 27- 28, 2020, USA (virtual meeting).
- [15] Participated as a module instructor in "Karyashala (Workshop) on advanced bio-analytical methods and applications-2022" supported by SERB in IISER, Kolkata on 06th June to 12th June 2022 in IISER-Kolkata, Kalyani, India.
- [16] Poster presentation on research topic "Emerging role of a novel long non-coding RNA ELDR in oral cancer progression and therapy" in 11th RNA Group Meeting at National Centre for Cell Science (NCCS), Pune, India on 1st- 3rd December, 2022.
- [17] Poster presentation on research topic "Emerging role of a novel long non-coding RNA: EGFR long non-coding downstream RNA (ELDR) in oral cancer progression and therapy" in 91st Annual Meeting of the Society of Biological Chemists (SBC-India) at Biswa Bangla Convention Center, Kolkata, India on 8-11 December, 2022.
- [18] Participated in a one-day workshop on "Grant Writing & Funding Opportunities at India Alliance" organized by Dr. D.Y. Patil Biotechnology and Bioinformatics Institute and DBT/Wellcome Trust India Alliance on February 3, 2023.
- [19] Invited speaker and module instructor on 'In-vivo Imaging' in 'Workshop on advanced bio-analytical methods and applications (BAW) -2023' jointly organized by Indian Institute of Science Education and Research (IISER) -Kolkata and Indian Institute of Science (IISC), Bangalore, India at IISER-Kolkata West Bengal, India on 13th June to 18th June 2023.
- [20] Poster presentation on research topic "COMPREHENSIVE EVALUATION OF LONG NON CODING RNAs IN ORAL SQUAMOUS CELL CARCINOMAS" in "International Conference on Advances in Biotechnology: Current Discoveries and future perspectives (ICAB-2023)" to be held on 17th and 18th October, 2023 at Amity University Maharashtra, Mumbai
- [21] Participated in a two-day workshop on "Problem-Based Learning" conducted by Prof. Dr. Lakshman Samarnayake at Dr. D.Y. Patil Dental College & Hospital on February 8-9, 2024.
- [22] Invited speaker in 8th World Cancer Congress – 2024 [THEME:"INTEGRATIVE MEDICINE AND TRANSLATION RESEARCH IN CANCER"] during March 18th - 20th, 2024 at JNU Convention Centre, Jawaharlal Nehru University (JNU), New Delhi, India, on 'Emerging role of Long Non-Coding RNA in Oral Squamous Cell Carcinoma Progression and Therapy'.

BIOTECHNOLOGY SKILLS:

- I. **In-vitro Systems:** Extensive experience in culturing primary and secondary animal cell lines in both 2D and 3D systems for cancer biology, chemoprevention, and viral pathogenesis studies.
- II. **In-vivo Models:** Proficient in handling and conducting experiments with various mouse strains (C57BL/6, BALB/c, nude, SCID, NSG) for chemical-induced carcinogenesis studies, as well as in syngeneic, xenograft, and patient-derived xenograft (PDX) tumor models.
- III. **Clinical Research:** Expertise in clinical research involving the use of human cancer tissue and blood samples for diagnostic and prognostic studies.
- IV. **Histopathology:** Advanced skills in histopathological assessment of carcinogenesis across various tissues in both human and murine models.
- V. **Molecular Biology Techniques:** Proficient in a broad spectrum of molecular biology techniques, with expertise in molecular cloning, genetics, microRNA and long non-coding RNA biology, proteomics, as well as exosome isolation.
- VI. **ABSL2 Laboratory and In-vivo Imaging:** Expertise in the management of ABSL2-level animal facilities, as well as performing in-vivo imaging techniques to track tumor progression and assess treatment efficacy.