

## Curriculum Vitae

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**Name:** Somsubhra Nath, Ph.D

**Designation:** Assistant Professor  
Institute of Health Sciences, Presidency University

**Institutional Address:** Presidency University (2<sup>nd</sup> Campus)  
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**Date of Birth:** 15<sup>th</sup> January, 1983

**Sex:** Male

**Nationality:** Indian

**Marital status:** Married

**Permanent Address:** College Pally (West), P.O. Sewli (Barrackpore)  
North 24 Parganas, 70012, West Bengal

### Professional appointments:

- 2022, July – till date: Assistant Professor, Institute of Health Sciences, Presidency University, Kolkata
- 2015, August – 2022, June: Scientist, Basic & Translational Research Div, Saroj Gupta Cancer Centre & Research Institute, Kolkata
- 2020, December – 2022, June: Technical Director, Molecular Diagnostics Laboratory, Saroj Gupta Cancer Centre & Research Institute, Kolkata

### Education and research experiences:

- 2013 – 2015: Post Doctoral Research Associate, University of Nebraska Medical Center, Omaha, USA
- 2013 (February-July): Visiting Scientist, University of Texas Medical Branch, Galveston, USA
- 2012: Ph.D. in Cancer Cell and Molecular Biology, CSIR-Indian Institute of Chemical Biology (Degree awarded from the Dept. of Biotechnology, University of Calcutta)
- 2005: M.Sc. in Biochemistry, University of Calcutta

- 2003: B.Sc. in Zoology (Hons.), University of Calcutta

#### **Awards and Recognitions:**

- Elected '**Associate**' of the West Bengal Academy of Science & Technology (**WAST**), 2021
- **Shri Ramnath Jaju Award for Best Oral Presentation** for Mid-level Scientists, 39<sup>th</sup> Annual Conference of Indian Association of Cancer Research (**IACR**), February, 2020
- Science and Engineering Research Board (**SERB**), Govt. of India - **Early Career Award** (Reference No. ECR/2015/000206), 2016
- University of Nebraska Medical Center Spring Travel Fellowship Award, 2015
- **A.S. Mukherjee best platform presentation award** for oral presentation by a young cell biologist at the XXXIV All India Cell Biology Conference (**AICBC**), December, 2010
- Fellowship- Council of Scientific & Industrial Research (CSIR)-National Eligibility Test, India (2006-2011)
- 1<sup>st</sup> class 1<sup>st</sup> position in M.Sc (Biochemistry) in 2005 from the University of Calcutta
- 1<sup>st</sup> class 1<sup>st</sup> position in B.Sc (Zoology Hons.) in 2003 from the University of Calcutta
- National Scholarship awarded for Bachelors Degree, 2003

#### **Research grants:**

##### **Ongoing:**

1. Grant title: Impact of BCR-ABL mutations on front-line tyrosine kinase inhibitor therapy: an East Indian cohort study

Grant number: ST/P/S&T/9G-21/2016; Role as investigator: Principal Investigator

Funding agency: Department of Science, Technology and Biotechnology (DSTBT), Govt. of West Bengal; Award period: 2018-2022

2. Grant Title: Clinical role of a pair of novel mutations in BCR-ABL1 towards therapy switch in imatinib-resistant chronic myeloid leukemia

Application No: 3330; Role as investigator: Principal Investigator; Funding agency: Lady Tata Memorial Trust (Institutional Research Grant); Award period: 2021-2024

##### **Completed:**

1. Grant title: Deciphering CUEDC2-mediated molecular crosstalk between aneuploidy and receptor status of breast tumors (ECR/2015/000206)

Role as investigator: Principal Investigator; Funding agency: Science & Engineering Research Board (SERB)-Dept. of Science and Technology (DST), Govt. of India; Award period: 2016-2019

2. Grant Title: Delineating a novel transcriptional regulatory role of APC/C-Cdc20 complex and its impact on chromosomal instability in oral cancer (EMR/2015/001835)

Role as investigator: Co-Investigator; Funding agency: Science & Engineering Research Board (SERB)-Dept. of Science and Technology (DST), Govt. of India; Award period: 2019-2022

**Editorial Role:**

- Review Editor, Frontiers in Oncology (Section “Hematological Malignancies”)
- Guest Associate Editor, Frontiers in Genetics (Section “Cancer Genetics and Oncogenomics”; Topic “Genetic Regulation of Mitosis and Ploidy in Cancer”)

**Peer Reviewed Publication:**

**Original Article:**

1. S Roy, S Saha, D Dhar, P Chakraborty, K Singha Roy, C Mukherjee, A Gupta, S Bhattacharyya, A Roy, S Sengupta, S Roychoudhury, **S Nath**. Molecular crosstalk between CUEDC2 and ER $\alpha$  influences the clinical outcome by regulating mitosis in breast cancer. *Cancer Gene Ther* (2022); doi: 10.1038/s41417-022-00494-x
2. Saha T, Bhowmick B, Sengupta D, Banerjee S, Mitra R, Sarkar A, Chaudhuri T, Bhattacharjee G, **Nath S**, Roychoudhury S, Sengupta M. No association of the common Asian mitochondrial DNA haplogroups with lung cancer in East Indian population. *J Basic Clin Physiol Pharmacol*. (2022) doi: 10.1515/jbcpp-2021-0352
3. S Ghuwalewala, D Ghatak, S Das, S Roy, P Das, M Butti, R Gorain, **S Nath**, GC Kundu, S Roychoudhury. MiRNA-146a/AKT/ $\beta$ -catenin activation regulates cancer stem cell phenotype in oral squamous cell carcinoma by targeting CD24. *Fronts Oncol* (2021), doi: 10.3389/fonc.2021.651692
4. S Dey, D Bhattacharyya, P P Gupta, **S Nath**. Long-term Outcome of Philadelphia Chromosome Positive Leukemia from Eastern Indian Sub-continent: An Experience in the Era of Tyrosine Kinase Inhibitor (TKI) Therapy. *Clin Lymphoma Myeloma Leuk* (2021). doi: <https://doi.org/10.1016/j.clml.2021.06.026>
5. D Sengupta, S Banerjee, P Mukhopadhyay, R Mitra, T Chaudhuri, A Sarkar, G Bhattacharjee, **S Nath**, S Roychoudhury, S Bhattacharjee, M Sengupta. A comprehensive meta-analysis and a case-control study give insights into genetic susceptibility of lung cancer and subgroups. *Sci Rep*. 2021 Jul 16;11(1):14572. doi: 10.1038/s41598-021-92275-z
6. **S Nath**, S Roychoudhury, M J Kling, H Song, P Biswas, A Shukla, H Band, S Joshi, K K Bhakat. The extracellular role of DNA damage repair protein APE1 in regulation of IL-6 expression. *Cell Signal*. 2017 Nov;39:18-31. doi: 10.1016/j.cellsig.2017.07.019
7. S Roychoudhury, **S Nath**, H Song, M L Hegde, L J Bellot, A K Mantha, S Sengupta, S Ray, A Natarajan, K K Bhakat. Human AP-endonuclease (APE1) is acetylated at DNA damage sites in chromatin and acetylation modulates its DNA repair activity. *Mol Cell Biol*. 2017 Mar 1;37(6). doi: 10.1128/MCB.00401-16

8. S Sengupta, A K Mantha, H Song, S Roychoudhury, **S Nath**, S Ray, K K Bhakat. Elevated level of acetylation of APE1 in tumor cells modulates DNA damage repair. *Oncotarget*. 2016 Nov 15;7(46):75197-75209. doi: 10.18632/oncotarget.12113
9. S Bajaj, S K Alam, K Singha Roy, A Datta, **S Nath**, S Roychoudhury. E2-ubiquitin conjugating enzyme, UBE2C, is reciprocally regulated by wild-type and gain-of-function mutant p53. *J Biol Chem*. 2016 Jul 1;291(27):14231-47. doi: 10.1074/jbc.M116.731398
10. K K Bhakat, S Sengupta, V Adeniyi, S Roychoudhury, **S Nath**, L J Bellot, D Feng, A K Mantha, M Sinha, B Luxon. Regulation of limited N-terminal proteolysis of APE1 in tumor via acetylation and its role in cell proliferation. *Oncotarget*. 2016 Apr 19;7(16):22590-604. doi: 10.18632/oncotarget.8026
11. **S Nath**, A Chowdhury, S Dey, A Roychoudhury, A Ganguly, D Bhattacharyya, S Roychoudhury. Deregulation of Rb-E2F1 axis causes chromosomal instability by engaging the transactivation function of Cdc20-APC/C complex. *Mol Cell Biol*. 2015 Jan 15; 35(2):356-69. doi: 10.1128/MCB.00868-14
12. S Bhattacharjya, **S Nath**, J Ghose, G Maiti, N Biswas, N P Bhattacharyya, S Bandopadhyay, C K Panda, S Roychoudhury. miR-125b promotes cell death by targeting Spindle Assembly Checkpoint gene MAD1 and modulating mitotic progression. *Cell Death Differ*. 2013 Mar;20(3):430-42. doi: 10.1038/cdd.2012.135
13. **S Nath**, M Moghe, A Chowdhury, K Godbole, G Godbole, M Doipodhe, S Roychoudhury. Is Germline transmission of MAD2 gene deletion associated with human foetal loss? *Mol Hum Reprod*. 2012 November;18(11):554–562. doi: 10.1093/molehr/gas031
14. **S Nath**, T Banerjee, D Sen, T Das, S Roychoudhury. Spindle assembly checkpoint protein Cdc20 transcriptionally activates expression of ubiquitin carrier protein UbcH10. *J Biol Chem*. 2011 May 6;286(18):15666-77. doi: 10.1074/jbc.M110.160671
15. T Banerjee, **S Nath**, S Roychoudhury. DNA damage induced p53 downregulates Cdc20 by direct binding to its promoter causing chromatin remodeling. *Nucleic Acids Research* 2009 May;37(8):2688-98. doi: 10.1093/nar/gkp110

#### **Review Article:**

1. S Saha, S Dey and **S Nath**. Steroid hormone receptors: links with cell cycle machinery and breast cancer progression. *Fronts Oncol*. 2021. Mar 12;11:620214. doi: 10.3389/fonc.2021.620214
2. **S Nath**, D Ghatak, P Das, S Roychoudhury. Transcriptional control of mitosis: deregulation and cancer. *Front Endocrinol (Lausanne)*. 2015 May 5;6:60. doi: 10.3389/fendo.2015.00060

#### **Book Chapter:**

1. **Nath S.**, Roy S. (2021) Genomic Instability in Carcinogenesis: the role of oxidative stress. In: Chakraborti S., Ray B.K., Roychowdhury S. (eds) *Handbook of Oxidative Stress in Cancer: Mechanistic Aspects*. Springer, Singapore. [https://doi.org/10.1007/978-981-15-4501-6\\_155-1](https://doi.org/10.1007/978-981-15-4501-6_155-1)

2. Roychoudhury S, Banerjee T, **Nath S**. CDC20 (cell division cycle 20 homolog (*S. cerevisiae*)). Atlas Genet Cytogenet Oncol Haematol. 2009; 13(2):104-105. doi: 10.4267/2042/44399

**Conference publication:**

1. D. Bhattacharyya, S. Dey, R. N. Ghosh, P. P. Gupta, A. Gupta, S. Roychoudhury, **S. Nath**. PB2498 Diagnosis of acute leukemia and its impact in a resource poor centre of Eastern India: A retrospective overview. Hemasphere. 2020; 4:S1, 1106
2. D. Bhattacharyya, R. N. Ghosh, P. P. Gupta, A. Gupta, S. Roy, S. Roychoudhury, **S. Nath**. PB1972 Prevalence of imatinib resistance in chronic myeloid leukemia (CML): experience from a tertiary care centre in Eastern India. Hemasphere. 2020; 4:S1, 897
3. **S. Nath**. 65P Investigating the molecular connection between hormone receptor status and ploidy management in breast cancer. Annals of Oncology. Volume 31, Supplement 2, S37, May 01, 2020. <https://doi.org/10.1016/j.annonc.2020.03.199>
4. D. Bhattacharyya, R. Ghosh, P. Gupta, A. Gupta, S. Roychoudhury, **S. Nath**. 1098P - Incidence of imatinib resistance in chronic myeloid leukemia (CML) patients: Experience from resource poor center of eastern India. Annals of Oncology. Volume 30, Supplement 5, October 2019, Page v445, doi:10.1093/annonc/mdz251
5. **S Nath**, A Shukla, S Joshi, K K Bhakat. DNA damage repair enzyme APE1 is a non-classical secretory protein and acts as a mediator of IL6 dependent inflammatory responses (IRM11P.626). J Immunol. May 1, 2015, 194 (1 Supplement) 132.5
6. Sengupta, S., Bellot, L., **Nath, S.**, Bhakat, K. K. *Mitotic bookmarking of genes- a novel dimension of epigenetic memory in cancer*. Anticancer Res. October, 2014 34(10); 5835
7. **S Nath**, T Banerjee, D Sen, T Das, S Roychoudhury. Abstract 3075: A novel transcriptional role of spindle assembly checkpoint protein Cdc20 regulating the expression of mitotic ubiquitin carrier protein Ubch10, Cancer Res. April 15, 2011 71; 3075
8. S Bajaj, **S Nath**, S Roychoudhury. Abstract # 4269 - Novel TP53 gain-of-function mutations that activate the cell cycle regulatory gene, UBE2C, Cancer Res. May 1, 2009 69; 4269
9. T Banerjee, **S Nath**, S Roychoudhury. Repression of the spindle assembly checkpoint gene CDC20 by p53 upon DNA damage, Cancer Res. May 1, 2008 68; 2597

**Membership in Scientific Research Organizations:**

- European Society of Medical Oncology (ESMO) [Membership ID 448284]
- Indian Association of Cancer Research (IACR) [Life Membership ID: LM-1060]
- European Hematology Association (EHA) [Membership ID 079249]
- Society of Biological Chemists (SBC) [Life Membership ID: 4317]
- Calcutta Consortium of Human Genetics (CCHuGe) [Life Member]