**Lopamudra Das Roy, MS, Ph.D., MBA, Founder and President, Breast Cancer Hub**
**9637 Camden Town Dr NW, Concord NC 28027**
**Email: lopa@breastcancerhub.org, lopa2006@gmail.com**
Website: https://www.breastcancerhub.org/
LinkedIn: https://www.linkedin.com/in/lopamudradasroy/

Dr. Lopamudra Das Roy **(Distinguished Cancer Scientist-Research Professor), Founder and President** of **Breast Cancer Hub (BCH),** a **GuideStar Platinum Certified, Top-rated Nonprofit Organization**. She resigned from her rewarding career in 2017 to create BCH as a **Full-time pro bono, humanitarian work, providing 100% Free services, saving lives globally by making impactful sustainable changes working at the grassroots level bridging the gap between the Developed & Developing countries.** BCH Fights **Breast Cancer** in **Women, Men & LGBTQ+.** BCH stands together against **All Types of Cancers (BCH Wings - Cancer Hubs).**

**Dr Das Roy has 22+ years of experience in Research, Teaching and Mentoring undergraduate and Ph.D. candidates in the field of Genetics and Cancer.** She worked as **Lecturer of Genetics at Garden City University,** Bengaluru in the beginning of her career. She served at **University of North Carolina at Charlotte (UNCC), USA** as **Research Professor**, **awarded with grants as Principal Investigator (PI) from the Department of Defense (DOD) cancer research program, discovering targeted cancer therapies and signaling pathways in metastatic Breast and Pancreatic cancer.** Dr. Das Roy worked as **Research Director at OncoTAb, Inc (UNCC spin off),** focusing on **Cancer diagnostics and therapeutics** and as an **Adjunct Associate Professor at UNCC** & was awarded with Contract **grant from National Cancer Institute** as **Principal Investigator**. Her original research work is attributed with numerous **high impact factor publications, inventions, citations, press releases with global recognition from American Association of Cancer Research and public media for breakthrough work on discovering the signaling pathway between Breast cancer metastasis and Arthritis**. She is invited to present her work at worldwide conferences as **Keynote speaker** and is a **scientist reviewer** of grants from Department of Defense (**DOD**) and for Cancer related journals. She serves as Global Leadership Panel member at Fight Cancer Global**.**

Dr Das Roy received her **Ph.D. in Molecular Biology (Genetics) from Assam University, India,** with **research experience in Biochemistry at Delhi University** & She received her **Post-Doctoral fellowship from Mayo Clinic College of Medicine, USA in Cancer Immunology & therapeutics focusing on Breast and Pancreatic Cancer** and her **MBA from Northwestern University-Kellogg School of Management, Chicago.** She also completed **"Step into Impact" Nonprofit Executive Education Program from Northwestern-Kellogg School of Managemen**t.

Dr. Das Roy is "**Awarded as one of the 100 Global Women in Leadership 2021"**, **"Honored as one of the five inspiring women around the world leading the fight against Breast Cancer";** Bestowed with the **"USA President's Lifetime Achievement Award for commitment to building a stronger nation through volunteer service",** "**Best Researcher Award"** in the International Scientist Awards on Engineering, Science and Medicine (INSO), 2022", **"Exemplary Social Worker Award", "Global Role of Cancer Awareness"**; **"Truly dedicated Social Activist Award";** "**Award of Excellence for Humanitarian service**".

Dr Das Roy's story featured at **Charlotte Lately Magazine** as one of the **31 Influential Women in the City (Charlotte, North Carolina)**, her journey featured at **Global Women Summit, INet NYC (International Network in New York City), Voyage LA Magazine, Passion Piece, Podcasts (making a Global Impact), and other Magazines, WBTV - Charlotte News, Press & blogs due to relentless**

work across the globe and the community in the field of Cancer, **felicitated globally** for her work and **featured as best of 2020 East India Cover Story, recognized as the savior of women with Breast Cancer** in addition to being awarded for Outstanding performance on relief and welfare activities in **India** during Covid-19 from **Universal Diplomatic Affairs of Human Rights**. She also received the **Global Achievers' Award 2021** from IAF, **India** for outstanding professional experience & **contribution in Nation building.**

- **Breakthrough Scientific Discoveries:**

- Discovered the molecular signaling pathway between **Arthritis (Inflammation)** and **Breast Cancer Metastasis** and received Press release from American Association of Cancer Research in 2012 at Chicago in addition to worldwide **Press Releases.**
- Discovered the direct role of MUC1 protein in initiating epithelial to mesenchymal transition (EMT) in **pancreatic cancer**.
- Developed a novel antibody-based blood test for earlier detection of Breast Cancer.

- **Research Grants Awarded as Principal Investigator:**

**1. Source: SBIR** (Small business innovation research) contract grant issued by National Cancer Institute (NCI)
**Title:** Molecularly Targeted Radiation Therapy for Cancer Treatment.
**Role: Principal Investigator (2016-2017)**
**2. Source:** Department of Defense cancer research Program
**Title:** A novel association and therapeutic targeting of neuropilin-1 and MUC1 in Pancreatic Cancer
**Role**: **CO-Principal Investigator (2012-2014)**
**3**. **Source:** Department of Defense Breast cancer research Program: BCRP BC087792 Award
**Title:** Evaluate the mechanism of enhanced metastasis induced by arthritis.
**Role**: **Principal Investigator (2009-2012)**

**Breast Cancer Hub Research: WIRB USA and IEC INDIA approved**

**4. Source:** Breast Cancer Hub Corporation
**Title:** Breast Cancer Hub Epidemiological Research Study & Clinical Data Analysis
**Role**: **Principal Investigator (2017 onwards)**

- **Scientist reviewer for Journals:** Cancer Biomarkers, Cancer Research, PLoS ONE, BMC Cancer, Journal of Translational Medicine, International Journal of Biomedical Science, Immunopharmacology and immunotoxicology, Cancer Medicine, Molecular Carcinogenesis, Recent Patents on Biotechnology, Cellular Signaling, Annals of Clinical and Experimental Metabolism.

- **Scientist reviewer for grants/proposals**
DOD – US Department of Defense Breast cancer research Program

- **Scientific Editorial board member** for Science Journals related to Cancer Immunology & Immunotherapy.

- **Distinguished Cancer researcher**: Awarded with US Permanent Residency as a distinguished cancer researcher and classified as an individual with extraordinary ability (EB1 category) and of national interest to USA by United States Citizenship and Immigration Services (USCIS)

## Breast Cancer Hub Honors and awards (www.breastcancerhub.org)

- **Media highlights**: https://www.breastcancerhub.org/news
- **Honors**: https://www.breastcancerhub.org/bch-honors
- **Reviews**: https://www.breastcancerhub.org/bch-reviews
- **Video Testimonials**: https://www.breastcancerhub.org/video-testimonials
- **BCH in 2 Minute Snippet**: https://youtu.be/7qYVgoDkW-Y
- **Seminars as Guest speaker (Breast Cancer Hub):** https://www.breastcancerhub.org/events

## Professional Experience

**2017 September onwards: Founder-President, Cancer Research Professor, Breast Cancer Hub (BCH). BCH is a GuideStar Platinum Certified, Top-rated 501 (c)(3) nonprofit organization, registered in North Carolina, USA in September 2017**. www.breastcancerhub.org

**Research Director at OncoTAb, Inc (**UNCC spin off Company, focused on Cancer Diagnostics and antibody targeted therapy) **(Nov 2012 – June 2017** and
**Adjunct Professor at University of North Carolina at Charlotte (Oct 2014 –June 2017)**

**University of North Carolina at Charlotte**

Nov 2012 –Sep 2014: Adjunct Associate Professor (Cancer Research Lab)
Oct 2010 – Oct 2012: Research Assistant Professor (Cancer Research Lab)
Sep 2008 – Sep 2010: Post-Doctoral Research Associate (Cancer Research)

**Mayo Clinic College of Medicine, Mayo Clinic, Scottsdale.**

Sep 2007 – Aug 2008: Post-Doctoral Fellow, (Department of Cancer Immunology/Oncology)

**Garden City University, Bangalore, India**

*2002-2004*- Lecturer, Department of Genetics
*2004-2005 – Part time Lecturer Department of Genetics and registered for Ph.D. program in 2004*

**Delhi University, Delhi, India**

2001-2002 - Research Scholar, Hormone Research Lab, Department of Zoology

## Education

Masters of Business Administration (MBA) from **Northwestern University, Kellogg School of Management**, **Chicago**

Post-Doctoral Fellowship in Breast & Pancreatic Cancer Immunology and Metastasis from **University of North Carolina at Charlotte.**

Post-Doctoral Fellowship in Breast & Pancreatic Cancer Immunology and Metastasis from **Mayo Clinic College of Medicine**, Mayo Clinic, Scottsdale.

**Ph.D. in Genetics & Molecular Biology** from **Assam University** India.

## RESEARCH PUBLICATIONS

**Summary of Research and Academics experience along with Scientific Peer Reviewed Publications (Contribution to Science)**

**Doctoral Research-2004-2007:** focused on evaluating the genotoxic potential of pharmaceuticals {Chloroquine (CHQ), metronidazole (MTZ), Ciprofloxacin (CIP)} using chromosome aberration (CA), micronucleus (MN), and sperm head abnormality (SA) assays *in vivo* in Swiss albino mice. The interaction between a low dose of radiation and pharmaceuticals, as well as the effect of vitamin C on pharmaceuticals-induced genotoxicity, was also evaluated. We found that these drugs induced dose dependent increase in the frequency of CA as well as MN in polychromatic erythrocytes. Supplementation with vitamin C prior to drug treatment significantly reduced the frequency of CA as well as MN. Our findings also suggest that these drugs may sensitize bone marrow cells to radiation exposure and enhance genotoxicity.

1. **Das Roy, L.,** Mazumder, M., and Giri, S. (**2008**). **Effects of low dose radiation and vitamin C treatment on chloroquine induced genotoxicity in mice. Environ. Mol. Mutagenesis**. 49:488-495.
2. **Das Roy, L.,** and Giri, S. (**2007**). **Genotoxicity of ciprofloxacin in mammalian test system**. **Journal of Pediatric Oncall**. 70:39-40. (National Indian Journal).
3. **Das Roy, L.,** Giri, S., Singh, S., and Giri, A. (**2013**). **Effects of radiation and vitamin C treatment on metronidazole genotoxicity in mice. Mutation Research**. doi:pii: S1383-5718(13)00029-6. 10.1016/j.mrgentox.2013.02.001.
4. Singh, S., **Das Roy, L.,** and Giri S. (**2013**). **Curcumin Protects Metronidazole and X-ray Induced Cytotoxicity and Oxidative Stress in Male Germ Cells in Mice**. **Prague Med Rep**, 114(2):92-102.

**Breast cancer and Arthritis- 2007-2012 (Mayo Clinic & UNCC): Established a link between inflammation** and **breast cancer metastases**, and that there are therapies and treatments that could be developed to decrease the metastases. Specifically, we have identified the key cytokines associated with the enhanced metastasis. We recognized the role of mast cells and SCF/c-Kit signaling in breast cancer with arthritis. The other route of mechanism reported is that IL-17 is up-regulated in the arthritic mice with Breast Cancer and blocking the IL-17 pathway may significantly reduce the rate of metastasis. These insights are fostering new anti-inflammatory therapeutic approaches to cancer development. We are the pioneer of this research investigation and in discovering that breast cancer associated metastasis is significantly augmented due to arthritis and I received press release for discovering the underlying mechanism. Our discoveries and insights are fostering new anti-inflammatory therapeutic approaches to cancer development. The data generated not only reveal the underlying mechanism of high susceptibility to bone and lung metastasis in an arthritic condition, but the combination therapies may lead to treatment modalities that will be capable of reducing tumor burden, and preventing relapse and metastasis in arthritic patients with breast cancer.

5. **Awarded with grant on behalf of the Fiscal year 2008(FY08) Department of Defense (DOD) Breast cancer research program (BCRP)**. Title of the proposal: "**Evaluate the Mechanism of Enhanced Metastasis Induced by Arthritis**". **Role: Principal investigator,** 2009-2012.
6. "**Arthritis augments breast cancer metastasis: role of mast cells and SCF/c-Kit signaling**", **Received Press release at AACR Annual Meeting 2012, held in Chicago.**

7. **Nature Precedings (2008)**. Available online: **Das Roy, Lopamudra**, Pathangey, Latha, Tinder, Teresa, and Mukherjee, Pinku. **Breast Cancer Associated Metastasis is Significantly Increased in a Model of Autoimmune Arthritis.** https://www.nature.com/articles/npre.2008.2632.1
8. **Das Roy, L.,** Pathangey, B.L., Tinder, L.T., Schettini, L.J., Gruber, H.E., and Mukherjee, P. (**2009**). **Breast cancer associated metastasis is significantly increased in mice with autoimmune arthritis. Breast Cancer Res**. 11(4):R56. doi: 10.1186/bcr2345.
9. **Das Roy, L.,** Pathangey, B.L., Tinder, L.T., Schettini, L.J., Gruber, H.E., and Mukherjee, P. (**2011**). **Collagen induced arthritis increases secondary metastasis in MMTV-PyV MT mouse model of mammary cancer**. **BMC Cancer**, 11:365. doi: 10.1186/1471-2407-11-365.
10. **Das Roy, L.,** Curry, J., Sahraei, M., Kidiyoor, A., Besmer, D., Gruber, H.E and Mukherjee, P. (**2013**). **Arthritis augments breast cancer metastasis: Role of mast cells and SCF/c-Kit signaling**. **Breast Cancer Res.** 11;15(2):R32. doi: 10.1186/bcr3412
11. **Das Roy, L**, Sahraei, M., Gruber, H.E., Besmer, D and Mukherjee, P. (**2014**). **Systemic neutralization of IL-17A significantly reduces breast cancer associated metastasis in arthritic mice by reducing CXCL12/SDF-1 expression in the metastatic niches. BMC Cancer**, doi: 10.1186/1471-2407-14-225.

**Pancreatic Cancer Research: 2007-2017 ((Mayo Clinic & UNCC):** **MUC1** plays a crucial role in the oncogenic signaling pathways of human pancreatic cancer and we discovered the direct role of MUC1 protein in initiating epithelial to mesenchymal transition (EMT) in pancreatic cancer. We also identified the oncogenic signaling pathways driven by MUC1 in **pancreatic cancer**.

12. **Awarded with grant from Department of Defense (DOD) Breast cancer research program (BCRP)**. Title: "**A novel association and therapeutic targeting of neuropilin-1 and MUC1 in Pancreatic Cancer.**" **Role: CO-Principal Investigator,** 2012-2014.
13. **Das Roy, L.,** Sahraei, M., Subramani, D., Besmer, D., Nath, S., Tinder, T., Kandavel, S., Lee, Y., Hwang, SL., Gendler, S., and Mukherjee, P. (**2011). MUC1 enhances invasiveness of pancreatic cancer cells by inducing epithelial to mesenchymal transition. Oncogene Nature publication**, doi 10.1038/onc.2010.526.
14. Besmer M, L., Curry, J., **Das Roy, L.,** Tinder, T., Schettini, J., Hwang, S., Lee, Y., Gendler, S.J., and Mukherjee, P. (**2011**).**Pancreatic ductal adenocarcinoma mice lacking mucin 1 have a profound defect in tumor growth and metastasis**. **Cancer Research**. 2011 Jul 1;71(13):4432-42.
15. Sahraei, M., **Das Roy, L**., Curry, J., Tinder, L.T.,Nath, S., Besmer, D., Kidiyoor, A., Dalia, R., Gendler, S., and Mukherjee, P**.** (**2011**). **MUC1 plays a crucial role in the oncogenic signaling pathways of human pancreatic cancer cells. Oncogene Nature publication**, doi 10.1038/onc.2011.651.
16. Schettini, J., Kidiyoor, A., Besmer, D., Tinder, T., **Das Roy, L**., Lustgarten, J., Gendler, S and Mukherjee, P.(**2012**). **Intratumoral Delivery of CpG-Conjugated Anti-MUC1 Antibody Enhances NK Cell Anti-Tumor Activity. Cancer Immunology Immunotherapy**, DOI: 10.1007/s00262-012-1264-y.
17. Nath,S., Daneshvar,K., **Das Roy, L.,** Kidiyoor, A., Sahraei, M and Mukherjee, P. (**2013**) **MUC1 induces drug resistance in pancreatic cancer cells via activation of PI3K/Akt pathway and upregulation of multidrug resistance genes. Oncogenesis** (**2013**) 2, e51; doi:10.1038/oncsis.2013.16.
18. Kidiyoor,A., Schettini, J*., Besmer, D*., Rego, S., Nath, S., Curry, J., **Das Roy, L.**, Dreau D., and Mukherjee, P. (**2014**) **Pancreatic Cancer Cells Isolated from Muc1-Null Tumors Favor the Generation of a Mature Less Suppressive MDSC Population**. **Cancer Immunology Immunotherapy**, doi: 10.3389/fimmu.2014.00067.
19. Nath, S., **Das Roy, L**., Grover, P., Rao, S., and Mukherjee, P. (**2015**) **MUC1 regulates *Cox-2* gene in pancreatic cancer. Pancreas** 2015;00: 00–00.

20. Zhou,R., Curry,J., **Das Roy,L.,** Grover, P., Moore,L., Wu,S., Kamesh, A., Leung,T., Mukherjee, P. **(2016). A Novel Association and Therapeutic Targeting of Neuropilin-1 in MUC1$^{high}$ Pancreatic Cancer. Oncogene Nature Publication**, doi:10.1038/onc.2015.516.

**Research at OncoTAb, Inc-November 2012-June 2017 (UNCC):**

Developed a novel antibody-based blood test (Agkura Personal Score$^{TM}$) for earlier detection of breast cancer (**Biomarker**). **.**

21. **Awarded with SBIR** (Small business innovation research) contract grant issued by **National Cancer Institute (NCI) as Principal Investigator. Title: Molecularly Targeted Radiation Therapy for Cancer Treatment**
22. Moore, L., **Das Roy, L**., Zhou, R., Grover, P., Wu, S., Curry, J., Dillon, L., P, Puri., Yazdanifar, M., Puri, R., Mukherjee,P and Dréau,D.. (2016) **Antibody guided in vivo imaging for early detection of mammary gland tumors. Translational Oncology, (2016), 9, 295-305**.
23. **Das Roy, L**.,Dhillon, L., Zhou., R., Moore., L, Puri., R., Livasy, C., Mukherjee., P. (**2017**) **A monoclonal antibody with exceptional specificity across major breast cancer subtypes**. **Genes and Cancer, 8(3-4):536-549.doi:10.18632/genesandcancer.134**.
24. Didier Dréau, Laura Jeffords Moore, Mike Wu, **Lopa Das Roy**, Lloye Dillion, Travis Porter, Rahul Puri, Noor Momin, K. Dane Wittrup, Pinku Mukherjee (**2019**). **Combining the specific anti-MUC1 antibody TAB004 and Lip-MSA-IL-2 limits pancreatic cancer progression in immune competent murine models of pancreatic ductal adenocarcinoma. Frontiers in Oncology, section Cancer Immunity and Immunotherapy 441584.**
25. John Stuart Salmon, Jimmy J. Hwang, Myra M. Robinson, James Thomas Symanowski, Lloye M Dillon, **Lopamudra Das Roy**, Matthew A. Beldner, Kelry Preston, Sharon Buige, Reza Nazemzadeh, Pinku Mukherjee, Farhang Farhangfar, Edward S. Kim. **Phase II study of regorafenib (Reg) in patients with previously treated advanced pancreatic cancer (APC). Journal of Clinical Oncology.** DOI:10.1200/JCO.2017.35.15_suppl.e15751

**More list of Scientific Publications (2012-2019):**

26. Chauhan, V., Nelson, D., **Das Roy, L.,** Mukherjee, P and Kenneth, B. (**2012**) **Exacerbated metastatic disease in a mouse mammary tumor model following latent gamma herpes virus infection. Infectious Agents and Cancer**, 7(1):11.
27. Hastie, E***.**, Besmer, D*., Shah, N., Murphy, A., Moerdyk-Schauwecker, M., Molestina, C., **Das Roy, L.,** Curry, J., Mukherjee, P., and Grdzelishvili, VZ. (**2013**). **Oncolytic vesicular stomatitis virus in an immunocompetent model of pancreatic cancer. Journal of Virology**, doi:10.1128/JVI.01412-13
28. Jennifer M. Curry ,Dahlia M. Besmer ,Timothy K. Erick,Nury Steuerwald, **Lopamudra Das Roy**, Priyanka Grover,Shanti Rao,Sritama Nath,Jacob W. Ferrier,Robert W. Reid,Pinku Mukherje. (**2019**). **Indomethacin enhances anti-tumor efficacy of a MUC1 peptide vaccine against breast cancer in MUC1 transgenic mice. Plos One.** https://doi.org/10.1371/journal.pone.0224309
29. Zhou, R; Yazdanifar, M; **Das Roy, L**; Whilding, L; Gavrill, A; Maher,J; Mukherjee, P. (**2019**). **CAR T Cells Targeting the Tumor MUC1 Glycoprotein Reduce Triple-Negative Breast Cancer Growth. Frontiers in Immunology, section Cancer Immunity and Immunotherapy.** https://doi.org/10.3389/fimmu.2019.01149
30. **Das Roy, L (2019).** Early detection is the key to survival. Paper published in Chapter Book – Bioresources of Northeast India: Status & Conservation Strategies. A collection of research & review paper. Published by ADP College, Nagaon & Sampriti Publication (India).
31. **Das Roy, L (2019).** Shh..let's not discuss, Silent Ignored Chapter**.** Wall magazine at Dr B Borooah Cancer Institute, India.

32. **Das Roy, L (2020).** Male Breast Cancer. Gati Newspaper-19th April, 2020
33. **Das Roy, L (2020).** Cancer & Inflammation – Role of Diet. Click here
    And Read more
34. **Das Roy, L (2020).** Breast Cancer Screening. Click here
35. **Das Roy, L (2020).** Silent ignored chapter. Click here
36. **Das Roy, L (2020).** Cancer is not contagious**.** Click here
37. Mahnaz Sahraei, Mukulika Bose, J. Alexa Sanders, Chandrav De, **Lopamudra Das Roy,** Sritama Nath, Cory R. Brouwer, and Pinku Mukherjee. **(2021). Repression of MUC1 Promotes Expansion and Suppressive Function of Myeloid-Derived Suppressor Cells in Pancreatic and Breast Cancer Murine Models. International Journal of Molecular Sciences** as part of the Special Issue **The Immune Landscape in Solid Tumors**. *Int. J. Mol. Sci.* **2021**, *22*(11), 5587; https://www.mdpi.com/1422-0067/22/11/5587.
38. Rudrarup Bhattacharjee, **Lopamudra Das Roy**, Amarendranath Choudhury (2022). **Understanding on CRISPR/Cas9 mediated cutting-edge approaches for cancer therapeutics. Discover Oncology**, https://link.springer.com/article/10.1007/s12672-022-00509-x
39. Sanalembi Devi, Sapna Pashi, Ranjita Singha, Rakesh S. Ramesh1 , **Lopamudra Das Roy** (2022). **Breast Cancer Hub – Meeting the challenges to screening, diagnosis, treatment, and support to cancer patients during the COVID-19 pandemic in North-East India**.
    **Annals of Oncology Research and Therapy,** Click here – Full Paper

**Complete List of Published Work in My Bibliography:**
http://www.ncbi.nlm.nih.gov/pubmed/?term=lopamudra+das+roy

## Scientific Presentations at Conferences/Meetings/Events

1. **Das Roy, L.,** and Giri, S. (2007). Induction of Chromosomal Abnormality, Micronucleus and Sperm Shape Abnormality by Metronidazole: A Commonly Used Pharmaceutical. **International conference on Biomarkers in health and Environmental Management & Environmental Mutagen Society of India: XXX11 Annual Meet, Coimbatore, India**.
2. **Das Roy, L.,** and Giri, S. (2007). Effects of low dose radiation and vitamin C treatment on metronidazole induced genotoxicity in mammalian test system *in vivo*. **Indian Academy of Pediatrics 22nd Annual Conference, Assam, India.**
3. **Das Roy, L.,** and Giri, S. (2007). Induction of Chromosomal Abnormality, Micronucleus and Sperm Shape Abnormality by Metronidazole and Vitamin C Intervention. **National Conference on genomics: Impact on human health, Madhya Pradesh, India**.
4. **Das Roy, L.,** and Giri, S. (2007). Induction of Chromosomal Abnormality, Micronucleus and Sperm Shape Abnormality by chloroquine: A Commonly Used Pharmaceutical**. 30th All India Cell Biology Conference and Symposium on - Molecule's to Compartments: Cross- Talks and Network, New Delhi, India.**
5. **Das Roy, L.,** and Giri, S. (**2007**). Genotoxicity of ciprofloxacin in mammalian test system. Proceedings: **Journal of Pediatric Oncall**. 70:39-40. (National Indian Journal).
6. **Das Roy, L.**, Pathangey, B.L., Tinder, T., Schettini, L.J., and Mukherjee, P. (2008). Study the influence of arthritis on breast cancer associated bone metastasis. **Era of Hope, Department of Defense Breast Cancer Research Program, Baltimore, USA.**
7. **Das Roy, L.**, Pathangey, B.L., Tinder, T., and Mukherjee, P. (2008). Breast cancer-associated metastasis is significantly increased in mice with autoimmune arthritis. **Autumn Immunology Conference, Chicago, USA.**
8. **Das Roy, L.**, Pathangey, B.L., Tinder, T., Gruber, H.E., and Mukherjee, P. (2009). Increased breast cancer associated metastasis in PyV MT mice induced to develop arthritis. **American Association of Immunology Conference, Seattle, USA.**

9. **Das Roy, L,** Schettini, J.L., Sahraei, M., Gruber, H.E., Sahraei, M., and Mukherjee, P. (2010). Treatment with anti-IL 17A coupled with COX-2 inhibitor significantly decreases breast cancer associated secondary metastasis in a model of autoimmune arthritis. **Annual meeting of the American Association for Cancer Research, Washington D.C., USA**
10. Kidiyoor, A., Schettini, J., **Das Roy, L**., Besmer, D., and Mukherjee, P. (2011). Pancreatic tumor cells that develop within a Muc1 knock-out mice generate less immunosuppressive MDSCs in vitro. **Annual meeting of the American Association for Cancer Research, Orlando, USA.**
11. Nath, S., **Das Roy, L.,** Rao S., Tinder, T., and Mukherjee, P. (2011) The oncogenic role of MUC1 in the context of TGF-β production and signaling. **Annual meeting of the American Association for Cancer Research, Orlando, USA.**
12. Besmer M, L., Curry, J., **Das Roy, L.,** Tinder, T., Schettini, J., Hwang, S., Lee, Y., Gendler, S.J., and Mukherjee, P. (2011). MUC1 increases proliferation of pancreatic cancer in vivo and in vitro through regulation of ERK1/2. **Annual meeting of the American Association for Cancer Research, Orlando, USA**
13. **Das Roy, L.,** Curry, J., Sahraei, M., Kidiyoor, A., Besmer, D., Gruber, H.E and Mukherjee, P. (2011) Evaluate the Mechanism of Enhanced Metastasis Induced by Arthritis. **Era of Hope, Department of Defense Breast Cancer Research Program, Orlando**, **USA.**
14. **Das Roy, L.,** Curry, J., Sahraei, M., Kidiyoor, A., Besmer, D., Gruber, H.E and Mukherjee, P. (2012) Arthritis augments breast cancer metastasis: Role of mast cells and SCF/c-Kit signaling. **Annual meeting of the American Association for Cancer Research, Chicago, USA.**
15. Besmer,D., Kidiyoor, A., Nath, S., **Das Roy, L.,** Curry, J., and Mukherjee,P. (2012). Investigating the Role of IDO in MUC1 Expressing Breast Cancers. **Annual meeting of the American Association for Cancer Research, Chicago, USA.**
16. Curry, J., Besmer, D.,*, **Das Roy, L.,** Grover, P., Nath, S., Rao,S., Mukherjee, P. (2013). Combinational MUC1 vaccine therapy and Indomethacin treatment reduces breast tumor burden via a COX-independent pathway. **American Association of Cancer Research, Washington, USA**.
17. Hastie, E*., Besmer, D*., Shah, N., Murphy, A., Moerdyk-Schauwecker, M., Molestina, C., **Das Roy, L.,** Curry, J., Mukherjee, P., and Grdzelishvili, VZ. (2013). Oncolytic vesicular stomatitis virus in an immunocompetent model of pancreatic cancer. **15th Annual Graduate Research Symposium, March 13, Charlotte, North Carolina, USA.**
18. Hastie, E*., Besmer, D*., Shah, N., Murphy, A., Moerdyk-Schauwecker, M., Molestina, C., **Das Roy, L.,** Curry, J., Mukherjee, P., and Grdzelishvili, VZ. (2013). Oncolytic vesicular stomatitis virus in an immunocompetent model of pancreatic cancer. ***32nd Annual Meeting of the American Society of Virology*, July 20 – 24, State College, Pennsylvania, USA.**
19. Zhou, R., Curry, J., Grover, P., **Das Roy, L**., Leung, T., and Mukherjee,P. (2014) MUC1 enhances neuropilin-1 signaling in pancreatic ductal adenocarcinoma. **Annual meeting of the American Association for Cancer Research, SanDiego, USA.**
20. **Das Roy, L**., Zhou., R., Moore., L, Puri., R., Mukherjee., P. (2015) MUC1 expression in a panel of human breast cancer cell lines. Publication only: **American Society of Clinical Oncology (ASCO) Annual meeting, Chicago, USA.**
21. Allen, B., Wu, Shuta., **Das Roy, L**., Zhou, Ru., Fowler, A., Ogle, J., Garmon, C., Ogle, C., Mukherjee,P.(2015) Targeting Breast and Pancreatic Cancer with Antibody-guided PLGA Nanoparticles. URC **(Undergraduate Research Conference) 2015 at UNC Charlotte, USA.**
22. Dréau,D., Moore, L., **Das Roy, L.,** Wu, S., Puri, R., Mukherjee,P. (2015) Early detection of mammary tumors in vivo using a highly specific tumor antibody: **Breast Cancer Symposium, ASCO, USA**
23. Expert Speaker and Chairperson at "Global Cancer Summit Conference", November 2015 at Indian Institute of Science, Bangalore, India.
    https://www.youtube.com/watch?v=fZJCEdsQoyM

24. **Das Roy, L**., Zhou., R., Moore., L, Puri., R., Mukherjee., P. (2015) A monoclonal antibody with exceptional specificity across major breast cancer subtypes. **San Antonio Breast Cancer Symposium, San Antonio, USA.**
25. Zhou, R., **Das Roy, L.,** Yazdanifar, M., Moore., L, Cherian, E., Livasy, C., Mukherjee., P. (2016) **Development of combinatorial immune therapy using tMUC1specific chimeric antigen rece ptor redirected T cells for the treatment of triple negative breast cancer**. Tumor Immunology and Immunotherapy, AACR, Boston, USA
26. Priyanka Grover, Monica,D. Nye, Mahboubeh Yazdanifar, Mohammad Ahmad, Ru Zhou, **Lopa mudra Das Roy**, Kajal Grover, Shu-ta Wu, Sritama Nath and Pinku Mukherjee.(2017) **MUC1 regulates TGFβ function in pancreatic cancer.** AACR Annual Meeting 2017; April 1-5, 2017; Washington, DC
27. Mukherjee, P., Zhou, R., Yazdanifar, M., and **Das Roy, L. (2017)** Development and future of CAR T cell therapy for pancreatic ductal adenocarcinoma and triple negative breast cancer. **American association for cancer research Frontiers in Cancer Treatment at Cape Town, January 2017.**
28. **Das Roy, L. (2017).** Inflammation & Cancer. Indian Academy of Pediatrics (Assam, India)**.**
29. Zhou, R., **Das Roy,L.,** Yazdanifar, M., Livasy, C., and Mukherjee, P. **(2017) The use of tMUC1 highly specific chimeric antigen receptor-redirected T cells for the eradication of triple negative breast cancer**. American association of immunology conference, Washington D.C, May 2017.
30. Ru Zhou, Mahboubeh Yazdanifar, Lopamudra Das Roy, John Maher and Pinku Mukherjee. **Tumor MUC1 glycoprotein-highly specific CAR T cells control triple-negative breast cancer (2019).** DOI:10.1158/1538-7445.AM2019-2305.Proceedings: AACR Annual Meeting
31. Sanalembi Devi, Sapna Pashi, Mimila Chanu and Lopamudra Das Roy from **Breast Cancer Hub**. **Impact of Covid-19 on Breast Cancer Screening in North-East India** (26th August, 2020). Indian Association of Women's Studies E-Conference. "Gender during Covid -19: Perspectives from Northeast India.
32. Guest speaker in urban & rural India, Hospitals, Universities & Colleges, on Breast Cancer: https://www.breastcancerhub.org/india-1
33. **Invited as Panelist/Guest Speaker/Keynote** for various seminars/webinars **Globally** highlighting Breast Cancer awareness, cancer prevention, challenges & solutions: **Glimpses of few events -** https://www.breastcancerhub.org/events
34. Srikavya Pasumarthy, Dr. Rakesh S. Ramesh, and Dr. Lopamudra Das Roy. **Breast Cancer Hub Research Study: Evaluating the Disproportionate Rate of Metastasis and Mortality by Age in Patients with Breast Cancer in India and the United States Through a Comparative Study**. St John's National Academy of Health Sciences, Bengaluru, 3rd Annual Research Day April 8, 9, 2021
35. Zuganta Jyoti Das, Dr Afifa Kausar , Gulzar Hussain, Foujana Hoque, Ananya Kalita, Ruptalin Engtipi, Priyam Goswami, Rajdeep Bora, Dr. Rakesh S. Ramesh, and Dr. Lopamudra Das Roy· **Breast Cancer Hub Research Study: An epidemiological research study to depict the status of Breast Cancer Awareness in the local population of Nagaon, Karbi Anglong District & surrounding areas in Assam, India – generate awareness to help with early detection**. St John's National Academy of Health Sciences, Bengaluru, 3rd Annual Research Day April 8, 9, 2021
36. Sanalembi Devi, Sapna Pashi, Mimila Chanu, Sarita Singha, Ranjita Singha, Langlen Sana, Uma Nunia, S. Nilkamal Singha, Richard Huang, Dr. Rakesh S. Ramesh, and Dr. Lopamudra Das Roy. **Breast Cancer Hub Research Study: Investigating the cancer awareness status, underlying determinants leading to late detection, navigating the suspicious cases, and addressing the challenges with grassroots solutions during the Covid-19 pandemic in the**

**villages adopted by Breast Cancer Hub (BCH) in Cachar, Assam, India**. St John's National Academy of Health Sciences, Bengaluru, 3rd Annual Research Day April 8, 9, 2021

37. Zuganta Jyoti Das, Dr Afifa Kausar Foujana Hoque, Ananya Kalita, Dr Rakesh Ramesh and Dr Lopamudra Das Roy: **Breast Cancer Hub Research Study: Ground Reality on Breast Cancer Screening Scenario in Nagaon & Karbi Anglong Districts of Assam, India.** Oral Presentation, AKAM Conference, Delhi University, 19-20 January, 2022.
38. Srikavya Pasumarthy, Peggy Miller, Patricia Washburn, Cheri Ambrose, Dr. Lopamudra Das Roy. **High Mortality in the Male Breast Cancer Community— A Report on its Underlying Determinants and the Need for a Change in Healthcare Policy.** Western Michigan University Homer Stryker M.D. School of Medicine - Research Day, May 03, 2023, Kalamazoo, Michigan

## HONORS & AWARDS

**Key note speaker/Guest Speaker on behalf of Breast Cancer Hub Globally:**
**https://www.breastcancerhub.org/events**

**Honored with various awards & press releases (newspapers & TV)-**
https://www.breastcancerhub.org/news

**Honored and felicitated from various organizations worldwide for selfless contribution towards community on Breast Cancer Awareness, Education & Research AND Saving innumerable Lives.**
https://www.breastcancerhub.org/bch-honors

- **Story published in Hidden Gems, Voyage LA Magazine, 2023:** http://voyagela.com/interview/community-highlights-meet-dr-lopamudra-das-roy-of-breast-cancer-hub/
- **2023; Be you start now: Dr Lopamudra' s interview @Podcast with Sarah Ashley Neil -** https://www.sanartina.com/podcast
  Spotify: https://lnkd.in/eG4QqkZF
  Apple: https://lnkd.in/em_Jdb_Y
- **Honored as one of the five inspiring women around the world leading the fight against Breast Cancer by Goodera.**
- "**Awarded as one of the 100 Global Women in Leadership 2021" from GCPIT and CIMSME.**
- **"Best Researcher Award in the International Scientist Awards on Engineering, Science, and Medicine (INSO) by VDGOOD Professional Association on November 30, 2022**
- **"USA President's Lifetime Achievement Award for commitment to building a stronger nation through volunteer service, 2021".**
- **"Global Role of Cancer Awareness 2021 by Pratishruti Cancer and Palliative Trust, Assam, India"**;
- **"Exemplary Social Worker Award 2021 by Niramay Trust, Assam, India",**
- **"Truly dedicated Social Activist Award by** Women Cell, Chandragiri Club, Assam**";**
- **Global Achievers' Award 2021** from IAF, **India** for outstanding professional experience & **contribution in Nation building.** https://www.iafindia.com/dr-lopamudra-das-roy/
- **2021: Podcast hosted by Carrie Madrid and Chris Donovan (Handle with Care: Breast Cancer & Beyond): Title:** Making a Global Impact on Breast Cancer with Dr Lopa of the Breast Cancer: http://tiny.cc/jgh4vz

- Dr Das Roy's story featured at **Global Women Summit, INet NYC (International Network in New York City)** https://tinyurl.com/y52oxj42**,**
- **Charlotte Lately Magazine**, issue#3 August 2020, **as one of the 31 Influential Women in the City** due to relentless work across the globe and the community in the field of Cancer,
- **Featured at East India Cover Story as the savior of women with Breast Cancer. https://eastindiastory.com/dr-lopamudra-and-the-asura-of-breast-cancer/**
- **Interview at Passion Piece: https://passionpiece.com/en/2020/07/09/wywiad-tygodnia-dr-lopamudra-das-roy/**
- **Universal Diplomatic Affairs of Human Rights:** Awarded for Outstanding performance on relief and welfare activities in India during Covid 19.
- Women Equality Day by Shakthi Corporation: invited to share my experiences, my perspectives, scenarios I face through my work especially in the developing countries on behalf of Breast Cancer Hub. https://youtu.be/yHEgHyijzuo
- Young Scientist Cancer Meet September 14, 2019 – Spectrum News: https://www.facebook.com/breastcancerhub/videos/2433660736724319/
- Dr. Das Roy received "**Award of Excellence for Humanitarian service**" at Male Breast Cancer Coalition Conference on April 27th, 2019 at Orlando, Florida, USA.
- Global Leadership Panel member at Fight Cancer Global

**Press Releases in 2012 for discovering the signaling pathway between arthritis and breast cancer: Websites below**

**AACR press release attached (Page 10-11)**

https://www.breastcancerhub.org/news

**http://www.the-scientist.com/?articles.view/articleNo/31948/title/News-from-Cancer-Meeting/**

http://www.sciencedaily.com/releases/2012/04/120401134939.htm

http://cancerdiscovery.aacrjournals.org/content/early/2012/03/29/2159-8290.CD-NB2012-031.full

http://www.breastcancer.co/news/research/breast-cancer-metastases-link-identified-possibly-treatable

http://in.news.yahoo.com/intimate-relationship-between-metastatic-breast-cancer-arthritis-identified-044034701.html

http://www.dailyrx.com/news-article/breast-cancer-metastasis-associated-arthritis-18333.html

http://www.newsmaxhealth.com/healthwire/breast_cancer_arthritis/2012/04/09/444146.html

http://uccltnews.blogspot.com/2012/04/mechanism-found-connecting-metastatic.html

- ~ 1110 citations of publications.
- Awarded with First Class 2nd Position (2nd Highest score in the University and State) in the Bachelor's Degree program from Assam, India, 1998
- Awarded with First Class 2nd Position (2nd Highest score in the University) in the Master's Degree program from Assam, India, 2000
- Pre-doctoral Scholarship/Fellowship awarded from the Central Government of India, 2004-07 for PhD Research.
- Awarded with US Permanent Residency as a **distinguished cancer researcher** and classified as an individual with extraordinary ability (EB1 category) and of national interest to USA by United States Citizenship and Immigration Services (USCIS)
- **Awarded with grant on behalf of the Fiscal year 2008(FY08) Department of Defense (DOD) Breast cancer research program (BCRP)**. Title of the proposal: "Evaluate the Mechanism of Enhanced Metastasis Induced by Arthritis". Proposal rated Outstanding with a score of 1.3. **Role: Principal investigator,** 2009-2012

- Awarded with postdoctoral grant from **Susan Komen Foundation** but declined since I was awarded with DOD grant in the same year, 2009.
- Launched Breast Cancer Hub on October 20th, 2017 at Northwestern Kellogg School of Management, Chicago, IL, USA by giving a presentation on Breast Cancer Scenario across the world. https://www.youtube.com/watch?v=M2HvKqLGhiQ
- Expert Speaker and Chairperson at "Global Cancer Summit Conference", November 2015 at Indian Institute of Science, Bangalore, India. https://www.youtube.com/watch?v=fZJCEdsQoyM
- Guest Speaker on "Early detection of breast cancer" at University of North Carolina at Charlotte, March 2016.
- Guest Speaker at Biology Department Seminar, University of North Carolina, Charlotte, USA, 2009.
- Guest/Invited speaker for Conferences in USA, China, Canada, South America and India, 2009 onwards
- Certificate of Excellency in All India Talent Search Examination, 1993
- **Judge** for the fifth annual graduate student poster competition in the Charlotte Biotechnology conference, 2011
- **Review committee**: International Member of review committee for graduate students from Assam University (Central University), India, 2011-present
- **Millennial Magazine Spring/Summer 2011**, Page 12, Title: "**Inspiring Discovery"**. Article published on my work on breast and pancreatic cancer, **2011. https://issuu.com/criuncc/docs/millennial_summer_2011__final_**
- "Arthritis augments breast cancer metastasis: role of mast cells and SCF/c-Kit signaling", **Identified as Newsworthy for the AACR Annual Meeting 2012, held in Chicago.** The work was reported through a wide range of consumer media outlets (newspapers, magazines, radio and television), trade publications, and social media platforms and press conference, 2012
- **Wikipedia on MUC1 protein (2014)** referenced the manuscript under reference#30: **Das Roy, L.,** Sahraei, M., Subramani, D., Besmer, D., Nath, S., Tinder, T., Kandavel, S., Lee, Y., Hwang, SL., Gendler, S., and Mukherjee, P. MUC1 enhances invasiveness of pancreatic cancer cells by inducing epithelial to mesenchymal transition. Oncogene nature publication, doi 10.1038/onc.2010.526.
- **Link to Wikipedia:** http://en.wikipedia.org/wiki/MUC1
- Expert Speaker and Chairperson and **Judge** at "**Global Cancer Summit Conference**", November 2015 at **Indian Institute of Science, Bangalore, India.**
- **Judge** for poster competition for Center for Biomedical Engineering and Science (CBES), UNCC, April, 2016.
- November, 2019: One of the panelists at Careers in Biosciences at University of North Carolina, Charlotte.
- More than **140 outreach events,** as guest speaker in urban & rural India, Hospitals, Universities & Colleges, on Breast Cancer: **2018, 2019, 2020**. https://www.breastcancerhub.org/india-1
- **2018-2020:** Panelist and Invited Guest speaker to talk about Global Challenges with Breast Cancer & how we overcome, at **more than 200 health platforms & seminars:** https://www.breastcancerhub.org/events

**Other key interest and experience**

- Completed training for educating children with special needs (**Cerebral Palsy**) at Indian Institute of Cerebral Palsy, India.
- Socially active and participate in community services and other social activities and campaigns.
- Professionally trained Indian Classical dancer and performs in several shows and events in multi-cultural events and functions.

**Press Release**

Embargoed For Release:
8:00 a.m. CT, April 1, 2012

Media Contact:
Jeremy Moore
(215) 446-7109
Jeremy.Moore@aacr.org
In Chicago, March 31 - April 4:
(312) 528-8206

Link Between Inflammation and Breast Cancer Metastases Identified, May Be Treatable

- Metastases increased in mice with breast cancer and arthritis.
- Mast cells one of the major underlying causes of metastases.
- Therapies could be developed to decrease metastases.

CHICAGO — The incidence of breast cancer-associated metastasis was increased in animal models of the chronic inflammatory condition arthritis, according to results of a preclinical study presented at the AACR Annual Meeting 2012, held here March 31 - April 4. The results indicate that inflammatory cells known as mast cells play a key role in this increase and that interfering with mast cells reduces the occurrence of bone and lung metastases.

"The most devastating aspect of breast cancer is the emergence of tumor cells that grow to distant organs," said Lopamudra Das Roy, Ph.D., research assistant professor at the University of North Carolina at Charlotte, N.C. "It has been reported that sites of chronic inflammation are associated with the establishment and growth of tumor cells."

Prior research conducted by Das Roy established that the incidence of breast cancer metastasis to the bone and lungs was increased in arthritic mice. Because both breast cancer and arthritis are prevalent in women, specifically postmenopausal women, the researchers conducted an additional study using two groups of mice to identify what might be causing the association between arthritis and breast cancer metastases.

The first group of mice had spontaneous arthritis and was induced to have breast cancer. The second group of mice had spontaneous breast cancer and was induced to have arthritis. Because mice in both groups had enhanced numbers of mast cells within the bone and lung, Das Roy and colleagues focused on understanding how these cells might influence breast cancer metastasis.

"We found that there were many proinflammatory factors that are upregulated in the arthritic microenvironment and several of these proinflammatory factors known to influence metastases are produced by mast cells, which are activated by tumor-derived stem cell factor (SCF) binding to its receptor c-Kit," Das Roy said



A subsequent key finding was that SCF/c-Kit signaling was increased in arthritic mice with breast cancer versus nonarthritic mice with breast cancer. This set the stage for examining the effects of blocking this signaling.

When the mice were treated with a therapy to target the c-Kit mast cell receptor in combination with celecoxib (a drug used to treat autoimmune arthritis), the incidence of breast cancer metastasis to the bone and lung was greatly reduced.

"The clinical implications of this research are huge," Das Roy said. "We already have data that show that women with breast cancer and arthritis have lower survival as compared with women with breast cancer and no arthritis. This research indicates that we may be able to design a therapy to block SCF/c-Kit signaling, which could help reduce metastases to the bone and lungs."

This research was funded in Fiscal Year 2008 from Department of Defense Breast Cancer Research Program.

**Breast Cancer Hub**

Website: https://www.breastcancerhub.org/
LinkedIn: https://www.linkedin.com/company/breastcancerhub/
Facebook: https://www.facebook.com/breastcancerhub/
Instagram: https://www.instagram.com/breastcancerhub/
Twitter: https://twitter.com/BreastCancerHub