CURRICULUM VITAE

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1. PERSONAL INFORMATION

A. Education:

Undergraduate: ***University of Calcutta***, Calcutta, India, 1982-1985, Bachelor of Science, Zoology

Graduate Education: 1 ***University of Calcutta***, Calcutta, India, 1986-1988, Master of Science, Marine Science

2. ***University of Calcutta***, Calcutta, India, 1995-2000, Doctor of Philosophy, Marine Science

3. ***National Cancer Institute, National Institute of Health***, Bethesda, USA, 2003-2004, Post-doctoral, Cancer Research.

B. Professional Experience & Training:

Title, Institution, City, Country, Years at that Institution Service

1. ***Associate Professor***, Department of Pediatrics & Child Health, Howard University College of Medicine, Washington, DC, USA, 2022-Present.
2. ***Assistant Professor***, Department of Pediatrics & Child Health, Howard University College of Medicine, Washington, DC, USA, 2015-2022.
3. ***Principal Investigator***, Department of Biology, Howard University College of Medicine, Washington, DC, USA, 2017-present
4. ***Sr. Research Associate***, Department of Biology, Howard University College of Medicine, Washington, DC, USA, 2004-present (22 + Years)
5. ***Postdoctoral Visiting Fellow***, Department of Cancer Treatment and Diagnosis (DCTD), Clinical Trial Unit, National Cancer Institute, NIH, Bethesda, Maryland, USA, 2003-2004
6. **Research Associate**, University College of Medicine, Calcutta University, Calcutta, India, 2000-2003

C. Licensure: Not Applicable

D. Certification: All CITI Human Subject's Research Certifications.

E. Languages Spoken: English, Bengali, Hindi

2. RESEARCH AND SCHOLARLY ACTIVITIES

A. Publications:

i. Original Papers in Peer-Reviewed Journals

1. Retland N, Thompson KM, Aubee JI, Apprey V, **Ghosh S**, Copeland R, Kanaan Y, Fang Y, Ramadan A, Brim H, Muneer M. Abbas M.M. **Uncovering genetic variations in HTR2A and miRNAs drivers of breast cancer risk in African American women**. J Breast Cancer Res. 2026;6(1):65-83.
2. SYDNEY I. ALLISON; TANMOY MONDAL; CHRISTOPHER LOFFREDO; RUTH QUARTEY; BRENT KORBA; GAIL NUNLEE-BLAND; SOMIRANJAN GHOSH. **Leptin Pathway Dysregulation in African Americans with Type 2 Diabetes**. https://doi.org/10.2337/db26-2616-P.
3. Adeyika TA, Datturgi A, Ettinoffe Y, **Ghosh S**, Albanese C, Kwabi-Addo B. Oncotarget. 2026 Mar Epigenetic dysregulation and biological function of PDX1 in prostate cancer. 31;17(1):157-172. doi: 10.18632/oncotarget.28854. Print 2026 Mar 31. PMID: 41955005.
4. Noreen Z, Mondal T, Johnson J, Sahota J, Loffredo CA, Nunlee-Bland G, Korba B, Bhatti A, Chandra V, **Ghosh S.** Exploring shared molecular pathways and gene signatures in type 2 diabetes mellitus and Alzheimer's disease in a Pakistani cohort. J Alzheimers Dis Rep. 2026 Mar,1;10:25424823251403462. doi: 10.1177/25424823251403462. eCollection 2026 Jan-Dec. PMID: 41929972.
5. Mondal T, Korba BE, Loffredo CA, Smith CI, Quartey R, Sahota J, Moses G, Howell CD, Nunlee-Bland G, Sherif ZA, **Ghosh S.** Transcriptomic Profiling of MicroRNA and Non-Coding RNA from Whole Blood of African Americans with MASLD. Int J Mol Sci. 2026 Feb 9;27(4):1666. doi: 10.3390/ijms27041666. PMID: 41751802.
6. Krauss C, Cuffee J, Banerjee N, Armstrong E, Banerjee S, **Ghosh S**, Mondal T, Abedin Z, Mandal S, Banerjee HN. An Investigation to Identify the Anti-Cancer Properties of Novel Rhenium Compounds in Prostate and Lung Cancer Cell Lines. J Biotechnol Biomed. 2026;9(1):20-27. doi: 10.26502/jbb.2642-91280206. Epub 2026 Feb 4. PMID: 41717271.
7. Lake B, Banerjee A, Cuffee J, Banerjee N, Armstrong E, Banerjee S, Blount C, Hunter C, El-Hashash A, Rawat K, Adedeji D, **Ghosh S**, Mondal T, Abedin Z, Banerjee HN. Differential Molecular Transcriptomics and Underlying Biological Pathways between Smokers Lung Cancer (Small Cell Lung Carcinoma) in Comparison to Healthy Human Lung Cells. Comput Mol Biosci. 2025 Jun;15(2):19-36. doi: 10.4236/cmb.2025.152002. Epub 2025 Jun 26. PMID: 41347211 Free PMC article.
8. Mallick D, Ghosh I, Mondal T, Mondal S, Mukhopadhyay R, Joseph J, **Ghosh S**, Jana SS. Cellular elasticity drives mechano-adaptation against fluid shear stress. J Cell Sci. 2025 Nov 1;138(21):jcs264293. doi: 10.1242/jcs.264293. Epub 2025 Nov 14. PMID: 40999998 Free PMC article.
9. Saleem A, Volz A, Mondal T, Loffredo CA, Trnovec T, Murinova LP, Conka K, Drobna B, **Ghosh S.** Exploring the associations between prenatal PCB exposures and gene expression: Observations from a study of newborn Slovak infants. Ecotoxicol Environ Saf. 2025 Oct 1;304:119059. doi: 10.1016/j.ecoenv.2025.119059. Epub 2025 Sep 20. PMID: 4097593
10. Genetic Variants Linked to Dyslexia Co-Morbid ADHD: A Case Study of a Pakistani Outpatient. Haider S, Mondal T, Nawaz I, Azam M, **Ghosh S.** J Popul Ther Clin Pharmacol. 2024 Sep 2;31(9):2698-2711. doi: 10.53555/rd5d9s46. Epub 2024 Sep 22. PMID: 40926959
11. Epidemiological Investigation on the Clinical Status of the Developmental Dyslexia and ADHD comorbidity among school-age children in Pakistan, Haider S, Mondal T, Loffredo CA, Korba B, Nawaz I, Azam M, Sur T, **Ghosh S.** Open J Epidemiol. 2025 Aug;15(3):528-541. doi: 10.4236/ojepi.2025.153033. Epub 2025 Aug 1. PMID: 40855875.
12. Developing Non-Invasive Molecular Markers for Early Risk Assessment of Alzheimer's Disease. Tapas K. Sur, Tanmoy Mondal, Zarish Noreen, Jheannelle Johnson, Gail Nunlee-Bland, Christopher A. Loffredo, Brent E. Korba , Vijay Chandra , Siddhartha S. Jana, Bernard Kwabi-Addo, Sumit Sarkar , **Somiranjan Ghosh**. Biomarkers in Neuropsychiatry; Volume 12, June 2025, 100120.

13. GENETIC VARIANTS LINKED TO DYSLEXIA CO-MORBID ADHD: A CASE STUDY OF A PAKISTANI OUTPATIENT. Shujjah Haider, Tanmoy Mondal, Irum Nawaz, Maleeha Azam, **Somiranjan Ghosh**. J. Population Therap. & Clin.c. Pharmacol., 23(9) 2024: 2698-2711.
14. Transcriptomic Analysis of Alzheimer's Disease Pathways in a Pakistani Population. Mondal T, Noreen Z, Loffredo CA, Johnson J, Bhatti A, Nunlee-Bland G, Quartey R, Howell CD, Moses G, Nnanabu T, Cotin ST, Clark M, Chandra V, Jana SS, Kwabi-Addo B, Korba BE, Shahzad S, Bhatti MF, **Ghosh S.** J Alzheimers Dis Rep. 2024 Mar 19;8(1):479-493.
15. Mondal T, Smith CI, Loffredo CA, Quartey R, Moses G, Howell CD, Korba B, Kwabi-Addo B, Nunlee-Bland G, R Rucker L, Johnson J, **Ghosh S.** Transcriptomics of MASLD Pathobiology in African American Patients in the Washington DC Area †.Int J Mol Sci. 2023 Nov 23;24(23):16654. doi: 10.3390/ijms242316654.
16. Cagle E, Lake B, Banerjee A, Cuffee J, Banerjee N, Gilmartin D, Liverman M, Brown S, Armstrong E, Bhattacharya S, **Ghosh S**, Mandal T, Banerjee H. Analysis of Differential Gene Expression and Core Canonical Pathways Involved in the Epithelial to Mesenchymal Transition of Triple Negative Breast Cancer Cells by Ingenuity Pathway Analysis. Comput Mol Biosci. 2023 Jun;13(2):21-34. doi: 10.4236/cmb.2023.132002. Epub 2023 May 19.
17. Creighton CJ, Zhang F, Zhang Y, Castro P, Hu R, Islam M, **Ghosh S**, Ittmann M, Kwabi-Addo B Comparative and integrative analysis of transcriptomic and epigenomic-wide DNA methylation changes in African American prostate cancer. Epigenetics. 2023 Dec;18(1):2180585.
18. Moore MM, Ayuk MA, Johnson AA, Sims T, Haamen S, Haidara R, Allen AD, Dickson LA, **Ghosh S**, Gugssa A, Ullah H, Bassey GB, Fernando LM, London LY, Irabor EG, Roy SD, Quagraine BK, Smith M; Howard University SEA-PHAGES Students; Anderson WA, Robinson CJ Complete Genome Sequences of Subcluster C1 Mycobacteriophages Blackbrain, Cactojaque, Kboogie, Trinitium, and YoungMoneyMata. Microbiol Resour Announc. 2023 Jun 20;12(6):e0025323. doi: 10.1128/mra.00253-23. Epub 2023 May 31.
19. Mondal T, Loffredo CA, Simhadri J, Nunlee-Bland G, Korba B, Johnson J, Cotin S, Moses G, Quartey R, Howell CD, Noreen Z, Arif M, **Ghosh S.** Insights on the pathogenesis of type 2 diabetes as revealed by signature genomic classifiers in an African American population in the Washington DC area. Diabetes Metab Res Rev. 2022 Nov 4:e3589. doi: 0.1002/dmrr.3589. Online ahead of print. PMID: 36331813.
20. Arif M, Mondal T, Majeed A, Loffredo CA, Korba BE, **Ghosh S.** Peroxisome Proliferator-Activated Receptor-α (*PPARα*) Expression in a Clinical Population of Pakistani Patients with Type 2 Diabetes and Dyslipidemia. Int J Mol Sci. 2022 Sep 16;23(18):10847. doi: 10.3390/ijms231810847.
21. London LY, Ayuk MA, Black AC, Cheung L, Robinson DM, Thomas DN, Warner MH, Allen AD, **Ghosh S**, Gugssa A, Ullah H, Bassey GB, Fernando LM, Moore MM, Oliver JJ, Irabor EG, Roy SD, Quagraine BK, Smith M; Howard University SEA-PHAGES Students, Anderson WA, Robinson CJ. Complete Genome Sequences of Mycobacteriophages SynergyX, Abinghost, Bananafish, and Delton. Microbiol Resour Announc. 2022 Jul 11:e0028622. doi: 10.1128/mra.00286-22. Online ahead of print.
22. Mondal T, Loffredo CA, Trnovec T, Palkovicova Murinova L, Noreen Z, Nnanabu T, Conka K, Drobna B, **Ghosh S.** Gene expression signatures in PCB-exposed Slovak children in relation to their environmental exposures and socio-physical characteristics. Environ Sci Pollut Res Int. 2022 Apr 14. doi: 10.1007/s11356-022-20018-2. Online ahead of print. PMID: 35420343.
23. Krauss C, Aurelus C, Johnston K, Hedley J, Banerjee S, Wisniewski S, Reaves Q, Dia K, Brown S, Bartlet V, Gavin S, Cuffee J, Banerjee N, Rawat K, Mandal S, Abedin Z, **Ghosh S**, Banerjee H. A Study of Differential Gene Expression and Core Canonical Pathways Involved in Rhenium Ligand Treated Epithelial Mesenchymal Transition (EMT) Induced A549 Lung Cancer Cell Lines by INGENUITY Software System. Comput Mol Biosci. 2022 Mar;12(1):12-19. doi: 10.4236/cmb.2022.121002. Epub 2022 Mar 7. PMID: 35342659
24. Tailor K, Paul J, **Ghosh S**, Kumari N, Kwabi-Addo B. RASAL2 suppresses the proliferative and invasive ability of PC3 prostate cancer cells. Oncotarget. 2021 Dec 21;12(26):2489-2499. doi: 10.18632/oncotarget.28158. eCollection 2021 Dec 21. PMID: 34966481

25. London LY, Ayuk MA, Effiom D, Fashina F, Louis BJ, Tolsma SS, Allen AD, Dickson LA, **Ghosh S**, Gugssa A, Ullah H, Bassey GB, Fernando LM, Moore MM, Oliver JJ, Irabor EG, Roy SD, Quagraine BK, Smith M; Howard University SEA-PHAGES Students,, Anderson WA, Robinson CJ. Complete Genome Sequences of Mycobacteriophages Dallas and Jonghyun. Microbiol Resour Announc. 2021 Jul 8;10(27):e0030421. doi: 10.1128/MRA.00304-21. Epub 2021 Jul 8. PMID: 34236221
26. Mondal T, Nautiyal A, **Ghosh S**, Loffredo CA, Mitra D, Saha C, Dey SK. An evaluation of DNA double strand break formation and excreted guanine species post whole body PET/CT procedure. J Radiat Res. 2021 Jul 10;62(4):590-599. doi: 10.1093/jrr/rrab025. PMID: 34037214
27. Simhadri JJ, Loffredo CA, Trnovec T, Murinova LP, Nunlee-Bland G, Koppe JG, Schoeters G, Jana SS, **Ghosh S.** Biomarkers of metabolic disorders and neurobehavioral diseases in a PCB- exposed population: What we learned and the implications for future research. Environ Res. 2020 Dec;191:110211. doi: 10.1016/j.envres.2020.110211. Epub 2020 Sep 13. PMID: 32937175
28. Noreen Z, Loffredo CA, Bhatti A, Simhadri JJ, Nunlee-Bland G, Nnanabu T, John P, Khan JS, **Ghosh S.** Transcriptional Profiling and Biological Pathway(s) Analysis of Type 2 Diabetes Mellitus in a Pakistani Population. Int J Environ Res Public Health. 2020 Aug 13;17(16):5866. doi: 10.3390/ijerph17165866. PMID: 32823525.
29. Banerjee H, Krauss C, Worthington M, Banerjee N, Shawn Walker R, Hodges H, Chen L, Rawat K, Dasgupta S, **Ghosh S**. Mandal S. Differential expression of efferocytosis and phagocytosis associated genes in tumor associated macrophages exposed to African American patient derived prostate cancer microenvironment. J. Solid. Tumor. 2019; 9(2): 22-27. doi: 10.3390/ijerph15081582. PMID: 30049934.
30. Halder D, Saha S, Singh RK, Ghosh I, Mallick D, Dey SK, Ghosh A, Das BB, **Ghosh S**, Jana SS. Non-muscle myosin IIA and IIB differentially modulate migration and alter gene expression in primary mouse tumorigenic cells. Mol Biol Cell. 2019; 30(12):1463-1476 doi: 10.1091/mbc.E18-12-0790. Epub 2019 Apr 17. PMID: 30995168.
31. Noreen Z, DeJesus J, Bhatti A, Loffredo CA, John P, Khan JS, Nunlee-Bland G, **Ghosh S***. Epidemiological Investigation of Type 2 Diabetes and Alzheimer's Disease in a Pakistani Population. Int J Environ Res Public Health. 2018 Jul 26;15(8). pii: E1582. doi: 10.3390/ijerph15081582. PMID: 30049934
32. Washington K, **Ghosh S**, Reeves IV. A Review: Molecular Concepts and Common Pathways Involving Vitamin D in the Pathophysiology of Preeclampsia. Open Journal of Obstet. Gynecol. 2018; 8: 198-229. doi. 10.4236/ojog.2018.83023
33. **Ghosh S***, Loffredo CA, Mitra PS, Trnovec T, Murinova LP, Sovcikova E, Hoffman EP, Makhambi KH, Dutta SK. PCB exposure and potential future cancer incidence in Slovak children: an assessment from molecular finger printing by Ingenuity Pathway Analysis (IPA®) derived from experimental and epidemiological investigations. Environ Sci Pollut Res Int. 2018; 25(17): 16493–16507. doi: 10.1007/s11356-017-0149-1. Epub 2017 Nov 15. PMID: 29143255.
34. **Ghosh S**, Dutta S, Thorne G, Boston A, Barfield A, Banerjee N, Walker R, Banerjee HN. Core Canonical Pathways Involved in Developing Human Glioblastoma Multiforme (GBM). International Journal of Scientific Research in Science, Engineering and Technology (IJSRSET). 2017 February 28; 3(1):458-465. PMID: 28523289
35. **Ghosh S**, Mitra PS, Loffredo CA, Trnovec T, Palkovicova L, Sovcikova E, Ghimbovschi S, Zang S, Hoffman EP, Dutta SK. Transcriptional profiling and biological pathway analysis of human equivalence PCB exposure in vitro: indicator of disease and disorder development in humans. Environmental Res. 2015; 138C:202-216. doi: 10.1016/j.envres.2014.12.031. Epub 2015 Feb 27. PMID: 25725301
36. **Ghosh S**, Palkovicova L, Trnovec T, Loffredo CA, Washington K, Mitra PS, Dutta SK. Biomarkers Linking PCB Exposure and Obesity, Current Pharmaceutical Biotechnology. 2014; 15 (11): 1058-1068. doi: 10.2174/1389201015666141122203509. PMID: 25420728
37. **Ghosh S**, Trnovec T, Palkovicova L, Hoffman EP, Washington K, Dutta SK. Status of LEPR Gene in PCB-exposed Population: A Quick Look. Int J Hum Genet. 2013; 13(1): 27-32. doi: 10.1080/09723757.2013.11886193. PMID: 23741107
38. Dutta SK, Mitra PS, **Ghosh S**, Zang S, Sonneborn D, Hertz-Picciotto I, Trnovec T, Palkovicova L, Sovcikova E, Ghimbovschi S, Hoffman EP. Differential Gene Expression and Functional Analysis of PCB-exposed

Children: Understanding Disease and Disorder Development. Environment International. 2012; 40: 143–154. doi: 10.1016/j.envint.2011.07.008. Epub 2011 Sep 8. PMID: 21855147.

39. Mitra PS, **Ghosh S**, Zang S, Sonneborn D, Hertz-Picciotto I, Trnovec T, Palkovicova L, Sovcikova E, Ghimbovschi S, Hoffman EP, Dutta SK. Analysis of the toxicogenomic effects of exposure to persistent organic pollutants (POPs) in Slovakian girls: correlations between gene expression and disease risk. Environment International. 2012; 39: 188–199. doi: 10.1016/j.envint.2011.09.003. Epub 2011 Dec 8. PMID: 22208759.
40. **Ghosh S**, Zang, S, Mitra, PS, Ghimbovschi, S, Hoffman, EP, Dutta, SK. Global gene expression and Ingenuity biological functions analysis on PCBs 153 and 138 induced human PBMC in vitro reveals differential mode(s) of action in developing toxicities Environment International. 2011; 37: 838-857. doi: 10.1016/j.envint.2011.02.010. Epub 2011 Apr 5. PMID: 21470681.
41. **Ghosh S**, De S, Chen Y-Q, Sutton DC, Ayorinde FO, Dutta SK. Polychlorinated biphenyls (PCB-153) and (PCB-77) absorption in human liver (HepG2) and kidney (HK2) cells in vitro: PCB levels and cell death. Environment International. 2010; 36: 893–900. doi: 10.1016/j.envint.2010.06.010. Epub 2010 Aug 17. PMID: 20723988.
42. De S, **Ghosh S**, Chatterjee R, Chen Y-Q, Moses L, Kesari A, Hoffman EP, Dutta SK. PCB congener specific oxidative stress response by microarray analysis using human liver cell line. Environment International, 2010; 36: 907-917. doi: 10.1016/j.envint.2010.05.011. Epub 2010 Jul 17. PMID: 20638727.
43. Mitra P, **Ghosh S**, Zang S, Sonneborn D, Hertz-Picciotto I, Trnovec T, Lubica Palkovicova L, Sovcikova E, Ghimbovschi S, Hoffman EP, Dutta SK. Persistent Organic Pollutants (POP) and their Effect on Gene Expression in Exposed Children, in 2010 Joint Conference of International Society of Exposure Science & International Society for Environmental Epidemiology (ISES-ISEE 2010) at Seoul, Korea, 28th August-1st September. Epidemiology. 2010; 22 (1) p-S94, 2011. doi: 10.1097/01.ede.0000391955.79176.0c
44. Dutta SK, Mitra P, **Ghosh S**, Zang S, Sonneborn D, Hertz-Picciotto I, Trnovec T, Palkovicova L, Sovcikova E, Ghimbovschi S, Hoffman EP. Gene Expression Analysis of PCB exposed Children: Understanding Toxicity and Disease Process, in 2010 Joint Conference of International Society of Exposure Science & International Society for Environmental Epidemiology (ISES-ISEE 2010) at Seoul, Korea, 28th August-1st September. Epidemiology. 2010; 22 (1) p-S33, 2011. doi: 10.1097/01.ede.0000391759.48334.51.
45. Dutta S, **Ghosh S**, Zang S, Trnovec T, Palkovicova L, Sovcikova E, Sonneborn, Dean, Hertz-Picciotto, Irva, Ghimbovschi Svetlana, Hoffman, Eric. Identification of Early Disease Biomarkers in 45 Months PCB-Exposed Slovak Population [Abstract]. In ISEE 21st Annual Conference Proceedings, Dublin, Ireland, August 25-29. Epidemiology. 2009; 20(6): 6-pS131. doi: 10.1097/01.ede.0000362450.40526.30.
46. **Ghosh S**, Dutta S, Zang S, Trnovec T, Palkovicova L, Sovcikova E, , Ghimbovschi Svetlana , Hoffman, Eric PCB Exposure PCB Exposure In Vitro (PBMC): Differential Gene Expression, Pathway Analysis for Possible Mode(s) of Actions, and Disease Development in Comparison with PCB-Exposed Slovak Population In ISEE 21st Annual Conference, Dublin, Ireland, August 25-29, Epidemiology. 2009; 20(6): p S130. doi: 10.1097/01.ede.0000362447.94784.b4
47. Dutta SK, **Ghosh S**, De S, Hoffman EP. CYP1A1 and MT1K are Congener Specific Biomarker Genes for Liver Diseases Induced by PCBs. Environ. Toxicol. Pharmacol. 2008; 25: 218-221. doi: 10.1016/j.etap.2007.10.018. Epub 2007 Oct 16. PMID: 21783860.
48. **Ghosh S,** De S, Dutta SK. Altered Protein Expressions in Chronic PCB-153 Induced Human Liver (HepG2) cells. Int. J. Toxicol. 20007; 26: 203-212. doi: 10.1016/j.etap.2007.10.018. Epub 2007 Oct 16. PMID: 21783860
49. Chen YQ, De S, **Ghosh S**, Dutta SK. Congener Specific Polychlorinated Biphenyl-Induced Cell Death in Human Kidney Cells In Vitro: Potential Role of Caspase. Inter. J. Toxicol. 2996; 25: 1-7. DOI: , PMID: **16940006.**
50. De S, **Ghosh S**, Dutta SK. Congener specific polychlorinated biphenyl metabolism by human intestinal microbe Clostridium species: Comparison with human liver cell line-HepG2. Ind. J. Microbiol. September 2006; 46: 191-199. PMID: 25838614.
51. **Ghosh S**, Hazra A K, Banerjee S, Mukherjee B. Ecological monitoring for ascertaining the bio-safety of liver lipids from some Indian marine puffer fishes. Fisheries Science. 2005; 71(1), 29-37.

52. **Ghosh S,** Hazra, AK, Banerjee S, and Mukherjee B. The seasonal toxicological profile of four puffer fish species collected along Bengal coast. India, Indian J. Mar. Sci. 2004; 33(3), 276-280.
53. Dasmahapatra GP, Didolkar P, Alley MC, **Ghosh S**, Sausville EA, Roy K*. In Vitro Combination Treatment with Perifosine and UCN01 Demonstrate Synergism against Prostate (PC-3) and Lung (A549) Epithelial Adenocarcinoma Cell Lines. Clinical Cancer Research. 2004; 10: 5242-5252. doi: 10.1158/1078-0432.CCR-03-0534. PMID: 15297428
54. **Ghosh S**, Hazra A K, Banerjee S, Mukherjee B. The Multifaceted Health Benefits of Fish Oil. Science and Culture. 2003; 69 (9-10), 326-330.
55. Banerjee S, **Ghosh S**, Hazra A K, Dutta P, Besra S E, Vedasiromoni R, Bhattacharyya D. Mukherjee B. Puffer Toxin: Unusual Molecular Structure, in the Proceedings of Asian Symposium on Medicinal Plants and Species (ASOMPS X), Dhaka, 18-23 November 2000; 149-159.
56. Hazra A K, **Ghosh S**, Banerjee S, Mukherjee B. Studies on Lipid and Fatty Acid Compositions of Puffer Liver from Indian Coastal waters with Seasonal Variation. J. Am. Oil. Chem. Soc. 1998; 75(1), 1673-1678.

ii. Reviews or Editorials in Refereed Journals

N/A

iii. Books or Chapters in Books

1. **Ghosh S**, Hazra A K, Mitra S K, Mukherjee B. Poisonous Fishes: Potential Begetter of Bioactive Substances. In: Ed. Devadasan K et al. Nutrients and Bioactive Substances in Aquatic Organisms. Cochin, India: Society of Fisheries Technologists, 1994; 44-58.

vi. Other Publications (PATENT)

1. **Ghosh S**, Hazra AK. and Mukherjee B., A Novel Process for the Extraction of Non-toxic Oil Having High EPA & DHA Content from the Livers of Marine Non-Edible Fishes, (Indian Patent No. AA-2468).

v. Abstracted for Conference papers and posters (100+ more as invited lectures).

1. Zarish Noreen, Tanmoy Mondal, Christopher A. Loffredo, Gail Nunlee-Blnad, Jyothirmai J. Simhadri, Jheannelle Johnson, Sharleine T. Cotin, Brent E. Korbe, Ruth Quartey, Charles D. Howell, Maria Arif, Attya Bhatti, Vijay Chandra, Siddhartha S. Jana, Sharoon Shahzad, **Somiranjan Ghosh**. **Similarities in Pathobiology of Alzheimer's Disease and Type 2 Diabetes Mellitus: A Proof of Concept by a Case Study**. https://doi.org/10.1002/alz.062039.
2. Morinne Osborne, Tanmoy Mondal, C. Smith, C. Loffredo, R. Quartey, C. Howell, B. Korba, Z. Sherif, G. Nunlee-Bland, L. Rucker, G. Moses, **S. Ghosh**. **Characterizing IL-6–Related Inflammatory Signaling Associated with The PNPLA3 RS738409 Variant in African Americans with MASLD.** 2026 RCMI Consortium National Conference. Bethesda, MD. July 19-22.
3. Tanmoy Mondal, Coleman I Smith, Christopher A. Loffredo, Ruth Quartey, Charles Howell, Brent Korba, Zaki A Sherif, Gail Nunlee-Bland, Gemeyel Moses, **Somiranjan Ghosh**. **Non-Coding RNA Regulation of TGFB1–E2F Signaling in MASLD.** 2026 RCMI Consortium National Conference. Bethesda, MD. July 19-22.
4. **Somiranjan Ghosh**, Tanmoy Mondal, Zarish Noreen, Abhay Maghekar, Gail Nunlee-Bland, Vijay Chandra. **Cross-Population Alzheimer's Disease Risk in Chronic Type 2 Diabetes**. 2026 RCMI Consortium National Conference. Bethesda, MD. July 19-22.
5. Jasneet Sahota; L Berry; T Mondal; CI Smith; C A Loffredo; B Korba; CD Howell; G Nunlee-Bland; G Moses; **S Ghosh**. **Transcriptomic Profiling and Analysis of E2F1 Polymorphisms in African Americans with MASLD.** 2026 RCMI Consortium National Conference. Bethesda, MD. July 19-22.
6. Sydney Allison; Tanmoy Mondal; Christopher A Loffredo; Ruth Quartey; Brent Korba; Gail Nunlee-Bland; **Somiranjan Ghosh**. **The Role of Transcriptional Dysregulation and LEP Polymorphisms in African Americans with T2DM.** 2026 RCMI Consortium National Conference. Bethesda, MD. July 19-22.

7. Tanmoy Mondal, J Johnson, TK Sur, CA. Loffredo, ST Cotin, J Sahota, BE Korba, G Nunlee-Blnad, **S Ghosh**. 2025. **Metabolic Dysfunction and Alzheimer's Disease Risks in African Americans. Alzheimer's & Dementia**. e086476. 20(S2). https://doi.org/10.1002/alz.086476
8. Sahota J, **Ghosh S**, Tanmoy Mondal, Simhadri J, Loffredo C, Howell C. Conceptual Framework for Understanding the Association between Type 2 Diabetes Mellitus and Alzheimer's Disease Risks in African Americans. Diabetes 2025;74(Supplement_1):1579-P. https://doi.org/10.2337/db25-1579-P
9. Tanmoy Mondal, Loffredo CA, Quartey R, Moses G, Howell C, Korba BE, Nunlee-Bland G, Noreen Z, **Ghosh S**. **Gene Expression and Pathway Analysis in African Americans with T2DM and HCV Comorbidity. Diabetes** 2025;74(Supplement_1):1535-P. https://doi.org/10.2337/db25-1535-P
10. Tanmoy Mondal, Jheannelle Johnson, Tapas K. Sur, Christopher A. Loffredo, Sharleine Cotin, Jasneet Sahota, Charles D. Howell, Brent Korba, Gail Nunlee-Bland, **Somiranjan Ghosh**. Metabolic Dysfunction and Alzheimer's Disease Risks in African Americans. AAIC 2024, Philadelphia, USA.
11. Tanmoy Mondal, Maia Pohlhaus, Christopher A. Loffredo, Brent E. Korba, Ruth Quartey, Gemeyel Moses, Charles Howell, Gail Nunlee-Bland, Lucy Berry, **Somiranjan Ghosh**. **Understanding Noncoding RNAs in African American Patients with Type 2 Diabetes Mellitus and Hepatitis C Virus.** Cell Symposia: Precision genomics for human health. September 17–19, 2025 | Paradise Point, San Diego, CA, USA
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15. Saimoen Anderson, Miranda Newheart, **Tanmoy Mondal**, Tapas Kumar Sur, **Somiranjan Ghosh**. **Decoding Latent Autoimmune Disease (LADA) in African American Adults: A Comprehensive Study on the Role of PFKFB3 Gene and Pathway's T2DM Patient**. 18th Annual Undergraduate Research Conference 2024. Virginia State University.
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B. RESEARCH FUNDINGS

i. CURRENT & ACTIVE

1. Agency: **NIMHD NIH (R21)**
Identifying Number: **2U54-MD007597**
Title of the Project: **Understanding Pathobiology of MASLD in Diabetic African Americans**
Dates of Project Period :**2025-2027**
Corresponding-PI: **Somiranjan Ghosh**
Total Direct Costs over all years of award: $**250,000.00**
Total Direct plus Indirect Costs over all years of award: **$478,000.00**
Role on Project: *Principal Investigator* (Lead/Contact PI)
Description: African Americans (AA), have a higher incidence of metabolic disorders due to several comorbidity factors, namely obesity and type 2 diabetes, which negatively impact their health. While the reported incidence of MASLD among AA in the US is low (13%) compared to the other ethnicities, AAs often present with more aggressive and advanced stages of the disease at diagnosis due to higher incidence of comorbidities. The **overreaching goal of this research** is to identify the gene signature, and pathways disrupted in AA with diabetes in the progression of MASLD. The study will improve our understanding of ethnic-specific disease mechanisms in MASLD and inform tailored therapies.
Percent Effort: **7.5%**

ii) PENDING (Under Resubmission)

1. Agency: **NIDDK/NIH (RO1) (Resubmission)**
Identifying Number: **1R01DK147171-01**
Title of the Project: **A Whole-Blood Transcriptomic Window into the Pathogenesis of metabolic dysfunction-associated steatotic liver disease**
Dates of Project Period :**2027-2032**
Corresponding-PI: **Somiranjan Ghosh**
Total Direct plus Indirect Costs over all years of award: **$3,372,980.00**
Role on Project: *Principal Investigator* (Lead/Contact PI)
Description: The proposed study will provide a deeper understanding of how genetic and molecular pathways detected in blood unveil the disease mechanisms for Metabolic dysfunction Associated Steatotic Liver Disease (MASLD, formerly known as NAFLD or non-alcoholic fatty liver disease). This approach paves the way for more precise diagnostic tests and personalized therapeutic interventions in liver disease management in the future.

Percent Effort: **15%**

2. Identifying Number: **1R21MD021271-01 (Re-submission)**
Title of the Project: **Transcriptomic Regulation of E2F1 in MASLD Progression in African Americans.**
Dates of Project Period :**2026-2028**
Corresponding-PI: **Somiranjan Ghosh**
Total Direct Costs over all years of award: $**250,000.00**
Total Direct plus Indirect Costs over all years of award: **$422,000.00**
Role on Project: *Principal Investigator* (Lead/Contact PI)
Description: This project investigates the role of *E2F* transcription factor 1 in MASLD progression among African Americans (AAs), who exhibit paradoxically low MASLD prevalence despite high metabolic risk. Using a case-control study with blood samples from AA patients with and without MASLD, we will perform transcriptomic profiling to identify E2F1-regulated pathways influencing hepatic lipid metabolism. Findings will be validated using qRT-PCR and correlated with clinical data on liver function. This innovative exploration of ethnic-specific mechanisms in MASLD is expected to identify molecular signatures for MASLD risk assessment, laying the foundation for tailored interventions.
Percent Effort: **15%**

3. **Agency: NIA/NIH**
Proposal/Active Project Title: **Amyloid-B Pathways and Alzheimer Disease Risk: Impacts of Diet and Lifestyle**
Status of Support: **Resubmission**
Proposal/Award Number: P5-International Collaborative
Source of Support: NIA (NIH)
*Primary Place of Performance: Howard University / IACS
Proposal/Active Project Start Date: (MM/YYYY): 10/2028
Proposal/Active Project End Date: (MM/YYYY): 09/2033
Total Anticipated Proposal/Project Amount: **$3,400,000**
Role on the project: ***Lead-Contact PI***
***Overall Objectives:** This is a new submission (a resubmission under new PF5) proposal under the new PF5, which will investigate whether people with a generational practice of a low-fat, vegetarian diet appear to have reduced risk of Alzheimer 's-related dementia compared to those with a high-protein/high cholesterol (red meat-based) diet. The overarching goal of this research is to understand how diet/lifestyle may modify the risk and expression of AD, yielding new insights into the biological mechanisms that, in turn, can inform strategies to prevent or delay the disease process.
Person Months per budget period Devoted to the Proposal/Active Project: **1.2 (10%)**

4. Agency: NIEHS (NIH)
Title of the Project: **Role of Environmental Chemical Exposures in the Development of Obesity, Type 2 Diabetes, and Metabolic Syndrome in Slovak Population**
***Status of Support:** **Re-Submission as PF5** (Previous RO1)
Proposal/Award Number: NA
Primary Place of Performance: Howard University/Slovak Medical University
Proposal/Active Project Start Date: (MM/YYYY): 04/2028
Proposal/Active Project End Date: (MM/YYYY): 09/2033
Total Anticipated Proposal/Project Amount: $3,900,000
Overall Objectives: This application will be a resubmission of the previously submitted RO1 proposal under the New PF5 directive and the rules under the international collaboration project. This application addresses the identification of biomarkers that would link polychlorinated biphenyls (PCB) exposure to the development of diabetes. A genetic signature is the anticipated biomarker and would be based on patterns of gene expression. The proposed study is a very important study from a scientific perspective. Several epidemiologic studies have

linked exposure to persistent organic pollutants (POPs) with type 2 diabetes. The identification of biomarkers that could specifically link exposures to the risk of diabetes would be a substantial improvement and would move the field forward.
Person Months per budget period Devoted to the Proposal/Active Project: 1.2 (10%)

5. **Agency:** NIMHD (NIH)
Proposal/Active Project Title: Mechanistic and Predictive Modeling of Metabolic Syndrome Trajectories in African Americans Using Privacy-Preserving, Quantum-Inspired AI.
Status of Support: Pending
Proposal/Award Number: To be assigned
Primary Place of Performance: Howard University/Meharry medical College
Proposal/Active Project Start Date: (MM/YYYY): 10/2027
Proposal/Active Project End Date: (MM/YYYY): 09/2032
Total Anticipated Proposal/Project Amount: $1,500,000
Overall Objectives: This project enhances our capacity to identify mechanistically distinct, high-risk disease endotypes in African Americans with Mets Successful completion of this project will establish one of the first fairness-aware, multimodal AI/ML frameworks specifically optimized for predicting cardiometabolic risk trajectories and metabolic disease endotypes in African American populations. By integrating longitudinal clinical phenotypes, transcriptomic signatures, and social determinants of health, this work will advance precision minority health research, strengthen RCMI AI research infrastructure, and generate clinically actionable risk stratification tools to support earlier intervention, personalized prevention, and reduction of cardiometabolic health disparities in underserved communities.

Person Months per budget period Devoted to the Proposal/Active Project: 1.00 (10%)

6. **Agency: NIHLMB (NIH)**
Project Title: Mechanistic and Predictive Risk Stratification of Diabetic Long COVID in African Americans.
Status of Support: Pending
Proposal/Award Number:
Primary Place of Performance: Howard University/Virginia Tech
Proposal/Active Project Start Date: (MM/YYYY): 10/2027
Proposal/Active Project End Date: (MM/YYYY): 09/2029
Total Anticipated Proposal/Project Amount: $1,260,000
Overall Objectives: This project leverages harmonized longitudinal clinical data from the NHLBI BioData Catalyst platform and corresponding biospecimens from the Mayo Clinic/RECOVER Biorepository. Preliminary findings from RECOVER and our institutional analyses suggest that African American participants exhibit a distinct "cardiometabolic-heavy" Long COVID phenotype characterized by palpitations, exercise intolerance, and metabolic dysregulation. The expected outcome of this project is the identification of clinically actionable molecular signatures
and predictive models capable of improving risk stratification and mechanistic understanding of
diabetic Long COVID in African Americans. This work will enhance the RECOVER program's
capacity to define high-risk Long COVID subgroups, inform precision prevention and therapeutic strategies, and advance health equity in populations disproportionately affected by metabolic disease and COVID-19 sequelae.

Person Months per budget period Devoted to the Proposal/Active Project: 1.2 (10%)

7. Agency: **Department of Defense (DoD)**
Identifying Number: NA

Title of Project: **Comparison of Molecular Profiles in Diabetic Obese versus Nondiabetic Obese African American men and Prostate Cancer Aggressiveness.**
Dates of Project Period: 2027-2030.
Corresponding PI: **Kwabi-Addo B.**
Total Direct Costs over all years of award**: $900,000.00**
Total Direct plus Indirect Costs over all years of award: **$ 900,000.00**
Role on Project: **CO-PI (MPI)**
Description: The proposed work directly addresses the **FY22 PCRP Overarching Challenges to define the biology of prostate cancer progression to lethal prostate cancer to reduce death.** First, studies could identify epigenetic regulated genes common to obesity, diabetes and prostate cancer aggression in African American men and increase our understanding of the genetic changes contributing to aggressive nature of tumors among African American men and prostate cancer disparity.

Person Months per budget period Devoted to the Proposal/Active Project: 15%

8. Agency: **NCI/NIH**
Identifying Number: **1 R01 CA242886-01**
Title of Project: **Chronic liver disease and liver cancer risk factors in Puerto Rico**
Dates of Project Period: 2027-2032
Corresponding PI: Loffredo CA (Contact-Lead PI)
Total Direct Costs over all years of award: **$386,250.00** (Amount Only to Howard)
Role on Project: **Co-Investigator**
Description: The overarching goals of this research are, twofold: (a) to shed new light on the possible mechanisms by which factors such as diabetes and/or obesity contribute to chronic liver disease risk, and (b) to identify, at an early and preventable stage, a group of patients at high risk for liver cancer years prior to symptomatic onset of disease. Thus, we will identify potential avenues for future treatment and prevention interventions in the territory of Puerto Rico and beyond.
Person Months per budget period Devoted to the Proposal/Active Project: 15%

6. Agency: **NIH/NIGMS**
Identifying Number: **1 R01 MD011393-01**
Title of Project: **Randomized Trial of VIT-D Supplement to Reduce Hypertension in Pregnancy of African Americans**
Dates of Project Period: 2027-32
Corresponding PI: Reeves Inze (Contact PI)
Total Direct Costs over all years of award: **$3,451,553.00**
Role on Project: **Principal Investigator** (MPI)
Description: The overreaching goal of our approach can be described as assessing the efficacy of VIT-D to reduce hypertension and possibly preeclampsia by directly measuring VIT-D status and its interplay with genetic and non-genetic factors from biological samples collected from pregnant African Americans in a randomized trial.
Person Months per budget period Devoted to the Proposal/Active Project: 15%

8. Agency: **Department of Science & Technology, Govt. of India**
Identifying Number: **VJR/2018/000018**
Title of Project: **Investigation on Metabolic Dysfunction Pathways as the Precursor of Alzheimer's Disease: A Pilot and Collaborative Approach in Strengthening the Biomedical Research in India.**
Dates of Project Period: 2028-2030
Corresponding PI: JANA SS.
Role: US-(Contact US Visiting PI)
Total Direct Costs over all years of award: **$35,000.00**
Role on Project: **Vesting Faculty/Scientist**

Proposal Description: This collaborative research is developed for joint research involving Howard University, USA and Indian Association for Cultivation of Science (IACS), India to foster joint research to find the causative pathways in developing Alzheimer's. The research is, therefore, to shed new light and may contribute to the disease burden of patients with Alzheimer's, and identify avenues for treatment and prevention, for Indian Subcontinent, a major step forward in Indian S&T and biomedical science strengthen the research base (Alzheimer's) in interest to India including translation of science to practice.

Person Months per budget period Devoted to the Proposal/Active Project: 1.2 Month (10%)

iii). RECENTLY COMPLETED

1. Agency: **NIMHD-/NIA (ADMIN-SUPPLEMNT-Fast Track)**
Identifying Number: **2U54-MD007597**
Title of the Project:
Identification of key biological pathways and signature genes towards the future risk of Alzheimer'sDisease in African American diabetic patient.
Dates of Project Period :**2023-2025**
Corresponding-PI: **Somiranjan Ghosh**
Total Direct Costs over all years of award: $**250,000.00**
Total Direct plus Indirect Costs over all years of award: **$250,000.00**
Role on Project: *Principal Investigator* (Lead/Contact PI)
Description: The rationale behind the study is that people of color, especially African Americans, have a higher incidence of Alzheimer's disease (AD), increased symptom severity, and mortality due to several comorbidity factors, namely obesity and type 2 diabetes, which negatively impact their health. The **overreaching goal of this research** is to shed new light on possible interactions between AD and diabetes to understand how race may modify the risk and expression of AD; it may yield new insights biological mechanisms that in turn can inform future diagnostic and therapeutic advances.
Percent Effort: **15%.**

6.Agency: **NIMHD-RCMI-CENTER GRANT (PROJECT-1)**
Identifying Number: **2U54-MD007597**
Title of Project: **Molecular and Genetic Signatures of Perturbed Diabetic Pathways with Hepatitis C Virus infection and co-morbidity risks in African American Population.**
Dates of Project Period :**2019-2025**
Corresponding-PI: **Somiranjan Ghosh**
Total Direct plus Indirect Costs over all years of award: **$1,481,238.00**
Role on Project: ***Principal Investigator*** (Lead/Contact PI)
Description: This project investigates the possible mechanisms by which HCV infection may contribute to the development of diabetes, beyond that attributable to chronic liver disease alone, and identify potential new targets for treatment, management, and prevention of T2DM for this minority AA population, thereby contributing positively to the mission of HU-RCMI Center on health disparity issues
Person Months per budget period Devoted to the Proposal/Active Project: 15%

7. Agency: **NCI/NIH**
Identifying Number: **1-P20CA242611-01**
Title of Project: **Howard-Georgetown Collaborative Partnership in Cancer Research-**
Study Title**: Fatty Liver Disease in African Americans**
Dates of Project Period: 2019-2023
Corresponding PI: **Somiranjan Ghosh**
Total Direct Costs over all years of award: **$372,163.00**
Total Direct plus Indirect Costs over all years of award: **$ 574,991.00**
Role on Project: **Principal Investigator** (Lead/Contact PI)

Description: The overall objective is to identify candidate genes and genetic pathways associated with NAFLD and fill the knowledge gaps of this extreme health disparity issue among AA around the Washington DC region and to shed new light on possible mechanisms by which NAFLD may contribute to the dysregulation of important pre-cancer pathways. In turn, such knowledge will foster the identification of potential avenues for treatment and prevention for this minority population.
Person Months per budget period Devoted to the Proposal/Active Project:: **19%**

7. Agency: Higher Education Commission (Pakistan)
Identifying Number: 1-8/HEC/HRD/2022/2637-IRSIP-51-S.Sc
Title of the Project: **Genetic Elucidation and Molecular Characterization of Learning Disabilities in Pakistani Population.**
Dates of the Projected Period: February 01 to July 31st, 2023.
Corresponding PI: Somiranjan Ghosh
Total Direct Cost: **$ 13,500.00**
Role in the Project: **Foreign PI/ Mentor**
Description: This short-term research is train foreign research student towards partial fulfillment of his Graduate Program that brings together the collaborative research project to investigate molecular mechanism behind onset of Learning Disorder (LD) in School going children of Pakistan. a health issues of Pakistani Population.

8. Agency: **NIMHD/NIH**
Identifying Number: **5G12MD007597-25** (PI: Southerland; PILOT Project PI-GHOSH)
Title of Project: **Validating a gene expression signature for type 2 diabetes in a low environmental exposure setting of African American Population.**
Dates of Project Period: 2017-2020
Corresponding PI: Somiranjan Ghosh
Total Direct Costs over all years of award: **$100,000.00**
Total Indirect Costs over all years of award: NA
Total Direct plus Indirect Costs over all years of award: **$ 154,500.00**
Role on Project: ***Principal Investigator***
Description: This pilot proposal is to bring together clinical and basic investigators from Georgetown University (GU), Howard University and Howard University Hospital (HU&H) to find out whether our signature metabolic disorder biomarkers are unique or are generic, i.e. are observable in the local Washington DC population.
Person Months per budget period Devoted to the Proposal/Active Project: 10%

9. Agency: **NIH**
Identifying Number: **5U01ES016127-04**
Title of Project: **Early Disease Biomarkers for PCB-exposed Human Population**
Dates of Project Period: 2007-2012
Corresponding PI: DUTTA SK
Total Direct Costs over all years of award: **$1,637,000.00**
Total Direct plus Indirect Costs over all years of award: **$ 1,872,000.00**
Role on Project: **Co-Investigator**
Description: This is a funded collaborative project with Slovak Medical University and University of California at Davis to develop early disease biomarker using highly PCB-exposed human population
Percent Effort: **100%**

10. Agency: **Agilent Technologies**
Identifying Number: LC-ESI-TOF/MS
Title of Project: Instrument Loan Program-Equipment Grant

Dates of Project Period:2006-2008
Corresponding PI: **DUTTA-GHOSH-AYORINDE**
Total Direct Costs over all years of award**: $800,000.00**
Total Direct plus Indirect Costs over all years of award: **$ 800,000.00**
Role on Project: **Co-Investigator**
Description: This is a funded collaborative project with Slovak Medical University and University of California at Davis to develop early disease biomarker highly using PCB-exposed human population
Percent Effort: 5%

C. Invited Lectures:

1. *Grantee Participants*, Transdisciplinary Collaborations, *Evolving Dimensions of US and Global Health Equity*, 2014 Minority Health and Health Disparity Grantees, NIMHD National Harbor, Maryland, USA, December 2014

2. *Session Chair*, International Society of Environmental Epidemiology (ISEE), Dublin, Ireland, 2009

D. Editorships, Editorial Boards, and Reviewing Activities

Name of Editorial Board/Study Section/Community Organization, Role/Status, Date(s) of Service

1. *Scientific Peer Advisory and Review Services* (SPARS), American Institute of Biological Sciences (AIBS) Grant Reviewer. 2022-23
2. *New Jersey Department of Health* (NJDOH) FY23 Cancer Program Reviewer, 2022-Present
3. *NIH Early Carrier Review Program*, Grant Reviewer, 2010-2019
4. *Pesticide Biochemistry and Physiology* (Elsevier), Reviewer, 2008-Present
5. *Environmental International* (Elsevier), Reviewer, 2010 – Present
6. *Indian Journal of Microbiology* (SpringerLink), Reviewer, 2008-Present
7. *World Applied Science Journal* (WASJ.org), Reviewer, 2012-Present
8. *International Journal of Molecular Science* (MDPI, AG, Switzerland), Reviewer, 2012-Present
9. *Indian Journal of Biochemistry & Biophysics* (IJBB), Reviewer, 2010-Present
10. *International Journal of Tropical Medicine and Public Health* (Cross House, UK), 2014-Present
11. *Chemical Research in Toxicology* (ACS Paragon Plus Environment, USA), Reviewer, 2-14-Present
12. International Journal of Medical Science and Public Health (IJMSPH, IND), 2010-Present
13. *Frontier Journal- Journal of Ethnopharmacology* (Switzerland), Reviewer, 204-Present
14. *Environmental Disease* (Medknow Publication, USA), Reviewer2016-Present
15. Environmental Toxicology (Wiley InterScience), Reviewer, 2016-Present
16. Hazardous Materials (Elsevier), Guest Reviewer, 2016-Present
17. *Biodegradation* (Springer), Guest Reviewer, 2010-Presnet
18. *Tumor Biology* (Springer), Guest Reviewer, 2018-Prensent
19. *Protein Journal* (Springer), Guest Reviewer, 2018-Present
20. 2014 Minority Health and Health Disparities (NIMHD) Grantees' Conference on Transdisciplinary Collaborations: Evolving Dimensions of US and Global Health Equity, Guest Scientific Reviewer, 2014.
21. *Biomolecules,* MDPI, Reviewer, 2021-Present
22. *Cancer Informatics*, Reviewer, SAGE Publication, 2022-Present.
23. *Sustainability*, Reviewer, MDPI Group of Publication, 2022- Present
24. *Antioxidant*, Reviewer, MDPI Group of Publication, 2022- Present
25. *Cells*, Reviewer, MDPI Group of Publication, 2022- Present.
26. *Diagnostics*, Reviewer, MDPI Group of Publication, 2022- Present.
27. *Oncoscience*. Reviewer, 2025- Present.
28. *2026 RCMI Consortium National Conference July 19-22, 2026 ,Bethesda, Maryland;* Guest Reviewer.

3. TEACHING, MENTORING, AND ADVISING

A. Teaching Activities

i**. Undergraduate Courses**

1. Name and Course Number: **BIO-101**
Role: Instructor
Number of Direct* Contact Hours: 20
Year(s) Taught: 2018-2019
Number of Students: 423 in each Semester
Overall Evaluation Score: N/A

2.Name and Course Number: **SEA-PHAGES (HHMI)-BIO-101**
Role: Instructor
Number of Direct Contact Hours*: 150 Hours/in Academic Calendar
Year(s) Taught: 2018-Present
Number of Students: 22-25 per batch
Overall Evaluation Score: N/A

Note: ***Average number of Undergraduate students involved in your research program: Approximately 10 Annually***

B. Major Advisor Graduate Students Research, Thesis, & Dissertation including Mentoring (Post-Doctoral)
Training Experience of Mentor(s) - Dr. Somiranjan Ghosh, *PhD*; (**Primary**): Dr. Ghosh received an extensive from NCI in the Department of Cancer Treatment and Diagnosis as a postdoctoral fellow, where he was involved in determining the molecular mechanisms involved in tumor progression (prostate and mammary tumorigenesis) and how this information helps target novel therapies to prevent cancer development or to inhibit tumor progression. The goal was to develop many new cancer drugs and bring new treatments and good ideas to clinical research. His research involvement included the study of the mechanistic basis of action of drugs on different cell lines, especially on prostate cancer (PC3), breast cancer (MCF7), and lung cancer (A549), the leading cause of cancer mortality in the United States. With these research activities, information flows from the patient to the lab and back to the patient again. This strong background knowledge led him to full-fledged clinical research, particularly with minority health and health and health disparity, in which he excelled others in his niches at Howard. Besides his stellar research background, his mentoring activities are exemplary. The details of his mentoring activities are below:

Sl No.	Name (Year)	Role	Research Area	Present Status/Current Involvement
Postdoctoral				
1.	Dr. Shizhu Zhang, (2008-10)	Mentor/Advisor	PCBs Exposure and health Effect	Professor, College of Life Science, Nanjing Normal University Nanjing, China
2.	Dr. Raghunath Chatterjee, (2009-10)	Mentor/Advisor		Professor, ISI, Kolkata, India
3.	Dr. Jyothirmai Simhadri (2019-2022)	Mentor/PI	Heath Disparity in African Americans	Research Scientist, Howard University Sickle Cell Center, USA
4.	Dr. Tanmoy Mondal (2022-Current)	Mentor /PI	Liver Cancer / Health Disparity	Member Faculty, Howard University, USA.
Graduate Studies (PhD/MS)				

5.	Dr. Shuja Haider (2023-2024)	Foreign Mentor Advisor	ADAHD of Pakistani Children	State Education Borad, Pakistan
6.	Dr. Sharlein Cotin (2021-24)	Mentor/Advisor	Metabolic Diseases/ Cancer	NIH-PDF
7.	Dr. Zarish Noreen (2017-19)	Foreign Advisor	Metabolic Disease/ ALZ/AD	Lecturer; IIUI, Islamabad, Pakistan
8.	Dr. Maria Arif (2019-2020)	Foreign Advisor	Type 2 Diabetes/	Research Scientist, NUST/Pakistan.
9.	Dr. Thomas Nnanabu, 2018-20	Mentor/Advisor (HU) Advisor (Harvard)	Molecular Mechansim of ALZ disease and Type 2 Diabetes	MD/MLA, Pediatrician in Seattle, WA. USA
10	Ms. Joy Choku. *MS* (2018-19)	Advisor (ECSU)	Prostate Cancer in AA	Graduate Student, ECSU, NC. USA.
11.	Dr. Supriyo De, (2004-2009)	Mentor/Advisor	Gene expression/ Disease & Disorders	Head, Computational Biology and Genomics Core, NIA, Baltimore, USA.
12.	Dr. Yongqing Chen, (2004-2009)	Mentor / Advisor	Exposure Biology Gene Expression	Regulatory Scientist, FDA, Silver Spring, MD. USA.
13.	Dr. Kriste Magie, (2004-2010	Mentor / Advisor	Environmental Chemical Exposure	Freelance Medical writer. NY
14.	Dr. Aisha Adam (2004-12)	Mentor / Advisor	Environmental Chemical Exposure	Unknown
15.	Dr. Leisel Lashley (2004-2010	Mentor / Advisor	Environmental Chemical Exposure	Research Scientist, USDA, ARS. Beltsville, MD, USA
16.	Mr. Jermaine Barker, *MS.* (2008-10)	Mentor / Advisor	Environmental Chemical Analytics	Director of Technology at BRMi, Chevy Chase, MD, USA

Note: ***During his tenure at Howard (20 Years and continuing), Dr. Ghosh has mentored/guided 50+ undergraduate students from various schools and colleges for their independent and summer research through his lab and acknowledged their contribution to the research. No individual names are mentioned here.***

Professional responsibilities and Activities:

A. University Services:

i. Department (Role/Function, Committee Name, Dates (Years) of Service).

1. Member, HU-RCMI Center-Steering Committee, 2018-Present.
2. Member, Research Advisory Council (RAC), Community Outreach Program.

ii. School (Role/Function, Committee Name, Dates (Years) of Service)

1. Faculty Research Symposium Committee Member, HU-Graduate School, 2014-Present.

Medical School Courses

i) Name and Course Number: Molecules and cells, unit 2 / medicine & society, Unit 1
Role: Course Facilitator
Number of Direct* Contact Hours: 4 hour in two session each

Year(s) Taught: 2010-2018
Number of Students: 30
Overall Evaluation Score: N/A

ii. Graduate Biomedical Education Courses
Name and Course Number: Howard University MSSRP Summer Research
Role: Mentor/Advisor
Number of Direct* Contact Hours: 40 hrs./Week/Student
Year(s) Taught: 2017-present
Number of Students: 7
Overall Evaluation Score: N/A
Average number of Postdoctoral Fellows you train per year = 4

B. Professional Volunteering Service:

1. Member MCSL (Montgomery County Swim League) Serving as Certified Referee in local swim league
2. Member USA Swimming (PVS Swimming)- Certified Official for USA Swim Competition Top Tier N3). Served many National Deck and International Events.
3. NCAA/MAPSSA Certified Official.

5. HONORS AND AWARDS

1. Faculty Author Award, Howard University, 2005-2018.
2. Visiting Postdoctoral Fellowship, National Institute of Health, 2003- 2004.
3. Research Associate, Department of Ocean Development, Govt. of India, 2000-2003
4. Senior Research Fellowship, Department of Ocean Development, Govt. of India, 1993-2000.
5. Junior Research Fellowship, Department of Ocean Development, Govt. of India, 1991-1993.

6. PROFESSIONAL SOCIETY MEMBERSHIP

Dates (in Years) of Membership Society Name, Leadership Role (if appropriate)

1. 2007, The Indian Science Congress Association, ***Life member***
2. 2004-2010 American Society of Microbiology (ASM).
3. 2010-2018, Sigma XI, Professional Member.
4. 2010-Present, American Association of Advancement of Science, Professional Member
5. 2010-Present Foundation for Advanced Education in the Sciences, Voting Member.
6. 2024-Present. American Association For The Study of Liver Disease (***AASLD***), Member (Professional
7. 2025- Present. Americal Diabetic Association (***ADA***), Member Professional)

I certify that this curriculum vitae is a current and accurate statement of my professional record.

Signature:_____ _ _____Date: **08/14/2026**