

Aththota Gamage Pramoda Sahan Kumari

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PROFESSIONAL SUMMARY

An experienced and motivated researcher with 5 + years of research, laboratory, and working experience focused on Biochemistry, Molecular biology, and chemistry.

EDUCATION

➤ **PhD Student – Biochemistry**

Wayne state University, United States.

August 2023 to present.

➤ **Master of Science – Biochemistry**

Brigham Young University, UT, United States

April 2021

- Awarded a full-tuition scholarship for the master's degree.

➤ **Bachelor of Science (Hons) in Biochemistry and Molecular biology**

University of Colombo, Colombo, Sri Lanka

March 2017

RESEARCH TECHNIQUES

- Cell culture (mammalian etc.) • Single cell RNA sequencing data analysis • Immunohistochemistry • Immunocytochemistry • Western blots • Immunoprecipitation • Fluorescence Activated Cell sorting (FACS) • Isolation of Immune cells from human and mouse • protein assays (Bradford assay and PI3kinase assay) • CRISPR • Immunofluorescence staining and Phalloiding staining • siRNA and shRNA transfections and knockdowns • ligation and transformation • Expression cloning • Nuclear and cellular fractionation • Viral transfections • SDS page gel electrophoresis • Incucyte • 16s rRNA sequencing • Real-time and Conventional PCR • Gel electrophoresis • DNA extraction • Bacterial culturing • Biochemical testing • Inoculation and other aseptic procedures • Mass spectrometry and Proteomics • Data analysis using R language and Graph Prism.

RESEARCH AND WORKING EXPERIENCE

Graduate Teaching Assistant

Wayne State University

(August 2023 to present)

- Conducted Organic Chemistry discussion classes, held weekly office hours, graded quizzes, and exams.

Research Assistant I

Boston Children's Hospital and Harvard Medical School

(May 2021 to June 2023)

- Conducting research on projects titled "NRP2 signaling in Immunity".
- Gaining wet lab experience and knowledge of molecular biology techniques such as western blots, immunoprecipitations, Immunohistochemistry, Immunocytochemistry, Single cell RNA sequencing data analysis, transfections, and Si RNA/Sh RNA transfections.
- Performs mammalian cell culture and cell-based assays as needed.
- Gaining knowledge in Immunology, experiences performing in Isolation of Immune cells (PBMCs, CD4+, CD8+ and regulatory T cells) in human and mouse cells, vitro cell culture assays, and standard readouts such as FACS, ELISA, and/or qPCR.
- Performing DNA and RNA extractions, gel electrophoresis, real-time PCR, and conventional PCR.
- Calculates, graphs and; perform statistical analyses using Graph prism.
- Independently decides which techniques may be appropriate for specific experimental investigations and carries out those experiments with minimal supervision or independently.

Graduate Research Assistant- Biochemistry**(September 2019 to April 2021)****Fritz B. Burns Cancer Research Laboratory, Brigham Young University**

- Conducted individual research on the project titled “SGK2, 14-3-3, and HUWE1 coordinately regulate the localization and stability of PTOV1 which leads to cancer” and contributed to grouped research on the project titled “Oncogenic capacity of TNK1 clinical mutants controls the 14-3-3 binding”.
- Gained wet lab experience and knowledge of biochemistry, molecular biology, cell culture, cell sorting, and cell-based assays research supporting diagnostic solutions in prostate cancer treatment.
- Utilized methods such as RNAi Interference, transient transfection, enzymatic assays, and Genomic editing using Cas9 for RNA
- Done live-cell imaging using incucyte.
- Performed mammalian cell culture and cell-based assays as needed.
- Experience working in ML-2 laboratory with viral vectors.
- Plasmid subcloning, RNA preparations, PCR
- Prepared tables, graphs, fact sheets, and written reports summarizing research results.
- Executed qualitative and quantitative analysis on a wide range of data.
- Designed research and experimental studies, executing research techniques, tests, and assays.
- Gave public presentations of findings at conferences.

Graduate Teaching Assistant**(January 2021 to present) and (September 2019 to August 2020)****Department of Chemistry & Biochemistry, Brigham Young University.**

- Conducted Biochemistry classes, laboratory classes, and tutorial classes for 1st-year and 2nd-year chemistry undergraduate students and educated students maximized learning capabilities, and sharpened classroom interest through effective instructional techniques.
- Conducted special assessments and tutoring sessions to support individual student needs.

Research Assistant- Molecular microbiology**(July 2016 to September 2019)****Department of Microbiology, Faculty of Medical Sciences, University of Sri Jayewardenapura, Sri Lanka.**

- Conducted individual research on the project titled “Determining the role of the gut microbiome in the etiology of colorectal cancer in Sri Lanka”.
- Colorectal cancer patient sample and clinical data collection, sample preparation making positive ID on all patient’s samples from hospitals and conducted all wet laboratory experiments related to the assigned project.
- Edited data collection forms and created questionnaires.
- Gave public presentations of findings at local and international conferences.
- Educated undergraduate students on laboratory protocols and activities.

PUBLICATIONS - REFEREED JOURNAL ARTICLES AND RESEARCH ABSTRACTS

1. Timna Agur, Johannes Wedel, Sayantan Bose, **AG Pramoda Sahankumari**, Daniel Goodman, Sek Wong Kong, Chandra C. Ghosh and David M. Briscoe “Inhibition of Mevalonate metabolism by statins augments the immunoregulatory phenotype of vascular endothelial cells and inhibits the costimulation of CD4+ T cells” – **Am J Transplant 2022 Mar;22(3):947-954. doi: 10.1111/ajt.16872. Epub 2021 Nov 8 – IF 8.08**
2. Pennington KL, McEwan C, Woods J, Muir C, **Sahankumari AGP**, Eastmond R, Egbert CM, Heaton T, Piccolo SR, Andersen JL “SGK2, 14-3-3 and HUWE1 coordinately regulate PTOV1” – **Molecular Cancer Research – IF 5.852** (Manuscript DOI: 10.1158/1541-7786.MCR-20-1076 Manuscript ID: MCR-20-1076R2)
3. **AGP Sahankumari**, B.D Gamage, G.N. Malavige. “Patterns of gut microbiota in a South Asian population of colorectal cancer” – bioRxiv preprint (doi: <https://doi.org/10.1101/694125>)
4. **AGP Sahankumari***, Diyanath Ranasinghe*, Bawantha D. Gamage, Gathsaurie Neelika Malavige “16S metagenomic analysis of gut tissue and stool microbiota to discover biomarkers for colorectal cancer” – In Progress

5. **A.G.P Sahankumari**, Tsz-Yin Chan, Chrissy Egbert, Kristina Kohler, Maddie Frey, Julia Maxson, David Huang, Steven Warner, David Bearss, Jeffrey Tyner: Oncogenic capacity of TNK1 clinical mutants controls the 14-3-3 binding. The Student Research Conference, 2020, The College of Physical and Mathematical Sciences (CPMS), Brigham Young University, United States (USA).
6. **A.G.P Sahankumari**, B.D Gamage, G.N. Malavige. Determining the specific gut microbiota patterns associated with colorectal cancer. The Supplement of the Journal of Gastroenterology and Hepatology. Coex, Seoul, South Korea. – (E – poster presentation)
7. **A.G.P Sahankumari**, B.D Gamage, G.N. Malavige. Determining the gut microbiota patterns associated with early-stage CRC and late-stage CRC. The Sri Lanka Journal of Surgery August 2018 Volume 36, Issue Supplement S1 ISSN 1391-491X. (Oral presentation)
8. **A.G.P Sahankumari**, B.D Gamage, G.N. Malavige. Identification of the gut microbiota patterns associated with Diabetes mellitus (2018). The Ceylon Medical Journal Volume 63 Supplement 1, July 2018. (Oral presentation)
9. **A.G.P S. Gamage**, B.D Gamage, G.N. Malavige. Determining the role of the gut microbiome in the etiology of colorectal cancer. In: Proceeding of the Ceylon College of Physicians, 50th Annual Academic Sessions; 2017 Sep 6-9; Colombo, Sri Lanka: CCP; 2017. Abstract nr 61 (Oral and poster presentation).
10. Katie L. Pennington, James Woods, Colin Muir, Colten M. McEwan, **Pramoda S. K. Aththota Gamage**, Riley J. Eastmond, Crissy M. Egbert, Tyler Heaton, Stephen R. Piccolo, Joshua L. Andersen. SGK2, 14-3-3, and HUWE1 coordinately regulate the localization and stability of PTOV1. American Association for cancer research, Annual meeting 2021, United States.

EXTRACURRICULAR ACTIVITIES

- Member of American Association for Cancer Research, USA.
- Member of Chemical Society, University of Colombo, Sri Lanka

CERTIFICATE COURSES AND WORKSHOPS

- Biomedical Responsible Conduct of Research (CITI Program, A Division of BRANY, United States. Credential ID – 42513179)
- Human Research Group 1 Biomedical (CITI Program, A Division of BRANY, United States. Credential ID – 42513178).
- Certificate Course on Quantitative/Qualitative data analysis (University of Sri Jayewardenepura, Sri Lanka.).
- Certificate Course on Research Methodology and Scientific Writing (University of Sri Jayewardenepura, Sri Lanka.)