

Bhagya De Silva

Colorado Springs, CO
(785) 770 – 6139 | wabndesilva@gmail.com | wdesilva@uccs.edu
<https://www.linkedin.com/in/bhagya-desilva/>

EDUCATION

Ph.D. in Chemistry (sub-plan Biochemistry)

University of Nevada, Las Vegas (August 2024)

Dissertation Title: Characterizing GSK3 β Interactions and Kinetics via Isothermal Titration Calorimetry (ITC)

M.S. in Biochemistry

Kansas State University (August 2015)

Thesis Title: A Study of Neuronal Ceroid Lipofuscinosis Proteins CLN5 and CLN8

B.S. in Biochemistry and Molecular Biology

University of Colombo (Nov 2011)

Undergraduate Thesis Title: Identification of *Salacia* Species Using DNA Barcoding

TEACHING EXPERIENCE

Assistant Teaching Professor in Biochemistry (Fall 2024 – Present)

Department of Chemistry and Biochemistry, University of Colorado Colorado Springs

Courses: Biochemistry Laboratory (CHEM 4222), Advanced Techniques in Biochemistry (CHEM 4232), Biochemistry of Human Health and Development (CHEM 4751/5751), Biochemistry Capstone (CHEM 4921), General Chemistry Laboratory II (CHEM 1412)

Visiting Faculty (Summer 2024)

Department of Chemistry and Biochemistry, University of Nevada, Las Vegas

Courses: Biochemistry II (CHEM 475), General Chemistry Laboratory II (CHEM 122L)

Graduate Teaching Assistant (2015 – 2024)

Department of Chemistry and Biochemistry, University of Nevada, Las Vegas

Courses: Organic Chemistry for Life Sciences Lab I (CHEM 241L), Organic Chemistry for Life Sciences Lab II (CHEM 242L)

Graduate Teaching Assistant (2013 – 2014)

Department of Biochemistry and Molecular Biophysics, Kansas State University

Courses: Introductory Organic and Biochemistry Laboratory (BIOCH 265)

RESEARCH EXPERIENCE

Doctoral Researcher (2015 – 2024)

Department of Chemistry and Biochemistry, University of Nevada, Las Vegas

Advisor: Dr. Ronald K. Gary

Dissertation research on the enzymology and biophysical characterization of GSK3 β using isothermal titration calorimetry and metal-ion binding assays.

Authored and co-authored peer-reviewed publications and conference abstracts.

Graduate Research Assistant (2013 – 2015)

Graduate Biochemistry Group, Kansas State University

Advisor: Dr. Stella Y. Lee

Investigated protein–protein interactions and signaling mechanisms of neuronal ceroid lipofuscinosis proteins CLN5 and CLN8.

Research Assistant (2011 – 2013)

Herbal Technology Section, Industrial Technological Institute (iti), Sri Lanka

Senior Scientists: Dr. Radhika Samarasekara and Dr. C. Wijeyasiriwardene

Conducted analytical and microbiological studies of natural products with applications in crop protection.

PUBLICATIONS

Lim, R. C., **De Silva, B.**, Park, J. H., Hodge, V. F., & Gary, R. K. (2020). Aqueous solubility of beryllium (II) at physiological pH: effects of buffer composition and counterions. *Preparative Biochemistry & Biotechnology*, 50(6), 585–591.

Adhikari, B*, **De Silva, B***, Molina, J. A., Allen, A., Peck, S. H., & Lee, S. Y. (2019). Neuronal ceroid lipofuscinosis-related ER membrane protein CLN8 regulates PP2A activity and ceramide levels. *Biochimica et Biophysica Acta (BBA) - Molecular Basis of Disease*, 1865(2), 322–328.

Abdul, A. ur R. M., **De Silva, B.**, & Gary, R. K. (2018). The GSK3 kinase inhibitor lithium produces unexpected hyperphosphorylation of β -catenin, a GSK3 substrate, in human glioblastoma cells. *Biology Open*.

De Silva, B., Adams, J., & Lee, S. Y. (2015). Proteolytic processing of the neuronal ceroid lipofuscinosis-related lysosomal protein CLN5. *Experimental Cell Research*, 338(1), 45–53.

*Co-first authors

CONFERENCE PRESENTATIONS

“Kinetic Characterization of Glycogen Synthase Kinase 3 β (GSK3 β) via Isothermal Titration Calorimetry,” American Chemical Society – Fall National Meeting: Division of Biological Chemistry, Aug 2023

“Preferential Interaction of Beryllium Ion with Carboxylate-Rice Peptides,” American Chemical Society (Southern Nevada) Symposium, 2019

“Preferential Interaction of Beryllium Ion with Carboxylate-Rice Peptides,” American Society for Biochemistry and Molecular Biology – Annual National Meeting, 2018

“Identifying Interacting Proteins and the Functional Role of CLN8, A Neurodegenerative Disorder-related Protein,” 13th K-INBRE Symposium, 2015

HONORS AND AWARDS

Graduate College, Summer Doctoral Fellowship, University of Nevada, Las Vegas (2017, 2019 – 2023)

Phi Kappa Phi, Love of Learning Award (2018, 2020 and 2023)

Graduate College, Grad Rebel Slam 3-Min Thesis (University-wide competition) – 3rd Place Awards, University of Nevada, Las Vegas (2018 and 2022)

College of Science, Wolzinger Family Research Scholarship, University of Nevada, Las Vegas (2020 – 2021)

Graduate College, Outstanding Graduate Teaching Assistant – 1st Place Award, University of Nevada, Las Vegas (2020)

Graduate College, The Community Impact Graduate Scholarship, University of Nevada, Las Vegas (2020)

College of Sciences, Outstanding Graduate Teaching Assistant, University of Nevada, Las Vegas (2019)

Research Foundation Scholarship, Kansas State University (2013 – 2015)

Johnson Cancer Research Center, Graduate Student Summer Stipend, Kansas State University (2014)

Professor Mohan Munasinghe MIND Undergraduate Scholarship, Munasinghe Institute for Development, Sri Lanka (2010 – 2011)

MENTORSHIP AND SERVICE

Resident Scientist (2022 – 2023) – STEM Teacher Development Academy, UNLV College of Sciences.

Collaborated with K–12 teachers to design science activities and outreach for elementary students.

Graduate Student Mentor (2018 – 2020) – Grad Rebel Advantage & LSAMP Programs, UNLV.

Guided undergraduate STEM students in research, study skills, and graduate-school preparation.

Grad Rebel Ambassador & GPSA Committee Member (2019–2020) – UNLV Graduate College.

Represented graduate education and reviewed funding applications for research forums.

Council Representative (2018–2020) – Chemistry & Biochemistry, UNLV.

Advocated for graduate student well-being.

International Speakers Bureau Volunteer (2013–2015) – Kansas State University.

Delivered community presentations promoting cultural understanding.