

Vishaka Pathiranage

in VishakaPathiranage || ✉ hh5639@wayne.edu

"A young scientist showing intellectual acquisitiveness in the field of bio-physical chemistry and a humble individual who is working hard towards her goals"

Education

Wayne State University

Detroit, MI

PHD CANDIDATE IN CHEMISTRY

August 2021 - Present

- Carrying out computational studies on fluorescent tags to understand the fundamental mechanisms behind fluorescence enhancement and quenching.

College of Chemical Sciences, Institute of Chemistry Ceylon

Rajagiriya, Sri Lanka

GRADUATESHIP EXAMINATION IN CHEMISTRY

Jan. 2015 - Dec 2018

- Second Class (Upper Division)
- Completed the practical and theory course modules totaling to 120 credits

The Ceylon Medical College Council

Colombo, Sri Lanka

CERTIFICATE OF EFFICIENCY AS PHARMACIST

Nov. 2013 - Dec. 2016

- Successfully completed the practical and theory examinations
- Registered under section 56 of the medical ordinance (Chapter 105) as a Pharmacist

Skills

Instrument Handling Hands on experience in AAs, GC-FID, UV-Vis and Fluorescence spectrometers

Programming Gaussian, UCSF ChimeraX, Avogadro, PyMOL, Amber, VMD, TeraChem and AlphaFold

Research and Work Experience

Wayne State University

Detroit, MI

GRADUATE RESEARCH STUDENT IN WALKER LAB

Aug. 2021 - PRESENT

- Carrying out molecular dynamics simulations of fluorescent proteins and QM/MM studies on fluorescent tags

Wayne State University

Detroit, MI

GRADUATE TEACHING ASSISTANT

Aug. 2021 - PRESENT

- Conducted general chemistry practical sessions for undergraduate students and helped them to enrich their practical skills

College of Chemical Sciences, Institute of Chemistry Ceylon

Rajagiriya, Sri Lanka

UNDERGRADUATE RESEARCHER

Mar. 2017 - Aug 2018

- Conducting research under the title of "Method Development and Validation of Lipid Lowering Drug Atorvastatin using UV-Visible Spectroscopy"
- Development and validation of a novel UV spectroscopic methodology to monitor the lipid lowering drug Atorvastatin following International Conference of Harmonization (ICH) guidelines under supervision of Dr. Udaya K. Jayasundara

The University of Colombo (Faculty of Medicine)

Colombo, Sri Lanka

DEMONSTRATOR

Jul. 2020 - May 2021

- Performed duties and responsibilities related to the curriculum implementation unit of the faculty

College of Chemical Sciences, Institute of Chemistry Ceylon

Rajagiriya, Sri Lanka

GRADUATE TEACHING ASSISTANT

Jan. 2018 - Dec. 2019

- Conducted physical, inorganic, organic chemistry practicals to undergraduate students
- Conducted microbiology, biochemistry, hematology and food chemistry practicals to students following Diploma in Laboratory Technology

Nawaloka Care (Pvt) Ltd

PURCHASING MANAGER

Colombo 02, Sri Lanka

Jun. 2017 - Sept. 2017

- Placed purchasing orders for medicines, medical equipment and other sanitary items needed for the chain of outlets under the company
- Gained an in-depth knowledge of key health and safety standards used within the industry

State Pharmaceutical Cooperation

TRAINEE PHARMACIST

Rathnapura, Sri Lanka

Dec. 2013 - Jan. 2015

- Dispensing prescribed drugs for patients and preparation of extemporaneous preparations prescribed by doctors

Professional Qualifications

Institute of Chemistry Ceylon

MEMBERSHIP

Rajagiriya, Sri Lanka

Jan. 2019- Present

- Associate member of the Institute of Chemistry Ceylon

Morison PLC

WORKSHOP

Colombo, Sri Lanka

Jul 2020

- Successfully completed the certificate course covering the topics introduction to manufacturing, research and development process, quality process, production process and regulatory functions in pharmaceutical manufacturing industries

Sanofi Lanka Limited

WORKSHOP

Sri Lanka

Jun 2014

- Successfully participated in the programme on drug stability, shelf life and storage

University of Sri Jayawardanapura

WORKSHOP

Nugegoda, Sri Lanka

Apr. 2012

- Successfully participated the workshop on molecular genetics and its applications

Publications and Presentations

PUBLICATIONS [* indicate authors made equal contribution to the study]

- Ong, W. S.*; Ji, K.*; **Pathirana, V.***; Maydew, C.; Baek, K.; Villones, R. L. E.; Meloni, G.; Walker, A. R.; Dodani, S. C., Rational Design of the β Bulge Gate in a Green Fluorescent Protein Accelerates the Kinetics of Sulfate Sensing. *Angewandte Chemie* **2023**, 135 (26), e202302304.
- Wakpal, J.; **Pathirana, V.**; Walker, A. R.; Nguyen, H. M., Rational Design and Expedient Synthesis of Heparan Sulfate Mimetics from Natural Aminoglycosides for Structure and Activity Relationship Studies. *Angewandte Chemie International Edition* **2023**, e202304325.
- Jayasundara, U.; Herath, H, M, M, B.*; **Kaushalya, P, V, N.***, Method Development, Validation, and Concentration Determination of Metformin Hydrochloride and Atorvastatin Calcium Using UV-Visible Spectrophotometry. *J Anal Bioanal Tech* **2021**, 12 (428), 2.

PRESENTATIONS

- Invited Oral Presentation at **American Chemical Society Central Regional Meeting 2023** under the title of Computational Insight to Sulfate Sensing in mNeonGreen via Flexible Loop Engineering
- Oral Presentation at **American Chemical Society Spring Meeting 2023** Computational Studies of mNeonGreen as a Sulphate Sensor
- Poster Presentation at **Wayne State University Graduate Research Symposium 2023** under the title of Understanding Fundamental Spectroscopic Properties of mNeonGreen As Chloride Sensor Using Quantum Mechanics-Molecular Mechanics
- Single figure Presentation at **Virtual Winter School on Computational Chemistry 2023** under the title of Computational studies of mNeonGreen as a Sulphate Sensor
- Poster Presentation at **Wayne State University Chemistry Research Symposium 2022** under the title of Computational Studies of mNeonGreen as a Sulphate Sensor
- Oral Presentation at **Frontiers in Chemical Technology International Conference 2020** under the title of Development of a New Spectrophotometric Method for the Analysis of Metformin Hydrochloride and Atorvastatin Calcium in Tablet Formulation