

# Department of Botany Faculty of Science / University of Peradeniya



# Prof. Priyanga Wijesinghe

B.Sc. (Perad.), Ph.D. (Wayne State, USA)

**Professor in Molecular Biology and Biochemistry** 

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https://www.youtube.com/@biomedicalsciencepgis

#### **About Me**

I earned my B.Sc. specializing in Botany with a First Class Honors from the University of Peradeniya in 2003. I received the Exceptional Service as a Graduate Teaching Assistant Award in 2010 and my PhD in Biochemistry from the Wayne State University, USA in 2012. One of my PhD thesis projects led to the discovery of a novel enzymatic function (efficient deamination of the DNA base 5-methyl cytosine into thymine). I completed a postdoctoral fellowship in the Barbara Ann Karmanos Cancer Institute, USA in 2016. Having worked in the universities of Kelaniya and Sri Jayewardenepura respectively, I joined the Department of Botany, University of Peradeniya in 2018. Teaching biochemistry in a Botany department is a blessing in this "golden age of biology". According to Parker J. Palmer, "students who learn are the finest fruit of teachers who teach". To reap those fruits however, I believe in continuous updating and upgrading of the curriculum. I also believe in interdisciplinary research and would like to welcome fruitful collaborations in the fields of plant biochemistry, microbial genetics, cancer and genomics.

## **Higher Education Qualifications**



PhD

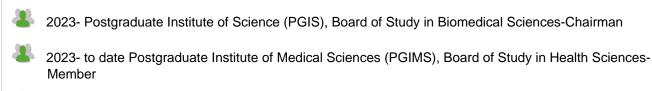
Wayne State University
USA
(2012)



**BSc** 

University of Peradeniya Sri Lanka (2003)

## Awards, Scholarships, Memberships & Fellowships



2022- University of Peradeniya Research Excellence Award of the Faculty of Science

2021- University of Peradeniya Excellence in teaching Award of the Faculty of Science

2020- Postgraduate Institute of Science Research Award (PGIS/2020/17) Rs. 1000,000.00

2019- to date Postgraduate Institute of Science (PGIS), Board of Study in Biomedical Sciences-Coordinator

2019-2022 Postgraduate Institute of Science (PGIS), Board of Study in Biomedical Sciences-Secretary

2019-2020 University of Peradeniya Science Alumni Association (UPSAA) – Treasurer

2019- Recipient of the grant AHEAD/ELTA/ELSE. Rs. 1 M

2018- Recipient of the grant University grant URG/2018/38/S Rs. 334,950.00

2018- Recipient of the grant AHEAD/RA3/ICE/PDN/SCI. Rs. 3 M

2015- Michigan State University Next Generation Sequencing Data Analysis Summer Course, Course Director: Dr. Titus Brown, UC Davis (got selected to a class of 24 out of 159 applicants)

2014 - American Association for Cancer Research Associate Member

2012 - Wayne State University Summer Dissertation Fellowship

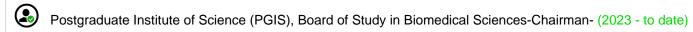
2012- Wayne State University Summer Dissertation Fellowship

2010 - Wayne State University Exceptional service as a Graduate Teaching Assistant

2009 - Member of the Phi Lambda Upsilon National Honorary Society

2004 - University of Peradeniya University Award for Academic Excellence

# **Positions Held**



Co-chair - Media and Networking, Wayne State University Postdoctoral Association- (2016)

Co-organizer - 3rd Michigan B-cell Molecular Biology conference, Wayne State University- (2011)

Co-organizer - 11th Annual Chemistry Graduate Research Symposium, Wayne State University- (2009)

President - University Botanic Society, University of Peradeniya, Sri Lanka- (2002)

Junior Treasurer - Society of Molecular Biology (Molecular Biology Association), University of Peradeniya, Sri Lanka- (2002)

Junior Treasurer - University Botanic Society, University of Peradeniya, Sri Lanka- (2001)

Postgraduate Institute of Science (PGIS), Board of Study in Biomedical Sciences-Coordinator- (2019 - to date)

Postgraduate Institute of Science (PGIS), Board of Study in Biomedical Sciences-Secretary- (2019-2022)

# My Teachings

BIO1152: Biomolecules/ Biomolecules and their applications

BT207: Plant Biochemistry I

BT403: Plant Toxicology

BT405: Plant Biochemistry II

BT406: Plant Molecular Genetics and Biotechnology

MB221: Enzymology

MIC303: Gene Regulation in Microbes

MIC308: Introduction to Bioinformatics

# Research Interests (Research Fields/ Projects)

Phytochemicals as anti-cancer agents, Biochemical assay development, Plant and cancer genomics, Antimicrobial resistance

## **Ongoing Research and Projects**

- Potential of white rot fungal laccases on polythene degradation and dye decolorization
- Fusion genes and their detection through Next Generation Sequencing (NGS)
- Diagnostic tools for antimicrobial resistance

#### **Key Publications**

Nucleic Acids Res - (2012)

Efficient Deamination of 5-Methylcytosines in DNA by Human APOBEC3A, but not by AID or APOBEC3G.

Sci Rep. - (2017)

Treating triple negative breast cancer cells with erlotinib plus a select antioxidant overcomes drug resistance by targeting cancer cell heterogeneity.

#### Conferences

Molecular Therapeutics Annual Research Symposium

- (2014)

**TOPIC**: Fine-mapping 5-hydroxymethyl-cytosine in breast cancer reveals a path to activating NOTCH1. Poster presentation.

Molecular Therapeutics Annual Research Symposium

**HELD AT :** Karmanos Cancer Institute, Wayne State University, Detroit, MI, USA - (2013) **TOPIC :** A Novel Assay to simultaneously Analyze ROS1 and RET Gene Fusions in Non-small Cell Lung Cancer Clinical Specimens. Poster presentation.

Sequenom MassArray User Group Meeting and Advanced Technical Workshops

HELD AT: San Diego, CA, USA - (2013)

**TOPIC**: Invited Participant of the Roundtable Discussion on "Future Software needs for the Sequenom MassArray System".

4th Michigan B cell Molecular Biology Conference

**HELD AT:** University of Michigan, Ann Arbor, MI, USA - (2012)

**TOPIC**: Can AID Play a Role in DNA Demethylation? Oral presentation.

Keystone symposium. Mutations, Malignancy and Memory - Antibodies and Immunity

HELD AT: Boston, MA, USA - (2012)

**TOPIC**: Reexamination of the DNA-cytosine deaminases to Deaminate 5-methyl cytosine. Poster presentation.

## My Publications

Please goto the website.

https://sci.pdn.ac.lk/botany/staff/Priyanga-Wijesinghe