



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

-  2023- Postgraduate Institute of Science (PGIS), Board of Study in Biomedical Sciences-Chairman
-  2023- to date Postgraduate Institute of Medical Sciences (PGIMS), Board of Study in Health Sciences-Member
-  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

-  Postgraduate Institute of Science (PGIS), Board of Study in Biomedical Sciences-Chairman- (2023 - to date)
-  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>