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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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)

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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

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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)

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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**

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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

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