

Veda Krishnan, ARS, Ph.D.



Experience

April, 2021 – March, 2022

Fulbright post-doctoral Scholar, Whistler Center for Carbohydrate Research. Purdue University, Indiana, USA

September, 2018–Till date

Scientist (Senior scale) • ICAR-Indian Agricultural Research Institute (IARI), New Delhi, India

October, 2012–September, 2018

Scientist • ICAR-Indian Agricultural Research Institute (IARI), New Delhi, India

September, 2011–October, 2012

Scientist • Central Institute of Research on Cotton Technology (CIRCOT), Mumbai, India

December, 2009–September, 2011

Project associate • Molecular immunogenetics lab, CSIR-IGIB, New Delhi, India

June, 2008–November, 2009

Research Fellow • DST-SCTIMST, Trivandrum, Kerala, India

Dec, 2007 – May, 2008

International Research Exchange Student • Nanyang Technological University (NTU) • Singapore

- ***Passion for enhancing global human health by contributing towards food and nutrition research, bio functional foods and innovative processes.***
- ***Providing assistance in research, analysis, and experimentation in nutritional enhancement in cereals & legumes***



Visiting Scholar, Purdue University & Scientist, Department of Biochemistry, ICAR-IARI, New Delhi -110012 India



+1-765-4091865



Krish211@purdue.edu
veda.krishnan@iari.res.in
vedabiochem@gmail.com



www.iari.res.in

<https://www.linkedin.com/in/veda-krishnan-30095418/>
<https://scholar.google.com/citations?hl=en&user=M5udW3UAAAAJ>

Developed expertise and delivered noted contributions to nutritional biochemistry, particularly in deciphering the role of nutritional matrix components (anthocyanins, α -tocopherol, resistant starch) and their bioavailability. In soybean, important insights into anthocyanin & tocopherol diversity, their mechanism of regulation as well as their nutraceutical potential using *in vitro* cell models. Deciphering and characterizing phytate biosynthetic enzymes and in metabolic pathway engineering for developing *low phytate soybean* using gene silencing and editing tools. Developed transient and stable soybean transformation protocols, 55+ peer reviewed publications and co-invented *patent (2432/DEL/2015)*. Imparted rich experience in nutritional matrix characterization during trainings as well as teaching (nine years).

Education

- Doctoral Research, IARI-Bharathidasan University, Trichy India (2014-2019)
- Research Exchange Student, NTU, Singapore (2007-2008) – **Best Thesis GPA 10/10**
- Masters in Biotechnology, CUSAT, Cochin, Kerala, India (2006-2008) – **Gold Medal securing First Rank**
- Bachelors in Botany & Biotechnology, Kerala University, Kerala, India (2003-2006) – **Silver Medal securing Second Rank**

Honors & Awards

- *Plantae Fellow 2020*, American Society of Plant Biologists
- *Fulbright-Nehru Post-doctoral fellowship*, 2020-2021
- *Young Woman Scientist Award* at 2nd International Conference on recent advances in agricultural, environmental, and applied sciences for global development, 2019
- IASc-INSA-NASI Summer Research Fellowship, 2019
- *Best Oral talk “National Conference on Integrative Plant Biochemistry and Biotechnology” 8-9th, Nov 2019*
- *ISPP-Young Scientist Award* at 4th International Plant Physiology Conference 2018
- Best poster presentation award at 4th India International Science Festival, held at Lucknow (5-6th, October, 2018)
- Certificate of excellence EET-Expo Edu Awards as young faculty 2015
- *Young Scientist Award*, International Conference of Radiation Biology, conducted by Ministry of defense & DRDO, 2014
- *First Rank* in Agricultural Research Service (ARS), 2010 in Plant biochemistry

- CSIR, JRF/NET cleared with AIR – 130; GATE – 91 percentile
- ‘Gold medal’ – First Rank, MSc Biotechnology, CUSAT in 2008 Best Master’s thesis Award (GPA 10/10)
- ‘Silver medal’ – Second Rank, BSc Botany & Biotechnology, Kerala University in 2006
- Selected as talented student by Kerala State for the programme under “Promotion of excellence among gifted children” (2000)

Funding/External research support

- ‘Fulbright-Nehru Post-Doctoral Fellowship’ on *Unraveling the structure-digestibility relationship of modified rice/ starch of ‘Superior Low Glycemic Index’,* USIEF (2020-2022)
- World Bank – ICAR sponsored, National Agricultural Higher Education Project Centre for Advanced Agricultural Science and Technology (CAAST) on *‘Developing starch quality matrix to identify soluble fiber rich Indian rice varieties with low glycemic potential’* (2019-2020) [PI]
- Department of science and technology (DST-SERB) on *‘Pullulanase based identification of high resistant starch rice (Oryza sativa L.)’* (2018-2021) [Co-PI]
- ICAR-Niche Area of Excellence (NAE) project on *‘Development of Biochemical and Physical Processing Technology to Arrest Oxidation of Lipids/Flavones to Enhance the Shelf-Life of Pearl Millet Flour* (2019-2022) [Co-PI]
- DST-International travel grant to attend and present at 5th International Rice Congress, Singapore on *‘Healthier attributes of pigmented rice’* (2018)

Publications - 55 publications in peer-reviewed journals

<https://scholar.google.com/citations?user=M5udW3UAAAAJ>

Patent (granted) - Patent No: 341699 “Plant transformation vector for suppressing Mips gene expression and method for culturing low phytate soybean”

Teaching

- Actively involved in postgraduate and doctoral teaching since 2011. (guided 3 master’s students; 5 trainees)
- Resource person in courses like Basic biochemistry, biochemistry techniques, Industrial Biochemistry, Genetic Engineering, Nucleic acids and Intermediary metabolism

Oral presentations in Symposia/Conferences/Trainings

- Invited talk delivered in ‘Young science leader series’ titled *‘Rolling stone gathers moss’* (Aug 2nd, 2020)
- Webinar talk delivered on *‘Functional foods: Composition, matrix interactions/dynamics and bio-availability’* organized by Vigyan Prasar and G.N Ramachandran Science Club (Aug 11th, 2020)
- Oral Invited talk on *‘Healthier attributes of pigmented rice’* on

ICAR training on Omics meet plant biochemistry: Applications in nutritional enhancement with one health perspective” (Sept7-27th, 2019)

- Oral talk on ‘Role of pullulanase: from inception to formation of inherent resistant starch in rice (*Oryza sativa*. L)’ at National conference on integrative plant biochemistry and Biotechnology (Nov 8-9th, 2019)
- Oral Invited talk on ‘Starch fine structure and digestibility – A key to fine tune energy release’ on ICAR training on - Tools and Techniques for Analysis of Biomolecules (Sept 5-18th, 2017)
- Oral Invited talk on ‘Metabolic pathway engineering for food and nutritional security’ in CAFT training on Plant Omics – Emerging tools and techniques for crop improvement which was from (Nov18 – Dec 8th, 2015)
- Oral talk delivered on ‘How to go to unknown; revealing the mysteries of research’ at MACFAST, School of Biosciences, Thiruvalla, Kerala (March 2nd, 2015)
- Key note address delivered on National science day on “Metabolic engineering for food security” at MACFAST, School of Biosciences, Thiruvalla, Kerala (Feb 28th, 2015)

Other Interests

- ✓ Science communication, Science journalism
- ✓ Radio talks – Woman in Science; Nutrigenomics
- ✓ Young science leader speaker & virtual mentoring for 20 students
- ✓ Developing Edu-tutorials (Content creator - MHRD E-Patshala programme & content reviewer - ICAR NAHEP-CAAST programme, Govt. of India)
- ✓ Scientific workshops & discussions on nutrition-resource person