

Curriculum Vitae

Dr. Hridya.H
Scientist-C
Muga Eri Silkworm Seed Organization
Central Silk Board, Ministry of Textiles
Khanapara, Guwahati
Assam 781022 India
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Qualification

Course of study	Institution	University	Year of Completion
Ph.D.	VIT University, Vellore, Tamilnadu	VIT University,	2018
Master of Science (Plant Biology & Plant Biotechnology)	Ethiraj College for Women, Egmore, Chennai, Tamilnadu	University of Madras	2013
Bachelor of Science (Plant Biology & Plant Biotechnology)	Ethiraj College for Women, Egmore, Chennai, Tamilnadu	University of Madras	2011

Ph.D. Research

Thesis title 'Study on the inhibitory effect of brazilein and santalin on tyrosinase: hunt for natural anti-melanogenic agent'

Professional History

- Scientist-B in Muga Eri Silkworm Seed Organisation, Central Silk Board, Guwahati, Assam (November 2018 - till date)
- Guest lecturer at Government College Kasaragod, Vidyanagar Kasaragod, Kerala (May 2018-October 2018)
- Research Fellow at KSCSTE Malabar Botanical Garden & Institute for Plant Sciences, Calicut, Kerala (September 2017- May 2018)
- Research Associateship in VIT University, Vellore, Tamilnadu (2013-2017)

Publications

No of Papers Published: 21

H index: 12

I10 index : 15

Cumulative Impact Factor : 85.14

Citations: 647

<https://scholar.google.co.in/citations?user=pxsgCsEAAA&hl=en>

2022

Dey, D., **Hridya, H.**, Doss, G. P., Priyadarshini, R., & Siva, R. (2022). Accumulation of betacyanin in *Hylocereus undatus* rind: Pigment stability analysis and its role in xanthine oxidase inhibition. *Phytomedicine Plus*, 2(1), 100197.

2021

Hridya, H., Guha, L., Mazumdar, M., Sarkar, B.N., Vijayakumar, S. and Borpuzari, P., 2021. Probing the potentiality of the defoliator *Cricula trifenestrata* Helfer silk: a revisit. *Bulletin of the National Research Centre*, 45(1), pp.1-8.

2019

- Hyde, K. D., Xu, J., Rapior, S., Jeewon, R., Lumyong, S., Niego, A. G. T.**Hridya, H.** & Chaiyasen, A. (2019). The amazing potential of fungi: 50 ways we can exploit fungi industrially. *Fungal Diversity*, 1-136. **(IF 20.37)**
- Sankari, M., **H. Hridya**, P. Sneha, C. George Priya Doss, J. Godwin Christopher, Jill Mathew, Hatem Zayed, and Siva Ramamoorthy. "Implication of salt stress induces changes in pigment production, antioxidant enzyme activity, and qRT-PCR expression of genes involved in the biosynthetic pathway of *Bixa orellana* L." *Functional & integrative genomics* 19, no. 4 (2019): 565-574.**(IF 3.410)**

2018

- **Hemachandran, H.**, Jain, F., Mohan, S., Kumar, D.T., Priya Doss C.G., and Ramamoorthy, S., 2017. Glandular hair constituents of *Mallotus philippinensis* Muell. fruit act as tyrosinase inhibitors: insights from enzyme kinetics and simulation study. *International Journal of Biological Macromolecules* 2018 (107), 1675-1682. **(I.F. 6.953)**
- Mohan, S., **Hemachandran, H.**, Sneha, P., George Priya Doss, C., Godwin Christopher, J., Jayaraman, G., & Ramamoorthy, S. (2018). Structural insights into the binding mode and conformational changes of BSA induced by bixin and crocin. *Journal of Biomolecular Structure and Dynamics*, 36(8), 2085-2098. **(I.F. 3.31)**

- Gurudevaru, C., Gopalakrishnan, M., Senthilkumar, K., **Hemachandran, H.**, Siva, R., Srinivasan, T & Palanisami, N. (2018). Synthesis and structural and DNA binding studies of mono-and dinuclear copper (II) complexes constructed with— O and— N donor ligands: Potential anti-skin cancer drugs. **Applied Organometallic Chemistry**, 32(2), e3998. (I.F. 4.105)

2017

- **H. Hridya** , Amrita Anantharaman, Sankari Mohan, Gopalakrishnan Mohan, Thirumal Kumar D, Diksha Dey, Drishty Kumar, Priyanka Dey, Amrita Choudhury, George Priya Doss and Siva Ramamoorthy .Unraveling the Inhibition Mechanism of Cyanidin-3-sophoroside on Polyphenol Oxidase and its Effect on Enzymatic Browning of Apples, **Food Chemistry** , 2017, 227, 102-110. (I.F.- 7.514)
- Srividhya M, **Hridya H**, Shanthi V, Ramanathan K. Bioactive Amento flavone isolated from *Cassia fistula* L. leaves exhibits therapeutic efficacy. **3 Biotech**. 2017;7(1):33. doi:10.1007/s13205-017-0599-7. (I.F. 2.406)
- **Hridya Hemachandran**, C. George Priya Doss and Ramamoorthy Siva. Plant communication: an unresolved mystery, **Current Science**, 2017, 112 (10) Commentary Article (I.F. 1.102)
- Sankari, M., Hridya, H., Sneha, P., Doss, C.G.P. and Ramamoorthy, S., 2017. Effect of UV radiation and its implications on carotenoid pathway in *Bixa orellana* L. **Journal of Photochemistry and Photobiology B: Biology**. 2017 (176), 136-144. (I.F. 6.252)
- Sankari, M., Rao, P.R., **Hemachandran, H.**, Pullela, P.K., Tayubi, I.A., Subramanian, B., Gothandam, K.M., Singh, P. and Ramamoorthy, S., 2017. Prospects and progress in the production of valuable carotenoids: insights from metabolic engineering, synthetic biology, and computational approaches. **Journal of biotechnology**. 2017 (226),89-101 (I.F. 3.307)

2016

- R. Priya, **H.Hridya**, A.Amrita, C.Rajasekaran, G.Christopher, P.Sneha, G.Priya Doss and R. Siva, Astaxanthin Biosynthetic Pathway: Molecular Phylogenies and Evolutionary Behaviour of Crt genes in eubacteria. **Plant Gene**, 2016, 8, 32-41. [I.F. -3.688]
- Mohan Sankari , **Hridya Hemachandran** , Amirtha Anantharaman & Subramanian Babu& Renata Rivera Madrid & George Priya Doss C & Devanand P. Fulzele& Ramamoorthy Siva , Identifying a Carotenoid Cleavage Dioxygenase 4a Gene and Its Efficient Agrobacterium-Mediated Genetic Transformation in *Bixa orellana* L. **Applied Biochemistry and Biotechnology**, 2016, 179(5) 697-714. DOI 10.1007/s12010-016-2025-8 (I.F.- 2.926)

- Amrita Anantharaman, **Hridya Hemachandran**, Sankari Mohan, Dhanoop Manikoth Ayyathan, Thirumal Kumar D, George Priya Doss C, Ramamoorthy Siva, Induction of apoptosis by apocarotenoids in B16 melanoma cells through ROS-mediated mitochondrial-dependent pathway *Journal of Functional Foods* 20 (2 0 1 6) 346–357 (I.F. – 4.451)
- **H. Hridya**, Amrita Anantharaman, Rajendra Rao Priya, George Priya Doss and Ramamoorthy Siva, Interaction of Catechu Dye with DNA: Spectroscopic and in Silico Approach. *Nucleosides, Nucleotides and nucleic acids*, 2016, 35, 195-210. (I.F.- 1.381)
- **H. Hridya**, A. Amrita, M.Sankari, M. Gopalakrishnan, D.Thirumal Kumar, C.George Priya Doss and R. Siva, Functionality study of santalin as tyrosinase inhibitor: a potential depigmentation agent. *International Journal of Biological Macromolecules*, 2016, 86, 383-389.(I.F- 6.953)
- Anantharaman A, Priya RR, **Hemachandran Hridya**, Akella S, Rajasekaran C, Ganesh J, Fulzele DP, Siva R. Toxicity study of dibutyl phthalate of *Rubia cordifolia* fruits: in vivo and in silico analysis. *Environmental Toxicology*.2016, 31(9), 1059-67. Apr 30. doi: 10.1002/tox.22115 (I.F. 4.119)
- Amrita Anantharaman, **Hridya Hemachandran**, Rajendra Rao Priya, Mohan Sankari, Mohan Gopalakrishnan, Nallasamy Palanisami, Ramamoorthy Siva, Inhibitory effect of apocarotenoids on the activity of tyrosinase: Multi-spectroscopic and docking studies, *Journal of Bioscience and Bioengineering*, 2016, 121(1), 13-20 doi:10.1016/j.jbiosc.2015.05.007 (I.F. – 2.894)

2015

- **H. Hridya**, A. Amrita, M. Sankari, C George Priya Doss, M. Gopalakrishnan, C. Gopalakrishnan and R. Siva. Inhibitory effect of brazilein on tyrosinase and melanin synthesis: Kinetics and *In silico* approach. *International Journal of Biological Macromolecules*, 2015, 81, 228-234.(I.F- 6.953)
- Amrita Anantharaman, Rajendra Rao Priya, **Hridya Hemachandran**, Akella Sivaramakrishna, Subramanian Babu, Ramamoorthy Siva Studies on Interaction of Norbixin with Dna: Multispectroscopic and In Silico Analysis, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 2015, 144 (5), 163–169 doi:10.1016/j.saa.2015.02.049 (I.F. – 4.098)

Articles and Technology Booklet

- ❖ Technology Booklet to Muga farmers “Improved methods of Muga Silkworm Rearing and Seed Production”, 22 November, 2019, MSSO Guwahati, Assam
- ❖ Vikram Kumar, Abhishek Singh, Mahasankar Majumdar, Lopamudra Guha, **Hridya H.** and Ritesh Kumar Parihar, जलवायु परिवर्तन एवं इसका मुगा रेशम कीट पालन पर प्रभाव, *Kheti*. June, 2020

- ❖ Dr. N.Lalitha, **Hridya.H** and P.Borpuzari (2021) Booklet on Standard Operating Procedure for Scientific Eri Silkworm Seed Production Published by P2 Eri Basic Seed Farm, Topatoli, Kamrup, Assam
- ❖ Impact of Covid-19 pandemic on eri culture and emerging scope for micro-entrepreneurs development, **Hridya.H** , B.N.Sarkar, Azizur Rahman P. Borpuzari, DA00107, *Indian Silk* , April 2021

Reviewer

Invited as Reviewer in **Phytomedicine (Elsevier)**, **Bulletin of National Research Centre (Springer)** and **Natural Product Research (Taylor & Francis group)** journals (5 Nos. of Papers -peer reviewed)

Conference, Seminar & Workshops attended

- ❖ Presented Paper on “Unraveling the scope of transforming Ericulture waste to wealth for sustainable livelihood to combat the covid socioeconomic impact” in the National Seminar on Conservation of Biodiversity, Microbial Diversity with potential for application in Agriculture and Sericulture in North East India organized by University of Science & Technology, Meghalaya on 26th March 2022
- ❖ Participated in the brainstorming workshop on "Emerging needs and critical gaps in Muga and Eri culture" held at NEHU, Guest House, Guwahati on 14th March 2022 organised by Central Muga Eri Research and Training Institute, Lahdoigarh, Jorhat, Assam
- ❖ Invited as a speaker In the International Conference on Biotechnology for Environment & Health (ICBEH), organized by School of Bio Sciences and Technology, Vellore Institute of Technology along with Association of Biotechnology and Pharmacy, from November25-27,2021
- ❖ Participated in the online training programme on “Production of quality planting material of tropical tuber crops for North Eastern Hill region” organised by ICAR-CTCRI, Agri Business incubator, Thiruvananthapuram on June 04, 2021
- ❖ Participated in three day Skill Development Program on sericulture from July 15th -17th, 2021 organised by Department of Entomology, College of Agriculture, Faculty of Agriculture, Parul University, Vadodara, Gujarat
- ❖ Participated in Online Training Programme of ‘Extension Management Approaches for Promotion of Sericulture Industry’ organised by National Institute of Agriculture Extension Management MANAGE, Hyderabad on December, 15-18, 2020
- ❖ Participated in online WGCapD Webinar Series on“Remote Sensing in Crop Monitoring and Assessment” conducted by Indian Institute of Remote Sensing (IIRS), ISRO, during 19 May to 9 June, 2020.
- ❖ Participated in Two day international Webinar om Biotechnology : Modern Molecular Approches organized by Department of Biotechnology, Sri Padmavathi Mahila Viswavidyalayam: Tirupathi (Womens University) Andhra Pradesh, India on 10th – 11th September, 2020

- ❖ Participated in the webinar on “CRISPR-Cas Based Genome Manipulation : A Revolutionary Tool For Modern Biology” Organised by Department of Biosciences, Union Christian College, Aluva, Kerala, India On November 7th 2020.
- ❖ Participated in National Webinar on “Herbal Resource and their Role in Boosting Immunity against COVID-19 orgaised by School of Studies in Botany, Jiwaji University, Gwalior, Madhya Pradesh and S.K.Jain Institte of Ethnobiology on 15th June 2020
- ❖ Nominated as Physical verification executive (PVE) by Ministry of Textiles for verification of training centres proposed by state government under SAMARTH scheme.
- ❖ Nominated for Orientation Training on Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 for Officials of Government Departments, Members of ICC and LCC held on July18-19, 2019
- ❖ Attended one day workshop on ‘Management Information System’ at CSB, Bangalore on 01.10.2019.
- ❖ Won second prize in poster presentation in International symposium on Medicinal Plants and Herbal drugs in Human and Livestock Wealth A Global Prospective conducted by Pachaiyappa’s College Chennai.29th to 31st January 2016
- ❖ Presented paper at the 3rd International Conference and Exhibition on Pharmacognosy, Phytochemistry and Natural products in Hyderabad, India organized by Omics international. 26-28th October, 2015
- ❖ Presented paper in National Conference on New Horizons in Plant Biotechnology: Innovative products and applications organized by department of biotechnology, school of biosciences and technology VIT University, vellore, 11th and 12th March 2016.
- ❖ Presented Poster in International Conference of Biotechnology on Implications of Biotechnology on Biodiversity and its Conservation conducted by Ethiraj college for women in collaboration with M.S. Swaminathan research foundation- Chennai, Tamilnadu. 27th to 28th January 2011.
- ❖ Presented Paper in XV AZRA International Conference on Recent Advances in Life Sciences by Ethiraj college for women in collaboration with Applied Zoologists Research Association (AZRA), Bhubaneswar and Zoological Survey of India.11-13th February, 2016
- ❖ Presented Poster in International Conference on Current Trends in Biotechnology ICCB-2016 organized by VIT University, Vellore in association with Biotech Research Society, India (BRSI), 8-10TH December, 2016.

Prizes and Awards

- ❖ Qualified CSIR NET lectureship in June 2016 – AIR 66
- ❖ First prize in south zone student research convention under health sciences and allied subjects category in ANVESHAN-2016 conducted by Association of Indian Universities, New Delhi.
- ❖ Prof. S.K. Mukherjee Gold Medal for the best research project in national level student research convention ANVESHAN-2016 instituted by Association of Indian Universities, New Delhi.

- ❖ Tmt.T. Dhanalakshmi endowment cash prize instituted by Mrs. Prema Sampathkumar for securing first mark in external examination of B.Sc major theory papers (all three years) in Ethiraj College for women, University of Madras, Chennai.
- ❖ Dr. Hema Balaram prize for student who stand first in the final year B.Sc Plant biology & Plant Biotechnology end semester examination Ethiraj College for women, University of Madras, Chennai.
- ❖ Molahalli Sri Ranga Rao Medal for outstanding student of I M.Sc PBPB, Ethiraj College for women, University of Madras, Chennai.
- ❖ Thiru P.R. Thulasingham Endowment cash prize for securing highest mark in plant taxonomy (2012-2013), Ethiraj College for women, University of Madras, Chennai.

Research Interest

Plant Dyes and Pigments, Applied Biology and Biochromes, Endophyte biology, Melanin pigmentation in plants and animals, Secondary metabolite production, DNA interaction, protein binding studies, Plant biology, Food chemistry and wild silkworm seed production

Declaration

I hereby confirm that the information given above is correct