

Dr. Bhagya V Rao M. Pharm (Pharmacology), PhD (NIMHANS)

Professor

**Department of Pharmacology, KLE College of Pharmacy
KLE Academy of Higher Education and Research, Bengaluru**

bhagyavrao.klecop@gmail.com

Professional summary

Associate Professor, having more than 15 years of experience teaching undergraduate, graduate and doctoral courses in Pharmacology and neuroscience. Extensive research knowledge of Pharmacology, Neuroscience, Translational research with trans-disciplinary approach. Actively participated in continued learning through International conferences and professional research. Believes in students' abilities to learn and inherent thirst for knowledge with the right environment.

Teaching Experience

Sl. No	From	To	Duration	Position held	Courses	Place of work
1	01/10/2003	30/11/2003	2 months	Lecturer	D. Pharm & B. Pharm	Dayananda College of Pharmacy, Bengaluru
2	01/12/2003	30/04/2005	1 year 5 months	Lecturer	D. Pharm & B. Pharm	M S Ramaiah College of Pharmacy, Bengaluru
3	01/07/2009	15/08/2016	7 years 1.5 months	DST SERB Fast Track Young Scientist	M.Phil. MS Neuroscience, MS in Psychiatry, MSc in Nursing, Doctoral students	National Institute of Mental Health and Neuro Sciences (NIMHANS), Bengaluru
4	16/08/2016	30/06/2017	10 months	Professor	B. Pharm, M. Pharm and PhD	Nargund College of Pharmacy, Bengaluru
5	03/07/2017	29/02/2020	2 years 7 months	Assistant Professor	MSc (Ayurveda Biology), PhD	The University of Trans-Disciplinary Health Sciences and Technology (TDU), Bengaluru
6	02/03/2020	01/06/2025	5 years	Associate	B. Pharm, M.	KLE College of

				Professor	Pharm and PhD	Pharmacy, KLE University, Bangalore
7	02/06/2025	Till date		Professor	B. Pharm, M. Pharm and PhD	KLE College of Pharmacy, KLE University, Bangalore

Education

Degree	Field (s)-University	Year	Class/Percentage
PhD	Neurophysiology NIMHANS, Bangalore, Karnataka, India	06/2009	
M. Pharmacy (Pharmacology)	Government College of Pharmacy, Bangalore Karnataka, India	03/2001- 03/2003	73.5%
B. Pharmacy	Government College of Pharmacy, Bangalore Karnataka, India	11/1996- 10/2000	71.07%

Research Experience

From - To	Name of the Funding Agency	Detail about work
Under Review	VGST, GoK	Intranasal delivery of <i>Jyothshmati</i> oil nanoemulsion via the olfactory region for the management of depression: formulation, behavioural and biochemical estimation. (33,75,000).
Under Review	SERB-CRG, GoI	<i>In-silico</i> and <i>in vivo</i> : Evaluating the therapeutic potential phytoconstituents from <i>Tephrosia purpurea</i> in an animal model of epilepsy. (37,20,150) As CO-PI Provisionally accepted for further processing

Under review	Indian Knowledge System (IKS)	Role of Indian classical music exposure on chronic unpredictable mild stress associated cognitive deficits – Unravelling the neuronal plasticity mechanisms
Under review	Sree Ramakrishna Paramahansa Research Grant 2022 submitted: Principal Investigator	Neuroprotective effect of <i>Celastrus paniculatus</i> in chronically stressed rats: Role of glutamatergic and glucocorticoid signaling (Total cost of the project Rs 53,00,000)
Sanctioned	Principal Investigator: Amway India clinical trial project	Physiological responses to Poly-herbal Rasayana preparation in sub-optimally healthy volunteers Fund: INR 40,00,000/-
04/2018 – 10/2019	Co-Investigator: Amway-Nutriline, USA project	Rasayana project (Total cost USD. 93,000)
07/2013- 07/2016	DST- Fast Track Young Scientist, Department of Neurophysiology, National Institute of Mental Health and Neuro Sciences, Bangalore, INDIA	Effect of <i>Celastrus paniculatus</i> on cognitive deficits in chronically stressed rats: A behavioral, neurochemical, structural and electrophysiological approach (Total cost of the project INR 27,00,000/)
05/2010- 04/2013	CSIR-Senior Research Associate (Scientific Pool Officer), Department of Neurophysiology, National Institute of Mental Health and Neuro Sciences, Bangalore, INDIA	Role of escitalopram and reboxetine antidepressants on hippocampal neurogenesis and structural plasticity in endogenous animal model of depression (INR 19,00,000)
10/2008- 03/2010	CSIR-Senior Research Fellow, Department of Neurophysiology, National Institute of Mental Health and Neuro Sciences, Bangalore, INDIA	Neural basis of cognitive deficits in depressed-like rats
05/2005- 04/2008	PhD Research scholar, Department of Neurophysiology, National Institute of Mental Health and Neuro Sciences, Bangalore, INDIA	Neural plasticity in neonatal clomipramine induced endogenous depression in adult rats
03/2001- 03/2003	Junior Research Fellow, Department of Pharmacology, Government College of Pharmacy,	Neuropharmacological evaluation of polyherbal formulation SED-HD-01

	Bangalore, INDIA	
--	------------------	--

Publications

1. **V Bhagya**, BN Srikumar, TR Raju and BS Shankaranarayana Rao (2008) Neonatal clomipramine induced endogenous depression in rats is associated with learning impairment in adulthood. Behavioural Brain Research 187: 190–194
2. Veena J, Srikumar BN, Mahati K, **Bhagya V**, Raju TR and Shankaranarayana Rao BS (2009) Enriched environment restores hippocampal cell proliferation and ameliorates cognitive deficits in chronically stressed rats. Journal of Neuroscience Research 87: 831–843
3. George Lekha, **Bhagya P Kumar**, Shankar Narayana Rao, IrudayaArockiasamy and Karthik Mohan (2010) Cognitive enhancement and Neuroprotective effect of *Celastrus paniculatus* Willd. seed oil (Jyothismati oil) on male Wistar rats. Journal of Pharmaceutical Science and Technology 2(2): 130-138
4. **Bhagya V**, Srikumar BN, Raju TR, Shankaranarayana Rao BS (2011) Chronic escitalopram treatment restores spatial learning, monoamine Levels and hippocampal long term potentiation in an animal model of depression. Psychopharmacology (Berl) 214:477–494
- 5.
5. **Bhagya V**, Srikumar BN, Raju TR, Shankaranarayana Rao BS (2015) Selective noradrenergic reuptake inhibitor reboxetine restores spatial learning deficits, biochemical changes and hippocampal synaptic plasticity in an animal model of depression. Journal of Neuroscience Research 93: 104-120.
6. **Bhagya V***, Christofer T, Shankaranarayana Rao BS (2016) Neuroprotective effect of *Celastrus paniculatus* on chronic stress-induced cognitive impairment. Indian J Pharmacol 48(6):687-693. ***Corresponding author.**
7. Mahati K, **Bhagya V***, Christofer T, Sneha A, Shankaranarayana Rao BS (2016) Enriched environment ameliorates depression-induced cognitive deficits and restores abnormal hippocampal synaptic plasticity. Neurobiology of Learning and Memory. 134: 379-391 (*** equal authorship**)
8. **Bhagya V***, Srikumar BN, Veena J, Shankaranarayana Rao BS (2016) Short term exposure to enriched environment rescues chronic stress-induced impaired hippocampal synaptic plasticity, anxiety and memory deficits. J Neuroscience Res. 95: 1602-1610. ***Corresponding author.**
9. Shilpa BM, **Bhagya V***, Harish G, Bharath MM, Shankaranarayana Rao BS (2017) Environmental enrichment ameliorates chronic immobilisation stress-induced spatial learning deficits and restores the expression of BDNF, VEGF, GFAP and glucocorticoid receptors. Progress in Neuro-Psychopharmacology & Biological Psychiatry. 76: 88-100. (*** equal authorship**)
10. Abhijit S, Tripathi SJ, **Bhagya V**, Shankaranarayana Rao BS, Subramanyam MV, Asha Devi S (2018) Antioxidant action of grape seed polyphenols and aerobic exercise in improving neuronal

number in the hippocampus is associated with decrease in lipid peroxidation and hydrogen peroxide in adult and middle-aged rats. *ExpGerontol.* 101:101-112.

11. **Bhagya V**, JaideepSriranjini (2020) Neuropharmacological and Cognitive Effects of *Celastrus paniculatus*—A Comprehensive Review. *International Journal of Pharmaceutical Sciences Review and Research.* 65: 92-97. ***Corresponding author.**

12. **Bhagya V**, Sindhu VK, MahatiK, Shankaranarayana Rao BS (2022) Exposure to an enriched environment promotes dendritic remodeling in hippocampal neurons affected by endogenous depression. *Indian Journal of Biophysics and Biochemistry.* 59: 998-1005. ***Corresponding author.**

13. AgilandeswariDevarajan,**Bhagya V. Rao**, Tisa Francis (2023) Natural and Synthetic Sources of Phenolic Antioxidants. In: *Health Benefits of Phenolic Antioxidants.* Nova Medicine & Health Publisher, New York, USA.

14. Poonguzhali, **Bhagya V. Rao**, S. Srinivasan, Antara Choudhury, AgilandeswariDevarajan (2022) A Scientific Evidence-based Review of Tamarindusage in Indian Folklore Medicine. *Journal of Natural Remedies.* 22 (3): 347-362.

15. BABIKER BASHIR, **BHAGYA V RAO**, NAGARATHNA PKM, DEEPAK KUMAR JHA, HARSHA VARDHINI N (2023) TO evaluate the cardioprotective and anti-oxidant effect of methanolic extract of the leaves of *Tribulus terrestris* in Wistar rats. *Asian Journal of Pharmaceutical and Clinical Research.* 16 (8): 145-152.

16. Shilpa M, **Bhagya V**, Shankaranaryana Rao BS (2024) Escitalopram treatment ameliorates chronic immobilization stress induced depressive behavior and cognitive deficits by modulating BDNF expression in the hippocampus. *Journal of Applied Pharmaceutical Sciences.* 14(3): 170-182. ***Corresponding author.**

17. **Bhagya V***, Ramya HB, Hrishikeshavan HJ (2024) Ethanolic leaf extract of *Centella asiatica* L possesses nephroprotection in an animal model of nephrotoxicity. *Indian Journal of Pharmaceutical Education and Research.* 58(1s):s274-s281. ***Corresponding author.**

18. Avlani D, Shivakumar HN, Kumar A, Prajila A, Baraka BBH, **Bhagya V.** Pre-exposure prophylactic mucoadhesive sodium alginate microsphere laden pessaries for intravaginal delivery of tenofovir disoproxil fumarate. *Int J BiolMacromol.* 2024; 258(Pt 1):128816.

19. Alayadan P, Kumar A, Prakash SS, Bashir B, **Bhagya V**, Murthy SN, Shivakumar HN. Development, in vitro and in vivo evaluation of film forming solutions for transdermal drug delivery of Zaltoprofen. *J Biomater 9Sci Polym Ed.* 2024 Dec 23:1-24. doi: 10.1080/09205063.2024.2443332.

20. B.K. NithinGowda, **Bhagya Venkanna Rao**, Shilpa Borehalli Mayegowda. Bionanomaterials in Improving Food Quality and Safety. In: *Bionanomaterials for Industrial Applications.* CRS Press. 2024. <https://doi.org/10.1201/9781003432791>.

21. Bashir BBH, **Bhagya V***, Tanuja K. Synergistic effect of *Celastrus paniculatus* and *Tribulus terrestris* against chronic immobilisation stress-induced memory impairment, BDNF level and

neuroinflammation. J Appl Pharm Sci. 2025;15(02): 215–223. <http://doi.org/10.7324/JAPS.2025.172799>. *Corresponding author.

22. Cherishma RP, Babiker BH Baraka, **Bhagya V Rao**, Chetana S Karadi, Sneha V Gowda, Ramesh Kuma. Androgenetic Alopecia: Update on Etiology, Pathophysiology, Diagnosis, and Treatment. International Journal of Pharmaceutical Sciences and Drug Research, vol. 16, no. 2, Mar. 2024, pp. 286-92, <https://doi.org/10.25004/IJPSDR.2024.160220>.

23. Manasa GopalGowda, Babiker Bashir Haroun Baraka, **Bhagya V Rao**, Tudi Mani, Suhas Gouda H.B, Kavya D. Cognitive Impairment in Major Depressive Disorder. Strad Research. 2024; 11; 194-207.

24. Tanuja K, **Bhagya V**. Indian classical Mohana Raga (instrumental music) overcomes anxiety, depression and memory impairment in chronic unpredictable mild stress rat model –A behavioural study. Indian Journal of Traditional Knowledge. 24(4), April 2025, pp 319-328. DOI: 10.56042/ijtk.v24i4.12620.

25. Katchhi MS, **Bhagya VR**, Baraka BBH, Mayegowda SB. The Gut-Brain Axis: Microbial and Medicinal Effects on Mental Health and Neurodegeneration. J Pure Appl Microbiol. Published online 24 April 2025. doi: 10.22207/JPAM.19.2.08.

26. **Bhagya V**, Tilak K, Kanimozhi L, Sushma R Environmental enrichment and metformin combination improves cognitive function through BDNF and HPA axis in chronically stressed rats. Current Alzheimer Research. 2025, 22: 288-301. doi.org/10.2174/0115672050379003250520072717

27. Bhagya V*, Sahid Raza, Priyanka T. *Azadirachta indica* A. Juss Ameliorates Memory Deficits and Reduces Anxiety-Like Behaviour by Modulating Cholinergic Neurotransmission in An Animal Model of Depression: In-Silico and In-Vivo Studies. Traditional and Integrative Medicine. 2025, 10: 241-257. <http://doi.org/10.18502/tim.v10i3.19758>

28. Bhagya V*, Kanimozhi L, Sushma M, Ramya V. Neuroprotective Effect of *Inula racemosa* on Chronic Stress-Aluminum Chloride Induced Memory Deficits. Indian Journal of Pharmaceutical Education and Research. 2026; 60; 258-269. DOI: 10.5530/ijper.20261730

29. Bashir BBH, **Bhagya V***, Tanuja K, Ramya V. Housing in an enriched environment enhances the neuroprotective effect of *Celastrus paniculatus* and *Tribulus terrestris* in an animal model of chronic stress. Pharmacognosy Journal. 2025, 17: 191-202.

Editorial in Indian Journal of Pharmacy Practice.

1. **Bhagya V***, Deepa PB, Anusuya Patil (2021) Regulatory requirements for novelexipients. APTI Women's Forum Newsletter, Apr – Jun, 45-47.

2. **Bhagya V*** (2020). Covid Vaccine – A Promising Light. Indian Journal of Pharmacy Practice, Vol 13, Issue 4, Oct-Dec.

3. **Bhagya V*** (2021). RNA Vaccines - An Innovative Approach to Treat Infections. Indian Journal of Pharmacy Practice, Vol 14, Issue 1, Jan-Mar, DOI: 10.5530/ijopp.14.1.1.
4. **Bhagya V*** (2021). Geriatrics, Covid-19 Pandemic and Challenges. Indian Journal of Pharmacy Practice, Vol 14, Issue 2, Apr-Jun, DOI: 10.5530/ijopp.14.2.15.
5. **Bhagya V*** (2021). Anaemia – Is there any solution? Indian Journal of Pharmacy Practice, Vol 14, Issue 3, Jul-Sep, DOI:10.5530/ijopp.14.3.32.
6. **Bhagya V*** (2021). All substances (drugs) are poisons; there is none which is not a poison. the right dose differentiates a poison and a remedy. Indian Journal of Pharmacy Practice, Vol 14, Issue 4, Oct-Dec, DOI : 10.5530/ijopp.14.4.48.
7. **Bhagya V*** (2022). Personalized medicine: Ayurgenomics and modern medicine. Editorial. Indian Journal of Pharmacy Practice, Vol 15, Issue 1, Jan-Mar, DOI: 10.5530/ijopp.15.1.1
8. **Bhagya V*** (2022) Diabetes and Covid: Severity is inevitable???. Indian Journal of Pharmacy Practice. 15(2).
9. **Bhagya V*** (2022) PCOD and PCOS: Are they same or Different???. Indian Journal of Pharmacy Practice. 15(4).
10. **Bhagya V*** (2023) Artificial Intelligence Based Monitoring in Community Pharmacy–Tool for Disease Prediction and Diagnosis. Editorial. Indian Journal of Pharmacy Practice, Vol 16, Issue 2, Apr-Jun, DOI: 10.5530/ijopp.16.2.12

Professional recognition, awards, fellowships received

- Got 99.61 percentile in GATE-2000
- Best outgoing student award during 2000 from Government College of Pharmacy, Bangalore
- Parivarthan Bhargava memorial award for securing highest marks in B Pharm from Government College of Pharmacy, Bangalore
- PhD Fellowship, NIMHANS
- Awarded the Prof. T. Desiraju Memorial Prize from the Society for Neurochemistry India for the Best oral presentation of the abstract entitled “Escitalopram restores impaired hippocampal long-term potentiation and cognitive deficits in neonatal clomipramine model of depression” during the International Symposium on Regenerative Neuroscience and Annual meeting of Society for Neurochemistry India, National Institute of Mental Health and Neuro Sciences (NIMHANS), Bangalore, India, 17-18th January 2008.
- IBRO international travel award to attend Society for Neuroscience- 2008 meeting held at Washington DC, USA and present a paper entitled “Chronic escitalopram treatment restores hippocampal long-term potentiation, serotonin levels and spatial memory in neonatal clomipramine model of depression”.

- CSIR international travel award to attend Society for Neuroscience - 2009 meeting held at Chicago, USA and present a paper entitled “Chronic reboxetine treatment restores hippocampal long-term potentiation, monoamine levels and spatial memory in depressed rats”.
- Awarded the TulsabaiSomani Educational Trust Award for Best oral presentation from the Indian academy of Neuroscience of the abstract entitled “Chronic Reboxetine Treatment Restores Hippocampal Long-Term Potentiation, Monoamine Levels and Spatial Memory in Depressed Rats” during the XXVII Annual Conference of the Indian Academy of Neurosciences, NIMS University, Jaipur, 18-20th December 2009.
- IBRO international travel award to attend Society for Neuroscience - 2010 meeting to be held at San Diego, USA and present a paper entitled “Chronic low doses of escitalopram and reboxetine in combination restores depression-induced cognitive deficits”.
- FAONS-APRC Travel Award to attend the 5th Federation of Asian and Oceanian Neuroscience Societies (FAONS) Congress – 2010 and the XXVIII Annual Meeting of the Indian Academy of Neurosciences (IAN) Lucknow, 2010.
- Awarded CL Malhotra research award for Best published paper in Pharmacology 2011 form Association of Physiologists and Pharmacologists of India.
- Worked as Mentor and Tutor in DST sponsored 5th SERC school in Neuroscience “Learning and Memory” held at NIMHANS from 16-29 February, 2012.
- Awarded DST-SERB Fast track young scientist award 2013

Invited talks

1. International Symposium on Cellular and Molecular Basis of Brain Plasticity and Repair Mechanisms & Annual meeting of Society for Neuroscience (SfN)-Bangalore Chapter. DIHAR, DRDO, Leh. 3-5th September 2010.
2. 5th Congress of Federation of Asian-Oceanian Neuroscience Societies (FAONS) and XXVII Annual meeting of Indian Academy of Neurosciences (IAN), Lucknow, India. 25-28th November 2010.
3. The International symposium on recent trends in neurosciences and XXIX Annual conference of Indian Academy of Neurosciences, Defense Institute of Physiology and Allied Sciences, New Delhi. 30th October- 1st November, 2011.
4. First 'National Conference' of Association of Physiologists of India (ASSOPI), December 15 – 19, 2014, JIPMER, Puducherry.

Professional Affiliations

Association of Pharmaceutical Teachers of India (APTI)

Society for Neuroscience (SfN)

International Brain Research Organisation (IBRO)

Indian Academy of Neurosciences (IANs)

Society for Neurochemistry India (SNCI)

Molecular and Cellular Cognition Society (MCCS)

Association of Physiologists and Pharmacologists of India (APPI)

Other responsibilities

- **Chief Co-ordinator of Mentorship cell.**
- **Chief Editor** of Indian Journal of Pharmacy Practice from November 10, 2020.
- **Member of Human Ethics Committee of Jayadev Memorial Rashtrottana Hospital and Research Center, Bengaluru.**
- **Executive Member of Indian Academy of Neuroscience Bangalore Chapter at NIMHANS, Bengaluru.**
- **NAAC Criteria 6 Head.**
- APTI Women's Member Forum south zone **coordinator**.
- NBA criteria 8 head.
- **Coordinator and Member Secretary**, Internal Complaint Committee (anti-sexual harassment cell)
- Served as an **Organizing Secretary**, for the International Symposium on "**Traditional Health Knowledge Inspired Nutraceuticals**" held on March 6, 2018 in Bengaluru and published Proceedings of the symposium "Perspectives in translating insights from global traditional medicines through modern sciences".
- Member, Institutional Animal Ethics Committee, Nargund College of Pharmacy, Bengaluru
- Head, Animal House Facility, Nargund College of Pharmacy, Bengaluru
- **Resource person** and **Mentor** for 2 workshops, the 5th SERC School in Neuroscience Learning and Memory and the pre-conference workshop of APPICON-2013.
- **Resource person** for ICMR National Workshops for Advancement of Physiological Sciences in India (ICAPS) Mentor - Mentee Workshop.
- **Resource person** for National Symposium on future of Functional Genomics, October 2017.

- Preparation of curriculum for MSc Ayurveda Biology in The University of Trans-Disciplinary Health Sciences and Technology (TDU) during 2017-2018.