Dr. Vani. R

Associate Professor, Dept. Biotechnology, JAIN

Education

2008 - Ph.D, Zoology, Bangalore University

Work Experience

Since 2008 till date, JAIN (Deemed-to-be University), Bangalore

Area of Specialization: Oxidative Stress Biology

Teaching Experience: 16 years

- Associate Professor in Biotechnology, School of Sciences, Block I, JAIN (Deemed-to-be University), Bengaluru from Sept. 2018 till date. (Courses: Molecular Genetics, Molecular Biology and Genetic Engineering -Theory and lab).
- Assistant Professor in Biotechnology, School of Sciences-PG, JAIN (Deemed-to-be University), Bangalore from 21st May 2008 - 2018. (Courses: Molecular Genetics, Cell Biology, Molecular Biology, Genetic Engineering and Animal Biotechnology).

Research Experience: 20 years

Key Areas of Research: Oxidative Stress Physiology & Hematology

Erythrocyte physiology-hypobaric hypoxia; Blood banking – Storage lesion; Platelets- thrombocytopenia; Antioxidants as therapeutics**.**

PUBLICATIONS – 31

Google Scholar: https://scholar.google.com/citations?user=6S9IXRMAAAAJ&hl=en
ORCID id: https://orcid.org/0000-0002-4155-0960
SCOPUS id: https://www.scopus.com/authid/detail.uri?authorId=56007505100

1. Manasa and **R.Vani. 2021.** Evaluation of Caripill™ as a component of platelet storage solution **Hematology, Transfusion and Cell Therapy.** 43(2):133–140. DOI: 10.1016/j.htct.2020.01.003 Scopus indexed

2. Carl Hsieh and **Vani Rajashekaraiah. 2021**. Ferric Reducing Ability of Plasma: A Potential Oxidative Stress Marker in Stored Plasma. **Acta Haematologica Polonica**. 52(1): 61-67. DOI: 10.5603/AHP.2021.0009 **IF: 1.2** Scopus and Web of science indexed
3. Carl Hsieh, Srinivasa Prabhu and **Vani Rajashekaraiah**. **2020.** Influence of AS-7 on the Storage Lesion in Young and Old Circulating Erythrocytes. **Transfusion and Apheresis Science.** 59: 102905. doi.org/10.1016/j.transci.2020.102905 **IF: 1.285** Scopus and Web of science indexed
4. Hsieh Carl, **Rajashekaraiah Vani. 2020.** Effects of Rejuvenation on Young and Old Erythrocytes of Banked Blood towards the end of Storage Period. **American Journal of Blood Research.** 10(5): 161-171. **Invited article.** PMID: 33224560; PMCID: PMC7675119. Web of science indexed
5. S.Ravikumar, S.Prabhu and **R.Vani**. **2020.** Effects of L-carnitine on the Erythrocytes of Stored Human Blood. **Transfusion Medicine.** 30(3): 215-225. doi.org/10.1111/tme.12645 **IF: 2.159** Scopus and Web of science indexed
6. Carl Hsieh, Srinivasa Prabhu and **Vani Rajashekaraiah**. **2019.** Age-Related Modulations in Erythrocytes under Blood Bank Conditions. **Transfusion Medicine and Hemotherapy**. 46(4): 257-266. doi.org/10.1159/000501285 **IF: 3.747** Scopus and Web of science indexed
7. Manasa and **Vani Rajashekaraiah**. **2018**. L-carnitine as an additive in Tyrode's buffer during Platelet storage. **Blood Coagulation and Fibrinolysis**. 29(7): 613-621. DOI. 10.1097/MBC.0000000000000760 **IF: 1.203** Scopus and Web of science indexed
8. Soumya R and **Vani R. 2017.** Vitamin C as a Modulator of Oxidative Stress in Erythrocytes of Stored Blood. **Acta Haematologica Polonica.** 48(4): 350-356. **doi.org/10.1016/j.achaem.2017.08.005** Scopus and Web of science indexed
9. Carl H and **Vani R. 2017.** Influence of L-carnitine on Stored Rat Blood: A study on Plasma. **Turkish Journal of Hematology**. 34(4): 328-333. DOI.10.4274/tjh.2016.0343 **IF: 1.685** Scopus and Web of science indexed
10. Carl H, Soumya R, Srinivas P and **Vani R**. **2016.**Oxidative Stress in Erythrocytes of Banked ABO Blood. **Hematology.** 21(10): 630-634. https://doi.org/10.1080/10245332.2016.1187824 **IF: 1.65** Scopus and Web of science indexed
11. Manasa K, Soumya R and **Vani R**. **2016.** Phytochemicals as potential therapeutics for Thrombocytopenia. **Journal of Thrombosis and Thrombolysis.** 41(3): 436-440. https://doi.org/10.1007/s11239-015-1257-8 **IF: 2.054** Scopus and Web of science indexed
12. Soumya R, Carl H and **Vani R**. **2016.** Prospects of curcumin as an additive in storage solutions: a study on erythrocytes. **Turkish Journal of Medical Sciences.** 46(3): 825-833 DOI: 10.3906/sag-1501-93 **IF: 0.717** Scopus and Web of science indexed
13. K Manasa and **R Vani**. **2016.** "Influence of Oxidative Stress on Stored Platelets," **Advances in Hematology**, vol. 2016, Article ID 4091461, 6 pages, doi:10.1155/2016/4091461. Scopus indexed

14. Soumya R and **Vani R. 2016.** Comparison of the Protective Nature of Antioxidants on Stored Erythrocytes. **Applied Medical Research**. 4(1): 39-110. doi:10.5455/amr.20160309115846 Scopmed indexed
15. K Manasa and **R Vani**. **2015.** Platelet disorders: an overview**. Blood Coagulation and Fibrinolysis.** 26(5): 479-91 doi: 10.1097/01.mbc.0000469521.23628.2d **IF: 1.203** Scopus and Web of science indexed
16. **R. Vani**, R. Soumya, H. Carl, V. A. Chandni, K. Neha, B. Pankhuri, S. Trishna and D. P. Vatsal. **2015**. Prospects of Vitamin C as an additive in Plasma of Stored Blood. **Advances in Hematology.** Article ID 961049, 7 pages, doi:10.1155/2015/961049. Scopus indexed
17. R Soumya and **R Vani. 2015.** CUPRAC-BCS and antioxidant activity assays as reliable markers of antioxidant capacity in erythrocytes. **Hematology.** 20(3): 165-174 doi.org/10.1179/1607845414Y.0000000177 **IF: 1.65** Scopus and Web of science indexed
18. **Vani R,** Soumya R, Manasa K, and Carl H. **2015.** Storage Lesions in Blood Components. **Oxidants Antioxidants and Medical Science.** 4(3): 125-132. Scopmed indexed DOI: 10.5455/oams.130915.rv.019
19. Santosh Anand, **Vani Rajashekharaiah**, Ravikiran Tekupalli: **2015**. Effect of age and physical activity on oxidative stress parameters in experimental rat model. **International Journal of Clinical and Experimental Physiology.** 2(3): 185-90. DOI:10.4103/2348-8093.169960 EBSCO indexed
20. Carl H, Chandni A, Neha Ki, Trishna S and **Vani R. 2014.** "Curcumin as a Modulator of Oxidative Stress during Storage: A Study on Plasma" **Transfusion and Apheresis Science**, 50(2): 288-293. doi: 10.1016/j.transci.2013.12.015. **IF: 1.285** Scopus and Web of science indexed
21. **Vani Rajashekaraiah,** Abel Abraham Koshy, Amit Kumar Koushik, Harsimran Kaur, kavita kumari, Madhusudan Agrawal, Priyanka, Ramya, Smrutishree Khatai, Vaishnavi Gowda and Vinay Kumar. **2012.** The efficacy of erythrocytes isolated from blood stored under blood bank conditions. **Transfusion and Apheresis Science.** 47, 359-364. doi.org/10.1016/j.transci.2012.06.014 **IF: 1.285** Scopus and Web of science indexed
22. **Vani R**, Shivashankar Reddy CS and Asha Devi S. **2010.** Oxidative stress in erythrocytes: a study on the effect of antioxidant mixtures during intermittent exposures to high altitude. **International Journal of Biometeorology.** 54(5), 553-562. doi: 10.1007/s00484-010-0304-6. **IF:2.68** Scopus and Web of science indexed
23. Asha, D.S., **Vani, R.,** Subramanyam, M.V.V., Reddy, S.S., Jeevaratnam, K. **2007.** Intermittent Hypobaric Hypoxia-Induced Oxidative Stress in Rat Erythrocytes: Protective effects of vitamin E, vitamin C and carnitine. **Cell Biochemistry and Function**. 25(2), 221-231. https://doi.org/10.1002/cbf.1344. **IF: 2.632.** Scopus and Web of science indexed

24. Reddy, S.S., Subramanyam, M.V.V., **Vani, R.,** Asha, D.S. **2007.** In vitro models of oxidative stress in rat erythrocytes. Effect of antioxidant supplements. **Toxicology In vitro.** 21(8),1355-1364. doi: 10.1016/j.tiv.2007.06.010. **IF: 2.959** Scopus and Web of science indexed
25. Asha, D.S., Subramanyam, M.V.V., **Vani, R.,** Jeevaratnam, K. **2005.** Adaptations of the antioxidant system in erythrocytes of trained adult rats: Impact of intermittent hypobaric-hypoxia at two altitudes. **Comparative Biochemistry and Physiology.** Part C 140(1), 59-67. doi: 10.1016/j.cca.2005.01.003. **IF:2.892** Scopus and Web of science indexed.

National - 2

1. R Soumya, H Carl and **R Vani. 2016.** L-carnitine as a Potential Additive in Blood Storage Solutions: A Study on Erythrocytes **Indian Journal of Hematology and Blood Transfusion.** 32(3): 328-334. doi: 10.1007/s12288-015-0569-3 **IF: 1.615** Scopus and Web of science indexed
2. K Manasa and **R Vani. 2015.** In Vitro Susceptibility of Wistar Rat Platelets to Hydrogen Peroxide and AAPH Induced Oxidative Stress. **Indian Journal of Hematology and Blood Transfusion.** 31(1): 90-97. doi: 10.1007/s12288-014-0386-0. **IF: 1.615** Scopus and Web of science indexed

Book Chapters-04

1. **Vani Rajashekaraiah**, Carl Hsieh and Masannagari Pallavi. **2021**. Modulations in Oxidative Stress of Erythrocytes during Bacterial and Viral Infections. In. Erythrocyte - A Peripheral Biomarker for Viral and Bacterial Infections. ed. Kaneez Fatima Shad. IntechOpen. London UK. (May 26th 2021). [Online First], IntechOpen, DOI: 10.5772/intechopen.98236 ISBN: 978-1-83969-121-8
2. **R. Vani** and M. Manasa. **2019.** Thrombocytopenia: Emphasis on Etiology and Therapeutics. In Platelets: Overview, Function and Disorders. Chapter ID:59784. ed. Langlier R. Pg. 57-108. Nova Science Publishers, NY, USA. ISBN: 978-1-53616-592-0 https://novapublishers.com/shop/platelets-overview-function-and-disorders/
3. **R. Vani** and R. Soumya. **2019.** Erythrocyte Disorders: Causes and Clinical Outcomes. In Erythrocytes: Structure, Functions and Clinical Aspects. Chapter ID:58035. ed. Jorissen K. Pg. 21-56. Nova Science Publishers, NY, USA. ISBN: 978-1-53615-914-1 https://novapublishers.com/shop/erythrocytes-structure-functions-and-clinical-aspects/

4. T. Ravikiran, **R. Vani** and S. Anand**. 2017.** Differential Expression of the Brain Proteome in Physical Training. In Physical Activity and Aging Brain. ed. RR Watson. Pg 21-28, Elsevier publn. eBook ISBN: 9780128052624; Hardcover ISBN: 9780128050941. https://www.elsevier.com/books/physical-activity-and-the-aging-brain/watson/978-0-12-805094-1

Patents

Patent filed in India on 23.05.2019; Published on 27.11.2020; Revision filed on 12.5.2021.
https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus

Invention titled, “A formulation of vanillic acid to enhance the platelet count during drug- induced thrombocytopenia”.
Inventors: **Vani Rajashekaraiah** and Manasa M
Application No. 201941020419.
Status: Under Examination

Research Projects:

- As Principal Investigator in a project from VGST, Govt. of Karnataka, under SMYSR (Seed Money to Young Scientists for Research) scheme, 2013. Title- “Studies on Oxidative Stress in Erythrocytes isolated from different blood groups stored under blood bank conditions. Budget-Rs. 5 lakhs; Duration-1 year.
- As Co-Investigator in on-going DST Project, 2012 titled “Potential of selected microbial pigments as cancer therapeutics: an evaluation on human cancer cell lines”. (No: SR/SO/HS-0072/2012), Principal Investigator: Dr. Varalakshmi KN, Professor, Dept. of Biotechnology, Jain University, Bangalore. Budget: Rs. 31.28 Lakhs); Duration: 3 years.
- As Co-Investigator in completed UGC Major Research Project, 2008 titled- “Proteomic Analysis of Protein Carbonyls in Rat Brain: Effect of Exercise and Aging”. Principal Investigator: Dr. Ravi Kiran T, Lecturer, Dept. of Biotechnology, Bangalore University, Bangalore. [F.No.34-267/2008 (SR)]. Duration: 3 years
- As Principal Investigator in a project from JAIN (Deemed-to-be University), 2019, titled, “An in vitro study on Erythrocytes to evaluate the role of Antioxidants in blood storage solutions”. Budget: Rs. 75,000/-. Duration: 1 year