Dr. PRABHAKAR SINGH D.Phil. (Biochemistry)

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Areas of Research Interest

Biochemistry of oxidative stress and Aging, Natural Products and Progressive ageing Disorders

Teaching Experience: 05 Academic Years

Assistant Professor (Guest): Biochemistry. VEER BAHADUR SINGH PURVANCHAL UNIVERSITY, JAUNPUR, **Date of Joining:** 07th September 2015 – Continue.

Academia

D.Phil.	Biochemistry,	Award Date:	Aug 24, 2015	University of Allahabad
M.Sc.	Biochemistry	2006-2008	First (64.10%)	University of Allahabad
B.Sc.	Biochemistry, Chemistry & Zoology	2003-2006	First (66.20%)	University of Allahabad

Research Experience

D.Phil. (2009-2014) Studies on Antioxidants and membrane modulating effects of curcumin on

cellular system.

Supervisor: Dr. Syed Ibrahim Rizvi, Professor and Head, Department of

Biochemistry, University of Allahabad, Allahabad, U.P.

Summer Training Various techniques and protocol for isolation of human genomic DNA & other

(1st June 2006- 31st July 2006) molecular techniques. **Supervisor:** Dr. Saeed Ahmad [Director]

IQRA Biotech Services, Human DNA Bank, Biotech Park, Lucknow, U.P.

Honours & Awards

SRF -CSIR (Extended)	Council of scientific and Industrial Research (CSIR), New Delhi.	2014-2015
SRF-CSIR (09/001/0355/2012/EMR-1)	Council of scientific and Industrial Research (CSIR), New Delhi	2012-2014
CSIR-UCG-NET (LS): S.No.3061132393	Council of scientific and Industrial Research (CSIR), New Delhi.	June 2011
GATE-XL(Life Sciences): SC No: 503558	Indian Institute of Technology Roorkee, Roorkee	2009
CRET: Biochemistry	Department of Biochemistry, University of Allahabad, U.P.	July 2008
Certificate in Computer Application	University of Allahabad, U.P.	2005 (First)
Award	Presentation (01) + Poster (02)	

Publications

- Singh P, Singh S, Garg G, Singh AK, Rizvi SI, Curcumin has protective effects on ROS production and redox imbalance in an experimental oxidativelly-stressed model of rat. **2020** (*Communicated*)
- 2. Singh P, Rizvi SI, Pandey KB. Piperine protects oxidative modifications in human erythrocytes, 2020 (Communicated)
- 3. Singh P, Kesharwani RK, Misra K, Rizvi SI. Modulation of Erythrocyte Plasma Membrane Redox System Activity by Curcumin. Biochemistry Research International, Volume 2016 (2016), Article ID: 6025245, 1-8 (PubMed, Scopus, SCI), RG Journal Impact Factor- 1.96
- 4. Singh P. Pandey KB, Rizvi SI. Curcumin: the yellow molecule in making life green. Letters in Drug Design & Discovery, 2015, 13(2) 170-177. IF: 0.95.
- Singh P, Rizvi SI. Modulation effects of curcumin on erythrocyte ion-transporter activity. International Journal of Cell Biology, 2015, Volume 2015, Article ID: 630246, 1-8. (PubMed, Scopus) RG Journal Impact Factor- 1.00
- Kesharwani RK, Srivastava V, Singh P, Rizvi SI, Adeppa K, Misra K. A novel approach for overcoming drug resistance in breast cancer chemotherapy by targeting new synthetic curcumin analogues against aldehyde dehydrogenase 1 (ALDH1A1) and glycogen synthase kinase-3 β (GSK-3β). Applied Biochemistry and Biotechnology, 2015, 176 (7), 1996-2017. **Springer. IF: 2.14.**
- 7. Singh P, Kesharwani RK, Misra K, Rizvi SI. The modulation effects of curcumin on erythrocyte Na+/K+-ATPase activity. Journal of Advanced Research. 2015, 6, 1023–1030, Elsevier. IF: 5.04.
- 8. Singh P, Rizvi SI. Role of curcumin in modulating plasma PON1 arylesterase activity and susceptibility to LDL oxidation in oxidatively challenged wistar rats. Letters in Drug Design & Discovery, 2015, 12 (4), 319-323. IF: 0.95.

- 9. Singh P, Kesharwani RK, Misra K, Rizvi SI. In silico validation for the modulatory effect of tea catechins on erythrocyte Na+/K+-ATPase. The Natural Products Journal, 2014, 4 (3) 173-182. ESCI, Scopus
- 10. Singh P, Rizvi SI. Curcumin activates erythrocytes membrane acetylcholinesterase. Letters in Drug Design & Discovery, **2013**, 10 (6), 550-556. **IF: 0.95**.
- 11. Mehdi MM, Singh P, Rizvi SI. Erythrocyte sialic acid content during aging in humans: Correlation with markers of oxidative stress. *Disease Markers*, **2012**, 32(3): 179-186. **IF: 2.76**.
- 12. **Singh P,** Rizvi SI. Anti-oxidative effect of curcumin against *tert* butyl hydroperoxide induced oxidative stress in the human erythrocytes. The Natural Products Journal, 2012, 2, 69-73. SCI, Scopus
- 13. Rizvi SI, Kumar D, Chakravarti S, Singh P. Erythrocyte plasma membrane redox system may determine maximum life span. *Medical Hypotheses*, **2011**, 76: 547-549. **Elsevier. IF: 1.32.**

Book Chapters

- 1. Kesharwani RK, Singh P, Kesharwani RK. "Green coffee bean extract and chlorogenic acids: Chemistry and novel antioxidant benefits", In, Bagchi D, Moriyama H, Swaroop A. "Health benefits of green coffee bean in human", CRC Press, Taylor and Francis, 2016, ISBN 9781498716376- CAT#K25397. Chapter- 01
- 2. **Singh P**, Singh S, Kesharwani RK. "Resealed erythrocytes as drug carriers and its application in therapy", In "Recent Advances in Drug Delivery Technology" Kesharwani RK, Sharma AK, Kesharwani RK. IGI Global. **2016**, pp. 341-367. **Chapter - 12.** ISBN13: 9781522507512, DOI: 10.4018/978-1-5225-0751-2.
- 3. Singh P, Kesharwani RK, Keservani RK. Antioxidants and Vitamins: Roles in Cellular Function and Metabolism. In, Bagchi D. Edition 1st "Sustained Energy for Enhanced Human Functions and Activity", Section- 4: Antioxidant and B-Vitamins. Chapter- 24, pp- 385-407. Academic Press, Elsevier, 2017, ISBN: 9780128054130.
- 4. Singh P, Kesharwani RK, Keservani RK. Protein, Carbohydrates, and Fats: Energy Metabolism. In, Bagchi D. Edition 1st "Sustained Energy for Enhanced Human Functions and Activity", Section- 1: Introduction. Chapter- 06, pp- 103-**115**. Academic Press, **Elsevier**, **2017**, *ISBN*: 9780128054130.
- 5. Yadav D, Tripathi YB, Singh P, Kesharwani RK, Keservani RK. Roles of AMP, ADP, ATP, and AMPK in Healthy Energy Boosting and Prolonged Life Span. In, Bagchi D. Edition 1st "Sustained Energy for Enhanced Human Functions and Activity", Section- 1: Introduction. Chapter- 02, pp- 31-51. Academic Press, Elsevier, 2017, ISBN: 9780128054130.
- 6. Vishwakarma V.K., Kesharwani R.K., Tripathi S., Singh P. "Role of ADMET Tools In Current Scenario; Application and Limitations" "Recent Advances in Computer-aided Drug Designing (Springer), 2020 (Accepted). -In-Press
- 7. Singh P., Kesharwani R.K., Singh K., "Therapeutic Application of Stem Cells in Diabetes: Diabetes complications and treatment (250519-041049)" Advancements of Stem Cell Technology in Disease Prevention and Treatment. IGI Global. 2020 - In Press

Article and Abstract presented and published in National/International Conferences

- 1- Oral Presentation "Role of curcumin in regulation of Plasma Membrane Redox System (PMRS) activity of erythrocytes and antioxidant potential of plasma" 1st International Conference on Novel Frontiers in Pharmaceutical & Health Sciences (INNOPHARM 1), Oct. 10-11, 2015.
- 2- Oral Presentation "Role of curcumin in regulation of ion transporters and integrity of erythrocytes membrane" National Seminar on Science and Technology for Human Development organized by the Allahabad Chapter of The Indian Science Congress Association, Department of Chemistry, University of Allahabad, India, March 14-15, 2015.
- Poster Presentation "The modulating effects of curcumin on erythrocyte membrane acetylcholinesterase activity" 3rd Annual Meeting of the Indian Academy of Biomedical Sciences & Symposium on Modern Trends in Human Diseases, organized by Department of Biochemistry, Faculty of Medicine, INMC, AMU, Aligarh, Uttar Pradesh, India. December 14 & 15, 2013.
- **4- Poster Presentation** "Curcumin mitigates oxidative stress induced impairment in Paraoxonase 1 arylesterase activity, antioxidant potential of plasma and susceptibility of LDL to oxidation in albino rats" International Conference on **Health, Environment and Industrial Biotechnology, BioSangam-2013**, organized by Department of Biotechnology, MNNIT, Allahabad, Uttar Pradesh, India. November 21-23, 2013.
- 5- Poster Presentation "The modulation of erythrocyte Na+/K+-ATPase activity by curcumin" 83rd Annual Session and Symposium on "SPACE FOR HUMAN WELFARE" organized by Goa University, Goa, India, Section of Physical Science, December 05-07, **2013**. (Abstract Accepted: Not Participated)
- Poster Presentation "Effects of curcumin on various oxidative stress markers in human erythrocytes" International Symposium on Chemistry and Chemical Biology of Natural Products (CCBNP-2012). Indian Institute of Chemical Technology, Hyderabad, Andhra Pradesh, India. August 2-4, 2012.
- Poster Presentation "Anti-oxidative effect of curcumin on erythrocyte membrane" National Conference on "Emerging Trends in Biochemistry and Satellite Symposium of the Academy of Environmental Biology" Department of Biochemistry, University of Allahabad, Utter Pradesh, India. January 23 & 24, 2010.

Symposium and Workshops Attended

- One day author's workshop on "Writing research paper" supported by SAGE publication India Pvt. Ltd. New Delhi on 30th November 2015.
- 2-Springer sponsored - Author workshop in V.B.S. Purvanchal University on 31st October 2015.
- Self-finance short term course on "Hands on training on molecular techniques in biotechnology", organized by Department of Biotechnology, MNNIT, Allahabad, Uttar Pradesh, India. January 16-22, 2015.
- One week Participation in the "4th Inspired Program/Science Conclave: A Congregation of Nobel Laureate and Eminent Scientist", an MHRD-DST initiative at IIIT-Allahabad during November 26- December 02, 2011.
- Workshop on "Scientific paper writing" organized by The National Academy of Science, India (NASI), October 22-24, 2011 at Allahabad.
- Training program in "Molecular biology application in herbal drug design and diagnostics" Department of Biochemistry, University of Allahabad. March 31, 2011- April 2, 2011.
- "Summer workshop on assessment of antioxidant activity of foods", Jointly Organized by Department of Biochemistry and Department of Home Science, University of Allahabad, July 13, 2010 at Allahabad.

Membership Of Scientific Societies

- 1. Life Member: Indian Science Congress Association (L27194), India
- 2. Annual Member Indian Academy of Biomedical Sciences (2014-2015), India.

Member of Editorial Board and Reviewer of Journal

- International Journal of Life-Sciences Scientific Research: Member of Editorial Board
- •National Academy Science Letters (Springer): Reviewer
- Journal of Applied Pharmaceutical Science: Reviewer
- Advances in Medical Sciences (Elsevier) : Reviewer
- •International Journal of Tropical Insect Science (Springer): Reviewer

Extra Curriculum Work

- 1- Coordinator- Traffic control and Passage sign: National Youth Day-2019, VBS Purvanchal University
- 2- Coordinator- Research Panel Investment Advisors, Job fair-2019 VBS Purvanchal University.
- **3- Co-Coordinator (Basketball)** Annual Sport meet- 2019, VBS Purvanchal University.

Teaching Assignment: Faculty of Science, VBSPU, Jaunpur

M.Sc. Biochemistry B.Sc. (BZC)

Paper I Biomolecules and Bioenergetics **1 Year : Chemistry:** Paper III (Physical Chemistry)

Paper V Instrumentation and Analytical Techniques

Paper XI Intermediary Metabolism

Physiology and Nutritional Biochemistry Paper X Paper XIII Clinical and diagnostic Biochemistry

Personal Dossier

Date of Birth : Male August 8, 1985 Sex Marital status: Married **Nationality** Indian

References

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Place: Jaunpur Date: 16-05-2020 (Prabhakar Singh)