

## Dr. PRABHAKAR SINGH D.Phil. (Biochemistry)

Department of Biochemistry, Faculty of Science, V. B. S. Purvanchal University,

Jaunpur, Uttar Pradesh, India. PIN-223101

Email: [pruebiochem@gmail.com](mailto:pruebiochem@gmail.com)

[https://www.researchgate.net/profile/Prabhakar\\_Singh8](https://www.researchgate.net/profile/Prabhakar_Singh8)

<https://orcid.org/0000-0003-0203-8806>

<https://www.linkedin.com/in/dr-prabhakar-singh-a4536094?trk=hp-identity-name>

Phone: +91 9454695363



### 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:** 07<sup>th</sup> September 2015 – Continue.

### Academia

D.Phil.	<b>Biochemistry,</b>	<b>Award Date:</b>	<b>Aug 24, 2015</b>	University of Allahabad
M.Sc.	<b>Biochemistry</b>	2006-2008	First (64.10%)	University of Allahabad
B.Sc.	<b>Biochemistry, Chemistry &amp; Zoology</b>	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

(1<sup>st</sup> June 2006- 31<sup>st</sup> July 2006)

**Various techniques and protocol for isolation of human genomic DNA & other molecular techniques.**

**Supervisor:** Dr. Saeed Ahmad [Director]

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

### Honours & Awards

<b>SRF-CSIR (Extended)</b>	Council of scientific and Industrial Research (CSIR), New Delhi.	2014-2015
<b>SRF-CSIR (09/001/0355/2012/EMR-1)</b>	Council of scientific and Industrial Research (CSIR), New Delhi	2012-2014
<b>CSIR-UGC-NET (LS): S.No.3061132393</b>	Council of scientific and Industrial Research (CSIR), New Delhi.	June 2011
<b>GATE-XL(Life Sciences): SC No: 503558</b>	Indian Institute of Technology Roorkee, Roorkee	2009
<b>CRET: Biochemistry</b>	Department of Biochemistry, University of Allahabad, U.P.	July 2008
Certificate in Computer Application	University of Allahabad, U.P.	2005 (First)
<b>Award</b>	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 oxidatively-stressed model of rat. **2020 (Communicated)**
- Singh P**, Rizvi SI, Pandey KB. Piperine protects oxidative modifications in human erythrocytes, **2020 (Communicated)**
- 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**
- 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  $\beta$  (GSK-3 $\beta$ ). *Applied Biochemistry and Biotechnology*, **2015**, 176 (7), 1996-2017. **Springer. IF: 2.14.**
- Singh P**, Kesharwani RK, Misra K, Rizvi SI. The modulation effects of curcumin on erythrocyte Na<sup>+</sup>/K<sup>+</sup>-ATPase activity. *Journal of Advanced Research*. **2015**, 6, 1023-1030, **Elsevier. IF: 5.04.**
- 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<sup>+</sup>/K<sup>+</sup>-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 1<sup>st</sup> "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 1<sup>st</sup> "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 1<sup>st</sup> "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.**
- 3- **Poster Presentation** "The modulating effects of curcumin on erythrocyte membrane acetylcholinesterase activity" **3<sup>rd</sup> Annual Meeting of the Indian Academy of Biomedical Sciences & Symposium on Modern Trends in Human Diseases**, organized by Department of Biochemistry, Faculty of Medicine, JNMC, 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<sup>+</sup>/K<sup>+</sup>-ATPase activity by curcumin" **83<sup>rd</sup> 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*)
- 6- **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.**
- 7- **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, Uttar Pradesh, India. January 23 & 24, **2010.**

