

**AKHLASH P SINGH**  
**Associate Professor**  
Department of Biochemistry  
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#### **Educational Qualifications**

#### **Ph.D. in Biochemistry**

- Department of Biochemistry, CCS HAU, Hissar India (2006)  
PhD Thesis: *Biochemical evaluations of aromatic and non-aromatic genotypes of rice (oryza sativa)*, Ph.D. Supervisor: Late (Prof.) Dr. DRSood
- Qualified CSIR-UGC-JRF, GATE, ASRB, SRF in Biochemistry and Biotechnology
- **M.Sc. (Biochemistry & Biotechnology)** - Department of Biochemistry HAU, Hissar India, (1997-2000)
- **Bachelor of Science, CCS HAU, Hissar India, India (1993-1996)**

#### **Teaching/Research Experience**

- Since 13.7 2006- till date  
**Assistant Professor** in Department of Biochemistry, GGD SD College, Chandigarh  
Teaching Biochemistry, Biotechnology, Bioinformatics, food Biotechnology, Genomics and proteomics at graduate and post-graduate level
- 9.7.2005 to 13 July 2006  
**Assistant Professor (Tem)** in Department of Biochemistry, GGD SD College, Chandigarh  
Teaching Biochemistry, Biotechnology, Bioinformatics, Food Biotechnology, Genomics and Proteomics at graduate and post-graduate level  
**Senior Research Fellow** in Department of Zoology, CCS HAU, Hissar, India (16.3.2001 to till Ph.D. joining)

#### **Areas of Interest** **Publications** **(Journal/Book Chapters)**

- Biochemistry, Genomics and proteomics and synthetic biology
- #### **Journal Publications:**

1. Kumar, M., Luthra, O P., Kumar, R and **Singh, A P** (2006) Identification of RAPD markers linked to the Karnal bunt resistance genes in wheat. *Biologia Plantarum*.50 (4):755-758.
2. **Singh, A P.**, Jain, V and Shawney, S K (2006) Reactivation of nitrate reductase by potassium ferricyanide in water-stressed seedlings of wheat and *Pennisetum glaucum* (L.) depends on intensity of stress. *Plant Physiol & Mole.Biol of plant*.12 (2):139-143.
3. Koushik M, **Singh, A P** Saxena, N Malhotra SP. (2007) Possible Interactions of polyamines and ethylene during ripening of Guava (*Psidium guava* L.) Fruits. *J Food Biochemistry*.32:46-59.
4. **Singh, A P.**, Sood D R and Shilpa (2007) Biological assay using rice diets. *J. Food Science & Technology*.44 (4):433-436.
5. Kumar, R; Kuhad, M S; Kumar; **Singh, A P** (2005) Influence of potassium and phosphorus on growth of and yield in

- Chickpea under water stress. *Annals of Agri Bio Research*. 21:7-11
6. Sood, DR; **Singh, AP** (2006) Changes in cooking behavior of basmati and nonbasmati rice genotypes during storages. *J Dairying Food and H S* 25: 92-96
  7. Sood, DR; **Singh, AP** (2007) Biochemical evaluations of basmati and nonbasmati rice genotypes. *Indian J. Nutri and Diets* 44: 427-438
  8. Sood, DR; **Singh, AP** (2008) Changes in the fatty acid profiles of basmati and nonbasmati rice genotypes during storage. *Indian J. Nutri and Diets* 45: 34-39
  9. Sood, DR; **Singh, AP** (2006) Influence of storage on aroma and activities of peroxides, amylase and lipase in basmati and non-basmati rice genotypes. *The Indian J. Nutri and Diets* 43:443-45
  10. Sood, DR; Deka, SC; **Singh, AP** (2006) Nutritional quality of basmati rice genotypes. *J Dairying food and Home Sci.* 25: 1-7.
  11. Singh, A. (2020). The miR156: A Master Regulator to Harmonize Complex Biofuel Traits in Lignocellulosic Biomass Crops. <https://doi.org/10.20944/preprints202006.0123.v1>.
  12. Vijeta Gupta, Mukesh Kumar, Vikram Singh, Lakshmi Chaudhary, Kavita Lamba, **Akhlesh Pratap Singh**. Delineation of genotype x environment interaction for identification of stable genotypes for different physiological traits in wheat. *Int J Res Agron* 2024;7(9S):113-120
  13. Sharma, V., Nargotra, P., Sharma, S., Bangotra, R., **Singh, A. P.**, Kapoor, N., ... & Bajaj, B. K. (2024). Purification and biochemical characterization of an ionic liquid tolerant cellulase from *Aspergillus assiutensis* VS34 for potential biomass conversion applications. *Environmental Sustainability*, 1-14.
  14. Kumar, N., Sharma, R., Aggarwal, N. K., & **Singh, A. P.** (2024). Utilization of *Parthenium hysterophorus* for the Synthesis of Lignin-ZnO Nanocomposites Aimed at Boosting Antibacterial and Antioxidant Activity.
  15. Lamba, K., Kumar, M., Singh, V., Chaudhary, L., Jain, N., Saini, A. K., ... & **Singh, A. P.** (2024). Molecular diversity and trait association analysis in different wheat genotypes for yellow rust resistance. *Journal of Crop Science and Biotechnology*, 1-14.

#### Books

1. A.P. Singh (2017) *Understanding Biochemistry: Biomolecules (978-93-86558-16-9)* Mohindra Publishing House, Chandigarh
2. A.P. Singh (2018) *Brief in Biochemistry (first and Second Edition (2021) (978-93-86555842-8)* Mohindra Publishing House, Chandigarh
3. A.P. Singh (2017) *Understanding Biochemistry: Biomolecules (978-93-86558-16-9)* Mohindra Publishing House, Chandigarh
4. A.P. Singh (2018) *Rice Grain Biochemistry: Biomolecules*

(978-93-865558-43-5) Mohindra Publishing House, Chandigarh

5. A.P. Singh (2019) Brief in Nutrition and Metabolism (978-81-94936-66-4) Mohindra Publishing House, Chandigarh
6. A.P. Singh (2019) Brief in Molecular biology (97881-94936-65-7) Mohindra Publishing House, Chandigarh

### Book Chapters

1. **A P, Singh** (2015) Biochemical Approaches for Next Generation Biofuel Production: In Biotechnology: An Overview (ISBN: 9789351243335) Astral Publishing House London 101-111.
2. **Singh, A. P.**, & Kumar, S. (2020). Applications of tannins in industry. Tannins-structural properties, biological properties and current knowledge, 1-13.
3. **A P, Singh** (2015) Biochemical Approaches for Next Generation Biofuel Production: In Biotechnology: An Overview (ISBN: 9789351243335) Astral Publishing House London 101-111.
4. **A P, Singh** (2014) Women in science: Cause of under-representation and remedies: In Challenges in higher education: An inclusive perspective (ISBN: 9383316039) Gaurav Book Centre Pvt Ltd
5. **A P, Singh** (2014) Traffic offences Environment road safety and violence against women and children: In Environment road safety education violence against women and children and drug abuse (978-93-82068-29-7)
6. **A P, Singh** (2018): Traffic offences, penalties and procedure In Environment road safety education violence against women and children and drug abuse (978-93-82068-29-7)
7. **A P, Singh** (2018) Genomic Techniques Used to Investigate the Human Gut Microbiome: In Human Microbiome IntechOpen, London, U K (978-1-78984-849-6) IntechOpen, London, UK

### Seminars/ Conferences/Symposiums (Paper Presented)

- Presented paper on 'Economics and Politics of Capitalism in India: An analysis of first term of Modi Government (2014-2019)' in WINIR Symposium on *Global Capitalism and its National Varieties in an Era of Crisis* at Loughborough University London, United Kingdom (December 16-18, 2019)
- Presented a paper (co-authored with Mr. Yonus Amiri) titled 'The Politics of Foreign Aid in Afghanistan' at First annual Interdisciplinary National Conference on *Transcending Borders and Disciplines: Culture, Literature and Society* organized by IQAC, Central University of Haryana, Mahendergarh (April 27-28 2019)

### Refresher Courses/Workshops/ Training Programmes

- Orientation Course organized by Academic Staff College Panjab University, Chandigarh, from 2.9.2011 to 29.9.2011 (3 weeks) supported by UGC, New Delhi.
- Workshop on Microbial genome sequencing and bioinformatics organized by Department of Biotechnology, GGSDS College, Chandigarh from 3.6.2014 to 30.6.2014 (3 weeks) supported by Florida agricultural and mechanical

university Florida and GGSD College, Chandigarh

- Faculty Development Programme organized by Department of Bioinformatics, GGSD College, Chandigarh, from 15.10.2013 to 22.10.2013 (1week) supported by Department of Biotechnology, Government of India
- Refresher Course in Biochemistry organized by Academic Staff College Panjab University, Chandigarh from 4.12.2013 to 24.12.2013 (3 weeks) supported by UGC, New Delhi
- FDP on Biological Data organized by Dept of Bioinformatics, GGD SD College from Feb 27 2020 to 04 March 2020(One week) supported by RUSA and DHE Chandigarh
- FDP On Reengineering of the role of teacher as mentor supported by HRDC Panjab university under RUSA HRDC Panjab university in association with GGD SD College Chandigarh from 22 July 2021 to 28 July 2021 from (One week) HRDC Panjab university under RUSA programme.

#### Invited Talks

- **A.P. Singh**, (2010, 23th Feb). Proteomic analysis of guava fruit (*Psidium guajava* L) during ripening. 5th AOHUPO Congress. 14th ADNAT Convention & 1st PSI Conference on New Perspectives in Proteome Research: Feb 21-25, 2010. **CCMB Hyderabad, India**
- **A P Singh** presented a paper "Ensure food security and nutrition by adopting biobased economy" in the National seminar "Food security in India: Issues and Challenges" organized by the **University Institute of legal studies Panjab University** date 22 June 2020.
- A P Singh presented paper Next generation Biofuels, at 10th International Oil and Gas Conference and Exhibition (PETROTECH-2012), organized by the Oil and natural Gass ministry, Government of India, October 14th -17th, 2012 at New Delhi

#### Projects

- 1. Proteomic, physiological and biochemical based study of early expressed low abundant proteins and antioxidant defense system during water stress in wheat leaf. UGC New Delhi (Completed)
- Proteomic and Biochemical study of Guava (*Psidium guajava* L.) fruit ripening DST, U.T. Administration Chandigarh. (Completed)
- Study of biochemical and cooking properties of rice genotypes in northern India. UGC New Delhi (Completed)

#### MOOCS/Online Content

##### M. Phil Dissertation Supervised

Degree awarded:1

##### PhD Thesis

NIL

##### Administrative Experience

- Warden, Boys hostel, GGD SD College Chandigarh from July 2005 till February 2025
- Acting as Head of Department of Biochemistry, GGD SD College Chandigarh from July 2007 to till date

**Membership of Economic  
Associations**

- Acting as the assistant registrar at GGD SD College from July 2021 to till may 2024.
- Contributed to preparation of syllabus of NEP2020 in Department of Biochemistry and bioinformatics for Panjab University Chandigarh
- Being part of various committees include Discipline committee, purchase committee, antiaging committees etc.
- Organized the workshops, special lectures in the department for graduate, postgraduate and faculty members.
- Successfully conducted University Exams ( ) and acting as Superintendent and Deputy) in Panjab university annual and semester exams
- Life Membership of proteomics society of India
- Life Membership of society of biological chemists
- Also act as reviewers for many journals and book published by international Publisher

**A P Singh**