

## CURRICULUM VITAE



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**Present:** Currently working as Assistant Professor in Dr. Ghanshyam Singh PG degree college, Varanasi (UP)

### Educational Qualifications:

**2009-2015:** Completed PhD from CSIR-Central Institute of Medicinal and Aromatic Plants.

Course	Year	Institution	University	Result
PhD Biotechnology	2009-2015	CSIR-Central Institute of Medicinal and Aromatic Plants	Jawaharlal Nehru university	-
M.Sc. Biotechnology	2007-2009	Indian Institute of Technology Roorkee	Indian Institute of Technology	82.10% (Aggregate)
B.Sc. (Chemistry, Zoology, Botany) Third year (Honours) in Chemistry	2004-2007	Banaras Hindu University	Banaras Hindu University	65.22% (Aggregate)
Intermediate School	2003	W.H smith memorial school	I.S.C	76.60%
High School	2001	W.H smith memorial school	I.C.S.E	79.16%

### Publications:

**Singh AK**, Kumar SR, Dwivedi V, Rai A, Pal S, Shasany AK, Nagegowda DA (2017) A WRKY transcription factor from *Withania somnifera* regulates triterpenoid withanolide accumulation and biotic stress tolerance through modulation of phytosterol and defense pathways. *New Phytologist* 215(3):1115-1131 (**Impact factor- 7.5**).

**Singh AK**, Dwivedi V, Rai A, Pal S, Reddy SG Eswara, Rao DK Venkata, Shasany A, Nagegowda DA (2015) Virus induced gene silencing of *Withania somnifera* squalene synthase negatively regulates sterol and defense related genes resulting in reduced withanolides and biotic stress tolerance. *Plant Biotechnology Journal* 13(9) 1287-99 (**Impact factor- 7.3**).

Rai A, Smitha SS, **Singh AK**, Shanker K, Nagegowda DA (2013) Heteromeric and homomeric geranyl diphosphate synthases from *Catharanthus roseus* and their role in monoterpene indole alkaloid biosynthesis. *Molecular Plant*. 6(5):1531-49 (**Impact factor- 6.3**).

Meena S, Rajeev Kumar S, Dwivedi V, **Singh AK**, Chanotiya CS, Akhtar MQ, Kumar K, Shasany AK, Nagegowda DA (2017) Transcriptomic insight into terpenoid and carbazole alkaloid biosynthesis, and functional characterization of two terpene synthases in curry tree (*Murraya koenigii*). Sci Rep. 8; 7:44126. (**Impact factor- 5.5**).

Pal S, Yadav AK, **Singh AK**, Rastogi S, Gupta MM, Verma RK, Nagegowda DA, Pal A, Shasany AK (2017) Nitrogen treatment enhances sterols and withaferin A through transcriptional activation of jasmonate pathway, WRKY transcription factors, and biosynthesis genes in *Withania somnifera* (L.) Dunal. Protoplasma 254 (1):389-399 (**Impact factor- 2.6**).

### Fellowships and Awards:

- CSIR NET JRF qualified in 2009.
- Got 96.64 percentile in All India GATE- Life sciences 2009.
- Got 22<sup>th</sup> rank in IIT (Indian Institute of technology) entrance examination JAM.
- Department of Biotechnology (DBT), Govt. of India fellowship in M.Sc. program for the duration of two years.
- Got summer research fellowship sponsored by IASc, INSA AND NASI.

### Extra Curricular Activities:

- Participated in International Symposium Medicinal plants (2015) –Organized by CIMAP Lucknow and won best poster award
- Participated in International Symposium Aromed (2009) –Organized by CIMAP Lucknow.
- Participated and presented poster in 80th Annual Meeting of the Society of Biological Chemists (2011)
- National Level Science Talent Search Examination ( 2001 ) All India Rank-148
- Chemistry Olympiad ( 2000 ) First Prize

### Practical experience:

- Molecular biology techniques
- Protein expression, blotting
- Enzyme kinetics
- Chromatographic techniques (Ion-exchange chromatography, Affinity chromatography, Gel filtration chromatography and Thin layer chromatography).
- HPLC, GC
- All kinds of spectroscopic techniques.
- Plant-tissue Cell culture

### Technical Training:

1. **Project Name:** Study of nitrile metabolizing enzyme of *Amycolatopsis sp.*
2. **Project Name:** Identification and characterization of *WRKY* transcription factor in *Withania somnifera*
3. **Project Name:** To examine consequences of ubiquitous over-expression of the non-coding *hsr $\omega$*  gene using an Enhancer-Promoter line, *EP3037*

## Personal Profile:

**Date of Birth** : 22th August 1984  
**Sex** : Male  
**Marital Status** : Married  
**Languages** : English, Hindi  
**Nationality** : Indian  
**Permanent address** : B 38/1-E Birdopur Mahmoorganj  
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