

Biographical Resume of Professor Rana Pratap Singh



RANA PRATAP SINGH

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Brief Summary

Vision and Mission:

Higher education needs a rapid improvement in quality of teaching at par to the global needs as well as expansion in infrastructure and human resources to meet out the need of huge upcoming populations especially women, rural and other marginalized communities. This dual challenge requires resource generation and identification of the market needs at one hand, and to open the access and fruits of higher education to large population of the society, on the other. He considers education **as most significant wealth for progress of the nation and a cutting edge tool for the development of contemporary knowledge based society**. He believes in mission to utilize academic knowledge, administrative skill and more than three decades rich experience of working in the state and central universities as well as research institutions of India and abroad to bring up the assigned institution , a truly world class institution.

Personal Details

Born on 1st Feb., 1959 in a small village Prithvipur (presently in Kushinagar District of Uttar Pradesh, India), he was initially educated in village schools and graduated from St. Andrews College under the Gorakhpur University, Gorakhpur. He obtained a Ph.D. in Life Sciences at Devi Ahilya Vishwavidyalaya, Indore and started a career as university teacher in 1986 at Maharshi Dayanand University, Rohtak (Haryana, India) as Lecturer and Reader in Department of Biosciences, before he left to join BBA University, Lucknow, as Professor of Environmental Science in 2005.

- Father- Late Shri Vikram Singh and Mother-Shrimati Shaingari Singh, Married, Wife - Mrs. Sheela Singh, Daughter-Archana Singh, Sons-Tarun Sainger and Manish Sainger
- Present Residence: H. No. 247, Sec-2, Udaya-2, Eldeco, Rai Bareilly Road Lucknow-226025
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- Category-General

Academic

1} Research Contributions:

Professor Rana Pratap Singh has made significant contribution in understanding of ammonia assimilation and N- metabolism in plants (Singh and Srivastava, 1982, 1983, 1986; Srivastava and Singh, 1987; Kumar and Singh, 1993; Bharti and Singh, 1993; Singh et al., 1994; Murthy et al., 1996 a, b; Bharti et al., 1996; Tripathi et al., 2015). Most of the publications have been cited frequently with 247 as maximum for one paper. The novel findings reveal the knowledge and understanding of role of different amination pathways, in ammonia assimilation in non-stress and stressed agro-climatic conditions, role of nitrogenous molecules in *in-vitro* morphogenesis and development and application of low cost organic matrix based granular slow release fertilizers for rice, wheat, mustard and other crops. Besides, he has contributed some new knowledge on toxicity and remediation of soil and water ecosystems (Baudh and Singh, 2011, 2012 a,b; Pandey et al., 2012, Singh et al., 2010, 2012, Sainger et al., 2011).

He has 30 years of PG teaching and 35 years of research experience as well as 10 years of administrative experiences in MD University, Rohtak and BBA (Central) University, Lucknow. He has guided 27 students for successful award of Ph.D. degree and published about 100 original research papers, 14 review articles and 24 book chapters. He has guided over 100 M.Sc. and M. Phil students for their Dissertations. The Google Citation Indices are ; Citation: 1794, H-index: 22 and i10: 47 upto 31 March, 2015 to his credit.

2} Editorial Responsibilities and Books

Professor Singh is working as Editor-in-Chief of an International Journal “Physiology and Molecular Biology of Plants (www.springer.com/journal/12298) since 2002, which was started in 1995, as publication of Academy of Green World and now published by Professor H.S. Srivastava Foundation for Science and Society, Lucknow (www.phssfoundation.org.in). The journal is marketed globally by Springer over 10,000 destinations worldwide. It has a Scopus rating of about 1.0 and is considered a leading international journal in field of Plant Science. He is Editor of another International Research Journal “Climate Change and Environmental Sustainability” (www.indianjournals.com), started in 2013 and published by the Society for Science of Climate Change and Sustainable Environment, New Delhi (www.ssceindia.org) and marketed by Indian Journals.com, New Delhi. He is also in Editorial Board of many reputed Research Journals. He is Editor of a multilingual quaternary magazine " Kahaar " (www.kahaar.in), started in 2014, focused on communicating knowledge and practices of sustainable development to common masses and school students.

Professor Rana Pratap taught several hundred students for their M.Sc. courses in Plant Science, Biochemistry, Biotechnology and Environmental Science and has contributed 17 books

published from Springer (www.springer.com), Kluwer Academic Publishers, The Netherlands, CAB International (www.cabi.org), Studium Press, LLC, Houston, USA , Science Publishers, USA, Sci Tech Publishing LLC, USA, IBH & Oxford, New Delhi and Associated Publishing Company, New Delhi which includes 3 series 1) Nitrogen in Relation to Plants (Five Books); 2) Plant Genetic Engineering (9 Books) and 3) Legume Biotechnology (2 Books), besides independent titles (List will follow).

3} Administrative Experiences:

He worked as Dean School for Environmental Science and Head Department of Environmental Science for a full tenure i.e., three years each and worked as Controller of Examinations in the BBA University, Lucknow for one and half years besides his teaching and research assignments and participated in various committees and statutory bodies of the University time to time as chairman or member. Professor Rana Pratap Singh has worked as member of a MoEF nominated committee, State Expert Appraisal Committee, U.P. at Directorate of Environment, Lucknow for a period of 3 years during 2011 to 2013. He is presently working as Dean in-charge School for Management Studies and Coordinator, Centre for Industry Institution Partnership Program (CIIPP) in the university.

4} Science Communication and Literature:

During his stay in Madhya Pradesh and Haryana, Prof. Singh was actively involved in the activities of literacy, science literacy and science communication through the NGOs like Eklavya and Haryana Vigyan Manch (HVM). The same is continued with Professor H. S. Srivastava Foundation for Science and Society, Lucknow and Prithvipur Abhyadaya Samiti, Lucknow. The HVM was honoured with best science popularizing agency to children in early nineties when he was Secretary. He worked as member, Joint Secretary, Secretary and President for about 1½ decades with HVM and worked as Editor for its two Hindi monthly magazines namely Haryana Science Bulletin (From 1991 to 1996) and Parasmani, Children’s magazine (from 1997-2000). His books for children “Ek Tha Suraj, Ek The Ped” and “Pahale Murgi Ayee Ya Anda” witnessed many editions, awarded by Haryana Sahitya Academy (Ek Tha Suraj, Ek Tha Ped) , and was transcribed in Telegu and Malayalam. He wrote other books also for children and neo-literates and transcribed books of Prof. S. Sivadas from Malayalam through English. He wrote script for a Hindi serial “Sare Jahan Se Achha” broadcasted by DD-2 and Anchored by Mr. Gauhar Raza. Presently, he is editing a multilingual magazine Kahaar (www.kahaar.in) for science communication to common masses and working with a rural library network for knowledge exposure of rural people.

Honours and Awards

Name of Award	Year	Awarding Agency
AEB Honor	2012	The Academy of Environmental Biology, India, Lucknow
Scientist of Excellence Award	2008	Society for Plant Research, Meerut Indian Society for Plant Physiology, New Delhi

R. D. Asana Medal	1992	
JEB Young Scientist Award	1992	Academy of Environmental Biology India, Lucknow
INSA Visiting Fellowship	1992	INSA, New Delhi, India
UNESCO ST Biotech Fellowship	1994	UNESCO, Paris, France
NSERC Biotech Visiting Fellowship	1996	University of Guelph, Canada
Haryana Sahitya Academy First prize on Poetry Book	1988-89	Haryana Sahitya Academy, Chandigarh
Haryana Sahitya Academy First prize on Children's Books on Science	1994-95	Haryana Sahitya Academy, Chandigarh

Professional Experiences and Job assignments

Post held	Duration	Institute/ University
JRF and SRF CSIR, New Delhi	1981- 1986	D A University, Indore and M. D. University, Rohtak
University Teacher	1986-2005 2005- till date	M. D. University, Rohtak B.B.A. University, Lucknow
Scientific Officer, Biochem	1988*	U. P. Council of Sugarcane Research, Shahjahanpur, India
INSA Visiting Fellow	1992**	AIIMS, New Delhi
UNESCO ST Biotech Fellow	1994**	University of Guelph, Ontario, Canada
NSERC, Biotech Visiting Fellow	1996**	University of Guelph, Ontario, Canada
* Lien from M.D. University, Rohtak		
** Duty/ Academic leave from M. D. University, Rohtak		

Fellow of Academic Societies

- Fellow of Academy of Environmental Biology of India (HQ: IITR, Lucknow).
- Fellow of Indian Society for Plant Physiology, New Delhi (HQ: IARI, New Delhi)

Membership of Academic Societies

- Life member of National Academy of Sciences, Allahabad India, Indian Science Congress Association, Calcutta, International Society for Environmental Botanist, Lucknow, Academy of Environmental Biology India, Lucknow, Indian Society for Plant Physiology, New Delhi, Society for Plant Physiology and Biochemistry, New Delhi, Society for Plant Biochemistry and Biotechnology, New Delhi, Professor H.S. Srivastava Foundation for Science and Society, Lucknow, The Society for Science of Climate Change and Sustainable Environment, New Delhi, Haryana Vigya Manch, Rohtak.
- Member Executive Committee International Society of Environmental Botanists, CSIR-National Botanical Research Institute, Lucknow.
- Member Editorial Advisory Board, Vigyan Ganga, A Science Magazine of Banaras Hindu University, Varanasi.

Symposia and Conferences

- Delivered over 50 invited talk in several National conferences/ symposia /Refresher course for University Teachers etc.
- Chaired technical sessions for more than 25 times in many national and international conferences/ symposia / workshops/ seminars.
- Presented over 100 papers in National and International conferences/ seminars/ symposia and workshops.

National/International Scientific Exchange/Training, Collaboration

- Course in Protein Biochemistry organized by Deptt. Of Biotechnology Govt. of India, Govt. of India in 1991 at AMU, Aligarh (Three weeks).
- Indian National Science Academy, New Delhi visiting fellowship to work in Deptt. of Biophysics, All India Institute of Medical Sciences, New Delhi in 1992 to work on a research project on enzyme Amine Oxidase (two months).
- UNESCO ST Biotechnology fellowship by UNESCO, Paris to work on a collaborative project on somatic embryogenesis in geranium, peanut and chickpea at University of Guelph, Ont, Canada in 1994(Three months).
- NSERC Biotechnology fellowship to visit the same laboratory at University of Guelph, Ont, Canada in 1996 (four month).
- Visited Yunan Agricultural University Kunming, China for a International workshop cum training course on Molecular technique in Disease resistance of Crop Plants in 2002 (15 day).
- Hosted three Senegalese scientists from three different Research Institutes of Thies-Escale, Daker and Kolda of Senegal in own laboratory to develop collaborative research projects on *Sesamum indicum* in 2002(10 days)

Academic and Research Training

- Graduated from Gorakhpur University, Gorakhpur (presently DDU Gorakhpur University), in 1979 with M.Sc. First Class in Botany. Awarded Ph.D. on, “***Assimilation of Inorganic Nitrogen and Primary Amination Reactions in Maize Leaves***” by Devi Ahilya University, Indore in Life Sciences (Plant Biochemistry)
- Got training in protein biochemistry at Department of Biochemistry Aligarh Muslim University, Aligarh and All India Institute of Medical Sciences New Delhi on Short Assignments in 1989 and 1992.
- Visited University of Guelph Ontario, Canada twice in 1994 and 1996 on a short term UNESCO and NESERC Biotech Fellowships and Yunnan Agricultural University, Kunming, PR China in 2002.
- 3 Senegalese (South Africa) Scientist visited my laboratory at MD University, Rohtak in 2002 for about 15 days for some collaborative work.

Specializations

- Plant Functional Biology, Climate Change Research, Environmental Impact Assessment, Science Communication/ Children's Writing, Poetry

Research Interest

- Nitrogen Metabolism, Stress Biology, Bioremediation, Ecological Agriculture, Climate Impact Studies

Detailed List of Research Publications

Cumulative Impact factor of Research Publications (Thomas Reuters) : 131.24

Citation indices (Google Scholar)		
	All	Since 2010
Citations	1794	1012
h-index	22	17
i10-index	47	33

BOOKS

1. *Biotechnological Approaches for Mitigation of Climate Change* (2015) **Jaiwal P.K., Singh R.P.** and Dhankher O.P. (Ed.) Springer (In Press)
2. *Plant Membrane and Vacuolar Transporter* (2008). **Jaiwal P.K., Singh R.P.** and Dhankher O.P. CAB International (www.cabi.org), U.K.
3. *Nitrogen Nutrition and Plant Productivity* (2006). **Singh, R. P.,** Shankar, N. and Jaiwal, P.K. Studium Press, LLC, Houston, USA.
4. *Molecular Strategies for Improving Nitrogen use efficiency in Plants.* (2006) **Singh, R.,P.,** Shankar,N.and Jaiwal, P.K Studium Press, LLC, Houston, USA.
5. *Plant Genetic Engineering Vol 8: Metabolic engineering and molecular farming.* (2006) Jaiwal, P.K.and **Singh, R.P.** Studium Press, LLC, Houston, USA, 2006.
6. *Nitric Oxide Signaling in Higher Plants* (2005) Jose R. Magalhaes, **Rana P.Singh** and Leonidas P.Passos. Studium Press, LLC, Houston, USA
7. *Plant Genetic Engineering Vol 1: Applications and Limitations* (2003) **Singh, R.P.** and Jaiwal, P.K. Sci-Tech. Pub. Co. Houston, USA.
8. *Plant Genetic Engineering Vol 2: Improvement of Food Crops* (2003) Jaiwal, P.K. and Singh, **R.P.** Sci-Tech. Pub. Co. Houston, USA.
9. *Plant Genetic Engineering Vol 3: Improvement of Commercial Plants-1* (2003) **Singh, R.P.** and Jaiwal, P.K. Sci-Tech. Pub. Co. Houston, USA.
10. *Plant Genetic Engineering Vol 4: Improvement of Commercial Plants-11.* (2003) Jaiwal, P.K.and **Singh, R.P** Sci-Tech. Pub. Co. Houston, USA.
11. *Plant Genetic Engineering Vol 5: Improvement of Vegetables* (2003) **Singh, R.P.** and Jaiwal, P.K. Sci-Tech. Pub. Co. Houston, USA.
12. *Plant Genetic Engineering Vol 6: Improvement of Fruits.* (2003) Jaiwal, P.K. and **Singh, R.P** Sci-Tech. Pub. Co. Houston, USA.
13. *Focus on Biotechnology10A: Improvement Strategies for Leguminosae Biotechnology.* (2003) Jaiwal, P.K. and Singh, **R.P.** Kluwer Academic publishers, The Netherlands.

14. *Focus on Biotechnology 10B: Applied Genetics of Leguminosae Biotechnology*. (2003) Jaiwal, P.K. and Singh, **R.P.** Kluwer Academic publishers, The Netherlands.
15. *Nitrogen Nutrition and Plant Growth* (1999) Srivastava, H.S. and **Singh, R.P.** Science Publishers, Enfield, USA/ Oxford and IBH Publishing Co. Pvt. Ltd. New Delhi (Dual Edition)
16. *Strategies for Improving Salt Tolerance in Higher Plants*. (1997) Jaiwal, P.K., **Singh, R.P.** and Gulati, A Science Publishers, Enfield, USA/ Oxford and IBH Publishing Co. Pvt. Ltd. New Delhi (Dual Edition)
17. *Nitrogen Nutrition in Higher Plants* (1995) Srivastava, H.S. and **Singh, R.P.** Associated Publishing Co. New Delhi

BOOK CHAPTERS.

1. **Singh R.P.**, Baudhdh K., Sainger M., Sainger, P.A., Singh, J. and Jaiwal P.K. (2011). Nitrogen use efficiency in higher plants under drought, high temperature, salinity and heavy metal contaminations. Jain, V. and Kumar, P.A. (Eds). 2010. Nitrogen Use Efficiency in Higher Plants. New India Publishing Agency (India) Pvt. Ltd. Pp: 99-123.
2. **Singh R.P.**, Sainger M., Baudhdh K., Senger R.S. and Jaiwal P.K. (2010). Sustained nutrient supply reduced nutrient loss and high plant productivity with slow release fertilizers. Senger R.S. and Sharma A.K. (Eds). 2010. Stable Food Production and Sustainable Agriculture. Studium Press (India) Pvt. Ltd. Pp: 62-79.
3. **Singh R.P.**, Sainger M., Singh D.P. & Jaiwal P.K. (2008). Nitrate and ammonium transporters in plants. *In: Plant Membrane and Vacuolar Transporters* (Eds Jaiwal P. K., Singh R.P. & Dhankhad O.P.) CAB International pp: 83-103.
4. Dahiya S. Choudhary, D. Jaiwal R., Dhankher, O.P., **Singh, R.P.** and Jaiwal, P.K. (2008). Elemental biofortification of crop plants. *In: Plant Membrane and Vacuolar Transporters* (Eds Jaiwal P. K., Singh R.P. & Dhankhad O.P.) CAB International pp: 345-371.
5. **Singh R.P.**, Sainger M. & Sharma V. (2007). Genetic engineering of plants for environmental cleanup In: *Biotechnology in Plant Improvement*. (Ed Trivedi P.C.) Pointer publishers Jaipur, pp 316-337.
6. **Singh. R.P.**, Sharma, V and Jaiwal, P.K. (2007) Genetic engineering and biotechnology: book on plant physiology and biochemistry by National Institute of Science Communication and Information Resources (NISCAIR, CSIR), New Delhi, www.niscair.res.in
7. **Singh R.P.**, Dhanial G., Sharma A. & Jaiwal P.K. (2006). Biotechnological Approach to Improve Phytoremediation Efficiency for Environment Contaminants. *In: Environmental Bioremediation Technologies* (Eds Singh S.N. & Tripathi R.D.) Springer 223-258
8. Jaiwal, P.K. and **Singh, R.P.** (2006) Genetic manipulations of nitrogen assimilation to improve nitrogen use efficiency and yield of plants. In *Biotechnological Approaches Improve Nitrogen Use Efficiency in Plants* (Eds. Singh, R.P. and Jaiwal, P.K.) Studium Press, LLC, Houston, USA Pp 257-284
9. Sharmila P., **Singh, R.P.** and Pardha Sardhi, P. (2006) Nitrogen in interaction with sulfur metabolism in plants. In. *Biotechnological Approaches Improve Nitrogen Use Efficiency in Plants* (Eds. Singh, R.P. and Jaiwal, P.K.) Studium Press, LLC, Houston, USA. Pp 241-256
10. **Singh R.P.**, and Jaiwal P.K, *Biotechnological Approaches to improve Nitrogen use efficiency in Plants*, Studium press, LLC, Houston, USA
11. **Singh, R.P.**, Usha, Shankdhar, N. and Jaiwal, P.K. (2006) Nitrogen utilization in plants under salinity stress. In: *Nitrogen Nutrition and Plant Productivity*. (Eds. Singh, R.P., Shankar N. and Jaiwal, P.K.) Studium Press, LLC, Houston, USA. Pp 203-276.

12. Srivastava H.S., Shankar N., Yamaya T. and **Singh R.P.** (2006). Glutamatesynthese, ammonia assimilation and plant productivity. (Eds. Singh, R.P. and Jaiwal, P.K.) Studium Press, LLC, Houston, USA. Pp 135-166.
13. **Singh, R.P.**, Dahiya,S.,Usha, and Jaiwal, P.K.(2004) Slow release fertilizers for sustained nitrogen supply and high plant productivity. In: *Nitrogen Nutrition and Plant Productivity*. (Eds. Singh, R.P., Shankar N. and Jaiwal, P.K.). Studium Press, LLC, Houston, USA. Pp 329-349.
14. **Singh, R.P.**, Usha, Rizvi, S.M.H., Sonia and Jaiwal, P.K. (2003) Biotechnological strategies for enhancing abiotic stress tolerance in legumes. In: *Focus on Biotechnology10A:Improvement Strategies for Leguminosae Biotechnology*. Kluwer Academic publishers, The Netherlands.pp223-243.
15. Sonia, **Singh, R.P.**, Sharma, K.K, and Jaiwal, P.K (2003) *In vitro* regeneration and transformation of chickpea In: *Focus on Biotechnology10B: Applied Genetics of Leguminosae Biotechnology*. Kluwer Academic publishers, The Netherlands.pp 69-87
16. Sahoo L.,Sugla T.,Baloda A., **Singh, R.P**, and Jaiwal, P.K (2003) Engineering abiotic stress tolerance in crop plants. In: *Plant Genetic Engineering Vol.1 Applications and Limitations* (Singh RP and Jaiwal, PK eds) Sci-Tech Publishers, Houston, USA. pp123-146.
17. Sahoo L.,Singh N.D., SuglaT., **Singh, R.P** and Jaiwal P.K. (2003) Genetic transformation of legumes In: *Plant Genetic Engineering Vol.2 Improvement of food crops* (Jaiwal, PK and Singh RP eds) Sci-Tech Publishers, Houston, USA.pp267-326.
18. **Singh R.P**, Murch, S.J. and Saxena, P.K. (1999). The role of nitrogen in plant morphogenesis *in vitro*. In *Nitrogen Nutrition and Plant Growth* (Srivastava H.S. and **Singh R.P.** Eds.) Science Publishers Enfield USA/Oxford &IBH Publication Co. Pvt. Ltd. New Delhi pp 205-229.
19. Mishra, S.N., Jaiwal,P.K., **Singh R.P.**,Srivastava H.S. (1999). Rhizobium legume association. In: *Nitrogen Nutrition and Plant Growth* (Srivastava H.S. and **Singh R.P.** Eds.)Science Publishers Enfield USA/Oxford &IBH Publication Co. Pvt. Ltd. New Delhi. Pp. 45-102.
20. **Singh R.P.**,Chaudhary A., Gulati,A, Dahiya H.C., Jaiwal,P.K.and Sengar,R.S. (1997).Response of plants to salinity in interaction with other abiotic and biotic factors. In *Strategies for Improving Salt Tolerance in Higher Plants* (Eds. Jaiwal, P.K., **Singh R.P.** and Gulati,A.) Science Publishers Enfield USA/Oxford &IBH Publication Co. Pvt. Ltd. New Delhi pp 25-41.
21. Jaiwal,P.K. **Singh R.P** and Gulati,A(1997). Perception of salt signals by higher plants. In *Strategies for Improving Salt Tolerance in Higher Plants* (Eds. Jaiwal,P.K., **Singh R.P.** and Gulati,A.) Science Publishers Enfield USA/Oxford &IBH Publication Co. Pvt. Ltd. New Delhi pp 41-54.
22. Jaiwal,P.K. and **Singh R.P.**(1995). Regulation of nitrogen assimilation by plant Growth hormones. In *Nitrogen Nutrition in Higher Plants* (Eds. Srivastava H.S.and **Singh R.P.**) Associated Publishing Company, New Delhi, pp401-416.
23. **Singh R.P.**(1995). Ammonia Assimilation. In *Nitrogen Nutrition in Higher Plants* (Eds. Srivastava H.S.and **Singh R.P.**) Associated Publishing Company, New Delhi, pp189-203.
24. Singh J. **Singh R.P.**, Sinha O.K. and Aganihotri, V.P.(1994). Biochemical aspects of diseasesresistance with special refrance to red rot disease of sugarcane. In *Current Trends In Sugarcane Pathology* (Prof. K.S.Bhargava Festschrift) (Eds. Rao,G.P., GillaspieJr. A.G., Upadhyaya, P.P., Bergamin, A., Aganihotri,V.P. and Chen ,C.T.),Int.Books and Period.Sup.Serv.Delhi,PP.259-275.

REVIEW ARTICLES

1. Pandey, V.V., Singh, J.S., Singh, D.P., Singh, R.P. (2013). Metanotrophs: promising bacteria for environmental remediation. International Journal of Environmental Science and Technology, DOI 10.1007/s13762-013-0387-9 [Impact Factor: ISI=1.844].

2. Pandey V.C., Singh, K., Singh J.S., Kumar A., Singh B. and Singh R.P., (2012). *Jatropha curcas*: A potential biofuel plant for sustainable environmental development. *Renewable and Sustainable Energy Reviews*. 16, 2870-2883 [**Impact Factor: ISI=6.018**].
3. Pandey V.C., Singh J.S., Singh R.P., Singh N. and Yunus M. (2011). Arsenic hazards in coal fly ash and its fate in Indian scenario. *Resources, Conservation and Recycling*, 55, 819-835. [**Impact Factor: ISI=2.692**]
4. Singh, J. S. Abhilash, P.C, Singh H.B., **Singh R. P.** and Singh D.P. (2011). Genetically engineered bacteria: An emerging tool for environmental remediation and future research perspectives. *Gene* 480, 1–9 [**Impact Factor: ISI=2.268; NAAS=7.70**].
5. Sonia, Jaiwal, R., **Singh R.P.** and Jaiwal P.K., (2007) Genetic Engineering for Storage pest resistance in plants. *Physiol. Mol. Biol. Plants*. 13: 101-113 [**Impact Factor: NAAS=5.2**]
6. Chhabra, G., Singh R.P. and Jaiwal P.K. (2007) Duckweed (*Lemna* spp) Biotechnology for Commercial Exploitation. *Physiol. Mol. Biol. Plants* 13: 1-7. [**Impact Factor: NAAS=5.2**]
7. Singh, R. P. and Jaiwal, P.K. (2003) Arsenic Phytoremediation: New hopes for old problem. *Physiol. Mol. Biol. Plant*. 9:1-3. [**Impact Factor: NAAS=5.2**]
8. Bhupinder, P. Saharmila, **Singh R. P.** and Pardha Saradhi. (2002) Nitrogen- Sulfur interactions in Plants *Physiol. Mol. Biol. Plants* 8(2): 213-220. [**Impact Factor: NAAS=5.2**]
9. Jaiwal, P.K., Sahoo, L., Singh, N.D and **Singh, R.P.** (2002) Development of marker free transgenic plants-an environmental friendly approach. *Curr Sci*. 83(2): 128-136. [**Impact Factor: ISI=0.782; NAAS=7.20**].
10. **Singh, R.P.**, Singh, H.B., Sharma, A., Rizvi, S.M.H., Jaiwal, P.K. (2001) Phytoremediation of heavy metals using Indian mustards. *Brassica* 3: 33-41.
11. Sahoo, L., Sugla, T., Singh, N.D., Sonia, Nijsure, P., Gulati, A., **Singh, R.P.** and Jaiwal, P.K (2001) Current status and future strategies in genetic improvement of cowpea. *Vegetal Res*. 28(1): 9-16.
12. **Singh, R.P.** Tripathi, R.D. Sinha, S.K., Maheshwari R. and Srivastva, H.S. (1997). Response of higher plants to lead contaminated environment. *Chemosphere* 34:2467-2493. [**Impact Factor: ISI=3.155; NAAS=7.79**].
13. Sengar, R.S., Pant, R.C, **Singh, R.P.** and Srivastava H.S. (1995). Role and regulation of GS-GOGAT enzymes in higher plants. *Plant Physiol. Biochem.*, 22:89-100. Presently renamed as *Journal of Plant Biology, India* [**Impact Factor: NAAS=3.6**].
14. Srivastava H.S., and **Singh R.P.**, (1987). Role and regulation of L-glutamate dehydrogenase in higher plants. *Phytochemistry*. 26:597-610 [**Impact Factor: ISI=3.150; NAAS=7.9**]

Total Impact Factor of Review Articles: ISI=19.186; NAAS=54.99

RESEARCH PAPERS

1. Ashok, V., Kumar, S., **Singh, R.P.** (2014). Enhanced growth and yield of Rice (*Oryza sativa* L.) and soil enrichment is mediated by enhanced availability of N and P in soil and plant leaves on application of organic matrix entrapped urea and DAP. *International Journal of Environmental Botany*. (In Press).
2. Shah, A.B., Rai U.N., **Singh, R.P.** (2015). Correlations between some hazardous inorganic pollutants in the Gomti River and their accumulation in selected macrophytes under aquatic ecosystem. *Bulletin of Environmental Contamination and Toxicology*. DOI 10.1007/s00128-015-1546-0 [**Impact Factor ISI= 1.216**]
3. Kumar M., Baudh K., Sainger M., Sainger AP., **Singh R.P.** (2015). Increase in Growth, productivity and nutritional status of Wheat (*Triticum aestivum* L) and enrichment in soil microbial population

- applied with biofertilizers entrapped with organic matrix. **Journal of Plant Nutrition**, [Impact Factor: ISI=0.536] 38:260-276 DOI 10.1080/01904167.2014.957391.
4. Tripathi, P., Singh, R.P., Sharma, Y.K., Tripathi, R.D. (2015). Arsenite stress variably stimulates prooxidant enzymes, anatomical deformities, photosynthetic pigment reduction and antioxidants in arsenic tolerant and sensitive rice seedlings. *Environmental Toxicology and Chemistry* (Accepted) [Impact Factor: ISI=2.826].
 5. Kumar, A., Tripathi, R.D., Singh, R.P., Singh, P.K., Awasthi, S., Chakrabarty, D., Trivedi, P.K. (2014). Selenium ameliorates arsenic induced oxidative stress through modulation of antioxidant enzymes and thiols in rice (*Oryza sativa* L.). *Ecotoxicology* (DOI 10.1007/s10646-014-1257-z) [Impact Factor: ISI= 2.50].
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Research Projects Under Sponsorship of Funding Agency

Total Funds Received: About 1.5 Crore

- Nutrient use efficiency in wheat on application of conventional chemical fertilizers, biofertilizers and organic matrix entrapped granular fertilizers at different irrigation levels (UGC, New Delhi)
- Entrapment of biofertilizers in an organic matrix to enhance efficacy for wheat productivity. (CST, UP Project, PI, completed)
- Role of proline and ABA in regulation of ammonia assimilation and accumulation of nitrogenous metabolites in mung bean differing in salt tolerance (DST Major Project, PI)
- Transgenic of mung bean for yellow mosaic resistance (as Co-PI, DBT, New Delhi) (Multi-Institutional mega project; completed)
- Role of proline in TDZ-induced in vitro regeneration of grain legumes; pea, bean, mung bean and pigeon pea. (Under NSERC Canada sponsored research project)
- Response of some nitrogen compounds on TDZ-induced somatic embryogenesis in peanut, geranium and chickpea. (Under UNESCO sponsored Bio-Tech. Fellowship).
- Role of proline in TDZ-induced somatic embryogenesis in chickpea (UGC Major Project, PI)
- PQQ-binding of Cu-Amine-oxidase isolated lentil/pea seedlings (CSIR, New Delhi)
- Isolation and purification of Cu-Amine Oxidase from lentil seedlings (under INSA Visiting Fellowship)
- Isolation and immobilization of chloroplast from sugarcane leaves (UGC minor project.)
- Some biochemical studies on sugarcane infected with red rot and grossy shoot diseases (under UP Council of Sugarcane Research, Worked as Scientific Officer In charge)
- Purification, characterization of glutamate synthase enzyme from root and leaves of maize seedlings (as SRF, CSIR, New Delhi).
- Assimilation of inorganic nitrogen and primary assimilation reactions in maize seedlings (as JRF, CSIR, New Delhi)

Popular Books for Children and neoliterates- 05

- Pehle Murgi Ayee Ya Unda?: Published in 5 Editions
- Ek Tha Sooraj Ek Tha Ped: Published in 5 Editions and Awarded with Haryana Sahitya Academy First Prize Parkhanali me Paudha
- Bharat Ram Ki Poli
- Shushila Ka Peehar

Children Books Transcreated from Malayalam through English

- Anda aur Danda (Author: S. Siva Das)
- Kabhi na Khatm Hone Wali Kahani (Author: S. Siva Das)

Own books and articles transcreated in other languages

- Ek Tha Sooraj Ek Tha Ped: Transcreated in Telgu
- Article on Nigra fall transcreated in Malyalam and published in famous children magazine Eureka
- Several Articles in Social and Scientific Issues and poems have been published in various news papers and magazines like Dharam Yug, Saptahik Hindustan and Kadmbhari, etc.

Poems

- Book Hasiye Per Lage Nisan; Awarded with Haryana Sahitya Academy First Prize
- A PDF file (Poems) loaded on www.ranapratap.in/publications/literature (Free assess available).

b) Ph. D Projects for self and Ph. D. Students Guided by him

Research Stage	Title of Work/Thesis	University where work was carried out
Ph.D.	Assimilation of Inorganic Nitrogen and Primary Amination Reactions in Maize Seedlings	Devi Ahilya University, Indore
Post-Doctoral	1. INSA Visiting Fellow (1992) 2. UNESCO ST Biotech Fellow(1994) 3. NSERC, Biotech Visiting Fellow (1996)	AIIMS, New Delhi Uni. of Guelph, Ontario, Canada Uni. of Guelph, Ontario, Canada
Publications	Please see Annexure-I	

Research guidance Name of students awarded Ph.D. Degree

1.	Dr. Sushila Dabas	To study the effect of lead on efficiency of nitrogen fixation and nitrogen assimilation in <i>Vigna radiata</i> .	M.D. University, Rohtak
2.	Dr. Sridevi Prasad	Impact of heavy metal of industrial effluents on blue green algae and fish/zooplankton in a paddy field.	M.D. University, Rohtak
3.	Dr. Anil Chaudhary	Role and regulation of Cu amine oxidase in heavy metal stress of <i>Vigna radiata</i>	M.D. University, Rohtak
4.	Dr. Asha Sharma	Phytoremediation of heavy metal contaminated soil using potential plant species for metal removal.	M.D. University, Rohtak
5.	Dr. S.H.M. Rizvi	Molecular and Biochemical basis of <i>in vitro</i> somatic embryogenesis in Chick pea (<i>Cicer arietinum</i> L.)	M.D. University, Rohtak
6.	Dr. Preeti Chaudhary	Developing low cost slow release fertilizer as eco-friendly efficient plant Nutrition	M.D. University, Rohtak
7.	Dr. Sonia	Development of transgenic mungbean seeds resistant to storage pest bruchid beetles.	M.D. University, Rohtak
8.	Dr. Usha Dhull	Ammonia Assimilation in Relation to Proline Accumulation in Salt Stressed Mungbean (<i>Vigna radiate</i> L. <i>Wilzeck</i>)	M.D. University, Rohtak
9.	Dr. Amita Gupta	Proline Metabolism and Antioxidative Defense System in Mung bean Under	M.D. University, Rohtak

		Salt Stress.	
10.	Dr. Geeta Dhania	Biotechnological Approach for improving Abiotic Stress Tolerance in <i>Brassica Juncea</i>	M.D. University, Rohtak
11.	Dr. Kavita Jain	Biotechnological Approach for improving Abiotic Stress Tolerance in Chickpea	M.D. University, Rohtak
12.	Dr. Saroj Dahiya	Development and performance evaluation of slow release fertilizers for rice and mung bean	M.D. University, Rohtak
13.	Dr. Neelam Arya	Development of sulphure rich slow release fertilizers for improved nutrient utilization and high yield of crop plants	M.D. University, Rohtak
14.	Dr. Manoj Kumar	Development and performance evaluation of organic slow (controlled) release fertilizers on wheat and rice under salinity stress	BBA University, Lucknow
15.	Dr. Vinod Kumar	Studies on eco-friendly organic matrix based slow release fertilizers for improved nutrient utilization and high yield in Indian mustard (<i>Brassica juncea</i> L.) under the salinity stress.	BBA University, Lucknow
16.	Dr. Shobha Rawat	Studies on medicinally important Lichens on their conservation in some forest sites of Chamoli District, Uttarakhand India.	BBA University, Lucknow
17.	Dr. Surendra Vikram Ghavri	Studies on phytoremediation of wasteland contaminated with industrial effluent of Sandila Industrial area, District, Hardoi, Uttar Prades (India).	BBA University, Lucknow
18.	Dr. Pankaj Sharma	Effects of nutrient, Water and Tillage management on microbial activities and plant growth promoting rhizobacteria (<i>Pseudomonas</i> , <i>Bacillus</i> , <i>Azotobacter</i>) in soil under rice-wheat cropping system	BBA University, Lucknow
19.	Dr. Satish Rawat	Management of nitrate pollution in water by phytoremediation	BBA University, Lucknow
20.	Dr. Shailendra Singh	Nesting Ecology and conservation of endangered Batagur (<i>Kachuga</i>) species in National Chambal (river), Sanctuary, Uttar Pradesh	BBA University, Lucknow
21.	Dr. Preeti Tripathi	Response of Thiol Metabolism and Antioxidive defence system in Rice (<i>Oryza sativa</i> L.) plant under Aresenic stress	BBA University, Lucknow
22.	Dr. Uma shanker Singh	Carbon sequestration in natural sal (<i>Shorea robusta</i>) forest of south kheri forest division, Lakhimpur	BBA University, Lucknow
23.	Dr. Ritu Singh	Remediation of soil contaminated with hexavalent chromium and gamma-hexachlorocyclohexane (Lindane) using zero- valent iron nanoparticles	BBA University, Lucknow
24.	Dr. Kuldeep Bauddh	Remediation of soil contaminated with hexavalent chromium and gamma-hexachlorocyclohexane (Lindane) using zero- valent iron nanoparticles	BBA University, Lucknow
25.	Dr. Amit Kumar	Responses of Amino acids and Thiol metabolism in rice (<i>oryza sativa</i> L.) plant during Arsenic stresses and	BBA University, Lucknow

26.	Dr. Sanjeev Kumar	selenium supplementation Studies on organic matrix granular slow release fertilizers on sustainable wheat (<i>Triticum aestivum</i> L.) cultivation	BBA University, Lucknow
27.	Dr. Vishalakcchi Ashok	Studies on sustainable rice (<i>Oryza sativa</i> L.) cultivation with eco-friendly granular slow release fertilizers	BBA University, Lucknow
M.Phil. Degree			
1.	Renu Kela	Differential response of growth and nitrate assimilation in roots and leaves of <i>Vigna radiate</i> to lead in presence of some nutritional factors.	M.D. University, Rohtak
2.	Nisha Bharti	Nitrate assimilation and biomass and accumulation in <i>Seasamum indicum</i> seedlings under non-saline and salt affected complex heavy metal environment.	M.D. University, Rohtak
3.	Gulshan Taneja	Growth, photosynthetic pigments and nitrate assimilation in <i>Seasamum indicum</i> in a lead enriched environment	M.D. University, Rohtak



Place: Lucknow

(Rana P. Singh)