



Name: Susheel Verma

Designation: Associate Professor & Head,
Department of Botany, School of Biosciences and Biotechnology,
BGSB University, Rajouri

Date of Birth: 09.04.1971

Email: eremurus@rediffmail.com

Qualification: M Sc (Botany), NET, Ph. D

Academic Record: Through out first class (Matriculation and onwards)

Specialization in M.Sc.: Cytogenetics

Area of specialization: Conservation Biology, Cytology, Plant Biotechnology,
Molecular Genetics and Reproductive Biology

Teaching and Research Experience Excluding Ph. D: 17.4 years

Conferences/ Seminars / workshops attended: 34
International: 06; National: 20; Regional: 8

Awards and Honors

1. Qualified **National Eligibility Test** jointly conducted by CSIR-UGC in 1999
2. Awarded Dr. R. S. Rao Award in Conservation Botany by Indian Association for Angiosperm Taxonomy in 1999.
3. Awarded **Young Scientist Award** and **Dr. M. S. Swaminathan Certificate of Merit**, Indian Botanical Society in 2002.
4. Awarded **Fast Track Fellowship** of **Department of Science and Technology**, Govt. of India to carry out research independently in 2006.

Fellowships

a. International

- Nominated by the Ministry of Human Resource Development, Govt. of India for Chinese Govt Fellowship for one year, 2003 – 2004.

b. National

Senior Research Fellowship of Council of Scientific and Industrial Research (CSIR), Govt. of India in 1999 (1999-2002)

- Research Associateship of CSIR in 2002 (2002-2005)
- Senior Research Associate (Pool Officer) of CSIR in 2005 (2005 – 2009)

M.Phil/Ph. D guided and produced:

- M. Phil produced: 2
- Ph. D produced: 3
- Ph. Ds under supervision: 5

Reviewer:

1. **Vegetos (Springer)**
2. **Current Science** (Indian Academy of Sciences)
3. **Proceedings of the National Academy of Sciences, India - Section B: Biological Sciences (Springer)**

Research Projects: 08

A. Ongoing:01

S. No.	Title	Funding Agency	Duration	Grant Sanctioned (in Rs.)
1	Impact of climate change on phenology and reproductive biology of two economically important Himalayan plant species, <i>Dodonaea viscosa</i> and <i>Olea ferruginea</i>	Ministry of Environment and Forest and Climate Change, New Delhi <i>Under National Mission on Himalayan Studies (NMHS)</i>	3 years	16.215 lakhs

B. Completed:07

S. No.	Title	Agency	Period	Grant/Amount mobilized (Rs. In lakhs)
1	Studies on Reproductive Biology and genetic diversity of <i>Rauwolfia serpentina</i> , <i>Tinospora cordifolia</i> and <i>Asparagus racemosus</i>	Department of Science and Technology (DST), Govt. of India	2006 - 09	9.30 lakhs
2	Studies on reproductive biology of <i>Picrorhiza kurrooa</i> Royle ex Benth., <i>P.scrophulariiflora</i> Pennell, <i>Valeriana wallichii</i> DC. and <i>Ferula jaeschkeana</i> Vatke.	Department of Biotechnology, Ministry of Science and Technology, Govt. of India, New Delhi	2008 - 12	52.44 lakhs
3	Improvement of Infrastructural Facilities in Pir Panjal Biodiversity Park for <i>ex situ</i> conservation of endangered and endemic plant species and development of the Botanic Garden of the University as Lead Garden	Ministry of Environment and Forests, Govt. of India	2009- 12	Rs.57.50 lakhs
4	Assessment, mapping and prioritization of economically important and over exploited plants in a part of the proposed cold Desert Biosphere Reserve for Conservation	Ministry of Environment and Forests, Govt. of India	2009-12	18.65 lakhs
5	All India coordinated All India Coordinated Research Project on Reproductive Biology of Four rare, Endangered and threatened (RET) tree species namely: <i>Acer caesium</i> Wall; <i>Buxus wallichiana</i> Baill.; <i>Saraca asoca</i> (Rox)Willd.; <i>Woodfordia fruticosa</i> (L)Kurz of Jammu province of J&K state	Ministry of Environment and Forests, Govt. of India	2010-13	Rs. 36. 9 lakhs
6	Preventing extinction and improving conservation status of threatened plants through application of biotechnological tools	Department of Biotechnology (DBT), Ministry of Science and Technology, Govt. of India, New Delhi	2012-2017	48.00 Lakhs
7	Socio economic upliftment of rural women belonging to SC/ST communities through adoption of eco-friendly	Department of Biotechnology (DBT), Ministry of Science and Technology, Govt. of	2016-19	Rs. 45.66 Lakhs

	technologies in Dhanore region, Rajouri District of Jammu and Kashmir State	India, New Delhi		
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Membership of Scientific Societies

- Society for Conservation Biology
- International Society for Sexual Plant Reproduction, Netherlands
- International Association of Angiosperm Taxonomy, Vienna
- International Organization of Plant Biosystematists, Prague
- The Society of Plant Reproductive Biologists, Agra
- International Society of Plant Morphologists, Delhi, India
- Indian Botanical Society (Life member)
- Indian Science Congress Association

Institutional Activities:

- Member of various committees including DRC, DPC, Advisory Committee constituted for running DBT funded M. Sc. Biotechnology Programme, Board of Research studies in Botany and Biotechnology.
- Involved in conduct of examinations in the Department and member of the flying Squads during semester examinations of other P.G and U.G programs in the BGSB University.
- Involved in organization of important Day celebrations, Conferences, Seminars, workshops and invited lectures in the Department.

List of Publications (Papers)

1. **Verma, S. (2019).** Brahma Kamal: A source of livelihood in the life of locals of Kedarath Shrine. **Science and Culture 85 (3-4): 113-114** (with Semwal, P. and Thapliyal, A).
2. **Verma, S. (2019).** Bumblebees (*Bombus rufofasciatus* Smith) pollinate the enclosed inflorescences of the endangered Brahma's lotus (*Saussurea obvallata*: Asteraceae) of the Indian Himalaya. **South African Journal of Botany 121: 2019, 435-441** <https://doi.org/10.1016/j.sajb.2018.12.015> (with Semwal, P., Pauw, A., Palni, L.M.S. and Thapliyal, A)
3. **Verma, S. (2018).** Ethylene Supplements Increases PSII Efficiency and Alleviates Chromium Inhibited Photosynthesis Through Increased Nitrogen and Sulfur Assimilation in Mustard. **Journal of Plant Growth Regulation.**

- <https://doi.org/10.1007/s00344-018-9823-x> (with Asgher, M., Per, T. S., Pandith, S. A., Masood, A and. Khan, N. A)
4. **Verma, S. (2018).** Ethylene and Polyamines in Counteracting Heavy Metal Phytotoxicity: A Crosstalk Perspective **Journal of Plant Growth Regulation** **37:1300-1317.** <https://doi.org/10.1007/s00344-018-9858-z>(Asgher, M., Khan., M.I.R.,Anjum, N.A., Vyas, D., Per, T.S., Masood, A and Khan ,N.A)
 5. **Verma, S. (2018).** Floral biology and embryological studies are important for conservation of threatened plants having reproductive bottlenecks: A case study of *Illicium griffithii* Hook. f. & Thomson **Current Science** **114(3): 576-587** (with Marbaniang, E.J., Venugopal, N., , Raina, R., Khajuria, A. and Gautam, K.)
 6. **Verma, S. (2017).** Contribution of Glutathione in Heavy Metal Stress Tolerance in Plants. In: Dr. M. Iqbal R. Khan, Dr. Nafees Khan, and Dr. Abdelbagi M. Ismail, Reactive Oxygen Species and Antioxidant System. In *Plants: Role and Regulation under Abiotic Stress*. Springer Nature Singapore Pt. Ltd. (with Asgher, M., Khan., Per, T.S., Khan, M.I.R.,Anjum, N.A., Masood, A and Khan, N.A)
 7. **Verma, S. (2016).** Genetic Diversity Assessment of *Phaseolus vulgaris* L. in Two Himalayan Districts of India. **Proceedings of the National Academy of Sciences, India - Section B: Biological Sciences** **88(1) · DOI: 10.1007/s40011-016-0742-y** (with Dar, F. and Rehman, R.Ul)

8. **Verma, S. (2016).** New additions to the lichen flora of Jammu and Kashmir state (India). **Tropical Plant Research** 3(1): 157-161(with Bhat, M., Goni, R. and Upreti, D. K)
9. **Verma, S. (2016).** Male function for ensuring pollination and reproductive Success in *Berberis Lycium* Royle: A novel mechanism. **Journal of Biosciences.** 41(1):21-25. DOI 10.1007/s12038-015-9581-x. (with Supriya Sharma).
10. **Verma, S. (2014).** Assessment of air quality of Rajouri town, Jammu and Kashmir using lichen transplant technique. **Science and Technology Journal.** 2(1): 15 – 19. (with Bhat, M. and Upreti, D. K).
11. **Verma, S. (2014).** Lichens for sustainable development. **International Journal of Environmental Research and Development** 4: 325 – 328 (With Bhat, M and Upreti, D. K).
12. **Verma, S. (2014).** Genetic diversity in *Valeriana wallichii* DC., a medicinally important threatened species as assessed by Random Amplified Polymorphic DNA in two Himalayan states of India. **Proceedings of National Academy of Sciences.** 84:579-585. DOI 10.1007/s40011-013-0242-2 (with Sharma, P, Sharma, A and Karihaloo, J. L).
13. **Verma, S. (2013).** Genomic DNA extraction from *Ferula jaeschkeana* Vatke (Apiaceae) optimized for Random Amplified Polymorphic DNA Polymerase Chain Reaction (RAPD-PCR) analysis. **Proceedings of National Academy of Sciences.** 83: 341-345. DOI 10.1007/s40011-012-0142-x (with Sharma, P and Sharma, A).
14. **Verma, S. (2011).** Polymorphism in pollen mothers cells of *Valeriana wallichii* DC. (Valerianaceae). **Nucleus**, 54: 141-145 (with Sharma, A and Sharma, P).
15. **Verma, S. (2011).** Styler movement in *Valeriana wallichii* DC.-a contrivance for reproductive assurance and species survival. **Current Science** 100(8) : 1143-1144 (with Sharma, A and Sharma, P).
16. **Verma, S. (2011).** *Reinwardtia indica* Dumort.- first flowering report of the season. **The International Journal of Plant Reproductive Biology**3(1) : 78

17. **Verma, S. (2010).** and Genetic Systems in chillies II. Meiotic System of three cultivars of *Capsicum annuum* L. **Caryologia**, 63(1): 3-10. (with Chibber, N and Sharma, N)
18. **Verma, S. (2009).** Diversity and economic importance of agroforestry species in Dhanore region of Rajouri District, Jammu & Kashmir, **Indian J. Forestry**, 32(3): 401-405.(with Pant, S.)
19. **Verma, S. (2009).** Stigma behavior in *Incarvillea emodi* (Bignoniaceae). **Journal of Plant Reproductive Biology**, 1(1): 27-32. (with Magotra, R., Sharma, N., and Koul, A. K)
20. **Verma, S., (2008).** Pollinator induced anther dehiscence in *Incarvillea emodi* (Bignoniaceae). **Current Science**, 94: 1372-1374. (with Kaul, V., Magotra, R. and Koul, A. K)
21. **Verma, S. (2008).** Ethnobotanical Notes on Tree Species of Pir Panjal Biodiversity Park of Baba Ghulam Shah Badshah University, Rajouri, J&K, India, **Ethnobotanical Leaflets 12:** 400-408. (with Pant, S)
22. **Verma, S., (2007).** Genetic diversity in *Eremostachys superba* Royle ex Benth. (Lamiaceae), an endangered Himalayan species, as assessed by RAPD markers. **Genetic Resources and Crop Evolution 54:** 221-229. (with Karihaloo, J. I., Tiwari, S. K., Magotra, R. and Koul, A. K)
23. **Verma, S. (2007).** Genetic System of Chillies 1. Breeding and Meiotic system of Var. KL.1. **Cytologia 72(1):** 17-21. (with Chibber, N. and Sharma, N)
24. **Verma, S (2005).** Autonomous endosperm development in angiosperms. In: Plant Reproductive and Molecular Biology (eds. S. N. Chaturvedi and K. P. Singh), Festschrift in honour of Prof. S. V. S Chauhan, pp 30-37, **Aavishkar Publishers, Distributors, Jaipur, India.** (with Koul, V. and Koul A. K)
25. **Verma, S., (2004).** Stylar movement avoids self and promotes cross-pollination in *Eremurus himalaicus*. **Current Science 87:** 872-873. (with Magotra, R. and Koul, A. K)
26. **Verma, S. (2004).** Relevance of data on reproductive biology for conservation of threatened plants. Plant Diversity in India (Eds. J. S. Dargan & T. A. Sarma), pp 147–158, **Bishen Pal – Mahender Pal Singh, Dehradun.** (Koul, A. K. and Magotra, R)
27. **Verma, S. (2003).** Restoration of *Eremostachys superba* Royle ex Benth.- a critically endangered species. **Current Science 84:** 1307–8. (with Magotra, R. and Koul, A. K)

28. **Verma, S. (2002).** In vitro multiplication of *Eremurus persicus* Boiss. (Liliaceae)—an endangered species. **Phytomorphology 52:** 1–7. (with Magotra, R. and Koul, A. K)
29. **Verma, S. (2001).** Insect induced anther dehiscence, pollination and maximization of maternal rewards. Tropical Ecosystems: structure, diversity and human welfare(eds. K. N. Ganeshaiyah, R. Uma Shaanker and K. S. Bawa), pp 211–213, **Oxford and IBH, New Delhi.** (with Magotra, R. and Koul, A. K)
30. **Verma, S. (2000).** Dual danger to plant biodiversity in India. Environmental Protection (eds. A. K. Thukral and G. S. Virk), pp 107–114, **Scientific Publishers, Jodhpur, India.** (with Koul, A. K. Magotra, R.)
31. **Verma, S. (1997).** Is *Eremostachys superba* Royle ex Benth. really at the verge of extinction? **Current Science 73:** 313–314. (with Koul, A. K. and Magotra, R)
32. **Verma, S. (1997).** On the Brink. **Amruth:** 7 (with Koul, A. K., and Magotra, R)
33. **Verma, S. (1997).**Tara village in Jammu District provides hope to save *Eremostachys superba* from extinction. **Haryali** (April–Sept.): 18–19. (with Koul, A. K., Magotra, R.

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