

CURRICULUM VITAE

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Name : Dr. Balam Singh Bisht

Nationality : Indian

Marital status : Married

Languages known : English, Hindi

Present Status :
Presently working as an **Assistant Professor (Organic Chemistry)** in
M.B. Government Postgraduate College, Haldwani (Nainital).

Research Project: (Ongoing as Principal Investigator)

- **“Chemical Standardisation of high-altitude Aromatic and Medicinal Plants of Uttarakhand Himalaya”** Funded by **Uttarakhand State Council for Science and Technology, Dehradun.**
Sanction No.-UCS&T/R&D-01/23-24/24535 Dated-22-09-2023

Academic Qualification :

Ph. D.
Ph. D. completed on the topic **“Phytochemical and Bioactivity Evaluation of some *Teucrium*, *Tithonia*, *Senecio*, *Blumea* and *Chenopodium* species”** at Kumaun University (Nainital).

B. Ed.
Science, Maths and Computer, 2009, S. S. J. Campus Almora, Kumaun University, Nainital, Theory **63.0% (I)**, Practical **75.0% (I)**.

M. Sc.
Organic Chemistry. 2006. D. S. B. Campus, Kumaun University, Nainital, **66.7% (I)**.

B. Sc.
Chemistry, Botany and Zoology. 2004. D. S. B. Campus, Kumaun University, Nainital **69.2% (I)**.

Awards & Prizes :

- **Young Scientist Award for Best Poster presentation** in the **National Seminar** on Emerging trends in Chemistry-Biology interface held at D.S.B. campus, Kumaun University, Nainital (Uttarakhand) on 3-5 November 2011.
- **Best presentation award (First)** in the “*National conference on Plant biodiversity as a sustainable supply of bioactive compounds (Essential compounds) for the Environment and Human Health*” (PBSSBC-2024), 20-21 September 2024.

Research Experience :

- Worked as a Junior research fellow (JRF) and Senior research fellow (SRF) in USCS&T funded project “*Investigations on chemical diversity of Himalayan aromatic and medicinal plants and chemical modification of their constituents for commercial utilization*”.

Work Done :

- Survey and collection of medicinal and aromatic plants from different regions of Uttarakhand Himalaya viz. *Sunderdhoonga glacier, Pindari glacier and Kafni glacier* of Bageshwar. *Khatling glacier, Gangi, Kharsoli* and *adjoining areas* of Tehri Garhwal. *Gopeshwar, Mondal, Chopta, Tungnath* and *adjoining areas* of Chamoli and Rudraprayag district. *Narayan ashram, Tawaghat, sobla, Zipyty* and *adjoining areas* of Pithoragarh district, *Bagini glacier, Dronagiri, Ruing, Zuma, Joshimath* and *adjoining areas* of Chamoli district.
- Extraction of essential oils from medicinal aromatic plants and GC and GC-MS analysis of essential oil.
- Isolation and characterization of natural products from medicinal and aromatic plants by applying Chromatographic (Column and Gas) and Spectroscopic (UV, IR, Mass and NMR) methods in addition to common physico-chemical methods.

Analytical Experience :

- Three years six months working experience in handling Gas Chromatograph (analysis of volatile samples in **polar and non polar columns** Nucon 5765 with Flame Ionization Detector).
- Three years six months working experience in handling GC-MS. (Analysis of volatile samples in **polar and non polar columns**. ThermoQuest Trace GC 2000 interfaced with a Finnigan MAT PolarisQ ion trap mass spectrometer equipped with Rtx-5 non-polar fused silica capillary column)

- Three years six months experience in working with **Perkin Elmer Model Spectrum BX II FT-IR** System.
- Three years six months experience in handling *Thermoelectron quaternary HPLC* (analysis with both **normal phase** and **reverse phase** columns with UV and RI detectors).
- Isolation and characterization of natural products from medicinal and aromatic plants by applying Chromatographic (Column and Gas) and Spectroscopic (UV, IR, Mass and NMR) methods in addition to common physico-chemical methods.

Publication :

2026

1. Bisht, B. S., Vishwakarma, M. C., & Arya, D. (2026). **Chemical profiling and antimicrobial activity of essential oils from *Blumea mollis* (D. Don) Merr.** *Journal of Essential Oil Bearing Plants*, 1–9. <https://doi.org/10.1080/0972060X.2026.2680691>
2. Tamta, M. P., Joshi, H. K., Vishwakarma, M. C., Negi, A., Bisht, B. S., Kumar, R., Khati, P. S., Pooja, Joshi, S. K., & Bhandari, N. S. (2026). **Green synthesis and optimisation of silver nanoparticles using *Hedychium spicatum* rhizomes: Characterisation and antimicrobial activity.** *Journal of Molecular Structure*, 1352(2), 144528. <https://doi.org/10.1016/j.molstruc.2025.144528>

2025

3. Bisht, B. S., Karki, G., Khati, P. S. (2025). **Green synthesis and characterization of ZnO nanoparticles from water extract of *Chenopodium ambrosioides* and *Angelica glauca*: A comparative analysis.** *Journal of Water and Environmental Nanotechnology*.
4. Joshi, H. K., Vishwakarma, M. C., Kumar, R., Bisht, B. S., Joshi, N. C., Joshi, S. K., & Bhandari, N. S. (2025). **Comparison of Ni(II) ion biosorption onto *Eupatorium adenophorum* and *Acer oblongum* biomass using batch operations, response surface models, thermodynamics, kinetics, and equilibrium studies.** *Journal of Contaminant Hydrology*, 274, 104616. <https://doi.org/10.1016/j.jconhyd.2025.104616>
5. Mathela, C. S., & Bisht, B. S. (2025). **Bioprospecting terpenoid-rich Himalayan plants for use in food preservation and natural flavouring agents.** *Records of Agriculture and Food Chemistry*, 5(1), 63–70.
6. Bisht, B. S., Vishwakarma, M. C., Padalia, R. C., Kholiya, S., Mathela, C. S., & Panwar, A. (2025). **Terpenoid composition and antimicrobial activity of four Himalayan *Salvia* species.** *Journal of Essential Oil Bearing Plants*, 28(6), 1300–1312. <https://doi.org/10.1080/0972060X.2025.2598367>

7. Bisht, B. S., & Vishwakarma, M. C. (2025). **Linalool-rich essential oil of *Phlomis bracteosa* from Garhwal Himalaya: Composition and potential applications.** *Journal of Mountain Research*, 21(1), 55–58. <https://doi.org/10.51220/jmr.v20-i1.6>
 8. Tiwari, G., Bisht, B. S., & Joshi, R. K. (2025). **A comprehensive review on the chemical composition and biological activity of *Pleurospermum angelicoides* (DC.) Benth. ex C.B. Clarke.** *Records of Agriculture and Food Chemistry*, 5(2), 101–109.
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2024

9. Bisht, B. S., Karki, G., Padalia, R. C. (2024). **Comparative analysis of the essential oil composition of wild and cultivated *Valeriana jatamansi* Jones from Uttarakhand Himalaya.** *Journal of Essential Oil & Plant Composition*, 2(2), 124–129.
 10. Singh, D., Bisht, B. S., & Kumar, V. (2024). **Terpenoid composition of *Salvia plebeia* R. Br.: Its antioxidant and antifungal potential.** *Records of Agriculture and Food Chemistry*, 4(1), 1–11.
 11. Karki, G., Bisht, B. S., Khati, P. S., Vishwakarma, M. C., & Durgapal, P. (2024). **Green synthesis of ZnO nanoparticles using water extract of *Origanum vulgare* and its characterization.** *Journal of Mountain Research*, 19(2), 549–555. <https://doi.org/10.51220/jmr.v19-i2.57>
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2023

12. Bisht, B. S., Singh, D., & Mathela, C. S. (2023). **Terpenoid diversity and antimicrobial activity of five Himalayan *Senecio* species.** *Journal of Essential Oil Bearing Plants*.
 13. Bisht, B. S., Singh, D., Mathela, C. S., & Panwar, A. (2023). **Sesquiterpene lactones of *Saussurea lappa* (Decne.) Sch. Bip. and comparative antimicrobial activity of its root oil and extracts.** *Journal of Essential Oil & Plant Composition*, 1(2), 89–96.
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2020

14. Mathela, C. S., & Bisht, B. S. (2020). **Composition of a new chemotype of *Senecio chrysanthemoides* DC.** *Indian Journal of Chemistry*, 59B, 1745–1748.
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2019

15. Bisht, B. S., & Kumar, A. (2019). **Terpenoid composition of *Chenopodium ambrosioides* L. and its antimicrobial activity from Uttarakhand Himalaya of India.** *Journal of Drug Delivery & Therapeutics*, 9(4-A), 612–617.
16. Bisht, B. S. (2019). **Sesquiterpene rich essential oil from *Teucrium quadrifarium* Buch.-Ham. ex D. Don from Uttarakhand Himalaya of India.** *International Journal of Current Research in Chemistry and Pharmaceutical Sciences*, 6(8), 1–5.

2017

17. Bisht, B. S., & Joshi, R. K. (2017). **Comparative terpenoid composition of the leaf and root essential oil of *Tithonia diversifolia* (Hemsl.) A. Gray.** *American Journal of Essential Oils and Natural Products*, 5(3), 21–24.
18. Bisht, B. S. (2017). **Compositional changes in sesquiterpene constituents of *Blumea mollis* Merr.** *The Journal of Phytopharmacology*, 6(4), 217–219.
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2015

19. Mathela, C. S., Joshi, R. K., Bisht, B. S., & Joshi, S. C. (2015). **Nothoapiole and α -Asarone Rich Essential Oils from Himalayan *Pleurospermum angelicoides* Benth.** *Records of Natural Products*, 9(4), 546–552.
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2012

20. Joshi, R. K., & Bisht, B. S. (2012). **Antibacterial activity of volatile oil of *Tanacetum longifolium* from western Himalayan region of Uttarakhand, India.** *Journal of Natural Products and Plant Resources*, 2(6), 721–724.

Book:

1	Fundamentals of Chemistry-II	Pragati Prakashan Meerut	ISBN 978-81-19067-69-5	Dr.Girdhar Joshi, Mr.Shankar Ram, Dr S. B. Mishra, Dr. B. S. Bisht	According to NEP Second Revised Edition 2023
2.	Advanced Natural Products and Heterocyclic Chemistry	Kunal Books, New Delhi	978-93-6389-026-8	Dr. Om Prakash Dr. Darshan Singh Dr. Balam Singh Bisht	2026

Seminar :

- Oral presentation on “**Terpenoid constituents and antimicrobial activity of the volatile extract of *Blumea mollis* merr.**” in 7th USSTC-2012 held at Graphic Era University, Dehradun Date:22/Nov./2012.
- Poster presentation on “**Comparative study of the terpenoid constituents of *Blumea mollis* Merr.**” **B. S. Bisht** in the **Emerging trends in chemistry biology interface 3-5** November. 2011, at D.S.B. campus, Kumaun University, Nainital, Uttarakhand. (**Young Scientist award**)
- Poster presentation on “**Qualitative and Quantitative Terpenoid Diversity in Himalayan *Salvia* species**” **B. S. Bisht** in the **International conference on the Green technologies for Environmental Rehabilitation** 11-13 February. 2012, Gurukul Kangari University, Haridwar, Uttarakhand.

- Poster presentation on “**Furanoeremophilane derivative and other terpenoids from *Senecio chrysanthamoides* DC.**” **Balam Singh Bisht** and Darshan Singh in the **6th Uttarakhand State Science and Technology Congress**, 13-15 November. 2011, at S.S.J. Campus, Kumaun University, Nainital, Uttarakhand.
- Poster presentation on “**Sesquiterpene rich essential oil of *Teucrium quadrifarium* Buch Ham. Ex D. Don from Uttarakhand Himalaya**” **B. S. Bisht** in the **5th Uttarakhand State Science and Technology Congress**, 10-12 November. 2010, at Doon University, Dehradun, Uttarakhand.
- Poster presentation on “**Volatile constituents of *Eupatorium adenophorum* Spreng**”. K. K. Singh, S. C. Joshi and **B. S. Bisht** in the 27th Annual conference of **Indian Council of Chemist**, 26- 28 December 2008, pp. 300.
- Oral presentation on “**Cause of Student Absenteeism in School**”. Balam Singh Bisht in **National Seminar on Public Education** held at **DIET Bageshwar, Uttarakhand**. Date:14-15/Nov./2018.
- Online presentation on **Composition of a new chemotype of *Senecio chrysanthemoides* DC. from Uttarakhand Himalaya**. in the “*National conference on Plant biodiversity as a sustainable supply of bioactive compounds (Essential compounds) for the Environment and Human Health*” (PBSSBC-2024), 20-21 September 2024.

Date: 18.06.2026

Place: Haldwani

(**Dr. Balam Singh Bisht**)