

UNIVERSITA' DEGLI STUDI DI GENOVA

AREA RICERCA, TRASFERIMENTO TECNOLOGICO E TERZA MISSIONE

SERVIZIO RICERCA

SETTORE RICERCA NAZIONALE

IL RETTORE

- Visto il Decreto Rettorale n. 6200 del 16/12/2024, con il quale è stato indetto il concorso per titoli e colloquio, per il conferimento 1 borsa di ricerca post-laurea, di tipo consolidator della durata di 8 mesi, dell'importo di € 10.832,00 euro (diecimilaottocentotrentadue/00), eventualmente rinnovabile, per lo svolgimento di una ricerca sul tema "Modellistica e gestione dei dati per lo studio di potenziali attività biologiche di varietà vegetali liguri", presso il DIFAR dell'Università degli Studi di Genova;
- Visto il Decreto Rettorale n. 104 del 14/01/2025 con il quale è stata costituita la Commissione giudicatrice per il conferimento della suddetta borsa di ricerca;
- Visto il verbale della Commissione giudicatrice del concorso in parola, riunitasi in data 20/01/2025;
- Constatata la regolarità della procedura seguita;

DECRETA

Art. 1

Sono approvati gli atti del concorso di cui in premessa e la seguente graduatoria di merito:

- | | |
|-------------------------|--------------|
| 1. Dott.ssa Poonam Devi | punti 85/100 |
|-------------------------|--------------|

Sotto condizione dell'accertamento dei requisiti di cui al bando, è dichiarata vincitrice del concorso in parola la Dott.ssa Poonam Devi.

Genova,

IL RETTORE

(firmato digitalmente)

CURRICULUM VITAE

PERSONAL INFORMATION

WORK EXPERIENCE

Jul 2, 2018 – Sep 30, 2021 Assistant professor
LBR College of Pharmacy, Panchkula, Haryana, India.

EDUCATION AND TRAINING

Nov 1, 2021 – Oct 31, 2024 PhD student
Pharmaceutical, Food, and cosmetic sciences
Department of Pharmacy, University of Genova, Italy
Project title: “Biological and chemical investigations of plants belonging to the Lamiaceae Family” (Thesis submitted)
Supervisor: Prof. Angela Bisio
Tentative Graduation date: March 2025.

Jul 1, 2016 – Jun 30, 2018 Master of Pharmacy passed with 7.26/10 CGPA
Specialization: Pharmaceutics
Himalayan Institute of Pharmacy (HPTU), Hamirpur, Himachal Pradesh, India
Thesis title: "Formulation and Evaluation of Floating Tablets of Ranitidine HCl with Liquorice as natural ulcer protective agent"

Aug 1, 2012 – Jun 30, 2016 Bachelor of Pharmacy passed with 83.01%
Specialization: Pharmaceutics
Himalayan Institute of Pharmacy (HPTU), Hamirpur, Himachal Pradesh, India
Thesis title: “Formulation and evaluation of Nanosomes of Ashwagandha”
Industrial training: 1 month (July 2015) training at Grampus Laboratories Pvt Ltd. Kala-amb, Himachal Pradesh, India

PERSONAL SKILLS AND COMPETENCES

Strong team player with excellent collaborative skills, able to work effectively with a diverse group of people to achieve a common set of goals. Able to adapt and integrate quickly into new cultures and work environments. Open-minded, proactive and eager to learn and contribute to a dynamic environment.

MOTHER TONGUE

Hindi

OTHER LANGUAGES

- Reading skills
- Writing skills
- Verbal skills

| ENGLISH | PUNJABI | ITALIAN |
|-----------|-----------|---------|
| Excellent | Excellent | Basic. |
| Excellent | Excellent | Basic. |
| Excellent | Good | Basic. |

RESEARCH EXPERIENCE

Throughout my research journey, I have accumulated a diverse range of experiences, spanning multiple domains:

Industrial Training: Actively engaged in various departments including production, quality assurance, and quality control, where I gained practical insights into processes adhering to Good Manufacturing Practices.

Master's Project: Conducted an in-depth exploration into formulating and characterizing floating drug delivery systems.

Doctoral Studies: Focused on investigating "Chemical and biological investigations of plants belonging to the Lamiaceae family," specifically emphasizing three species of the *Salvia* genus. Expertly utilized phytochemical and biotechnological methodologies, demonstrating proficiency in isolating pure compounds through chromatographic techniques to contribute to sustainable practices in organic farming. Additionally, during my PhD, I had the privilege of conducting research at esteemed institutions across Europe, as summarized below:

•CeRSAA, Agricultural Testing and Assistance Centre, Regione Rollo, 98 Albenga (SV), Italy (May 2, 2024 - Jul 31, 2024) Supervisor: Dr. Anna Lanteri. Focus: Investigating the antimicrobial and antifeedant effects of *Salvia* extracts, against phytopathogens.

•School of Pharmacy, Aristotle University of Thessaloniki, Greece (Sep 21, 2023 - Dec 19, 2023) Supervisor: Prof. Anastasia Karioti. Focus: Employing diverse chromatographic techniques to isolate pure compounds, alongside contributing to NMR sample preparation and data analysis.

•Department of Pharmacy, University of Salerno, Via Giovanni Paolo II, 132, 84084 Fisciano (SA), Italy (Jun 1, 2023 - Jul 25, 2023) Supervisor: Prof. Alfredo Ambrosone. Focus: Exclusive work on isolating extracellular vesicles from hairy roots using ultracentrifugation methods, followed by comprehensive characterization.

•CREA-research centre for vegetable and ornamental crops, Corso degli Inglesi 508, 18038, Sanremo (IM), Italy (Jun 1, 2022 - Jan 31, 2023) Supervisors: Dr. Andrea Copetta, Dr. Barbara Ruffoni. Focus: Employing *in-vitro* micropropagation techniques and transformation using *Agrobacterium rhizogenes* to generate hairy roots, coupled with subsequent characterization employing PCR analysis contributing to innovative research in plant biotechnology.

TECHNICAL SKILLS AND COMPETENCES

Skilled in the use of column chromatography for the separation and purification of natural compounds, including the selection of appropriate stationary and mobile phases, and the development of efficient elution protocols, Expertise in developing and optimizing chromatographic methods using Biotage, flash chromatography systems, focusing on improving resolution, throughput, and reproducibility for compound isolation. Proficient in the isolation and purification of target compounds from complex mixtures using semi-preparative high-performance liquid chromatography (HPLC) techniques, experienced in the quantitative and qualitative analysis using analytical HPLC, Competent in the preparation and handling of samples for nuclear magnetic resonance (NMR) spectroscopy, including solvent selection, concentration adjustments, and ensuring sample integrity for accurate spectral analysis. Proficient in antimicrobial assays to evaluate the efficacy of compounds against a range of phytopathogens, utilizing various in vitro and in vivo testing protocols to determine inhibitory concentrations. Expertise in developing in vitro micropropagation protocols for plant tissue culture, including initiating, maintaining, and acclimatizing explants to ensure successful plant regeneration and propagation. Proficient in performing Agrobacterium-mediated genetic transformation of plant tissues, including the preparation of competent cells, co-cultivation, and selection of transformants for genetic modification studies, Expertise in polymerase chain reaction (PCR) techniques, specialized in isolating extracellular vesicles from hairy root cultures, involving ultracentrifugation and characterization using silver staining methods. Basic Knowledge of SQL Server for Database Management.

PUBLICATIONS•Kentsop, R. A. D.; Devi, P.; Copetta, A., Ruffoni, B.; Parisi, V.; Bisio, A.; Iobbi, V. *Salvia* species: biotechnological strategies applied on *in vitro* cultures for the controlled production of bioactive diterpenoids. *Agronomy* 2024, 14(4), 835. <https://doi.org/10.3390/agronomy14040835>.

•Devi, P.; Iobbi, V.; Copetta, A.; Laura, M., Ruffoni, B.; Bisio A. “Metabolite production from hairy root biomass in *Salvia* species. *Acta Horticulture Journal*, 1383, 337-344. <https://doi.org/10.17660/ActaHortic.2023.1383.40>.

•Copetta, A.; Mussano, P.; Devi, P.; Lanteri, A.; Cassetti, A.; Mascarello, C.; Bisio, A.; Ruffoni, B. *In vitro* micropropagation, rooting and acclimatization of two agastache species (*A. aurantiaca* and *A. mexicana*). *Horticulturae* 2023, 9, 1065. <https://doi.org/10.3390/horticulturae9101065>.

•Sansarwal, P*.; Sharma, S.; Ohri, R.; “Formulation and Evaluation of Floating Tablets of Ranitidine Hydrochloride with Liquorice as Natural Ulcer Protective Agent”. *International Journal of Pharmacy and Pharmaceutical Research*. 2019; Vol.17 (1): 38-59. doi: <https://doi.org/10.25166/ijppr.2020.v17i01.04>

•Devi, P.; Rana, S.; Kaur, N.; “A Review on Pharmacognostic Profile of *Ajuga reptans*”. *RRJoPC*, 2020, 9–18.

*I state that Poonam Sansarwal (original maiden name) and Poonam Devi (present name, given by authorities) are the names of the same person and that is myself.

**COMMUNICATIONS AT
CONFERENCES**

**ORAL
COMMUNICATIONS**

▪Oral presentation on “Chemical and biological characterization of *Salvia discolor* exudate for management of phytopathogens and pests” at workshop SIF, Young to Young: today for Tomorrow, Camogli, Italy, Sep 27 - 28, 2024.

**POSTER
COMMUNICATIONS**

▪Exploring the phytochemical profile and antimicrobial activity of *Salvia discolor* against phytopathogens. 25th International Conference on Isoprenoids, Naples, Italy, Sep 18 - 20, 2024.

▪Hairy roots: A biotechnological strategy to increase metabolite synthesis in *Salvia* species. New frontiers and challenges for the sustainability of agro-forestry-pastoral systems and food security (AISSA#under40), Salerno, Italy, Jul 12 - 13, 2023.

▪Metabolite production from hairy root biomass in *Salvia* species. XXVII International Eucarpia symposium section Ornamentals - from nature to culture: breeding Ornamentals for sustainability (Eucarpiaornam, 2023), Genova, Italy, Jul 2 - 5, 2023.

▪*In vitro* multiplication of *Salvia oxyphora*, *Salvia karwinskii* and *Salvia discolor*. The IV national conference on micropropagation (VITRO SOI 2022), Bari, Italy, Oct 12 - 14, 2022.

▪Nanotechnology: significant role in prosthodontics. International conference on Pharmacy practice clinical research and Pharmacovigilance trends-2019, Chitkara College of Pharmacy, Chitkara University, Punjab, Nov 8 - 9, 2019.

▪Pharmacovigilance: an integral part of pharma-society. International conference on Challenges in clinical trials and Pharmacovigilance of new drugs, genetically modified products and herbal drugs at School of Pharmaceutical Sciences, Bahara University, Shimla, Mar 28-29, 2018.

▪Phytosome: an emerging technology for herbal drug delivery. International conference on Drug discovery and drug delivery of supramolecules, Chandigarh College of Pharmacy, landran, Mohali, Mar 9 - 10, 2018.

▪Aquaporins water channels broad spectrum of clinical applications. International Seminar on Nanotherapeutics & crystal engineering: challenges and future perspectives, Department of Pharmaceutical Sciences and drug research Punjabi University, Patiala, Feb 8, 2016.

▪Emerging role of VDR in diabetic nephropathy. National conference on regulatory perspectives of the drug approval process: preparation and processing of IND and NDA, Himalayan Institute of Pharmacy, Kalamamb, Mar 13, 2015.

**PARTICIPATION IN
CONFERENCES AND
WORKSHOPS**

- Participated in workshop SIF, Young to Young: today for Tomorrow, Camogli, Italy, Sep 27 - 28, 2024.
- Participated in the 25th International Conference on Isoprenoids, Naples, Italy, Sep 18 - 20, 2024.
- Participated in National conference on New frontiers and challenges for the sustainability of agro-forestry-pastoral systems and food security (AISSA#under40), Salerno, Italy, Jul 12 - 13, 2023.
- Participated in International Eucarpia symposium section Ornamentals - from nature to culture: breeding Ornamentals for sustainability (Eucarpiaornam, 2023), Genova, Italy, Jul 2 - 5, 2023.
- Participated in an International scientific conference on plant biodiversity and sustainability (online), May 23 - 24, 2023.
- Participated in The IV national conference on micropropagation (VITRO SOI 2022), Bari, Italy, Oct 12 - 14, 2022.
- Participated in CNDP: Online conference -Natural products and their role in Post Covid time organized by the Phytochemical Society of Europe, UK, Mar 2 - 4, 2022.
- Participated and completed one week of UGC networking resource centre web training course on Training Pharmacy professionals to accomplish mission- make in India: step forth to promote academic entrepreneurship, Jan 18-23, 2021.
- Participated in an international conference on Pharmacy practice clinical research and Pharmacovigilance trends-2019 at Chitkara College of Pharmacy, Chitkara University, Punjab, Nov 8 - 9, 2019.
- Participated in Continue pharmacy education programme organised by Haryana State Pharmacy Council at Ambala, Haryana, Feb 24, 2019.
- Participated in Continue pharmacy education programme organised by Haryana State Pharmacy Council at Karnal, Haryana, Nov 25, 2018.
- Participated in an international conference on Challenges in clinical trials and Pharmacovigilance of new drugs, genetically modified products and herbal drugs at the School of Pharmaceutical Sciences, Bahara University, Shimla, Mar 28-29, 2018.
- Participated in an international conference on Drug discovery and drug delivery of supramolecules at Chandigarh College of Pharmacy, landran, Mohali, Mar 9 - 10, 2018.
- Participated in an industry-oriented workshop on Medical writing and meta-analysis in collaboration with Department of Pharmaceutical Sciences and drug research Punjabi University, Patiala, Oct 7, 2016.
- Participated in an International Seminar on Nanotherapeutics & crystal engineering: challenges and future perspectives at Department of Pharmaceutical Sciences and drug research Punjabi University, Patiala, Feb 8, 2016.
- Participated in national conference on regulatory perspectives of the drug approval process: preparation and processing of IND and NDA at Himalayan Institute of Pharmacy, Kala-amb, Mar 13, 2015.
- Participated in a national seminar on the Global scenario of pharmaceuticals, challenges and regulatory policies at Himalayan Institute of Pharmacy, Kala-amb, Mar 2, 2013.

GRANTS AND AWARDS

- Best oral presentation award on ‘Chemical and biological characterization of *Salvia discolor* exudate for management of phytopathogens and pests’ at Workshop SIF, Young to Young: today for Tomorrow, Camogli, Italy, Sep 27 - 28, 2024.
- Awarded 2nd prize in a poster presentation on ‘Aquaporins water channels broad spectrum of clinical applications’ in an International Seminar on Nanotherapeutics & crystal engineering: challenges and future perspectives at the Department of Pharmaceutical Sciences and drug research Punjabi University, Patiala, Feb 08, 2016.
- Qualified Graduate Pharmacy Aptitude Test (GPAT - 2016) and received scholarship by AICTE, India for two years (2016 – 2018).
- Awarded st prize in a Talent hunt competition organised by the Himalayan Institute of Management, Kala-amb, on April 25, 2014.
- Awarded for academic excellence at the Himalayan group of professional Institutions, Kala- amb (2013 - 2014).
- Awarded for academic excellence at the Himalayan group of professional Institutions, Kala- amb (2012 - 2013).
- Awarded 2nd prize in declamation competition in “Talent search contest” at Maharaja Agrasen Mahavidyalaya, Jagadhari, Dec 14, 2011.
- Awarded 2nd prize in an “Essay competition on cooperation” organised by The Haryana State Cooperative Development Federation LTD., Sep 17, 2009.

REFERENCES

Prof. Angela Bisio

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Prof. Anastasia Karioti

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Dr. Barbara Ruffoni

Director, CREA-research centre for vegetable and ornamental crops, Sanremo, Italy

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Prof. Alfredo Ambrosone

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