

CURRICULUM-VITAE

Dr. Anita Chauhan

Assistant Professor
Department of Biotechnology
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EDUCATION HISTORY:

- **PhD Biochemistry (2017-2024)**
Defence Institute of Physiology and Allied Sciences
DRDO, Timarpur, Delhi, in collaboration with
Indira Gandhi National Open University, New Delhi
- **Bioinformatics National Certification (BINC)-2010**
- **M.Sc. Bioinformatics (2008-2010)**
Punjab University, Chandigarh
- **B.Sc.(Hons.) Bioinformatics (2005-2008)**
Punjab University, Chandigarh

RESEARCH INTERESTS:

- Next generation sequencing
- DNA recombination
- Drug designing
- Sequence analysis
- Molecular Modeling
- Data mining
- Data analytics
- System Biology
- Cancer Vaccinology

RESEARCH EXPERIENCE:

Doctoral Research:

Title- System biology approach based vaccine design for non small cell lung carcinoma.

Defence Institute of Physiology and Allied Sciences DRDO, Timarpur, Delhi **In collaboration with**
Department of Biochemistry, School of sciences Indira Gandhi National Open University, New Delhi-68

Research advisor: Dr. Seema Kalra

Assistant Professor Department of Biochemistry
School of sciences , Indira Gandhi National Open University
New Delhi-68

Co-advisor: Dr. Ragumani Sugadev

Scientist H, DRDO, Timarpur, Delhi

Research Projects Undertaken:

1. Comparative study of environment dependent secondary structures adopted by CPPs.

Department of Bioinformatics, Punjab University

(Research advisor: Dr. Avneet Kaur Saini)

2. Homology Modeling and analogue based study of Neurokinin-1 receptor.

Department of Bioinformatics, G.G.D.S.D. College

Chandigarh(P.U)

(Research advisor: Dr. Neetu Thakur)

RESEARCH PUBLICATIONS:

- **Chauhan, A.,** Kalra, K., & Kalra, S. (2024). Azin1-centric dynamic network biomarker of tipping point in non-small cell lung cancer metastasis. *Journal of Applied Biology & Biotechnology*. doi:10.7324/jabb.2024.171563.
- **Chauhan A.** and Kalra S., .Erb- b2 Receptor Tyrosine Kinase 2 Interaction with Growth Factor Receptor Bound Protein 7 Acts as a Molecular Switch to Activate Non- Small Cell Lung Cancer: An *Insilico* Prediction. *Biomedical and Biotechnology Research Journal*, 2023.
- **Chauhan A,** Semalty M, Adhikar L. A comprehensive review on phytochemistry and pharmacological effects of stinging nettle (*Urtica dioica*).*Current Traditional Medicine* 3 (3), 156-167.
- Agarwal S, **Chauhan A,** Kaur R, Masih M, Gautam PK. Immunomodulatory effects of β -defensin 2 on macrophages induced immuno-upregulation and their antitumor function in breast cancer *BMC immunology* 23 (1), 53.
- **Chauhan A,** Gautam PK. Silver nanoparticles induces apoptosis of cancer stem cells in head and neck

cancer. Toxicology Reports 12, 10-17.

- **Chauhan A**, Gautam PK. The multifunction role of tumor-associated mesenchymal stem cells and their interaction with immune cells in breast cancer. *Immunological Investigations* 52 (7), 856-878.
- **Chauhan A**, Agarwal S, Masih M, Gautam PK. The multifunction role of tumor-associated mesenchymal stem cells and their interaction with immune cells in breast cancer. *Immunological Investigations* 52 (7), 856-878.
- Chaudhary B, Chaudhary P, **Chauhan A**. Review on Importance of Carotenoids in health and medicine *International Medico-Legal Reporter Journal* 3 (1), 78-82.
- **Chauhan A**, Parkar V, Raghuram V. Planning eco-sensitive zones for promoting tree diversity and ecosystem services in urban academic landscapes: a case study from the North-western Indo-Gangetic plain. *Arboricultural Journal* 47 (1), 4-21.
- Agarwal S, **Chauhan A**, Gautam PK. Immunomodulatory effects of β -defensin 2 on tumor associated macrophages induced antitumor function in breast cancer. *Advances in Cancer Biology-Metastasis* 7, 100102.
- Veeraragava S, Mani S, Natarajan L, Duraisamy R, **Chauhan A**. Phytotoxic effects of aqueous leaf extract of *Senna alata* on seed germination and biochemical changes in *Vigna radiata* L. *Vegetos* 35 (3), 788-795.
- **Chauhan A.** and Kalra S., 2020. Identification of driver gene important for progression from colonic inflammation to colorectal cancer. *Research Journal of Life Sciences, Bioinformatics, Pharmaceutical and Chemical Sciences*, 06(03).
- **Chauhan, A.** and Kalra, S., 2020. Lung cancer: A differential mini review of subtypes. *JETIR*, 7(5), pp.91-100. 4. **Chauhan A.** and Kalra S., 2020. Environmental risk factors of lung cancer. *IJEHS*, 2(1), pp.12-19.
- **Chauhan A** and **Kalra S**. Identification of potent COVID-19 main protease(MPRO) inhibitors from flavonoids: an in-silico approach. *J of Ayurveda and Hol Med(JAHM)*.2023;11(2):32-48.
- **Chauhan A**. Identification of driver genes for Non Small Cell Lung Carcinoma progression. *JEITR* 2022;19:241–8.
- **Chauhan A**. Impact of passenger genes for Non Small Cell Lung Carcinoma: An in silico study. *JEITR* 2022;19:241–8.
- **Chauhan A.** and Kalra S., An *Insilico* prediction of ERBB2-GRB7 interaction as a molecular switch to activate NSCLC. Abstract published in NPPRD international proceedings.

- **Chauhan A., Kalra S.** Designing of a multi- epitope vaccine candidate to treat NSCLC by employing an immunoinformatics approach. *BMC journal* 2024;245(6):156-190.
- **Chauhan A., Kalra S. and Sugadev R.** (2024). Identification of GRB2-GRB7 molecular switch in Non Small Cell Lung Carcinoma. *Journal of Proteins and Proteomics*.61(3):23-42.
- **Chauhan A., Kaul P.** (2024). Functional fingerprinting of new psychoactive substances: Impact on CNS binding sites.International Journal of Forensic Medicine and Toxicological Sciences 2024;11(3):1-6.
- **Chauhan A., Suman A.** (2025).Beta- N-methylamino-L-alanine neurotoxicity and amino acid inhibition in alzheimer's disease.International Journal of Comprehensive and Advanced Pharmacology. In Press.
- **Chauhan A., Sharma K** (2025). Polyester Hydrolase Leipzig 7 (PHL7) in Polyethylene Terephthalate (PET) Degradation. In press.

CONFERENCES/WORKSHOPS /SYMPOSIUM:

- Organized Two Days Workshop on” Skill Development for Young Budding Entrepreneurs” in Collaboration with St. Bede’s College and Biotechnology Incubation Center, HPU, Shimla on 4th and 5th October, 2024 at St. Bede’s College.
- Presented paper” Identification of a sub network as a predictive dynamic biomarker for Non Small Cell Lung Cancer.” in International Conference on Advance Interdisciplinary Research-2023 organized by Science Tech Institute, Lucknow and Digvijay Nath PG college, Gorakhpur,UP.
- Presented paper “*Insilico* Prediction of ERBB2- GRB7 interaction as a molecular switch to activate Non Small Cell Lung Carcinoma” in NPPRD ,International Conference organized by BDU Jhansi.
- Presented a paper on “Identification of potent COVID-19 main protease (Mpro) inhibitors from flavonoids: *in silico approach*” in National Conference on Post -Covid upheaval organised by APG Shimla University.
- Presented a paper on “ Azin1-centric dynamic network biomarker of tipping point in non-small cell lung cancer metastasis” in International Conference On Recent Developments on Interfaces of Chemistry, Biology and Material Sciences towards Health and Environment (ICBMHE-2024) organised by JUIT, Waknaghat,Solan(H.P)

- Participated in National Symposium on “Advances in Biotechnology” sponsored by Department of Science and Technology.
- Participated in National Symposium on “Pharmaceutical Sciences and Pharmacoinformatics” organized by University Grant Commission, New Delhi
- Participated in International Industry-Academia Meet held at P.U.Chandigarh. Participated in 2 day workshop on “cancer drug discovery” conducted by Biodiscovery Group, India.
- Participated in national workshop on “Stem cell revolution” organized by Centre for Medical Biotechnology, MDU, Rohtak, Haryana.

AWARDS AND HONOURS:

- Member of the Indian Science Congress Association (ISCA)
- Acquired 1st rank in OCET organized by Panjab University, Chandigarh.
- Awarded Savitri Bai Phulle research fellowship for year 2017-2020.
- Awarded with Women Researcher Krantijyoti Savitri Bai Phulle Fellowship-2024 for research worth Rs. 96,000.
- Secured the first position in oral presentation in National Conference on Post-Covid upheaval organised by APG Shimla University.
- Attended 7 Days Workshop on “Computer Aided Drug Design (CADD)” organized by Center for Advanced Computational Chemistry Studies, New Delhi.
- Attended a certificate course on “Scientific R Programming” Organized by Biodiversity Group India, New Delhi.
- Member of NAAC steering committee.

BOOKS AND CHAPTERS PUBLISHED

- Cancer Systems Biology-Understanding the Basics, Paperback published by Notion Press, 2025. **ISBN:** 978-93-342-5030-5.
- Beginner’s Bioinformatics, Paperback Published by white falcon publishing . **ISBN:** 978-93-5265-938-8.
- Secondary metabolites of important medicinal plant:hibiscus rosa sinensis,emerging trends in multidisciplinary. **ISBN:**978-81-958661-1-3.

PROFESSIONAL EXPERIENCE:

- Assistant Professor, Department of Biotechnology, St. Bede’s College, Shimla.

- Head of department, School of Allied and Healthcare Sciences.
- Assistant Professor, School of Allied and Healthcare Sciences, APG Shimla University, H.P.
- Teaching associate Bioinformatics (PG and PhD course work)-School of Sciences, Indira Gandhi National Open University, New Delhi.
- Provided guest lectures on Role of insilico research (UG)- University of Hyderabad.
- Invited speaker in many Government Schools on Promoting Research through India's National Education Policy, developing research strategies at school level, Stress management etc.

FACULTY DEVELOPMENT PROGRAMS

- Attended 7 days faculty development program/Workshop on “Computer Aided Drug Design(CADD)” organised by Centre for Advanced Computational Chemistry studies, New Delhi.
- Attended 6 days faculty development programme on “enhancing quality assurance in higher education: Insight into NEP 2020 and NAAC's binary accreditation framework” organised by St. Bede's College, Shimla (H.P).

SUBJECTS TAUGHT:

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|----------------------------|---|
| ➤ Biochemistry | ➤ Bioinformatics |
| ➤ Microbiology | ➤ IPR and biosafety |
| ➤ Bioprocess Technology, | ➤ Food biotechnology |
| ➤ Enzymology | ➤ Microbial diagnosis in health clinics |
| ➤ Immunology | ➤ Instrumentations and biotechniques |
| ➤ Advances in microbiology | ➤ Genomics |
| ➤ Vaccinology | ➤ Pharmaceutical chemistry. |

COURSE DESIGNED:

- B.Sc.(Hons.)Medical Microbiology
- B.Sc.(Hons.)Cardiovascular Technology
- B.Sc.(Hons.)Medical lab Technology

STUDENTS GUIDED:

- B.Sc. Microbiology: 4
- B.Sc. Biotechnology: 12

PERSONAL INFORMATION:

Father's Name: Hobbies Strengths
 D.O.B
 Nationality
 Native place
 Languages

Lt. Govind Chauhan English, Hindi, Punjabi

26-09-1987

Indian

Playing musical instruments and Listening to music.

Shimla, Himachal Self-confident, Inquisitive

Pradesh

DECLARATION:

I hereby declare that the information stated above are true and correct to best of my knowledge and belief.

Yours Sincerely,

Dr. Anita Chauhan

Place: Shimla, Himachal Pradesh