



Amanpreet Kaur

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ABOUT ME

Patent Analyst with 1 year of experience specializing in patent search and landscape analysis, backed by a Ph.D. in Chemistry. Proven expertise in conducting prior art searches, freedom-to-operate (FTO) analysis, and technology landscape studies across various chemical domains. Adept at using patent databases and delivering clear, data-driven reports for diverse stakeholders.

WORK EXPERIENCE

Research Analyst

Evalueserve SEZ Pvt. Ltd. [01/07/2024 – Current]

City: Gurugram | Country: India

- **Conducted Patent Searches:** Performed comprehensive patentability, freedom-to-operate (FTO), and invalidation searches across diverse chemical technologies.
- **Technology Landscaping:** Performed patent landscape studies, including patent searches, taxonomy additions, and patent categorization, in the fields of clean hydrogen and carbon capture technologies, identifying key players, innovation trends, and white spaces.
- **Data Analysis and Reporting:** Analyzed complex patent data and delivered actionable insights to support IP strategy and R&D decision-making.
- **Database Proficiency:** Skilled in using patent databases like IPRally, and Orbit for patent analysis.
- **Cross-Functional Collaboration:** Worked closely with other patent teams (Mechanical and Electronics) to align IP findings with business and innovation goals. Actively participated in the Evalueserve Newsletter team to provide the latest news relevant to patent activity in the chemical domain.

Assistant Professor

Thapar Institute of Engineering and Technology [01/07/2023 – 01/07/2024]

City: Patiala | Country: India

- Delivered practicals and tutorials for BTech students, covering key topics in chemistry such as spectroscopic techniques (Colorimeter, UV-Vis spectrophotometer), determination of hardness, alkalinity, chloride, chromium, iron, and copper in an aqueous medium, and experiments involving the use of pH meter, conductivity meter, and potentiometer, thereby enhancing their theoretical understanding.
- Mentored and guided students through complex problem-solving and practical applications, fostering a deeper understanding of course materials.
- Served as a peer reviewer for the OJC journal, critically evaluating manuscripts and providing detailed feedback, with the responsibility of delivering the final verdict on publication decisions.

EDUCATION AND TRAINING

Doctor of Philosophy

Thapar Institute of Engineering and Technology [01/09/2021 – Current]

Website: <https://www.thapar.edu/> | Field(s) of study: Chemistry

- Developed and optimized tyrosine kinase inhibitors targeting multiple cancer types, including cholangiocarcinoma, endometrial cancer, and glioblastoma, using advanced computational techniques.
- Applied virtual screening, molecular docking, and machine learning models to identify and rank potential drug candidates, enhancing the precision of targeted cancer therapies.

- Conducted molecular dynamics simulations to study ligand-receptor interactions at the atomic level, providing insights into binding stability and efficacy for drug discovery.
- Integrated structure-based and ligand-based approaches to improve the selectivity and bioactivity of inhibitors, facilitating their progression from hit-to-lead optimization.
- Collaborated with interdisciplinary teams of biologists and medicinal chemists to validate computational predictions and align them with experimental outcomes for translational research.

Master of Science

Punjab Agricultural University [01/2019 – 01/2021]

City: Ludhiana | Country: India | Field(s) of study: Chemistry

- Synthesized and characterized 10 novel Schiff base compounds with potential antifungal properties, contributing to developing novel therapeutic agents.
- Conducted comprehensive fungitoxicity on the growth of *Fusarium verticillioides*, *Rhizoctonia solani*, and *Macrophomina phaseolina* using poisoned food technique to evaluate the efficacy of synthesized compounds against various fungal strains.
- Utilized advanced spectroscopic techniques, including UV, IR, ¹H NMR, and ¹³C spectral studies for the structural elucidation and confirmation of the synthesized compounds.

PUBLICATIONS

[2023]
[Computational identification and exploration of novel FGFR tyrosine kinase inhibitors for the treatment of cholangiocarcinoma](#)

Journal of Bimolecular Structure and Dynamics

[2023]
[Synthesis, characterization and fungicidal activity of novel 2-aminopyrimidine Schiff bases](#)

Indian Journal of Chemistry

[2022]
[Synthesis and in vitro Fungitoxic Evaluation of Syringaldehyde Schiff Bases and \$\beta\$ -Lactams](#)

Organic Preparations and Procedures International

[2022]
[Synthesis, Characterization and Biological Evaluation of Benzyldienes and \$\beta\$ Lactams Bearing Aza Heterocyclic Moieties](#)

Biological Forum – An International Journal

CONFERENCES AND SEMINARS

[18/08/2024 – 22/08/2024] Denver, USA
American Chemical Society (ACS) Fall Meeting

Presented research on "In silico Investigation of Novel Endometrial Cancer Inhibitors for Point Mutation: A Machine-Learning Based Approach"

[07/03/2024 – 09/03/2024] Birla Institute of Technology And Science - Pilani
INNOVATE 2024 conference

Presented research on "Integrating Novel Approaches for Non-Communicable Disease Management: A Computational identification and designing of Cholangiocarcinoma Inhibitors"

BOOK CHAPTERS

AI-Powered Predictive Modelling for Disease Diagnostics

Genomic Intelligence Metagenomics and Artificial Intelligence by CRC Press Taylor and Francis. ISBN 9781032943411

Unveiling Cheminformatics for Accelerated Drug Discovery and Development: A Computational Guided Approach

Bioinformatics and Beyond: AI Applications in Healthcare by CRC Press Taylor and Francis. (Under review)

SCIENTIFIC ACTIVITIES

Participations

- One Month International Bioinformatics Workshop on - Data Science & Machine Learning with "Python" by Decode Life from 10th February – 7th March, 2024.
- Presented research work in an oral presentation at the 3rd International Conference on "Global Initiative in Agricultural, Forestry and Applied Sciences For food security, Environmental Safety and Sustainable Development (GIAFAS-2021)".
- 4 abstracts published in the 3rd International Conference on "Global Initiative in Agricultural, Forestry and Applied Sciences For Food Security, Environmental Safety and Sustainable Development (GIAFAS-2021)".
- Synthesis and characterization of novel heterocyclic 2-Aminopyrimidine Schiff bases as fungitoxic agents. Amanpreet Kaur, Sunita Sharma, Diksha Verma, Tanvi Sahni and Sukhmanpreet Kaur ISBN:978-93-5419-016-2.
- Synthesis of azomethines and β -lactams of aza heterocycles and antifungal evaluation against *Rhizoctonia solani*. Diksha Verma, Sunita Sharma, Tanvi Sahni, Amanpreet Kaur and Sukhmanpreet Kaur ISBN: 978-93-5419-016-2.
- Fabrication of Syringic Schiff bases and β -lactams along with their antimicrobial evaluation. Tanvi Sahni, Sunita Sharma, Diksha Verma, Sukhmanpreet Kaur and Amanpreet Kaur ISBN:978 93-5419- 016-2.
- Green synthesis of thiophene-2-carboxaldehyde azomethines and their antifungal evaluation Sukhmanpreet Kaur, Sunita Sharma, Tanvi Sahni, Diksha Verma and Amanpreet Kaur ISBN:978 - 93-5419-016-2.
- 14-day Hands-on internship on Cheminformatics conducted by Biotechnika Info Pvt. Ltd.
- Participated in a one-week virtual international workshop in BASICS PRINCIPLES TO ADVANCED TECHNIQUES: CHEMINFORMATICS AND MACHINE LEARNING IN DRUG DISCOVERY.
- Participated in the International Conference on Molecules and Materials Technology (MMT-2023) organized by the Department of Chemistry National Institute of Technology, Kurukshetra, held on 21st-22nd April 2023.
- Participated in a symposium at NIPER, Mohali, Punjab, India, and presented a group poster in Computational Chemistry.
- Hands-on Skill Development Training Programme on ENERGY MATERIALS - FUNDAMENTALS TO DEVICE FABRICATION (ECPE) conducted by CSIR-Central Electrochemical Research Institute-Karaikudi from 21-06-2021 to 25-06-2021.
- Participated in an International Webinar on the Role of Agriculture in Therapeutic Healing organized by ICAR-Directorate of Rapeseed-Mustard Research, Bharatpur.
- Participated in the International Conference on Multifunctional Advanced Materials (VICMAM-2021) organized by Dept of Chemistry, JVM's Degree College, collaborating with the Association of Chemistry Teachers (ACT) on 9th and 10th August 2021.
- Participated in Round Table Discussion with Ms. Juleen R. Zierath, the Nobel Prize Winner in Medicine or Physiology held at PAU, Ludhiana.
- Participated in a poster presentation competition at the National Seminar on Biodiversity at Govt. College for Girls, Ludhiana.

HONOURS AND AWARDS

Young Scientist DST-SERB International Travel Grant (ITS)

Awarded Young Scientist DST-SERB International Travel Grant (ITS) (by the Government of India) for attending ACS Fall 2024 in the USA.

PROFESSIONAL AFFILIATIONS

American Chemical Society (ACS)

Science Chemical Society (SCI)

Society for Advancement of Academic, Sports and Cultural Activities (SAASCA)