

Curriculum Vitae

1. Name: Dr. Ankita Sahu

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Web of Science ResearcherID: AEZ-7011-2022

ORCID  <https://orcid.org/0000-0001-6679-3486>

2. Work Experience

a. ICMR-Research Associate-II (2019-till date)

ICMR-National Institute of Pathology, New Delhi

Project entitled “**Integrated In silico and In vitro Study of Novel Aromatase Inhibitors for Breast Cancer Treatment**”.

Scientific summary:

- Protein structure analysis and protein-ligand interaction.
- Molecular docking and ADMET prediction
- Proficiency in managing the researches and studies of different laboratory groups
- Manage projects involving collaborative teams
- Developed sets of protocols and large dataset analysis
- Experience in flow cytometry
- In vitro studies: Cytotoxicity and western blotting, cell death analysis
- Synthesis and analysis work

b. ICMR-Post Doctoral Researcher (2016 - 2018)

ICMR-National Institute of Pathology, New Delhi:

Project entitled “**Identification and determination of potent inhibitors against cyclooxygenase receptors using computer aided drug design approach**”

Scientific summary:

- Domain knowledge on biochemistry.
- Developed sets of protocols and large dataset analysis
- Sequence space searching, sequence alignment/analysis.
- Protein structure analysis, protein-protein interaction and sequence design.
- ADMET in silico prediction
- In vitro studies: Cytotoxicity and western blotting, cell death analysis
- Investigation of novel therapeutic targets.
- Synthesis and analysis work were being carried out

c. Research work (6 month 2015-2016)

Govt. Jawaharlal Nehru Memorial Medical College, Raipur (CG), India.

Project entitled “**Identification and characterization of drug targets against breast cancer and designing of lead compounds using bioinformatics approach**”.

Scientific summary:

- Utilized bioinformatics tool for drug design
- Work was based on docking study using AutoDock Vina and PyRx.
- A keen eye for detail, especially in monitoring the work of post graduate students.

d. Doctoral work (2012-2016)

Sri Aurobindo Institute of Medical Sciences, Indore (MP), India.

Thesis title “**Evaluation of Oxidative Stress, Tumour Marker and Other Biochemical Parameters in Breast Cancer Patients**”

Scientific summary:

- Studied in different biochemical parameters, oxidative stress and breast cancer tumor markers
- Used ELISA testing to test product performance.
- Expertise in presenting research results to colleagues and other professionals.
- Problem-solving skills

3. A. Educational Qualification

- Ph.D (Medical Biochemistry): Research Centre SAIMS Medical College, Indore under the guidance of Dr. Meena Varma. Affiliated to Davi Ahilya Vishwavidyalaya, Indore in 2016.
- M.Sc. (Medical Biotechnology)- Center for Biotechnology, Pravara Institute of Medical Sciences, Ahmednagar (M.S.) in 2011. (Grade: A)
- BSc (Biotechnology) BSc (Biotechnology)-Hawabagh Women's College, Jabalpur. Affiliated to Rani Durgavati University, Jabalpur (M.P.) in 2009. (Grade:)

B. Technical Qualification

- Working and develop environment in Linux (Ubuntu), and Windows.
- Ability to manage time and prioritize tasks
- Softwares which I used: Schrodinger, AutoDock Vina, PyRx
- Biochemical Techniques: Protein concentration determination, western blotting, Lipid profile, RFT, PFT, Oxidative stress, ELISA, protein expression and tumor markers
- Windows excel, word, PowerPoint

C. Professional skills

- Action-oriented and result-focused.
- Contributed to numerous projects by helping senior-level scientists.
- Capability to work independently as well as in team work.
- Problem solving skills.
- Trained technicians and research assistance in use of laboratory equipment.
- Ability to furnish reports, papers, and recommendations according to the results of the studies.
- A high tolerance of stress and enjoys responsibilities
- Excellent time management skill
- Given the training in undergraduate, postgraduate and PhD students
- Willingness to attend the international/national conferences/seminars relevant to the research area and enjoys visiting the laboratory and to meet with the people working in the same research area.

4. Fellowship/award:

- Research Associateship Award**
ICMR-National Institute of Pathology, New Delhi (01/07/2019- till date)
- ICMR-Post Doctoral Research Fellow Award**
ICMR-National Institute of Pathology, New Delhi (21/11/2016- 20/11/2018)
- Young Scientist Award** in 6th National conference of Society of Medical Scientist of India (SOMSICON) at L.L.R.M. Medical College, Meerut (U.P.) (2016).
- Fellowship for Training of Young Scientist** by M. P. Council of Science & Technology Bhopal in 30th M.P. Young Scientist Congress at on 28th February & 1st March 2015 and 2014.
- Awarded 84.15** credit hours by different state medical council in India.
- A+ Grade** in State level Environmental Awareness examination 2001 organized by Environmental Care and Sustainable Development Society (ECSDS), Jabalpur (India).

- g. **Paper selected in 12th International Conference (BICOB-2020) at San Francisco, CA, USA in 23rd-25th March 2020. Due to coronavirus outbreak, the conference was cancelled.**

Life Membership: Indian Society for the Study of Reproduction and Fertility (ISSRF) membership No. 1608

5. Publications/conferences/workshop/training

Published research papers in international and national journal; *Three are in process. I have attended more than 20 conferences/workshop/training and presented more than 10 Poster/oral presentations in various institutes.

Reviewer

1. **Bioscience Reports.** Reviewed ten research/review papers.
2. Reviewed four book chapters.
 - a. Book titled “**Computational Intelligence Methods in COVID-19: Surveillance, Prevention, Prediction and Diagnosis**”. 2020. Springer Nature 2020.
 - b. Book titled: **Nature-Inspired Intelligent Computing Techniques in Bioinformatics, Springer 2022**

6. Personal Details

Name: Dr. Ankita Sahu

DOB: 29/05/1988

Gender: Female

Marital status: Unmarried

Language known: Hindi (Native), English (profession)

Passport No.: M7401459

Aadhar No.: 537328770074

Present address: Room No. 310, Adya Jha Hostel, C-3, SDA, Hauz Khas, New Delhi-110016

Permanent address: 123/B, Narmada Nagar, Gwarighat Road, Jabalpur (MP)-482008

Contact number: +91-9643535184, +91-8368217837

7. Hobbies and Interests

As you may be able to infer from my professional background, I have a strong interest in medical biological sciences, cell culture and structure-based drug design bioinformatics. Some of my hobbies are include reading, teach in govt. school/colleges, spending time in orphanage, travelling and listening gazal. I firmly believe that using my professional talents to the community's benefit is an important part of life.

8. References

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| <p>1. Dr. Saurabh Varma;
Scientist-E,
ICMR-National Institute of
Pathology
Safdarjung Hospital Campus
New Delhi – 110029
Email: svarmasv1@rediffmail.com
Mobile: +91-9899086705</p> | <p>2. Dr. Meena Varma:
Professor,
Department of Biochemistry
SAIMS Medical College, Indore
(M.P.)-453555
Email: varmameena25@gmail.com
Mobile: +91-9827302820</p> |
| <p>3. Dr. P.K. Patra:
Dean
Chhattisgarh Institute of Medical
Sciences (CIMS)
Chhattisgarh (C.G.)-495009:
Email: pkp1964@yahoo.co.in:
Mobile: +91-9893100505</p> | <p>4. Dr. Ram Singh
Professor
Department of Applied chemistry
Delhi Technological University
Rohini, New Delh-110042
Email: ramsingh@dtu.ac.in
Mobile: +91-9811470714</p> |

PUBLICATIONS

International/National Journals

1. Ankita Sahu, Dibyabhaba Pradhan, Saurabh Varma. **Cyclooxygenase-2 as a therapeutic target for human breast cancer**. 2022 (Under Revision) Mechanism of Diseases (IF:5.0).
2. Ajeeshkumar K.K., Ankita Sahu, Astha Singh, Saurabh Verma. **Proteoglycans in breast cancer, identification and characterization by LC-MS assisted proteomics approach: A review**. Cellular and Molecular Life Sciences. Submitted (IF:9.261)
3. Ankita Sahu, Dibyabhaba Pradhan, Babita Veer, Sumit Kumar, Ram Singh, Khalid Raza, Moshahid A. Rizvi; Saurabh Verma. **In silico screening, synthesis and in vitro evaluation of novel anticancer agents as potential COX-2 inhibitors**. Journal of Biomedical Science. (Submitted) (IF:4.8).
4. Ankita Sahu, Saurabh Varma, Dibyabhaba Pradhan, Khalid Raza, Sahar Qazi, A K Jain. **Computational screening for finding new potent COX-2 inhibitors as anticancer agents**. Letters in Drug Design & Discovery. 2022. E-pub Ahead of Print. DOI: 10.2174/1570180819666220128122553 (IF:1.15)
5. Ankita Sahu, P K Patra, Meena Varma, Manoj Kumar Yadav. **Impact of ErbB receptors targeted therapies in breast cancer**. Current Pharmaceutical Biotechnology. 2022; 23:787-802. DOI: 10.2174/1389201022666210719161453. (IF:2.8)
6. ManishRana, Rizwan Arif, Faez Iqbal Khan, Vikas Maurya, Raja Singh, Md Imam Faizan, Shama Yasmeen, , RaquibAlam, Ankita Sahu, Tanveer Ahmad, Rahisuddin. **Pyrazoline analogs as potential anticancer agents and their apoptosis, molecular docking, MD simulation, DNA binding and antioxidant studies**. Bioorganic Chemistry. 2021; 108: 1045565: 1-17. DOI: 10.1016/j.bioorg.2021.104665. (IF:4.831)
7. Ankita Sahu, P K Patra, Meena Varma, Manoj Kumar Yadav. **Identification and characterisation of ErbB4 kinase inhibitors for effective breast cancer therapy**. Journal of Receptors and Signal Transduction. 2017; 37(5):1-11. DOI: 10.1080/10799893.2017.1342129 (IF:2.092)
8. Kamal Kachhawa, Meena Varma, Poonam Kachhawa, Ankita Sahu, M. K. S. Shaikh, Sanjay Kumar. **Study of Dyslipidemia and Cystatin C Levels as a Predictive Marker of Chronic Kidney Disease in Type 2 Diabetes Mellitus Patients at a Teaching Hospital in Central India**. Integrative Nephrology & Andrology. 2016; 3(1):24-28.DOI: 10.4103/2394-2916.175401.
9. Ankita Sahu, Meena Varma, Kamal Kachhawa, M.K.S. Shaikh. A Prognostic Study of MDA, SOD and Catalase in Breast Cancer Patients published in "International Journal of Science and Research. 2015; 4(5): 156-159.
10. Kamal Kachhawa, Meena Varma, Ankita Sahu, Poonam Kachhawa, Rajesh Kumar Jha. **Oxidative Stress and Antioxidant Enzyme Levels In Hypertension Chronic Kidney Disease Patients** published in 'International Journal of Biomedical And Advance Research. 2014; 05(10):488-490.
11. Meena Varma, Kamal Kachhawa, Ankita Sahu, Poonam Kachhawa. **Association of Antioxidant enzymes and MDA level in Diabetic Nephropathy Patients in Indore Region of Madhya Pradesh** published in 'Journal of Pure and Applied Microbiology. 2014; 8(5): 4137-4141 (IF:0.483).
12. Meena Varma, Ankita Sahu, Sangeeta Paneri, Kamal Kachhawa. **Study of BMI, Lipid Profile and CBC in Women having Breast Cancer** published in 'Journal of Pure and Applied Microbiology. 2014; 8(6): 4827-4831 (IF:0.483).

Conference Proceeding

1. Sahu A, Pradhan D, Raza K, Qazi S, Jain AK, Verma S. In silico library design, screening and MD simulation of COX-2 inhibitors for anticancer activity. In Proc. of 12th International Conference on Bioinformatics and Computational Biology (BICOB-2020), San Francisco, USA, March 23-25, 2020. EPIc Series in Computing, 70: 21-32. DOI: <https://doi.org/10.29007/z2wx>.

Book Chapters

1. **Ankita Sahu, Sahar Qazi, Khalid Raza, Saurabh Verma. COVID-19: Hard Road to Find Integrated Computational Drug and Repurposing Pipeline.** Computational Intelligence Methods in COVID-19: Surveillance, Prevention, Prediction and Diagnosis. 2020; 295-309. ID: covidwho-891253. DOI: 10.1007/978-981-15-8534-0_15. (SCI) Springer Nature (H index:64)
2. **Ankita Sahu, Sahar Qazi, Khalid Raza, Astha Singh, Saurabh Verma. Machine Learning-Based Approach for Early Diagnosis of Breast Cancer Using Biomarkers and Gene Expression Profiles.** 2022. Computational Intelligence in Oncology. volume 1016:285–306. DOI: 10.1007/978-981-16-9221-5_17. (SCI) Springer Nature (H index:64)
3. **Khalid Raza, Sahar Qazi, Ankita Sahu, Saurabh Verma. Computational Intelligence in Oncology: Past, Present, and Future.** Computational Intelligence in Oncology. 2022. volume 1016:3–18. DOI: 10.1007/978-981-16-9221-5_1. (SCI) Springer Nature (H index:64)
4. **Astha Singh, Ankita Sahu, Saurabh Verma. Computer Intelligence in Detection of Malignant or Premalignant Oral Lesions: The Story So Far. Computational Intelligence in Oncology.** 2022. Volume 1016: 187-200. DOI: 10.1007/978-981-16-9221-5_11. (SCI) Springer Nature (H index:64)

Presentations

2. Presented a poster abstract entitled “**In Silico Study of Aromatase Inhibitors Using Computer-Aided Drug Design Against Breast Cancer**” in “World Congress on Reproductive Health with Emphasis on Reproductive Cancers, Infertility and Assisted Reproduction” at Shri Mata Vaishno Devi University, Katra, Jammu & Kashmir on 4th -16th February 2020.
3. Poster presented on “**In silico screening for identification of potential cyclooxygenase-2 inhibitors**” at India International Science Festival, Anna University, Chennai (T.N.) on 13th-16th October 2017.
4. Poster presented on “**Role Large-Scale Computational Screening Identifies First in Class Inhibitors of Breast Cancer Promoting Kinase**” at Pt. J.N.M. Medical College, Raipur (C.G.) on 25th -26th July 2016.
5. Poster presented on “**Correlative Study of Tumour Marker Ca 15-3 with Uric Acid in Patients with Breast Cancer**” at Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh (Punjab) on 25th -28th November 2015.
6. Poster presented on “**Role of Culture and Antimicrobial Susceptibility Pattern in Cancer Patients**” at Career College, Bhopal (M.P.) on 6th -7th Feb 2015.
7. Presented a research paper titled “**Study of Lipid Profile and Heamatological parameters in Breast Cancer Patients**” in “**30th M. P. Young Scientist Congress**” at M. P. Council of Science & Technology, Bhopal on 28th February & 1st March 2015.
8. Presented a paper titled “**A Comparative study of MDA and Antioxidant Enzymes In Breast Cancer Patients**” in “**3rd Madhya Pradesh Women Science Congress**” at Govt. Holkar Science College, Indore (M.P.) on 28th -29th Dec. 2014.
9. Poster Presented on “**SOD, Catalase and Lipid Peroxidation Status in Women Having Breast Cancer**” in “**International Conference on Emerging Challenges in Biotechnology, Human Health & Environment**” 18- 20 December 2014 in Indore.
10. Poster Presented on “**Effect of antioxidant enzymes and MDA level in diabetic chronic Kidney disease Patients in Indore**” in “**International Conference on Emerging Challenges in Biotechnology, Human Health & Environment**” 18- 20 December 2014 in Indore.
11. Poster Presented on “**Role of CA 15-3 with and without metastasis in Breast Cancer Patients**” in “**41th Annual Conference of Association of Clinical Biochemists of India (ACBICON)**” held at All India Institute of Medical Sciences, Jodhpur from 10th-13th December 2014.

12. Poster Presented on “**Effect of Antioxidant Enzymes and MDA level in Hypertensive Chronic Kidney Disease Patients**” in “**41th Annual Conference of Association of Clinical Biochemists of India (ACBICON)**” held at **All India Institute of Medical Sciences, Jodhpur**, from 10 -13 December 2014.
13. Presented a research paper titled “**Study of Lipid Profile and Heamatological parameters in Breast Cancer Patients**” in “**29th M. P. Young Scientist Congress**” at M. P. Council of Science & Technology, Bhopal on 28th February & 1st March 2014.
14. Poster Presented on “**Screening Of Antibiofilm Enzyme From *Actinobacillus Actinomycomitance* And Study Its Activity On Biofilm With Antibiotics**”, in “**40th National Conference Association of Clinical Biochemists of India (ACBICON)**” 3rd -6th December 2013 in New Delhi.
15. Poster Presented on “**The Effect of Temperature on Storage of Different Routine Biochemistry Metabolites in Human Serum**” in “**40th National Conference Association of Clinical Biochemists of India (ACBICON)**” 3rd -6th December 2013 in New Delhi.
16. Presented a research paper on “**Disaster Risk Management**” in “**National Seminar on Environment Hazards and Disaster**” held on 12th -13th January 2009 in Hawabagh Womens College, Jabalpur.

Conferences/Workshop/Training

1. Participated in Cloud-based Hands-on Workshop on **Molecular Docking, Pharmacophore Modeling and Machine Learning** organized by Bioinformatics Division, ICMR – National Institute of Cancer Prevention and Research, Noidaon 15-16th March, 2022.
2. Attended 5 Day workshop on “**Data Analysis using Python**” organized by the Department of Computer Science, Maitreyi College, University of Delhi on 24th – 28th June 2021.
3. Participated in the webinar on “**Secret of Covid-19 and Variant strains**” organized by GAIMS-Delhi on 15th January 2021.
4. Participated in the “**Indian Webinar Series - Introduction to Computational Drug Design**”, co-organized by Schrödinger, and Pharmacy Council of India with qualified the assessment test held on 21 Sep-23rd Oct 2020.
5. Attended Hands-on 3 days National workshop on “**Flow Cytometry**” held at ICMR- National Institute for Research in Environmental Health, Bhopal (M.P.) held on 27th -29st July 2018.
6. Participated Hands-on 6th National workshop on “**Next Generation Sequencing Data Analysis: Integrating Genomics, Transcriptomics and Proteomics Data for potential Therapeutic Target Discovery**” held at ICMR- National Institute of Pathology, New Delhi on 26th -1st March 2018.
7. Participated in the ICMR sponsored workshop on “**Rational Structure Based Bioinformatics in Drug Discovery**” held at Seminar Room of Biophysics, All India Institute of Medical Sciences, New Delhi held on 22nd to 24th February, 2017.
8. Attended Hands-on National workshop on “**Genome to Drug: in-silico analysis**” held at Pt. J. N. M. Medical College, Raipur (CG) on 25th -31st January 2016.
9. Hands-On workshop on “**Molecular Techniques**” held at Pt. J. N. M. Medical College, Raipur (CG) on 26th -1st August 2015.
10. Participated workshop on “**Research Methodology**” held at Bhopal Memorial Hospital and Research Centre, Bhopal on 12th -15th March 2015.
11. Attended International Congress on “**Scientific Innovation and Intellectual Property Laws: The Interface**” held at Vikram University, Ujjain on 18-20 September 2014.

12. Attended 3rd National Conference on “**Teen and Young Adult Cancers (TYAcon)**” held at Sri Aurobindo Institute of Medical sciences, Indore on 26th to 27th July 2014.
13. Participated Hands-on workshop on “**Exploration of Molecular Phylogeny and DNA Sequence Analyses for Taxonomy, Biological Diversity and Diseases Parental Association Findings**” held at Madhya Pradesh Council of Science and Technology, Bhopal on 28th June- 28th June 2014.
14. Attended the “NACO STEM CELL 2014” a National Conference on **Stem Cell Biology and the Era of Regenerative Medicine** held at All India Institute of Medical Sciences, Raipur on 4th -5th February 2014.
15. Attended National Conference on “**Role of Biotechnology in Human Welfare**” held at School of Biotechnology, Devi Ahilya University, Indore on 25th to 27th February 2014.
16. Attended 3rd National Seminar on the “**Management of Cancer Centers**” held at Institute of Management Studies, DAVV and Indian Institute of Head and Neck Oncology, Indore Cancer Foundation on 31st January - 1st February, 2014.
17. Participated 3 days Workshop cum Training on “**Use of Bioinformatics Tools in Molecular Biology and Genome Data Resource Analyses**” held at M.P. Council of Science and Technology, Bhopal on 12th-14th August 2013.
18. Participated 4 days workshop on “**Research Methods on Medical Sciences**” held at All India Institute of Medical Sciences (AIIMS, Bhopal) on 4th to 7th April 2013.
19. Participated 7 days Training on “**Molecular Techniques**” held at Madhya Pradesh Council of Science and Technology, Bhopal in 19th- 25th February 2013.
20. Participated in a three-day National Workshop-cum-Training on “**Bioinformatics: Sequence Analysis**” held at Birla Institute of Scientific Research, Jaipur on 21st -23rd September 2012.
21. 2 days national level conference on “**Medical Biotechnology & Clinical Research**” held at J.N. Tata Auditorium IISc, Bangalore on 2nd and 3rd October 2009.
22. Participated in the Workshop on “**Downstream Processing**” held at J.N.Tata, Auditorium, IISc,Bangalore on 2nd October 2009.
23. Attended Special Training program for “**Snake and Wild Life Conservation**” organized by International wild life and tiger conservation N.G.O. group in year 2007, Jabalpur.
24. 10 days Training in “**Biotechnology & Plant Tissue Culture**” from State Forest Research Institute, Jabalpur on 5th -17th November 2007.
25. Regional Workshop on “**Mushroom Production Technology**” in Hawabagh Women’s College in collaboration with J.N.K.V.V.Jabalpur (MP) on 23rd -24th February 2007.

Declaration

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

Date: 23th April, 2022

Place: New Delhi

Dr. Ankita Sahu