

Faculty Profile



Dr. Akhilesh Prajapati,
Assistant Professor, Biotechnology
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Educational Profile:

PhD – MS University of Baroda

Thesis titled: “To understand the etiopathogenesis of benign prostate hyperplasia at biochemical, cellular and molecular level.”

MSc – M.D.S. University, Ajmer, Rajasthan, India

BSc – M.D.S. University, Ajmer, Rajasthan, India

Key Skills

Dr. Akhilesh Prajapati is well verse with many scientific lab skills and capable of providing comprehensive solutions to various healthcare and biotech industry and other government bodies in the following areas:

1. Molecular Diagnostics based on ELISA and Mammalian cell culture techniques.
2. Biochemical studies on cell line and research animals
3. Stem cell differentiation and Bone marrow transplantation techniques.
4. Molecular signalling profiling to investigate genetic and cellular pathologies.
5. Various cytogenetics and oncogenic studies.

Background

Joined GSFC University in July 2017

Scholarship and Accomplishments

Dr. Akhilesh Prajapati has earned his doctoral degree in Biochemistry with specialization in Benign Prostate Hyperplasia, an endocrine and reproductive pathophysiological manifestation prevalent in males from the department of Biochemistry, The Maharaja Sayajirao University of Baroda. Astute outcomes of his Ph.D. research was to establish an economic and novel BPH

rodent model that evidently helped in exploring the hidden myths of BPH pathogenesis and Prostate Cancer. During the doctoral studies, he developed a BPH cell line and submitted to public health department, England.

Dr. Prajapati's thrust area of research is to try to understand mechanisms underlying oncogenic development in breast and prostate tissues facilitated by molecular and cellular crosstalk between cell types. Additionally, shed some light on the signalling pathways, cell surface receptors and cancer stem cells involved in the cancer development and progression. He has published several research papers and a book chapter in peer reviewed international science journals & publishing house in his repute and presented work at numerous national and International conferences, symposiums. He has won numerous honours, including the DBT-JRF, the GOI, the prestigious INSA visiting scientist fellowship, the GOG, the Gujarat Science Academy's Best PhD Award, the DBT-International Travel Award, the Best Poster Award, the Best Oral Presentation Award, and a nomination for the Rayan International Award, among others.

Since 2019, the GSBTM has also asked Dr. Prajapati to give interactive lectures on Biochemistry and Metabolism under Biotechnology Capacity Building Cell at the state level. He also serves as a reviewer and member of the editorial board for several prestigious scientific journals, including Cell Biology International, a Wiley-published journal, Advanced Chemicobiology Research (ACBR), etc. He is also an active member of numerous national and international scientific committees, including ISSCR, USA, The Society of Biological Chemists (INDIA), and American Association for Cancer Research (AACR). Additionally, he has been acknowledged by international journal as an exceptional reviewer.

Dr. Prajapati is also actively involved in a number of institutional start-up initiatives that are financed by the state government, and the Gujarat Knowledge Society, Education Department, and GoG have recognised him for his mentoring of students.

Dr. Prajapati is engaged in scientific study to look into different intricate cellular and molecular pathways to comprehend endocrine-based tumours in addition to teaching and other co-curricular activities. He has been granted a 43 lakh INR grant from the Gujarati government's GSBTM (DST) to study breast cancer stem cells and miRNA.

Most three Notable Publications

1. **Prajapati A, et. al., 2020 Oncogenic transformation of human benign prostate hyperplasia with chronic cadmium exposure.** Journal of trace element in medicine and research 62 (2020) 126633. **(first and corresponding authorship)** <https://doi.org/10.1016/j.jtemb.2020.126633> **(Impact Factor:3.995)**
2. **Prajapati A, et al 2015. Pyrazolone incorporating bipyridylmetallointercalators as effective DNA, Protein and lung cancer targets: Synthesis, characterization and in-vitrobiocidal evaluation.** *Chemico-Biological Interactions* (2015) 240, 250-266. <http://dx.doi.org/10.1016/j.cbi.2015.08.022> **(Impact Factor:5.192)**
3. **Prajapati A, et al 2014b. A single low dose of cadmium exposure induces benign prostate hyperplasia like condition in rats: A novel benign prostate hyperplasia rodent model.** *Exp Biol Med* (Maywood). 2014 May 28;239 (7): 829-841. [DOI: 10.1177/1535370214536118](https://doi.org/10.1177/1535370214536118) **(Impact Factor:4.51)**

Book chapter

1. **Prajapati A, “Hematopoiesis and Cancer stem cells: the seed and soil crosstalk”** Book on Hematopoiesis” by AAP/CRC Press, USA, ISBN: 9781774914724 (in production) 2022 **(first and corresponding authorship)**