



ABSTRACT NO:ICCPPr-SPS-120

THE PHARMACIST'S ROLE IN ADVANCING PHARMACOGENOMICS AND PERSONALIZED CARE

¹ D.VIKRAM DHANA, ² Dr. M.DHEENADHAYALAN *

¹ Pharm.D 5th year, School of Pharmaceutical Sciences, Vels Institute of Science, Technology and Advanced Studies.

² Assistant professor, Department of Pharmacy practice, School of Pharmaceutical Sciences, Vels Institute of Science, Technology and Advanced Studies.

EMAIL ID: vikramdhana666@gmail.com

ABSTRACT

Pharmacogenomics, the study of how genetic variations affect drug response, is revolutionizing the way treatments are designed and delivered. Instead of the traditional “one-size-fits-all” approach, it allows for therapies that are tailored to each individual’s genetic profile, thereby improving drug effectiveness, reducing adverse effects, and enhancing overall patient outcomes. As healthcare shifts toward precision medicine, the pharmacist’s role becomes increasingly central in this transformation.

Pharmacists possess unique expertise in drug mechanisms, interactions, and safety, which positions them to interpret and apply pharmacogenomic information in clinical practice. Their responsibilities extend beyond dispensing medications to actively collaborating with physicians and other healthcare professionals in selecting the most appropriate therapy for each patient. They play a vital role in counseling patients about the significance of genetic testing, addressing concerns about privacy and ethics, and ensuring that genomic information is integrated safely into treatment decisions.

Additionally, pharmacists contribute to research, education, and policy development, helping to establish guidelines for the effective use of pharmacogenomics in routine care. With growing accessibility to genetic testing, pharmacists are key to translating complex scientific data into practical, patient-centered solutions. Importantly, this evolving field also opens new professional opportunities for pharmacists—enhancing their scope of practice, strengthening their leadership role in healthcare teams, and preparing them to be central players in the era of precision medicine.

This integration highlights the pharmacist as a driving force in shaping the future of individualized therapy and advancing modern healthcare. **KEYWORDS:** Pharmacogenomics, Personalized medicine, Pharmacist’s role, Genetic testing, Patient-centered care, Healthcare innovation