

# Translational Pharmacology: Role and its Impact

Mariya Dixon\*

Managing editor, In Silico & In Vitro Pharmacology, London, UK

\*Corresponding author: Mariya Dixon

✉ ariya45@hotmail.com

Managing editor, In Silico & In Vitro Pharmacology, London, UK

## Abstract

As a field of clinical pharmacology, translational pharmacology is a relatively new branch. The goal of translational pharmacology is to bring the results of molecular pharmacological research to the patient level, with the goal of generating a novel medicine that is tailored to the patient's needs. As a result, it aids in the translation of knowledge from basic animal studies to patient investigations at the bedside.

Received: May 08, 2021; Accepted: May 22, 2021; Published: May 29, 2021

## Introduction

Harry Gold founded clinical pharmacology in the 1950s, which entails the scientific study of medications in humans, their rational use, safety, efficacy, cost and benefit availability, and tailored treatments. It helps to discover novel pharmaceuticals, conduct clinical research, and conduct clinical trials for new drug regimens.

Advanced information technology and nanotechnology are two domains that are currently being explored as newer technologies in targeted research and therapy as a solution for many aspects of healthcare management. Globally, drug development projections have revealed an unsustainable economic state pandemic. Pharmacotherapy, which is expressed as a cost-effective component in treating a condition, is an example of exponential inflation on expenses incurred. Many diagnostic and therapeutic products with unknown effects are supplied to patients who are known to be confounded by multiple aspects such as the ageing process, unestablished clinico-pathological association, and so on, well beyond the proved pharmacotherapy of various medical diseases. In order to quantify molecular diagnostic characteristics, clinical outcomes, treatment response, and idiosyncratic behaviour, translational medicine is critical.

The integrated personalised therapy is tailored based on genetic profiles, diagnosis, and therapeutic specificities, providing the greatest benefit to the community with the fewest side effects. As a result, personalization has become a part of everyday life. It has proven feasible to bridge the gap between palliative and curative disease management through the use of translational medicine. The combination of basic science, research, and pharmacology of a clinical condition has expanded beyond the individual patient to the entire population. Genotyping and phenotyping would

allow researchers to identify people who are more likely to have adverse medication reactions, allowing them to focus on safety precautions in the treatment of a specific clinical condition.

Translational pharmacology, which is regarded an extension of clinical pharmacology, has grown as a new discipline to fulfil today's healthcare needs as research and technology have progressed. Translational pharmacology, translational research, and translational medicine are synonymous terms in which the word translational refers to the development of a new treatment that addresses specific patient requirements and goals. It has a variety of roles and applications in today's world in terms of drug development, since it aims to bridge the gap between basic science, such as molecular pharmacology, and patient needs in order to solve relevant clinical problems. It covers the domains of molecular research, animal experimentation, and their use in patients to treat therapeutic conditions through reasoning. It is a fast emerging science that aspires to accelerate the development of newer diagnostic and treatment measures through highly collaborative research that spans the laboratory to patients.

## Conclusion

The development of a novel medication is an expensive and time-consuming procedure, and the fate of the developed molecule is unknown. Focused research and a proposal for a novel medication initiative enhance translational pharmacology and translational medicine. The use of a database reduces the cost of medication development as well as the time it takes to complete it.