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SHORT COMMUNICATION

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Hypothesis of Bio-Pharmaceutics and Pharmaceutical Formulations

Gwen Ericson*
Department of Pharmacology, University of Bari, Bari, Italy

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Description

The branch of pharmacy is known as pharmaceutics that concerned with the process of converting an existing drug or a Novel Chemical Entity (NCE) into a treatment that patients may use safely and efficiently. The science of dosage form design is another name for it. The entire process of turning a novel chemical substance into a recognised medication that is safe and successful in curing or preventing disease is known as pharmaceutics [1]. A variety of scientific, medical, legal, commercial, and regulatory expertises are needed for this complicated procedure. The science of pharmaceutics analyses the numerical elements of medicine distribution. It entails the creation, testing, and assessment of medications in conjunction with a suitable dose form. A pharmaceutical scientist describes the physical characteristics of medicines that create cutting-edge drug delivery technologies.

Bio-pharmaceutics can be either the effects of Physico-chemical properties of drug products or the study of physical and chemical properties of drugs and their appropriate dosage as related to the onset, duration, and intensity of drug action [2]. Bio-pharmaceuticals are advanced drugs created from living cells or organisms by frequently using the art of biotechnological techniques. The scientific basis for the creation and design of pharmaceutical products are provided by bio-pharmaceutics. The release of drug from the drug product and the accessibility of the medication at the site of action are two factors that could be impacted by each step in the manufacturing of a completed dosage form [3]. Currently, biopharmaceuticals have been extensively used as therapeutic agents are such as vaccines, blood components, immuniser, antigens, hormones, cytokines, enzymes, allergenic, cell therapies, gene therapies. Both indicate a connection between a drug's physicochemical characteristics, and its biological fate in the body after delivery, and the drug's subsequent pharmacological action. White blood cells or bacteria, among other living things are also used in the production of biopharmaceutical goods. On the other hand, chemical-based techniques are used to make pharmaceutical products. Drug permeability across the intestinal mucosa and solubility in Gastrointestinal (GI) fluids are examples of biopharmaceutical characteristics [4]. Connecting a pharmacological product's *in vitro* and in behaviour is a never-ending objective for research, business, and regulatory organisations.

Pharmaceutical formulations in pharmaceutics refer to the process of combining various chemical compounds, by including the active medicine, to create a finished pharmaceutical product [5]. Formulation is frequently used to refer to a dosage form. The goal of formulation research is to create a stable and patient-acceptable medication preparation. This typically entails adding the substance to a pill or capsule for medications that are used orally. Innovative dosage forms or delivery systems may direct a drug to its specific site of action; optimize the timing of the drug release, or increase comfort or convenience for the patient [6]. Thus, such innovations may improve efficacy and tolerability and lead to improvements in health-related quality of life.

Conclusion

Pharmaceutical formulation is a multi-step procedure that results in a good pharmaceutical product by combining the active ingredient with all other ingredients while considering factors such as solubility, polymorphism, and particle size. Pharmacists deal with the safe and effective administration and distribution of existing medications and ensure patients have the appropriate medications.

References

[1] Calo-Fernández B, Martínez-Hurtado JL. Biosimilars: Company strategies to capture value from the biologics market. Pharmaceuticals. 2012; 5(12):1393-408.

Contact: Gwen Ericson, E-mail: gwenerison@gmail.com

[2] Gleason PP, Alexander GC, Starner CI, Ritter ST, van Houten HK, Gunderson BW, et al. Health plan utilization and costs of specialty drugs within 4 chronic conditions. J Manag Care Pharm. 2013; 19(7):542-8.

[3] Kerr LD. The use of biologic agents in the geriatric population. J Musculoskelet Med. 2010; 27(5):175.

[4] Lamanna WC, Holzmann J, Cohen HP, Guo X, Schweigler M, Stangler T, et al. Maintaining consistent quality and clinical performance of biopharmaceuticals. Expert Opin Biol Ther. 2018; 18(4):369-79.

[5] Schiestl M, Stangler T, Torella C, Čepeljnik T, Toll H, Grau R. Acceptable changes in quality attributes of glycosylated biopharmaceuticals. Nat Biotechnol. 2011;29(4):310-2.

[6] Ryan MP, Walsh G. Veterinary-based biopharmaceuticals. Trends Biotechnol. 2012;30(12):615-20.