ACTA SCIENTIFIC PHARMACEUTICAL SCIENCES

Volume 3 Issue 6 June 2019

Editorial

Editorial on Drug Development and Technology

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Received: January 25, 2019; **Published:** May 01, 2019

DOI: 10.31080/ASPS.2019.03.0269

Drug development is the process of bringing a novel pharmaceutical drug to the souk once a lead compound has been acknowledged through the process of drug discovery. It includes pre-clinical research on microorganisms and animals and clinical trials on humans and may include the step of attaining regulatory approval with a new drug application to market the drug [1].

The first drug introduced by Merck in 1826 for civilian use was a pure natural product, named morphine, and the first semi-synthetic agent aspirin was introduced by Bayer in 1899. This led to the discovery and isolation of many significant drugs such as codeine, digitoxin, quinine, pilocarpine, paclitaxel and artemisinin which are effective for cardiovascular disorders, infection and for cancers. The World Health Organization (WHO) has given its estimation that more than 2/3rd of the global population nowadays depends on alternative sources of treatment to fulfill the basic healthcare requirements and this most importantly embroils the usage of plant products [2].

Drug discovery scientists are all aiming to identify compounds that are safe and efficacious as quickly and cheaply as possible. The average cost bare by a major pharmaceutical company in order to develop a new drug is over USD 6 billion but the cost of drugs can be reduced by latest technologies and profound understanding of biological sciences [3].

Mass spectrometry (MS) has been routinely used to assay the metabolism of compounds in lead optimization and preclinical trials. Flow cytometry is a well-established cellular analysis technique that has been demonstrated in clinical laboratories all over the world. More sensitive evanescent waveguide interferometry, Microscale thermophoresis, High-density microarrays for label-free biomolecular reaction kinetics, based on ellipsometry [4].

It is assumed that future drug novelty and exploration will continue to involve the same basic science disciplines that have been used for the past 60 years. The question is how the scientists assess the ability of novel agents in future, by utilizing the already discussed techniques or by some complex human-derived models with multiparametric assay systems that will identify more perfectly possible targets?

Bibliography

1. Taylor David. "The Pharmaceutical Industry and the Future of Drug Development". Issues in Environmental Science and Technology. Royal Society of Chemistry (2015): 1-33.

2. Farnsworth NR., *et al*. "Medicinal plants in therapy". *Bulletin WHO* 63 (1983): 965-981.

3. Herper M. The Truly Staggering Cost of Inventing New Drugs, Forbes.com (2012).

4. Landry., *et al*. "Discovering Small Molecule Ligands of Vascular Endothelial Growth Factor That Block VEGF–KDR Binding Using Label-Free Microarray-Based Assays". *Assay and Drug Development Technologies* 10 (2012): 250-259.

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