Acta Scientific Pharmacology

Volume 1 Issue 9 September 2020

Editorial

Natural Products for Drug Discovery

Ahmed M Abd-Alkhalek[1] and Omayma A Eldahshan[2]*

[1]*Faculty of Medicine, Al-Azhar University, Cairo, Egypt*

[2]*Department of Pharmacognosy, Faculty of Pharmacy, Ain Shams University, Cairo, Egypt*

***Corresponding Author:** Omayma A Eldahshan, Department of Pharmacognosy, Faculty of Pharmacy, Ain Shams University, Cairo, Egypt.

Received: June 27, 2020

Published: August 01, 2020

Most of the drugs in the market are originated -directly or indirectly- from natural resources such as chloroquine, digoxin, hyoscine and taxol. Lots of reported data discuss the *in vitro* and *in vivo* biological activities of natural extracts and isolated compounds, therefore the lights should be shed on the preclinical and clinical studies of these products in an attempt to add a new building block to the field of drug discovery. Choosing the extracts or compounds for clinical trials should depend on the availability of their natural sources as well as the yield in case of isolated compounds.

Cupressuflavone is an example. It's a biflavonoid isolated from Cupressus macrocarpa. It exerted analgesic and anti-inflammatory activities similar to that of diclofenac sodium at a dose of 100 mg/kg. The lack of toxicity suggests its potential application in functional foods and dietary supplements that target inflammation-related diseases [1]. Another example of biflavonoids is agathisflavone, which could improve memory and decrease anxiety by restoring the brain oxidative stress and regulating the activity of anti-choline esterase. It needs clinical investigation to develop an anti-amnesic agent [2].

Ocimum basilicum is used worldwide. Its hexane extract could be used as a nutritional supplement or a therapeutic drug to protect against aspirin-induced gastric ulcers. It would be interesting to conduct further detailed studies using clinical trials to evaluate its therapeutic efficacy [3].

Some plant extracts can be demonstrated in combination with conventional antibiotics in the treatment of infections. This combination will reduce human exposure to antibiotic residues and bacterial resistance to antibiotics. The seed extract of Theobroma cacao in a dose of 64 µg/mL has selectively improved (2- to 64-fold) the antibacterial activities of some antibiotics as tetracycline, kanamycin, and erythromycin, against Escherichia coli AG100Atet and Klebsiella pneumoniae K24 [4].

Conclusion

Natural products can be used as excellent leads in drug development although some of them have complex structures and limited oral bioavailability, therefore screening has to be developed and a library has to be set for the natural products that only need clinical trials to facilitate and encourage the discovery of new drugs

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