

PROSPECTS OF USING THE ARGAN PLANT MATERIAL FOR THE NEW DRUGS DEVELOPMENT

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Development of new drugs is still an actual task of pharmaceutical science at the current stage. And not only the synthesis of new chemical compounds is gaining much importance, but also the study of the chemical composition and isolation of separate compounds from plant-derived raw material since the abovementioned compounds possess expressed therapeutic effect having minor side effects in comparison to the synthetic compounds.

Our attention was focused on argan (*Argania spinosa*, *Sapotaceae*) which is an endemic plant of Morocco. This plant is of great importance for the local population since the kernels of the tree seeds are the source of the oil which is used for medical use as well as the food product; argan leaves are the food source of domestic animals and the wood is used for construction and as firewood. The most studied product obtained from argan tree is the oil.

Argan oil possesses hypolipidemic, hypocholesterolemic, antioxidant, antiproliferative, hypoglycemic, choleric, hepatoprotective effect. Moreover, argan oil is a typical ingredient of various cosmetics to treat skin pimples, juvenile acne, and chicken pox pustules. It also reduces the rate of appearance of wrinkles and is used to fight dry skin and dry hair.

The chemical composition of argan leaves is studied somewhat less. It is known to contain phenolic compounds, in particular flavonoids myricitrin, rutin, quercetin, hyperoside etc. This group of compounds shows a number of pharmacological properties. The most studied is the antioxidant effect of flavonoids which consists of neutralization of reactive oxygen, the latter being associated with the development of cancer (in particular, prostate cancer), atherosclerosis, inflammation, and neurodegenerative diseases. Thus the study of the abovementioned group of compounds is promising in terms of obtaining compounds with expressed therapeutic effect.

The dried argan tree leaves collected in 2013 in Morocco were used as the plant material. 50 % and 70 % ethanol were used as extragents. The flavonoids identification was carried out using conventional chemical reactions (cyanidin test and its modification by Briant, Wilson's test, azocoupling test, tests with iron (III) and aluminium (III) chloride).

As the result of the experiment carried out argan leaves were found to contain flavonoids, flavonols in particular. As a result of the form in which flavonoids are present in the plant material establishment, it was determined that the content of flavonoid glycosides was higher than amount of their aglycones.

Thus the further profound study of argan tree leaves flavonoids and their isolation in the free state creates prospects for the drug development on their basis which might possess antioxidant and anti-inflammatory activity.