

Abstract

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Title of thesis: Active substances used in clinical practice originating in plant sources

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Since time immemorial, plants have been used to treat various diseases, but it is not known what is behind their healing effect. It managed to find out with the development of pharmacy and chemistry. The first substances were isolated and their mechanism of action was elucidated. It was found that the substances themselves have a better and more efficient effect than the mixture, but also a number of side effects. The effort of experts was to remove them, which managed to prepare a lot of derivatives and in many cases they had even higher effect. With the development of new technologies, synthetically produced substances have come to the fore and it is already forgotten that many clinically used drugs have their origins in nature.

This thesis deals with substances that originate in plant sources and are used in clinical practice as medicinal substances. These substances are either directly isolated from natural material or are derivatives of these substances. It is stated that at the turn of the 20th and 21st centuries, 9 of the 20 most important drugs were of natural origin. The most important are tramadol, fentanyl, lidocaine or ipratropium, and new natural substances with interesting biological activity are still emerging.

As can be seen, plant and animal products are still a high source of medicinal substances, which are highly involved in the treatment of various diseases or are the subject of research to get new therapeutically important substances.