Abstract

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Enzyme 17β-hydroxysteroid dehydrogenase 3 belonging to the short-chain dehydrogenase/reductase superfamily is involved mainly in reduction of 4-androstane-3,17-dione to testosterone. Any changes in amount of testosterone can result in illness, such as the male pseudhermaphroditism or the prostate cancer. For this reason studies of inhibion effects of various substances have been doing as they could be used in the therapy such as illnesses.

Identification of the pharmacologically interesting substances was performed *in vitro* through the model system. Cell line *Sf9* was used to prepare a recombinant form of the target enzyme. Reduction activity of this enzyme was verified towards androstene-4,17-dione. Then screening of potential inhibitors, natural substances: flavonoids and alkaloids, was performed. IC_{50} value was defined at substances with 100% inhibition effect (2-hydroxyflavanone, biochanine A, fumariline).