

PREPARATION OF STANDARDIZED EXTRACTS FROM FLOWERS, LEAVES AND FRUITS OF *VITEX AGNUS-CASTUS* L. (CHASTEBERRY) AND INVESTIGATION OF BIOLOGICAL EFFECTS

Ebrar İNAL

ORCID: 0000-0002-6022-1644

BEZMİALEM VAKIF UNIVERSITY

INSTITUTE OF HEALTH SCIENCES

DEPARTMENT OF PHARMACOGNOSY AND NATURAL PRODUCTS CHEMISTRY DOCTORATE PROGRAM

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SUPERVISOR

Prof. Dr. Murat KARTAL

ORCID: 0000-0003-3538-2769

BEZMİALEM VAKIF UNIVERSITY

INSTITUTE OF HEALTH SCIENCES

DEPARTMENT OF PHARMACOGNOSY AND NATURAL PRODUCTS CHEMISTRY

ISTANBUL – TÜRKİYE

pharmmurat@gmail.com

SUMMARY OF THESIS

The thesis study has shown that the flowers and leaves of the plant exhibit cytotoxicity on MCF-7 and A-549 cell lines and anti-obesity activity. It was understood that the extracts included in male Wistar albino rat groups with high fat diet-induced obesity, 70% EtOH leaf, 100% water leaf and 70% EtOH flower coded samples showed anti-obesity activity. In cooperation with the Aegean Agricultural Research Institute of the Ministry of Agriculture and Forestry of the Republic of Türkiye, the casticin contents of *V. agnus-castus* fruits collected from 95 different regions were evaluated. According to the results, a native and rich cultivar in phenolic and flavonoid compounds, primarily casticin compound, will be developed.

APPLICATION AREAS OF THESIS RESULTS

In addition, new and creative products in the form of food supplements and drugs should be developed from raw materials, and they should take part in the world market and contribute to the country's economy. It is thought that the studies carried out within the scope of this thesis will encourage new research to be conducted by institutions and organizations interested in chasteberry products.

ACADEMIC ACTIVITIES

- İnal, E., Nath, E. O., Abudayyak, M., Ulusoy, Ş., İnan, H. A., Çiçek, M., & Kartal, M. (2023). Chemical composition of different parts of the *Vitex agnus-castus* L. essential oils and their in-vitro cytotoxic activities. *Records of Natural Products*, 17(5), 904-917.
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- Kartal, M., İnal, E., Ulusoy, Ş., Özdemir Nath, E., & Abudayyak, M.



KEYWORDS

- *Vitex agnus-castus*
- Obesity
- Essential oil chemotypes
- Cytotoxicity
- Quality control



İLETİŞİM

ebrar.inal@bezmialem.edu.tr



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