

## BARBARA TÓTH



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## RESEARCH AREA

My research focuses on evaluating the efficacy and safety of traditionally used medicinal plants. The aim of my work is to promote the evidence-based integration of medicinal plants into medicine. To achieve this goal, we perform meta-analyses in order to obtain a reliable picture of the applicability of a given plant or natural substance for a specific indication. The preparation of meta-analyses and the comprehensive evaluation of clinical trials raise a number of basic and applied research questions that offer opportunities for further cooperation. In recent years, I have begun to address a new aspect of rational drug utilization, which examines the short- and long-term risks of using drugs and medicinal herbs during pregnancy. There is a growing body of evidence suggesting that drugs and herbal remedies used during pregnancy, which are otherwise considered safe, and preparations believed by patients to be harmless, have a significant impact on the health of both pregnant women and their unborn children. It is therefore of paramount importance for the long-term health of society to better understand the links between the effects on the mother and fetus and the health of the unborn child.

## TECHNIQUES AVAILABLE IN THE LAB

Students participating in our research can learn the principles and practice of meta-analysis. In addition, they can gain insight into the entire research process of cross-sectional and longitudinal studies, from study design and ethical approval to questionnaire-based data collection and statistical analysis. Participation in our research also provides an opportunity to participate in drug utilization studies. The aim of our research is not only to publish the results in scientific journals, but also to strengthen patient education, improve public health, and support the education of healthcare professionals. Accordingly, we provide students with the opportunity to actively participate in the preparation of scientific publications and various educational materials.

## SELECTED PUBLICATIONS

Mátyus, R. O., Szikora, Z., Bodó, D., Vargáné Szabó, B., Csupor, É., Csupor, D., & **Tóth, B.** (2025). Promising, but Not Completely Conclusive-The Effect of L-Theanine on Cognitive Performance Based on the Systematic Review and Meta-Analysis of Randomized Placebo-Controlled Clinical Trials. *J Clin Med* **14**(21): 7710.

Szikora, Z., Mátyus, R. O., Szabó, B. V., Csupor, D., & **Tóth, B.** (2025). Hawthorn (*Crataegus spp.*) Clinically Significantly Reduces Blood Pressure in Hypertension: A Meta-Analysis of Randomized Placebo-Controlled Clinical Trials. *Pharmaceuticals (Basel)* **18**(7): 1027.

**Tóth, B.**, Jávornházy, A., Nyirády, P., Csupor-Löffler, B., Birinyi, P., Zhanel, G., Naber, K., Länger, R., Vörhendi, N., Gede, N., Váncsa, S., Hegyi, P., & Csupor, D. (2022). Bearberry in the treatment of acute uncomplicated cystitis (BRUMI): protocol of a multicentre, randomised double-blind clinical trial. *BMJ Open* **12**(6): e057982.

**Tóth, B.**, Hegyi, P., Lantos, T., Szakács, Z., Kerémi, B., Varga, G., Tenk, J., Pétervári, E., Balaskó, M., Rumbus, Z., Rakonczay, Z., Bálint, E. R., Kiss, T., & Csupor, D. (2019). The Efficacy of Saffron in the Treatment of Mild to Moderate Depression: A Meta-analysis. *Planta Med* **85**(1): 24–31.

**Tóth, B.**, Lantos, T., Hegyi, P., Viola, R., Vasas, A., Benkő, R., Gyöngyi, Z., Vincze, Á., Csécsi, P., Mikó, A., Hegyi, D., Szentesi, A., Matuz, M., & Csupor, D. (2018). Ginger (*Zingiber officinale*): An alternative for the prevention of postoperative nausea and vomiting. A meta-analysis. *Phytomedicine* **50**: 8–18.