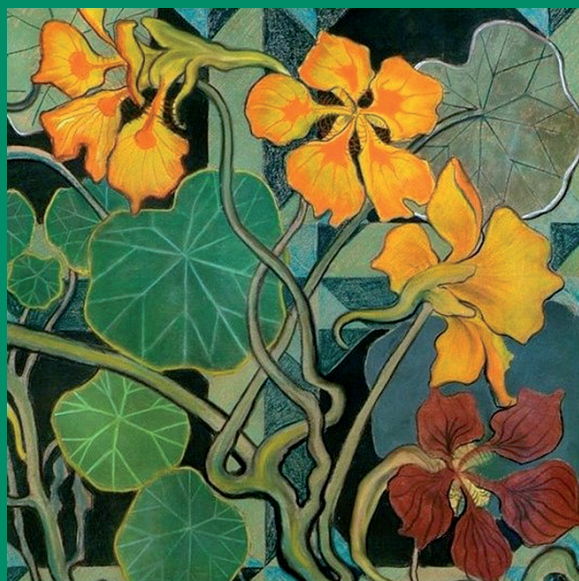


KRAKÓW



ICNPR 2024

INTERNATIONAL
CONGRESS ON
NNATURAL
PRODUCTS
RESEARCH

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ABSTRACTS BOOK

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Welcome Letter

Dear Participants, dear Colleagues,

on behalf of the Organizing Committee and the Scientific Committee it is our great pleasure to welcome you at the International Congress on Natural Products Research 2024 (ICNPR2024) which will be held in Kraków, Poland, July 13-17, 2024.

ICNPR2024 is co-organized by the Phytochemical Society of Europe (PSE), and our six sister societies representing the US, Europe and Asia, which include the Society for Medicinal Plant and Natural Products Research (GA), the Association Francophone pour l'Enseignement et la Recherche en Pharmacognosie (AFERP), the Italian Society of Phytochemistry and Sciences of Medicinal, Food and Perfume Plants (SIF), the American Society of Pharmacognosy (ASP), the Japanese Society of Pharmacognosy (JSP) and the Korean Society of Pharmacognosy (KSP). Every four years all of them meet together to share common interest in natural products research and exchange experience and simply unite together. It is always a unique possibility to experience this. ICNPR2024 is one of the largest gatherings of scientists involved in natural products and related fields from nearly every continent. The congress brings together experts and researchers from all over the world to share their latest findings and discuss the latest developments in the field of natural products research.

More than 1000 participants from 68 countries will deliver all together around 130 oral and almost 900 poster presentations. As a participant, you will have the opportunity to learn about cutting-edge research, network with other professionals in your field and getting involved in the extensive scientific program in many ways. Aside from that, you should also take the chance to explore the beautiful city of Kraków. It is one of the best recognizable cities in this part of Europe visited by about 10 million visitors annually. They are attracted by one-of-a-kind atmosphere and largest historical complex in Poland, unique on global scale. It is a city with a rich history and culture. The old town, with its beautiful architecture and narrow streets, is a UNESCO World Heritage site.

This congress is only possible with the collaboration of many people who were dedicated to do their best to make this event happen. First of all, we would like to thank the representatives of the seven organizing societies for their great support. Without the work of the members of the Scientific Committee it would not have been possible to handle more than 1000 abstracts and to create a scientific program of high quality, your efforts are very much appreciated. We also would like to thank plenary and keynote speakers for accepting our invitation to Krakow. We are grateful to the congress organizing secretariat, Symposium Cracoviense Sp. z o.o., for excellent cooperation in preparation of this event. Finally, we sincerely would like to acknowledge all financial support provided by the sponsors of this conference.

We hope that you will enjoy the time at ICNPR2024 and you feel not only the spirit of the city and place but also the touch of Polish culture and hospitality.



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Chairman of the Scientific Committee



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S1.P219 *In vitro* anti-*Helicobacter pylori* activity of extracts and essential oil of *Thymus pannonicus* All. (Lamiaceae)

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Thymus pannonicus All. is an aromatic herbaceous plant distributed in Central and Eastern Europe (Jalas, 1972). The aerial parts of the lemon-scented chemotype from Serbia are considered a traditional remedy for various gastrointestinal complaints (Maksimović et al., 2008). In this work, we tested its antibacterial activity against *Helicobacter pylori*, a bacterium associated with the risk of developing complicated chronic diseases of the gastrointestinal tract.

T. pannonicus hexane (HE), dichloromethane (DE), and methanol extracts (ME), the fraction of diethyl ether extract soluble in 80% aqueous methanol (FDM), and essential oil (EO), were tested by broth micro-dilution method against *H. pylori* ATCC 43504 (reference strain) and 10 clinical isolates, including strains resistant to metronidazole and/or clarithromycin.

ME showed the best activity, with MIC₅₀ (minimum concentration that inhibits the growth of 50% of the tested strains) and MIC₉₀ of 4 and 16 µg/mL, respectively. FDM exhibited MIC₅₀ 16 µg/mL and MIC₉₀ 32 µg/mL, while EO showed MIC₅₀ 2 µg/mL and MIC₉₀ 64 µg/mL. HE and DE were less active (MIC₅₀ and MIC₉₀ were 32 and 128 µg/mL, respectively).

Liquid chromatography with ultraviolet and mass spectrometric detection revealed that ME was characterized by a high content of rosmarinic acid (64 mg/g) and salvianolic acid H, while FDM was rich in methylated flavonoid aglycons. The dominant compounds in EO, analyzed by gas chromatography with mass spectrometry and flame-ionization detectors, were geranial and neral (36.7% and 27.2%, respectively).

The results indicate that preparations of *T. pannonicus* may be potential therapeutic agents against *H. pylori* infections.

Keywords: *Thymus*, *Helicobacter pylori*, rosmarinic acid, geranial, neral

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