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ABSTRACT BOOK



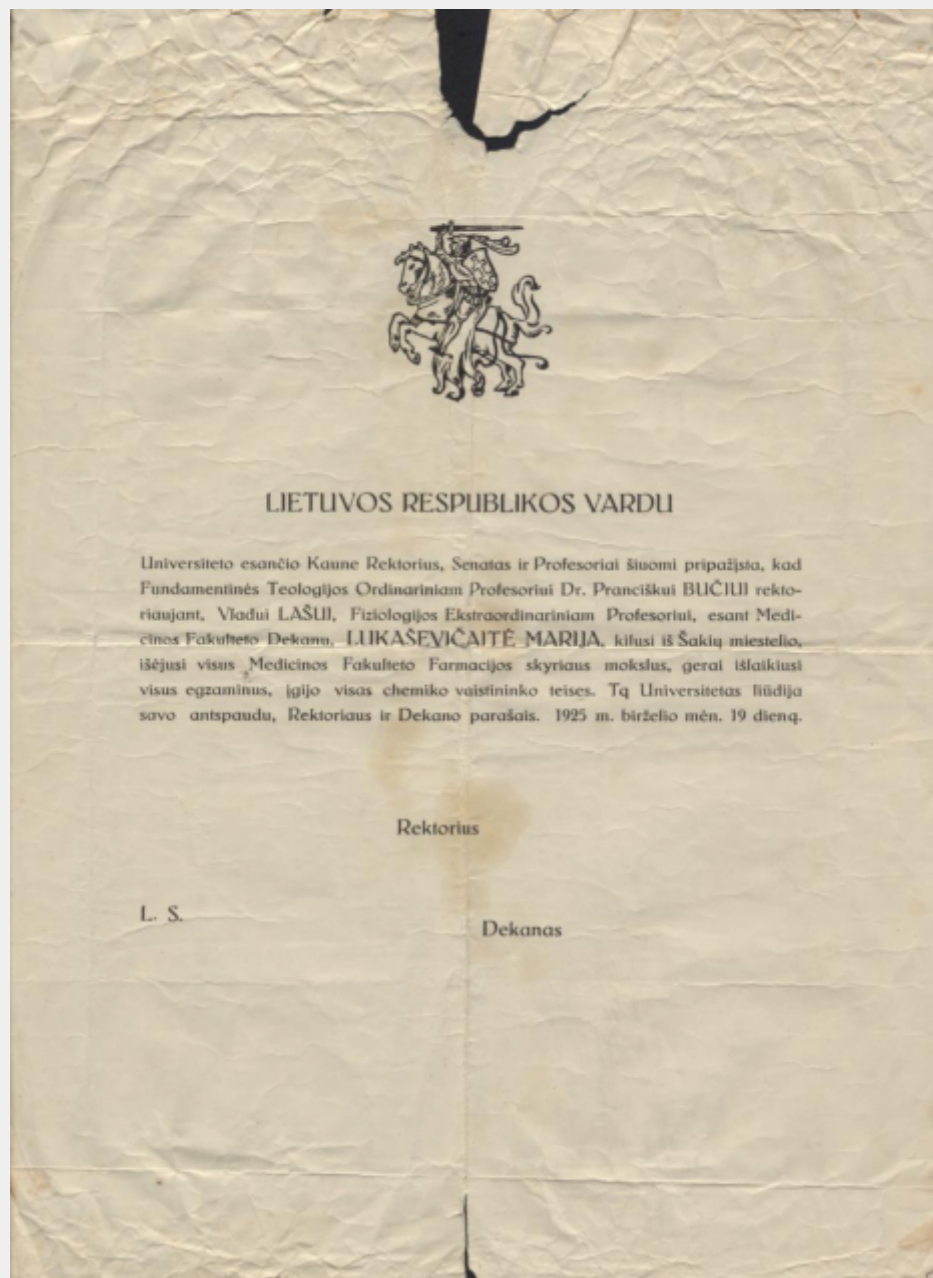
CONTEMPORARY PHARMACY: ISSUES, CHALLENGES AND EXPECTATIONS 2025

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Conference dedicated to the Centennial of the First Lithuanian Pharmacy Diploma.

One hundred years ago, the first nine graduates of the University of Lithuania completed their higher pharmacy studies and were awarded the diploma of Chemist-Pharmacist. Over the past 100 years, approximately 5,600 individuals have completed higher pharmacy studies in Kaunas. These graduates are not only the creators of Lithuanian pharmacy history but also contributors to the broader history of our country.

As we mark this centennial milestone, it is a fitting moment to look back and reflect on the remarkable journey we have taken...



Medicinal Plants 2025 - How to respond to the challenges of climate change and the needs of bio-economies?

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Background. Medicinal plants play a vital role in healthcare, cosmetics, agriculture, and nutrition, but their biodiversity is declining due to climate change, habitat loss and unsustainable harvesting. Many species may disappear before their medical potential is fully explored. While demand for plant-derived pharmaceuticals grows, ecosystems face pressure that threaten species distribution, quality and availability. The bioeconomy offers a sustainable approach to balancing conservation and economic needs (1).

Aim: To assess the impact of climate change and bioeconomic demands on medicinal plants and discuss strategies for their conservation and use.

Methods: A resilience framework was applied to seven vulnerable medicinal plants, evaluating habitat loss, reproductive success, climate adaptability, and economic demand (2).

Results. Climate change has significant impact on plant distribution, quality and yield. For example, rising temperatures and reduced precipitation have shifted the cultivation areas of *Crocus sativus* L. from southern to north-western Ukraine. Similarly, in Provence, France, increasing temperatures and water shortages have caused a threefold decline in *Lavandula angustifolia* Mill. yield and a northward shift in cultivation. While plants adapt through phenological shifts, extreme weather disrupts biosynthesis and lowers essential oil quality (3). Overharvesting and land-use changes further threaten endangered medicinal species like *Rhodiola rosea* L. and *Boswellia sacra* Flück.

Instead of expanding cultivation areas, optimising land use and applying adaptive strategies can promote sustainability. The bioeconomy supports economic growth in phytopharmacy by maximising plant-derived resources and decrease environmental impact. *Phacelia tanacetifolia* Benth. exemplifies sustainable use, enriching soil fertility, supporting pollinators, and providing bioactive compounds for pharmaceuticals and agrochemicals. Integrating medicinal plants into circular economic models expands their applications beyond traditional use while ensuring sustainability.

Conclusions. A bioeconomic approach maximises the potential of medicinal plants, ensuring sustainability, reducing waste, and preserving biodiversity for future generations.

References

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