our research team under their supervision. The microbiological investigations are carried out in cooperation with the Department of Medical Microbiology and Immunology at the Medical School of the University of Pécs, with the professional help of Dr. Béla Kocsis.

Our research infrastructure is largely provided by the Department of Pharmacognosy, and financial support is ensured by research grants. Our recently finished 4-year project investigated the nectar yield of the invasive medicinal plants milkweed (*Asclepias*) and goldenrod (*Solidago*), as well as the active compounds and biological activities of their honeys. In this project our research team was completed by Dr. Rita Filep and Dr. Dragica Purger, also from our department, participating mainly in field studies; and Dr. Szilvia Czigle from the Comenius University, Bratislava, who was responsible for antioxidant capacity assays.

Our future plans include determining the components of plant origin (pollen profile, phytochemical composition, minerals) in varietal honeys not investigated so far. We intend to reveal the relationships between these traits and their contribution to the antioxidant capacity of honeys, which can refer to their medicinal potential. A further objective is to study the effect of geographical origin and year of harvest on the above-mentioned characters, in case of commonly available honey types in several consecutive years. The therapeutical and market value of honeys can be higher in case their more pronounced antimicrobial and/or anti-inflammatory activity is proved. Thus we aim to investigate the mechanisms of effect that can be in the background of the pharmacological activities of honeys, applying various *in vitro and in vivo* assays.

I am grateful that I can supervise the research work of this dynamically changing team (Fig. 16), where each member provides the best of their knowledge, with ever-increasing enthusiasm. Our team members regularly propose novel ideas, how to widen our knowledge regarding high quality Hungarian honeys, which are the joint product of our diverse bee pasture and the diligent work of honeybees and beekeepers.

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Ethnopharmacobotanical Research Group

The study of ethnopharmacobotanical and ethnomedicinal data started 17 years ago at the Department of Pharmacognosy, Faculty of Pharmacy, University of Pécs. My first personal motivation dates back to 2006, when several studies were presented at the congress entitled "*Traditional use of medicinal plants – phytotherapetutical values*" organized by Section of Medicinal Plants, Hungarian Society of Pharmaceutics (Szentendre, 2006 Sept). Among them, studies presented by Dr. Tamás Grynaeus involved 50-year ethnomedicinal data from Transylvania (part of Romania) and Hungary, which piqued my interest for the topic. Tamás and Kata Frendl organized a field survey in summer of 2007 in Uz Valley (RO), to study the traditional use of plants by Csángós. Having joined this survey allowed me to investigate the botanical and human/personal aspects, methods, and everyday life of informants in the frame of field work. This journey launched me to study traditional data on plants, involving the local treatments and use of flora elements in less known areas in Transylvania.

Based on this decision, as second step, the *Ethnopharmacobotanical Research Team* was established with participation of students, PhD students, and colleagues at our department. Based on Tamás's proposals, the first trip was conducted with a biologist student in Lueta (~3000 inhabitants) to prepare her thesis, which was followed by several surveys until 2017, and resulted a complex monograph (364 pp) about the settlement (in Hungarian). Thereafter many field surveys were performed at various areas of Transylvania, first of all along the Kis and Nagy Homoród rivers in County Harghita. Although earlier data were published about 6 settlements of the region (inhabited by ~20 000 Székelys), in order to maintain the traditions and inheritances, and due to migration of young people and many changes in the landscape and culture, we started new field works in the above 6 and other villages in the area.

During these surveys new contacts were established with dwellers of neighboring 13 settlements, using the snow ball method (2011-). As follows, the structured and systematic ethnobotanical survey of the region evolved step by step. In the meantime,

field works were managed in Ghimeş mountain (2008), and in 20 villages of Covasna County (2010-2022), to collect data for the thesis of medical students of the University in Targu Mureş, and the dissertation of my PhD student.

Methods: The informants were interviewed by semi-structured interviews. Recorded data of the mentioned plant species are the following: local name, morphology, habitat, collection time, storage, applied parts, preparation, use, and treated diseases. Photo documentation: botanical identification of plants based on living and dried samples, habitats, home gardens, agricultural lands, preparations, uses, and applied tools. Collected data are recorded by dictaphone, and transcribed word by word based on local dialect (~450 species). Data are evaluated and compared with those obtained from scientific databases and literature, to select species for further histological, phytochemical, and pharmacological analyses (10-15 species / survey).

Team members change every year depending on the aims, e.g. to prepare theses, dissertations, grants, or applications. Based on the multidisciplinary sections of the topic, earlier and current members of the team include e.g.: pharmacist, biologist, medical doctor, dentist, dietetist, gardener engineer, anthropologist, ethnographer, as well as students, PhD students, and colleagues of other sciences (4-12 persons / survey). All of us learn from each other time after time, which leads to the continuous intensification and specification of research questions and our hypotheses.

Related subject at our department: *Ethnopharmacobotany* presented for pharmacist, medical and dentist students (Hungarian: 2007- , English: 2012-).

Results of our team: theses, dissertations, oral and poster presentations at national and international congresses, more than 50 publications (Hungarian, English), monographs in Hungarian, special issues, applications, Erasmus and NKFIH grants (current one: finishes in 2024). Due to these presentations, several cooperations were launched with Hungarian and international colleagues in form of field works, scientific presentations, publications, and grants.

The timeliness of the topic is highlighted by the changes in the study areas in space and time (last 17 years), which modify and concern our methods, data documentation and evaluation. The accelerated lifestyle has actually a great impact on the maintenance of traditional data at the study area, therefore the documentation of these records is an urgent mission nowadays. Further aims of our team: collection, preservation, and evaluation of the archaic knowledge of local ethnomedicine, focusing mostly on plants' use, to support their maintenance for the future and posterity.

I am grateful to study ethnobotanical and ethnomedicinal data in this field, involving both botanical and human relations, which play an important role in my research. Many thanks to our informants and members of our team.

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Current research fields of the Essential Oil Research Group of the Department of Pharmacognosy, Faculty of Pharmacy, University of Pécs

The employees of the Department of Pharmacognosy are motivated to introduce their main research fields and publish their results originated from their working groups. Furthermore, we intend to share these valuable information with the readers of our Journal.

The Research Group, as its name suggests, deals with the investigation of plant essential oils. These secondary metabolites have diverse biological effects. Among these, we became interested in the antimicrobial and anti-inflammatory effects. Why is that? Because behind of many acute or chronic diseases there is an infection or inflammation. Today, antibiotic resistance is huge, causing a serious problem in human and veterinary medicine, as well as in agriculture. We always design our experiments in such a way that there is a practical problem behind them. We are also able to create prototypes of essential oil-containing products.

The main research fields in our group:

1. Microbiological research

In the microbiological assays, we cooperate with Dr. Béla Kocsis, associate professor from the Department of Medical Microbiology and Immunology of University of Pécs. We have several *in vitro*