

The Researchs of Plant-Derived Medicines in the II Republic of Poland

The Origin, Determinants, Issues and Experimental Practice

Summary

The dissertation presents the history of the studies of medicinal plant materials and of the medicines in Poland in the period between the World Wars. The starting point of the dissertation is the assumption that the studies of medicinal plant materials and their derivative products are not only the certain part of the scientific life but also the convenient reference to explain the rules governing the development of applied sciences in Poland between 1918-1939.

The dissertation gives the overview of the circle of the scientists studying plant medicines in Poland between the World Wars, their scientific activity and the factors of its development. One of them was the participation of Poles in the development of the studies of plant medicines in the years 1795-1918. To find out the other determining conditions it was necessary to reconstruct in consecutive chapters: the finance, structure and the condition of research centres, which carried out the studies of plant medicines, and also the domestic and international flow of scientific information concerning the discussed aspects.

The studies of plant medicines in the II Republic of Poland were presented with respect to the differences in the aims and scientific methods. Therefore, the various approaches were distinguished: the botanical-pharmacognostic approach (based on the methodology of botanic and aimed first of all at the identification of plant-derived materials and also at working out the physiology and systematic of plants), chemical-analytical approach (based on the methodology of chemistry and targeted at the identification, isolation and determination of the content of chemical compounds in plant materials or their derivative products), chemical-structural approach (based on the methodology of chemistry and aimed at the determination of the summary formula and molecular structure of chemical compounds occurring in plant materials), biological-functional approach (experiments on animals, their isolated tissues and cells are to help to recognise the ranges of activity and appropriate dosage forms) and the agricultural approach (based on the methodology of agricultural sciences and targeted at finding out optimal conditions of cultivation, breeding and acclimation of medicinal plants). From this point of view, emphasising the importance of the methodology for cognitive progress, the development of the studies of plant medicines between the World Wars, seems to be the collective effort, consisting of several stages.

The essential role in this work was played by archival and printed resources such as reports of various institutions and research centres. Studies of the history of science, memoirs and autobiographies were less important.

Influenced by the old tradition of herbal medicine-chests kept at home, the economic needs of the country and also the wider and wider international co-operation of scientists, the development of the researchs of plant medicines in Poland between the World Wars made the original phenomenon. At that time in other European countries attention was drawn to the analysis of chemical composition of medicines and the studies explaining the structure of compounds which occurred in them, and also the attempts of the synthesis of recognised components. In the II Republic of Poland, integrating the three provinces economically ruined by the invaders, the development of the researchs of plant medicines was fully justified by the people's use of popular phytotherapy and low costs of herb cultivation.

A lot of tendencies presented in the paper, which had the influence on the development of the studies of plant drugs in the II Republic of Poland, were the consequences of the contemporary pro-social approach of the science. The studies of plant medicines were carried out to meet people's needs, not only associated with the obvious meaning of health. They also focused on strengthening the country economically, reducing unemployment and increasing the participation of Poland in the international trade and making her independent of the import of medicinal plant-derived materials.

The interesting point in the area of the Polish studies of plant medicines is also the emerging scientific influence of different countries, especially that of German-speaking countries and as time flew also of the USA and Japan. The meaningful influence of German-speaking countries was noticed in the range of botanical-pharmacognostic and chemical-analytical works while that of the U.K. – in the chemical-structural field. Americans induced the development of biological-functional studies (e.g. the papers by J. Modrakowski and J. Supniewski) and Japanese influenced the agricultural works (e.g. W. Strażewicz's experiments).

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