Professor Anna K Jäger

Natural Products Research

Department of Drug Design and Pharmacology

Faculty of Health and Medical Sciences University of Copenhagen, 2 Universitetsparken, Denmark

Pharmacognosy – The past, the present and the future

The written sources do not give any clues to medicinal plants in the Viking age, so knowledge comes from archeological sites. The Viking Materia Medica seems to have contained only a small number of plants. The introduction of Christianity in Scandinavia brought a new medicine system, with plants still in use today. The globalization during colonial times expanded our list of medicinal products. Then followed a period where pharmacognosy yielded to synthetic chemistry. This lasted until modern techniques in the middle of the 20th century made it possible to analyse the chemical composition of plants, followed by an explosion of knowledge and techniques in pharmacology, where especially the in vitro assays were used in pharmacognosy research. In the last decades of the 20th century, focus partly changed from drug discovery to improvements of traditional medicine with scientific evidence for safety and efficacy. The future for pharmacognosy looks bright, new developments in both analytical and pharmacological techniques, coupled with bioinformatics, makes it possible to understand how natural products works, often several active compounds may exert activity at multiple targets. Thus, the established paradigm of 'one compound-one target' is now giving way to an appreciation of the benefits of polypharmacology, in which herbal/natural products may re-enter the scene.