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HOLISTIC AND METABOLOMICS BASED CONCEPTS FOR QUALITY CONTROL OF HERBAL PRODUCTS

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4:00 - 5:00 PM



SEMINAR ROOM 5, 6/F, NO. 3 SASSOON ROAD



SEMINAR HIGHLIGHTS

In most herbal products, including Chinese medicine, the therapeutically relevant compounds are not fully known. In most cases, multiple compounds contribute to activity. According to a Reflection paper on markers used for quantitative and qualitative analysis of herbal medicinal products (HMPs) and traditional herbal medicinal products (EMA/HMPC/253629/2007) published by the European Medicines Agency (EMA), the whole extract is considered as the active constituent of these products.

In recent years, “fingerprint” analysis by HPTLC has become a regular tool for identification of herbal drugs in Pharmacopoeia monographs. In contrast, “assays” (quantitative quality control methods) are still often based on single analytical marker compounds, which only give very limited information on the overall quality of these products. The relevance of this single marker compound concept for quality control of HMPs has recently been questioned, and metabolomics- and chemometrics-based concepts have been suggested. High resolution chromatographic and spectroscopic techniques like LC-MS, HPLC-DAD, IR and NMR metabolomics seem to be the most appropriate methods. Multivariate analysis finally allows to standardize raw material and herbal extracts in a more holistic way. These innovative methods have been already considered in the Concept paper on the development of a Reflection Paper on new analytical methods/technologies in the quality control of herbal medicinal products (EMA/HMPC/541422/2017). Corresponding information chapters have also been published in the European Pharmacopoeia (5.21. Chemometric methods applied to analytical data; 5.28. Multivariate statistical process control). Examples will be provided to discuss the pros and cons of these methods.

Biography

Professor Rudolf Bauer is currently Professor emeritus at University of Graz, Austria. His research focused on phytochemical and pharmacological investigations of traditionally used medicinal herbs, quality control, identification of active constituents, plant metabolomics and interactions with gut microbiota.

He acted as president of the International Society of Ethnopharmacology, of the Society for Medicinal Plant and Natural Product Research (GA), and as founding president of GP-TCM Research Association.

He has published more than 420 research papers (h-index 70) and has edited several books. He is chairman of the expert groups 13A and TCM of the European Pharmacopoeia Commission.

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