



## **Joint meeting of the GP-TCM Research Association**

The TCM Chemistry Specialty Committee  
and the TCM Pharmaceutical Analysis Specialty Committee of  
the World Federation of Chinese Medicine Societies

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**"Traditional medicines: Science meets culture". Joint meeting GP-TCM RA / WFCMS. Mons 2015**

can be explained by a more stringent legislative framework applicable to traditional herbal medicines and higher quality and safety standards. At the same time the number of herbal food supplements increased dramatically. The most frequently used traditional medicinal plants in Lithuania are *Mentha × piperita* L. and *Valeriana officinalis* L. They are followed by 12 other plants: *Althaea officinalis* L., *Arctostaphylos uva-ursi* (L.) Spreng., *Artemisia absinthium* L., *Atropa belladonna* L., *Glycyrrhiza glabra* L., *Juniperus communis* L., *Matricaria recutita* L., *Menyanthes trifoliata* L., *Quercus* spp., *Rheum palmatum* L. /*Rh. officinale* Baillon, *Salvia officinalis* L. and *Taraxacum officinale* Web. Most of those plants are grown locally and are present in herbal medicines available at the moment on the Lithuanian market.

#### O-40

### RECOGNITION OF THE HERBAL PHARMACOPOEIAS OF THE FRENCH OVERSEAS REGIONS AND COLLECTIVITIES

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French overseas departments and territories are known for their rich and diverse tropical floras, associated with traditional health knowledge, skills, and practices. Many people find necessary to further highlight this still very much alive cultural heritage, because transmission to future generations is not assured. Official recognition of the medicinal character of major local medicinal plants, and in particular inclusion of these plants on the "List of Traditionally Used Medicinal Plants", a list which is part of the French official Pharmacopoeia, is one of the measures recommended by several overseas organizations of scientists and health professionals. Until recently, very few medicinal plants of the French overseas regions were included on this list, but a special focus of the experts of the French Pharmacopoeia Committee for Medicinal Plants & Essential Oils on the medicinal floras of Martinique, Guadeloupe, La Réunion and French Guiana allowed the inclusion in recent years of over 60 medicinal plants on this list. The presentation will first describe a few characteristic features of the traditional practices and health resources of the communities of the French overseas regions (Martinique, Guadeloupe, French Guiana, La Réunion, New Caledonia and French Polynesia). The integration process of the medicinal plants of these regions in the French Pharmacopoeia will be the focus of the second part of the presentation. In addition to the importance of the cultural recognition of these traditions, it is also important to note that the integration process involves economic issues that may contribute to the development and marketing of herbal healthcare products by local entrepreneurs.

#### O-41

### RESEARCH OF ANTIMICROBIAL AND RESISTANCE MODIFYING AGENTS FROM BENINESE PLANTS USED IN TRADITIONAL MEDICINE

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In a world of increasing resistance to current antibiotics, search of novel therapeutic options is urgently needed. The aim of this work was to screen plant crude extracts for direct or indirect (inhibition of resistance) antimicrobial activity. Four crude extracts from 12 plants traditionally used in Benin for the treatment of infections were obtained by successive extraction with hexane, dichloromethane, ethyl acetate, and methanol. *Staphylococcus aureus* MRSA ATCC33591 (resistant to  $\beta$ -lactams by production of  $\beta$ -lactamase and of an additional PBP [PBP2a] with low affinity for most  $\beta$ -lactams) and SA1 (resistant to quinolones by overexpression of the efflux pump NorA) were used as test organisms. Direct antimicrobial activity was tested by determination of Minimal Inhibitory Concentrations (MIC). Indirect activity was screened by looking for interaction between antibiotics and extracts using checkerboard titration and calculation of Fractional Inhibitory Concentration Index (FICI). Combined antibiotics were ampicillin (resistance due to  $\beta$ -lactamases and PBP2a), oxacillin (resistance due to PBP2a only), norfloxacin (substrate for efflux by NorA) and moxifloxacin (poor substrate of NorA). Synergy was defined by a FICI = 0.5 and additivity, by a FICI = 1. The methanol extracts of *Vitellaria paradoxa* and *Cola gigantea* leaves and stem barks were additive or synergistic with oxacillin and ampicillin against MRSA ATCC33591 (FICI: 0.28 – 1), suggesting a possible inhibition of PBP2a. The methanol extract of *Topinanthus bangwensis* aerial parts improved only the activity of ampicillin (FICI 0.3751), suggesting  $\beta$ -lactamase inhibition. The methanol extract of *Holarrhena floribunda* aerial parts and the dichloromethane extract of *Spirospermum penduliflorum* aerial parts increased the activity of norfloxacin against strain SA1 (FICI 0.375-1) without modifying that of moxifloxacin, which suggests the presence of compounds inhibiting the efflux pump NorA. Ongoing work aims at identifying the active compounds in these extracts.

#### O-42

### Study on Bioactive Compounds with Novel Structures from Toxic Plants in China

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Natural products play an important role in the discovery of leads for the development of drugs for the treatment of human diseases. In China, much of nature sources remain to be explored, particularly, the toxic plants, which leave no doubt that a host of novel, bioactive chemotypes await discovery. There are more than 900 species of toxic plants in China. Recently, the bioactivities of extracts of over 200