

**Issue no 12 of Food & Function** (a monthly peer-reviewed on line journal which publishes work at the interface of the chemistry, physics and biology of food) contains a scientific Supplement relating to PlantLIBRA foreground.

The Supplement is available at the following link:

<http://pubs.rsc.org/en/journals/journalissues/fo#!issueid=fo002012&type=current&issnprint=2042-6496>

The publication is dedicated to a detailed analysis of regulatory, scientific and technical issues concerning safety, quality and efficacy of plant food supplements (PFS), i.e. foodstuffs, marketed namely in dose forms such as capsules, pastilles, tablets, pills and other similar forms, sachets of powder, ampoules of liquids, drop dispensing bottles, and other similar forms of liquids and powders. Plant Food Supplements (PFS) consist of botanical preparations obtained by subjecting botanical parts to a variety of treatments such as extraction, expression, distillation, fractionation or concentration. These very heterogeneous products are often in use since long time to supplement the normal diet with additional natural nutrients or other natural substances with desirable physiological functions.

Upon inception of the EU Research PlantLIBRA Project, it was considered particularly useful to undertake a review of the status of knowledge in the many above-mentioned relevant sectors in order to benchmark the level of current understanding and clearly indicate main future knowledge needs.

To this end, the publication has been structured into 8 papers, starting from that on the "Regulations applicable to plant food supplements (PFS) and related products in the European Union". Botanical species being more widely used for manufacturing PFS and related products are addressed in the second paper, whereas market's structures in Member States and consumer's attitudes and beliefs about PFS are dealt with in papers 3 and 4, respectively. Moreover, quality, efficacy and safety aspects associated with PFS are the main subjects of papers 5, 6 and 7.

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### ***Editorial***

Patrizia Restani and Vittorio Silano

This issue is dedicated to a detailed analysis of regulatory, scientific and technical issues concerning safety, quality and efficacy of plant food supplements.

#### **1) Regulations applicable to plant food supplements and related products in the European Union**

Vittorio Silano, Patrick Coppens, Ainhoa Larrañaga-Guetaria, Paola Minghetti and René Roth-Ehrang

This paper deals with the current regulatory and legal settings of traditional plant food supplements and herbal medicinal products in the European Union (EU). By distinguishing traditional herbal medicinal products from plant food supplements and establishing selective marketing modalities for these two product categories, the EU has been confronted with implementation difficulties for traditional herbal medicinal products and a lack of homogeneity in the regulatory approaches adopted in different EU Member States.

#### **2) Botanical species being used for manufacturing plant food supplements (PFS) and related**

#### **products in the EU member states and selected third countries**

Chlodwig Franz, Remigius Chizzola, Johannes Novak and Silvia Sponza

The active substances usable in PFS are secondary plant products that are often characteristic for certain plant groups (taxa), species or plant parts. The correct identification of the plant material can be assessed by morphological, chemical and DNA specific methods.

#### **3) Plant food supplement (PFS) market structure in EC Member States, methods and techniques for the assessment of individual PFS intake**

Liliana Vargas-Murga, Alicia Garcia-Alvarez, Blanca Roman-Viñas, Joy Ngo, Lourdes Ribas-Barba, Suzanne J. P. L. van den Berg, Gary Williamson and Lluís Serra-Majem

The aim of this paper is to examine the PFS market structures in European Community (EC) Member States as well as to examine issues addressing methodologies and consumption data relating to PFS use in Europe. A revision of recent reports on market data, trends and main distribution channels

#### **4) Consumer attitudes and beliefs about plant food supplements**

Bernadette Egan, Charo Hodgkins, Richard Shepherd, Lada Timotijevic, and Monique Raats

The aim of this paper is to provide an overview of current knowledge about the users and the determinants of usage of plant food supplements. A variety of factors may be influencing consumption including the increasing number of older people in society, mistrust in conventional medicine and the perception that natural is healthy.

#### **5) Quality control of plant food supplements**

Elisabetta Sanzini, Mihaela Badea, Ariana Dos Santos, Patrizia Restani and Hartwig Sievers

Accurate data concerning the finished products and the plant used as the starting point are of major importance if risks and safety are to be properly assessed, but in addition standardized criteria for herbal preparation must be laid down and respected by researchers and manufacturers.

#### **6) Review of the efficacy of green tea, isoflavones and aloe vera supplements based on randomised controlled trials**

Gary Williamson, Patrick Coppens, Lluís Serra-Majem and Tristan Dew

We assess the evidence for health benefits of three commonly consumed plant food supplements (PFS), green tea, isoflavone and aloe vera, based on published systematic reviews of randomised controlled trials (RCTs).

#### **7) Safety assessment of plant food supplements (PFS)**

Suzanne J. P. L. van den Berg, Lluís Serra-Majem, Patrick Coppens and Ivonne M. C. M. Rietjens

Some examples of botanical compounds in PFS that may be of concern are discussed. Altogether, it is clear that "natural" does not equal "safe" and that PFS may contain compounds of concern at levels far above those found in the regular diet.

#### **8) The PlantLIBRA project: how we intend to innovate the science of botanicals**

Luca Bucchini, Alejandro Rodarte and Patrizia Restani

The EC-funded PlantLIBRA consortium presents its plan for improving the science of botanicals and risk and benefit assessment methodologies for plant food supplements.