MNF Report

The DFG-Senate Commission on Food Safety (SKLM)

A profile

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Introduction

The Senate Commission on Food Safety (*Senatskommission zur Beurteilung der gesundheitlichen Unbedenklichkeit von Lebensmitteln – SKLM*) of the Deutsche Forschungsgemeinschaft (DFG) advises parliaments and public authorities on the safety for health of foodstuffs. The risk assessment of foods, including novel and functional foods, covers the evaluation of food ingredients and additives as well as the evaluation of novel processing methods. The topics considered may originate from requests of the Ministry for Consumer Protection, Nutrition and Agriculture (BMVEL). Other topics may be selected by the Commission on its own initiative. If they are considered to be of particular importance for consumer protection. The results of its work are published as scientific recommendations. The SKLM also organises symposia and expert discussions.

Membership

In December 2003 the Senate of the German Research Association (DFG) renewed the mandate of the Commission for the period 2004–2006 with the following personal composition under the chairmanship of Prof. Dr. Gerhard Eisenbrand.

Figure 1. Members and Permanent Guests of the Senate Commission on Food Safety.

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Publications of the SKLM

Opinion series

The Senate Commission produces reports on its activities in the form of Opinions [1–7]. Opinion No. 6 "Criteria for the Evaluation of Functional Foods" has just been published [6]. The publication of the collected opinions of the SKLM during the last eight years (1997 – 2004) is in preparation. Short versions of these opinions are accessible in the internet [8].

Symposia series

As part of its activities the SKLM also organises symposia and discussion meetings of experts, the results of which are published in the DFG-symposia series. The subject matters dealt with up to now were: Food Allergies and Intolerances [9], Hormonally Active Agents in Food [10], Carcinogenic/Anticarcinogenic Factors in Food: Novel Concepts? [11], Functional Food: Safety Aspects [12].

The latest symposium volume "Functional Food: Safety Aspects" appeared in March 2004 by the publishers Wiley-VCH. The concept "Functional Food" is used for foods, for which advantageous health effects extending beyond the purely nutritional purpose are claimed. Such "Functional Foods" must, however, cause no undesirable disadvantageous health effects. The aim of this symposium was the provision of a critical survey and an evaluation of the present state of knowledge in the field of "Functional Foods". Difficulties with the evaluation of the safety to health or the assessment of the risk/benefit balance arise, because the profile of the biological effects and the dose dependency of any potential disadvantageous effects are known only incompletely or have only been inadequately investigated. On the other hand, positive health effects are frequently claimed without provision of the scientific evidence for them. It cannot be excluded, however that products which are generally destined only for certain consumer groups, *e.g.* those with hypercholesterolaemia, may possibly be consumed by larger sections of the population.

The SKLM has therefore developed in fulfilment of its advisory task "Criteria for the Evaluation of Functional Foods", which have been published in the symposium volume together with the symposium contributions, the main conclusions and the recommendations.

Working groups of the SKLM

The setting up of working groups for the handling of major themes has proved to be a suitable procedure for the efficient carrying out of the work of the Commission. Themes of special actuality are being dealt with in flexibly composed ad hoc working groups appointed for a limited period, *e.g.* the working group (WG) "Natural Food Constituents", the WG "Food Supplements", the WG "Additives and Contaminants" and the WG "Food Technology and -Safety".

The working group "**Natural Food Constituents**" is primarily concerned with the health assessment of substances naturally present in foodstuffs, particularly in view of the increasing marketing of such substances in an isolated or enriched form as food supplements and as "functional foods".

This WG has recently prepared an opinion on the toxicological evaluation of furocoumarins and one on the assessment of red mould rice. In addition, the natural food constituent glycyrrhizin from liquorice root extracts, which may be consumed in larger amounts mainly through the consumption of liquorice products, has been re-evaluated. Hints from the literature point to the possibility that glycyrrhizin may exert a clear effect on the blood pressure of persons particular disposed to hypertension and to the consumption of correspondingly large amounts.

In addition, the WG is actually considering plant carcinogens which occur, mostly in small concentrations, in certain foodstuffs (spices, teas). The main problem relates to the evaluation of the isolated pure substance compared to when it occurs in the natural matrix of the foodstuff. Furthermore, the WG is concerned with the evaluation of phytooestrogens. The SKLM has already drawn attention in the year 2003 in the form of an opinion to certain aspects of the potentially disadvantageous effects of polyphenols/flavonoids.

An **ad hoc working group "Food Supplements"** has been set up which is in the process of preparing a basic paper on the assessment of food supplements.

The WG "**Additive and Contaminants**" is deliberating on the health assessment of mycotoxins in foodstuffs. Jointly with the Senate Commission for the Evaluation of Substances and Resources in Agriculture (SKLW) the following opinion has been prepared: "Contamination of feedstuffs and foodstuffs with the fusarium toxins deoxynivalenol (DON) and zearalenone (ZEA) has to be evaluated differently".

The Working Group "**Food Technology and -Safety**" is dealing with the assessment of safety-relevant aspects of innovative food technologies such as high-pressure treatment of foodstuffs (Fig. 2). In this field the Commission has already published an opinion relating to the high-pressure treatment of fruit juices. In the foreground of the present discussion rests the determination and the assessment of the influence of this technology on the valuable and health-promoting constituents, on microbial inactivation, on the chemical changes and on the allergenic potential of such processed foodstuffs. An opinion with the title "Safety Assessment of high-pressure treated foods" has already been prepared. Other newly developed technologies such as high-tension impulse-treatment, ultrasound treatment, ohmic heating; will also be subject of a future assessment of the actual state of knowledge.

Figure 2. Pilot plant for high-pressure treatment of foodstuffs (TU Berlin).

Members and guests of the SKLM: (from left to right): Prof. Hannelore Daniel (Munich), Prof. Rudi F. Vogel (Munich), Dr. Heike Velke (DFG, Bonn), Dr. Roman Buckow (Berlin), Prof. Ib Knudsen (Denmark), Prof. Gerhard Eisenbrand (Kaiserslautern), Prof. Dietrich Knorr (Berlin), Prof. Peter S. Elias (Karlsruhe), Prof. Josef Schlatter (Zürich), Prof. Werner Grunow (Berlin).

National and international cooperation

The SKLM is fostering an exchange of information and an advisory cooperation with the Federal Institute for Risk Assessment (BfR, Berlin), the Federal Institute for Medicaments and Medical Products (BfArM, Bonn) and the Federal Institute for Nutrition (Karlsruhe).

An exchange of information is also in existence with foreign national authorities and committees, such as the British "Food Standards Agency" (FSA) and the British "Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment" (COT).

In the light of the background of increasing network formation between national committees with appropriate installations on an European level, the scientific expertise of the SKLM is being included in the corresponding network of European Advisory Committees within the context of the European Food Safety Authority (EFSA).

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