



EUROPEAN PARLIAMENT

*Scientific and Technological Options
Assessment*

STOA

STOA Workshop:

***Naturally occurring and health compromising substances in plant-derived foods:
Do we have a problem?***

Chair: Ms. Lily Jacobs (MEP) and Mr. Jorgo Chatzimarkakis (MEP)

*Thursday, May 15th 2008
10 am to 6 pm, Room A5G-3
European Parliament, Brussels*

The workshop is commissioned by STOA and organized by The Danish Board of Technology on behalf of the European Technology Assessment Group (ETAG).

During the last decade, new knowledge has been accumulated with regards to naturally occurring and health compromising substances in plant-derived food. Substances that are not added or taken in from pollution of the environment, but may be health compromising by their own nature, through for example toxic effects, allergenic effects or inhibition of nutrient assimilation.

The purpose of the workshop is to explore and debate new developments in basic research; industrial food processing; novel and functional food; and consumer knowledge and behaviour in order to determine whether problems can be identified which need to be dealt with by the European Union in the years to come:

- What are the problems?
- How big are they?
- Are they properly dealt with already?
- If not, how may they be better handled?

The programme is divided into four sessions and a wrap-up session at the end, intended to sum up the conclusions of the workshop. Each session will include 2-4 speakers and will consist of relatively short presentations followed by debate with questions from MEPs, other speakers and invited participants.

Tentative programme

10 – 10.20: Welcome, Ms. Jacobs, MEP, and ETAG

Moderator: *Hilmer Sørensen, Senior Associate Professor, Head of Research Group Biochemistry and Natural Product Chemistry, Department of Natural Sciences, Faculty of Life Sciences, University of Copenhagen and member of EFSA's Working Group on undesirable substances in feed section natural plant products.*

10.20 – 12.20: New knowledge and legal framework

Basic research within the fields of biochemistry and microbiology has given new insights with regards to the anti-nutritional nature of naturally occurring substances in plant-derived food. The aim of this session is to uncover these new insights and to present the legal framework dealing with them.

- What new knowledge has been uncovered?
- What are the possible adverse health effects?
 - Regarding non-processed food.
 - Regarding processed food.
 - Regarding novel and functional food.
- How big are these problems?
- To what extent are they currently being handled?

10.20 – 10.40:

Food group: Cruciferous vegetables; cabbage, broccoli, cauliflowers etc.

Toxic and anti-nutritional substances: Glucosinolates and glucosinolate derived compounds

Professor Gary Williamson, University of Leeds

10.40 – 11.00:

Food group: All plant-derived food

Toxic and anti-nutritional substances: Phenolics and antioxidants

Dr. Mariusz K. Piskula, Polish Academy of Sciences

11.00 – 11.20:

Food group: Plant proteins

Toxic and anti-nutritional substances: Allergens

Hanne Frøkiær, Associate professor, Nutritional immunology Group, Center for Biological Sequence Analysis, Institute of Systems Biology, Technical University of Denmark

11.20 – 11.50: Questions and debate

11.50 – 12.05 The legal framework

Ms. Helen Lee, European Commission, SANCO E4 - Food Law, nutrition and labelling

- What is the legal framework in the EU for handling naturally occurring substances in plant-derived food that may be health compromising through for example toxic effects, allergenic effects or inhibition of nutrient assimilation?

- Regarding non-processed food.
- Regarding processed food.
- Regarding novel and functional food.

12.05 – 12.20: Questions and debate

12.20 – 13.20: New developments in industrial food processing

Industrial food processing has increased and new technologies applied, which may provoke health-compromising effects of naturally occurring substances in plant-derived food. The aim of this session is to discuss to what extent this development causes health problems that need to be dealt with:

- What are the new developments within food processing?
- To what extent do these developments involve the provocation of health-compromising effects of naturally occurring substances in plant-derived food?
- How big are these problems?
- To what extent are they currently being handled?

12.20 – 12.35: Dietrich Knorr, Berlin University of Technology, Department of Food Biotechnology and Food Process Engineering

12.35 – 12.50: Dr. Anton J. Alldrick, Campden & Chorleywood Food Research Association

12.50 – 13.20: Questions and debate

13.20 – 14.30: LUNCH BREAK

14.30 – 15.30: New developments in novel and functional foods

Various novel and functional foods contain bioactive substances from plants. These substances are used because they are considered healthy, but used wrongly or excessively, they may have adverse, i.e. anti-nutritional, effects. The aim of this session is to discuss to what extent this development causes health problems that need to be dealt with:

- What are the new developments within novel and functional foods, involving substances from plants?
- To what extent does the use of these plant substances give cause to health adverse effects?
- How big are these problems?
- To what extent are they currently being handled?

14.30 – 14.45: Professor Marcello Duranti, Dipartimento di Scienze Molecolari Agroalimentari, University of Milano

14.45 – 15.00: Lisbeth Munksgaard, Senior Manager, External Scientific Affairs, Danisco A/S

15.00 – 15.30 Questions and debate

15.30 – 16.45: Consumer behaviour and knowledge

While knowledge about the naturally occurring and health compromising substances increases among experts, things may look differently in private homes, restaurants and canteens in hospitals, education facilities and other work places as well as various catering facilities. Basic knowledge about how to store, handle and prepare foods such as fruit and vegetables may not be sufficiently widespread and new initiatives may be needed to deal with that. Changing consumer habits may also call for new initiatives.

Knowledge on this issue is very scarce, but the speakers in this session will address the following issues with examples from related areas:

- Is plant-derived food being stored, handled and prepared in ways that may cause health problems related to toxic, allergenic and anti-nutritional substances? - by private consumers, restaurants and canteens in hospitals, education facilities and other work places, as well as by various catering facilities.
- How big are these problems?
- How are they currently dealt with and is it sufficient?

15.30 – 15.45: *Kees de Winter, Food Policy Advisor, BEUC*

15.45 – 16.00: *Liisa Lähteenmäki, Chief Scientist, VTT Technical Research Centre of Finland*

16.00 – 16.30: Questions and debate

16.30: Wrap-up session

Each speaker wraps up the day giving their conclusions (2 minutes each) on what are the most serious problems, how big they are and what needs to be done about them.

Questions from MEPs

17.45 Closing remarks by Mr. Chatzimarkakis, MEP