



## Estragole

Occurrence, toxicity and regulation  
of the alkenylbenzene estragole in  
food, feed and botanical drugs



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**Kooperation  
Phytopharmaka**

**23. February 2026, 13:30 – 17:15  
online**

# Introduction

**Dear colleagues,**

Estragole, a substance found in herbal medicinal products that form the core of phytotherapy, is in the focus of new regulatory measures. As an allylphenol, estragole belongs to a group of secondary plant compounds that are widespread in the plant kingdom and occur in numerous medicinal and aromatic plants, as well as in fruits and vegetables. Sources of exposure accordingly include food, food flavourings and food supplements, but also herbal medicinal products. Given that genotoxic effects have been described in toxicological models, some allylphenols have been subject to safety assessment and regulation in food and medicinal products already in the past.

Both the HMPC, which revised its earlier view on herbal medicinal products containing estragole in 2022, as the EFSA, which published a new draft scientific opinion in 2025, based their assessments on data existing so far, while in the meantime new scientific evidence has evolved, both by new toxicological studies increasingly substantiating the evidence for a thresholded effect of this compound, as by new exposure data for the general population. This symposium aims, based on lectures of leading researchers in the field, at integrating earlier assessments and new data, to allow a new, state of the art perspective on the risk profile of medicinal, aromatic and nutritional plants containing estragole.

**Monday, 23<sup>rd</sup> February, 2026**

**13:30 - 13:40 Welcome and Introduction**

Michael Heinrich, UCL School of Pharmacy, University of London, London, UK

President of GA Society

Jörg Fahrner RPTU, Kaiserslautern (D)

## **Session I**

**Chairs:** Stefan Gafner, Burlington (USA) and Michael Heinrich, London (GB)

**13:30 - 14:00 Determination of Pyrrolizidine Alkaloids (Pas) in tea and honey with automated SPE clean-up and ultra-performance liquid chromatography/tandem mass spectrometry**

Oliver Keuth, Münster (D)

**14:00 - 14:30 Novel aspects in PA occurrence: Seasonal variation of levels and transfer from feed to cow's milk**

Patrick P.J. Mulder, Wageningen (NL)

**14:30 - 15:10 Effects of pesticides on the genotoxicity of pyrrolizidine alkaloids**

Ad Peijnenburg, Wageningen (NL)

**15:00 - 15:15 Coffee Break**

## **Session II**

**Chairs:** Karen Nieber, Leipzig (D) and Jürgen Reichling, Heidelberg (D)

**15:15 - 15:45 Uptake, organ-specific metabolism and characterization of hepatotoxicity of the pyrrolizidine alkaloid senecionine**

Stefanie Hessel-Pras, Berlin (D)

**15:45 - 16:15 Assessment of the genotoxic potency of PA N-oxides: role of oxygen supply**

Stefan Pfuhler, Cincinnatti (USA)

**16:15 - 16:45 Relative potency factors (RPFs) of pyrrolizidine alkaloid N-oxides at realistic low dose levels**

Frances Widjaja, Wageningen (NL)

Monday, 23<sup>rd</sup> February 2026

13:30	Welcome	Prof. Dr. Michael Heinrich UCL School of Pharmacy, University of London, London, UK President of GA Society
13:35	Introduction	Prof. Dr. Jörg Fahrner, RPTU Kaiserslautern- Landau, Germany
13:40	Occurrence of Estragole and related Alkenylbenzenes in plant with emphasis on food plants	Prof. Dr. Michael Wink, Institute for Pharmacy and Molecular Biotechnology, University Heidelberg, Heidelberg, Germany
14:10	Biomarkers of exposure to estragole	Bernhard Monien German Federal Institute for Risk Assessment, Berlin, Germany
14:40	Concentration- response studies on the genotoxic potential of estragole	Prof. Dr. Jörg Fahrner, RPTU Kaiserslautern- Landau, Germany
15:10	Break	
15:30	Quantitative approaches for assessing the genotoxicity of estragole	Prof. Dr. George Johnson Swansea University, Wales, UK
16:00	Regulation of estragole in Food, HMP and Cosmetics: status and challenges	Dr. Hartwig Sievers, Phytolab GmbH & Co. KG, Vestenbergsgreuth, Germany
16:30	Round Table	Prof. Dr. Dieter Schrenk, RPTU Kaiserslautern-Landau, Germany
17:00	Summary/Conclusion	Prof. Dr. Jörg Fahrner, RPTU Kaiserslautern- Landau, Germany



## Organization

Society for Medicinal Plant and Natural Product Research



Gesellschaft für Arzneipflanzen- und Naturstoff-Forschung e.V.

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## Registration

This Seminar is offered free of charge.

Please use [this link](#) to register. You will receive a Zoom link via email afterwards – please check your spam-folder. If you don't receive any link, please contact [events@ga-online.org](mailto:events@ga-online.org) (Cornelia Kern).

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