



# WG1-4 Meeting on “RISK ASSESSMENT OF ENDOPHYTES”

WG Meeting 03-07 November 2014

(Management Committee Meeting 06 November 2014)

University of Ege, Faculty of Agriculture,  
Department of Plant Protection  
Bornova, İzmir/TURKEY

**COST Action FA1103:**

Endophytes in Biotechnology and Agriculture

[www.endophytes.eu](http://www.endophytes.eu)

# Call for abstracts

## Local Organizers:

Hatice ÖZAKTAN, Department of Plant Protection,  
Faculty of Agriculture, University of Ege, İzmir / TURKEY  
([hatice.ozaktan@ege.edu.tr](mailto:hatice.ozaktan@ege.edu.tr))  
Lalehan YOLAGELDI, Department of Plant Protection,  
Faculty of Agriculture, University of Ege, İzmir / TURKEY  
([lalehan.yolageldi@ege.edu.tr](mailto:lalehan.yolageldi@ege.edu.tr))  
Fax: 00 90 232 374 4848

## Action Chair:

Carolin Schneider, Institut für Pflanzenkultur e.K.  
Germany ([schneider@pflanzenkultur.de](mailto:schneider@pflanzenkultur.de))

## Meeting venue:

University of Ege, Faculty of Agriculture, B Block,  
Deanary Conference Hall, 35100-Bornova /İzmir,  
TURKEY

## Invitation:

Endophytic microorganisms may function as plant growth and defense promoters by synthesising phytohormones, producing biosurfactants, enzymes or precursors for secondary plant metabolites, fixing atmospheric nitrogen and CO<sub>2</sub> or control plant diseases as well as providing a source for new bioactive natural products with utility in pharmaceutical, agrochemical and other LifeScience applications. Furthermore, endophytes are likely to be adapted to the presence and metabolism of complex organic molecules and therefore show useful biodegradation activities. However, as with every innovative technology, a responsible approach should take risk assessment into account. F.e. one of the central questions in endophyte research is to understand the differences between beneficial and harmful plant-endophyte interactions. Another major concern are human pathogens colonizing the interior spaces of plants. Furthermore the characterisation of secondary metabolites produced by candidate strains for development of biocontrol agents and biofertilizers is of utmost importance, since the occurrence of toxins must be excluded as prerequisite for their registration.

This workshop will focus on various aspects regarding risk analysis and risk evaluation and will bring together scientists and representatives from companies and authorities.

We look forward to welcome you in İzmir, Turkey.

Sincerely,

Hatice Özaktan and Carolin Schneider

## Scientific programme:

The meeting will start at Monday, November, 3<sup>th</sup> 2014 at 13:30 with an opening session and reception, and will end at Friday, November, 7<sup>th</sup> 2014 at afternoon. During the meeting period, a field trip will be organized.

1. Please read carefully the session titles and descriptions and decide if and where your topic fits in, if you feel your topic fits into the overall title “Risk assessment of endophytes”, but doesn’t fit into a session, please though submit.
2. But, if your topic doesn’t touches the overall topic “Risk assessment of endophytes”, please think on submitting to a different meeting. You may propose meeting titles for 2015 as well, we are open.

## Sessions:

### **Session 1: WG1 - Human pathogens in plants (Andrea Campisano and Leo van Overbeek)**

Human pathogens colonizing the interior spaces of plants is of major concern. Cross-kingdom species belonging to the genera of e.g. *Stenotrophomonas*, *Serratia* and *Burkholderia* have been found frequently as plant colonizing species and endophytes. Human pathogens like *E. coli* O104, *E. coli* O157 and species belonging to *Salmonella* and *Staphylococcus* also have been demonstrated to internalize plants. It is unknown to which extent these species are adapted to the plant environment and thus being ecologically competent in the endosphere. Also, research to infection routes to plants and existence of mechanisms to actively penetrate plants are relatively unexplored fields for human pathogens. Answers to these questions are highly relevant for safe production of edible crops, especially for those that are freshly consumed.

We would like to call for abstracts in the field of human pathogens, or species taxonomically closely related to human pathogens, inside plants for the session on ‘human pathogens as endophytes’.

### **Session 2: WG2 - Mutualistic and pathogenic plant-endophyte interactions: what makes the difference? (Birgit Mitter and Angela Sessitsch)**

One of the central questions in endophyte research is to understand the differences between beneficial and harmful plant-endophyte interactions. The factors driving the nature of plant-endophyte interactions might be manifold. They may include among

others the genotype of the endophyte and the host plant and environmental factors, both abiotic such as various stresses and biotic such as interaction with the plant and the soil microbiome. Beneficial plant-endophyte interactions are multi-dimensional and a deeper understanding of all dimensions and components is needed to exploit the full potential of endophytes.

### **Session 3: WG3 Think-tank - Product pre-requisites for registration regarding risk assessment (Matthias Döring)**

(Endophytic) micro-organisms are widely used as agents in plant production to guarantee the growth of healthy plants by direct or indirect interactions with harmful organisms and by avoiding malnutrition. Recently, most of these micro-organisms used in plant production are regulated under the legal framework of the plant protection legislation (EC Reg.1107/2009) or are placed on the market following national rules, e.g. the national Fertilizers Acts. The recent fertilizer regulation (Regulation (EC) No 2003/2003) does not regulate micro-organisms. Because of the intention of the European Commission to revise this regulation to harmonize the legislation of all fertilizer materials (organic substances are not yet regulated in Regulation (EC) No 2003/2003), the question arises, whether micro-organisms should be regulated under the fertilizer regulation at the same time. The different product regulations require different risk assessment strategies.

The session will concentrate on presentations on endophytic strains for commercialization with following aspects, we will have a brainstorming as well:

How is the endophytic strain placed on the market?

What is the „mode of action“ of the endophytic strain?

What product will be developed?

What risks of the future product can be evaluated and how?

### **Session 4: WG4 - Production of mycotoxins, phytotoxins and other undesired secondary metabolites by biocontrol agents (Anna Maria Pirttilä and Frank Surup)**

The characterisation of secondary metabolites produced by candidate strains for development of biocontrol agents and biofertilizers is of utmost importance, since the occurrence of toxins must be excluded as prerequisite for their registration. In fact, many endophytes that are showing promising antagonistic activities during preliminary screening approaches in vitro, such as dual culture antagonism tests, frequently turn out to overproduce hazardous compounds. In this sense, characterization of the taxonomy of candidate strains by means of morphological and molecular phylogeny is

recommended to predict whether they belong to a group of notorious toxin producers (eg. the genus *Myrothecium* and the *Fusarium graminearum* complex). On the other hand, since the majority of endophyte species have never been studied thoroughly for secondary metabolite production, novel mycotoxins from hitherto unknown producers, as well as novel bioactive metabolites with strong toxicity are being continuously identified.

The symposium of WG4 is dedicated to the exploitation of such phenomena, and in particular those Action members who are dealing with secondary metabolite discovery are cordially invited to participate”.

## Participants:

1. The Management Committee of the Action decided to **invite 25 presentations** (oral and poster) with travel cost reimbursement (travel, accomodation, meals according to COST rules).
2. COST Action FA1103 gives strong support to **Early Stage Researchers** (PhD + max. 8 years), abstracts of young colleagues are expressly called.
3. COST policies target participants from industry, inclusiveness countries and gender balance, thus presentations from those groups are given priority.
4. As we will hold a Management Committee Meeting, max. 2 Management Committee Members per participating COST country are eligible for travel cost reimbursement (additionally to the above mentioned 25). Management Committee Members are expressly called to present their work topics related to risk assessment. **Country delegates, please discuss internally, which delegates are interested in presenting, not that reimbursements expire.**

All participants please register to the meeting with the registration form as soon as possible.

## Getting to İzmir:

**By plane:** City centre is located 20 km from İzmir Adnan Menderes airport.

### Flights:

It is possible to find direct connection from Munich to İzmir by Lufthansa  
[www.lufthansa.com/](http://www.lufthansa.com/)

It is possible to find direct connection from Istanbul to İzmir by Turkish Airlines THY  
<http://www.thy.com/en-INT/>

### Taxi:

From the airport to the hotel, it makes about 20 km. Cost of taxi is approximately 90-100 TL (30 €). Please note that taxi costs are only eligible to reimbursement for late arrival after 10:00 pm or early departure between 0- 7:00 am.

### **Shuttle Service: “HAVAŞ”**

Airport: Shuttle is available for every domestic aircraft of THY landing at Adnan Menderes Airport.

[Link to HAVAŞ Web page](#)

### **Shuttle Route**

Adnan Menderes Airport - Gaziemir - Karabağlar - Yeşildere - Kahramanlar - Basmahane - Çankaya – Grand Efes Swiss Otel.

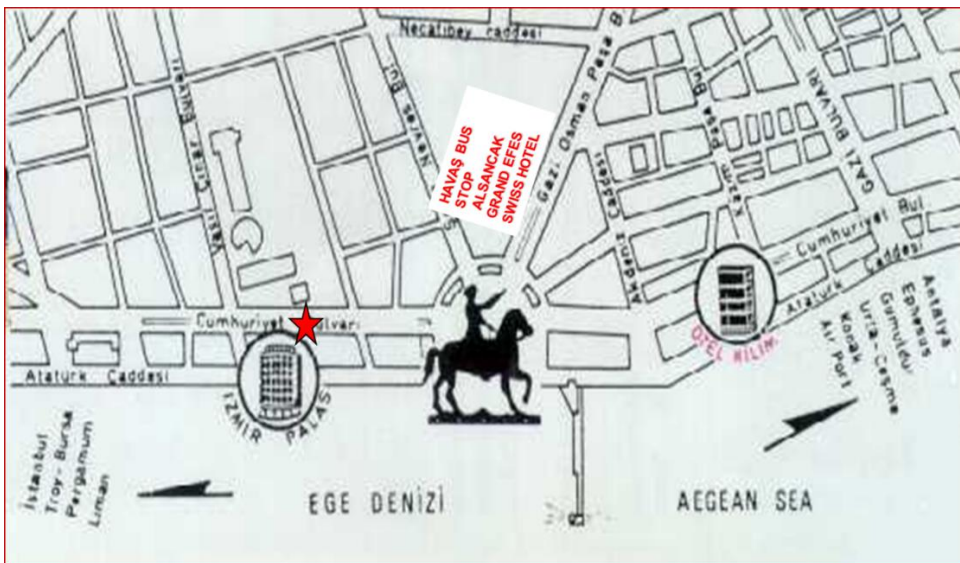
### **Shuttle Schedule**

From Alsancak (Grand Efes Swiss Otel): 03:30, 04:30, 05:30, 06:30, 07:30, 08:30, 09:30, 10:30, 11:30, 12:30, 13:30, 14:30, 15:30, 16:30, 17:30, 18:30, 19:30, 20:30, 21:30, 22:30, 23:30.

From Airport: 08:40 09:40 10:40 11:40 12:40 13:40 14:40 15:40 16:40 17:40 18:40 19:40 20:40 21:40 22:40 23:40 00:40 01:40 03:00

**Duration of Trip:** Approximately 60 minutes, **Ticket fee** 10 TL (VAT incl.) amounts to about 4 € (1 € = 2.9 TL)

You could reach to Hotel İzmir Palas from HAVAŞ bus stop Grand Efes Swiss Hotel by walking 5 min. Please find the route plan below.



## Accommodation information:

We would like to inform you that the Izmir Palas Hotel has kindly arranged a special rate for the meeting. We booked 60 (30 with sea view + 30 with city view) rooms from Izmir palace Hotel for our meeting in Izmir. This 4-star hotel is situated on the Kordon in the city center with spectacular views of Izmir Bay. The hotel is within walking distance of the shuttle bus stop of Airport (HAVAS) and subway for getting to Ege University.

HOTEL WEB PAGE is: <http://izmirpalas.com.tr>

A single room with sea view : € 50-55

A single room with city view : € 45-50

A double room with sea view: € 70-75

A double room with city view: € 60-65

including breakfast and taxes if you mention your participation in the international COST conference.

Our participants can book their hotel reservation with the quota of "**COST ENDOPHYTES**" by e-mail ([misafir@izmirpalas.com.tr](mailto:misafir@izmirpalas.com.tr) or [info@izmirpalas.com.tr](mailto:info@izmirpalas.com.tr)) without booking from booking.com. Please make your bookings by THURSDAY 15<sup>th</sup> OCTOBER 2014 and quote '**COST ENDOPHYTES**'

## Getting to Conference Venue:

The University of EGE is located in Bornova district of İzmir. It is possible to reach university campus by subway from the hotel. Çankaya subway station is 15 minutes walking distance from your hotel. You can easily walk to there by following the map. Please click [here](#) to show your walking direction from Hotel to subway station. You will take the line **EVKA 3** for getting to Ege University.

You can find the meeting place by clicking [here](#) after getting off **Ege Universitesi** station.

Also, a taxi spot is available across to hotel. Taxi fee is about 10-15 Euro to meeting place.

We will also offer a guide for the first day of the meeting to take you from the Hotel to meeting place.

## Call for abstracts:

- Please get your abstract (1 page) proof read for English
- The scientific committee will inform you as soon as possible after the deadline if your abstract is accepted for oral or poster presentation and for cost reimbursement.

**Send to [hatice.ozaktan@ege.edu.tr](mailto:hatice.ozaktan@ege.edu.tr)**

**Deadline Friday, September 26<sup>th</sup>, 2014**

## Style sheet for the abstracts:

**TITLE ARIAL CAPITALS 12 PT BOLD**

**Presenting author<sup>1</sup> and Author<sup>2</sup> Arial 12 pt bold**

*<sup>1</sup>Affiliation, Country, email Arial 10 pt italic*

*<sup>2</sup>Affiliation, Country, email Arial 10 pt italic*

Text Arial 11 pt

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3-5 recent references from own group