



Action FA1103  
Food and Agriculture

COST Grant System  
22 December 2011

## Action FA1103 Fact Sheet

### Title

Endophytes in Biotechnology and Agriculture

### Contacts

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### Details

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Mou:

Start of Action: 08/12/2011

Entry into force: 27/06/2011

End of Action: 07/12/2015

CSO approval date: 17/05/2011

### Objectives

Plants are associated with micro- and nanoorganisms: Endophytic bacteria and fungi, which live inter- and intracellularly in plants without inducing pathogenic symptoms, interact with the host biochemically and genetically. Endophytic microorganisms (EMOs) 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. The use of these EMOs to control plant-pathogenic bacteria and fungi is receiving increasing attention as a sustainable alternative to synthetic pesticides and antibiotics. Furthermore, these EMOs are likely to be adapted to the presence and metabolism of complex organic molecules and therefore show useful biodegradation activities. In order to reduce the input of pesticides and fertilizers and to bring European added value to an eco-friendly agriculture, it will be important to develop inocula of biofertilizers, stress protection and biocontrol agents. The aim of the Action is to identify bottlenecks limiting the use of endophytes in biotechnology and agriculture and to provide solutions for the economically and ecologically compatible exploitation of endophytes.

### Parties

Country	Date	Country	Date	Country	Date	Country	Date
Austria	15/06/2011	Denmark	11/11/2011	Finland	01/08/2011	France	12/08/2011
Germany	27/06/2011	Greece	21/11/2011	Ireland	11/08/2011	Israel	01/08/2011
Italy	22/06/2011	Netherlands	06/07/2011	Poland	22/06/2011	Portugal	18/10/2011
Spain	07/07/2011	Turkey	07/10/2011	United Kingdom	16/06/2011		

Total: 15



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### Intentions to accept the MoU

Country	Date	Country	Date	Country	Date	Country	Date
Belgium	N/A	Slovenia	N/A				

Total: 2

### Working Groups

None

### Website

None

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