

Template for STSM offers

COST Action CA15223

“Modifying plants to produce interfering RNA – iPLANTA”

PROPONENT INFORMATION:

Name of supervisor: Elena Baraldi

Department/Laboratory: DipSA/ Laboratory of Plant Pathology and Biotechnology

Institution: University of Bologna

Country: Italy

TITLE OF THE OFFER:

‘Producing iRNA strawberry plants to study candidate susceptibility genes to be exploited against fungal pathogens’

WORKING GROUP 2:

Elena Baraldi (Prof. of Plant Pathology)

Michela Guidarelli (Postdoc)

Francesca Negrini (PhD student)

DATES FOR TRAINING PERIOD: from September 2017 to July 2018

Nº OF DAYS: Depending on the activity from 60/90 up to 120/180

Nº OF MONTHS: 2/3 or 4/6

SUMMARY OF WORKING PLAN:

Two possible activities:

1) Producing transient RNAi silenced strawberry

Strawberry fruits at green stage will be infiltrated with *Agrobacterium tumefaciens* containing RNAi constructs of genes previously found as candidate susceptibility genes involved in the fruit defence response against *Colletotrichum spp.* and/or *Botrytis cinerea*. When ripen, fruits will be assayed for expression of the target gene in order to verify the silencing efficiency. Silenced fruits will be inoculated with pathogen conidia and susceptibility phenotype will be monitored.

For this activity a period of 3 months is convenient.

2) Producing stably RNAi silenced strawberry

Strawberry leaves will be used for transformation with *Agrobacterium tumefaciens* containing RNAi constructs to silence candidate susceptibility genes functioning in strawberry interaction with necrotroph pathogens, such as *Botrytis cinerea*. Transformant selection and regeneration will be carried out in vitro, in order to obtain rooted shoots to be transplanted in soil.

This activity will be carried out in collaboration with Prof. Bruno Mezzetti (UnivPM, Ancona Italy).

For this activity a period of 5/6 months is convenient.

Both these activities are subjected to some modification depending on the upcoming results of the current lab activity.

SPECIAL REQUIREMENTS:

Basic molecular biology skills.