

COST Action FA0806

Plant virus control employing RNA-based vaccines: A novel non-transgenic strategy

2009 | 2013

Objectives

- Co-ordinate frontier European research on plant virus control through gene silencing approaches.
- Develop novel non-transgenic control strategies for managing plant viral diseases in Europe.
- Optimize protocols for high-throughput production and delivery of suitable resistance inducer molecules.
- Transfer innovations to end-user groups (i.e. SMEs, plant protection organizations, growers' groups).
- Disseminate results via publication of all meeting proceedings, developing a web site with bibliography and announcements for long-term networking.

Main Achievements

- Interdisciplinary interaction of European research laboratories from 28 countries, working on plant virus control through gene silencing.
- Various dsRNA molecules targeting the genomes of selected plant pathogenic viruses have been developed.
- Different production methods (3 *in vitro* and 1 in bacteria) have been used for the production of dsRNA.
- Six training schools were completed under FA0806.
- Trans COST activities were performed in collaboration with other COST Actions in FA and BMBS Domain, namely 3 training schools and 3 workshops.
- One Working Group meeting was organized along with an EMBO-ESF workshop (one similar activity is pending).
- Nine non-COST participants have joined FA0806 (one is pending).
- Linking with other FP7 projects (TriticeaeGenome, SharCo) has been established.

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Food and Agriculture (FA)

Participating countries

AT, BE, BG, CH, CY, CZ, DE, DK, EE, EL, ES, FI, FR, HR, HU, IL, IT, LU, NL, NO, PL, PT, RO, RS, SI, SK, SE, TR, UK

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Image caption:



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Working Group activities

Working Group 1

- Development of novel non transgenic strategies for plant virus control.
- Development of methods and selection of RNA silencing inducer molecules.
- Production of RNA silencing inducer molecules in small scale and evaluation in different pathosystems.
- Establishment of high throughput production methods for the selected RNA silencing inducer molecules.

Working Group 2

- Application of novel non transgenic strategies for plant virus control.
- Development and evaluation of the application methods. Standardization of the protocols for efficient delivery of the RNA silencing inducer molecules will be developed and used in trials.
- Monitoring the efficacy of the developed methods in the greenhouse and field (e.g. Greece, Israel, Jordan, India, Mexico).

Working Group 3

- Socio-economic aspects of the novel application.
- Evaluation of the economics of the novel strategies for plant virus control.
- Dissemination of the obtained results to end-users (growers, advisors, private companies, local and national governmental personnel, non-governmental parties), through meetings and targeted workshops.
- Establishment of a web site and Action pamphlet generation so that consumer and wider public acceptance would be achieved.
- Guideline proposition for European regulation compliance.

Industry participation

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