

COST ACTION FA0804

Molecular farming: plants as a production platform for high value proteins

Minutes of the 3rd Management Committee Meeting

Vila Lanna, Prague, Czech Republic
6th October 2009 at 14:15

0 Welcome to participants

The Chair welcomed the participants and opened the meeting at 14.15. The delegates presented themselves. There were altogether 25 participants (see annex 1). New MC members Joachim Schiemann (GE), Alexandra Castilho (AU) and Meti Buh Gasparic (SLO) were welcomed.

1 Adoption of agenda

The agenda was accepted without changes.

2 Minutes of last meeting

The minutes of the previous MC meeting (held in Athens on 5th March, 2009) were approved.

3 Matters arising

There were no matters arising.

4 Report from the COST Office

a. News from the COST office

Science officer Albino Maggio was not able to attend the meeting.

b. Status of the Action, including participating countries

The Action has started on November 27th, 2008 and it will last till November 26th, 2012. Since the last MC meeting Sweden has signed the MoU. There are now 23 countries who have signed the MoU. Currently over 60 institutes are members of the Action. There is currently one non-country member application pending (see point 11).

c. Budget status, budget planning and allocation process

Since the Science officer was not present this was not discussed.



5 Progress report of working groups

▪ WG1 meeting in Lleida

Bart van Drookenbroeck summarized the Lleida WG1 meeting where four focus groups each having two objectives and two measurable outputs were determined. The meeting summary will be placed in the Action web site. Focus group leaders will contact core people who have earlier shown interest to the activities by email in order to achieve objectives and outputs.

▪ Report by the WG leaders

The current status, activities and achievements were summarized and actively discussed during the two-day workshop prior the MC meeting (see the program attached).

The Action Chair encouraged people to invite companies and developing country institutes to join the Action. However, their participation should bring added value for the Action. In addition, it was discussed to try to locate and invite members of the passed failed plant biotech companies in order to get their view of the major bottlenecks in commercialization of molecular farming.

6 Action planning

Annual Progress Conference

Stefan Schillberg was presenting our Action in the Annual Progress Conference in July 9th-10th, 2009 in Prague. The feedback was generally good. Stefan noticed that all the other Actions had listed all their scientific publications related to the topic of their Actions contrary to us. The MC committee decided that we should do the same starting from the beginning of 2009.

Action budget planning

The budget will be approximately 120k€ including 15% management costs.

The grant holder system will be adopted most likely from November 1st, 2009 on. The grant holder institute will be University of Lleida. However, so far there is no contract draft sent to the University of Lleida. The contract will be drawn and the training should be performed by the COST Office before November 2009.

Action Planning

The Action Chair presented the plan for the next period (1.11.2009-31.10.2010). Suggestions concerning activities were updated and the plan will be finalized and sent to the Science Officer still during October 2009.

The next annual meeting with MC meeting will be in Naples on October 8th, 2010. The local organizer Dr. Theodoro Gardi will confirm the exact place of the meeting.

The combined WG2 and 3 meeting will take place in Wageningen on January 25th to

26th, 2010. The local organizer is Dr. Dirk Bosch.

It was discussed about the follow-up WG1 meeting and there are two options either in connection to EPSO meeting (www.epsoweb.org) which takes place from 18th to 22nd April in Finnish Lapland or alternatively (or even as an addition) in Ghent in late May, early June. Prof. Ann DePicker promised to investigate these options together with the Action Chair.

7 STSM status, applications

Tomas Vanek, the STSM leader, summarized the current status of the performed STSMs. Altogether there has been four STSMs during 2009. He demonstrated the STSM procedure and encouraged the participants to apply since the STSM instrument has a very crucial role in our Action. All the documents needed and instructions are placed in the Action web site.

The MC meeting decided that the basic information (title, names of the partners and institutes, duration of the mission) concerning the terminated STSMs will be placed on the web site as well. The reports of the missions will be evaluated by the STSM committee. However, the full reports will not be published in order to avoid confidentiality issues. Tomas Vanek stressed that the quality of the reports should be improved.

8 Publications, dissemination and outreach activities

It was decided that the Action collects together the scientific publications related to the field of this Action from the participating members and place the list on the Action web page.

Dissemination and other outreach activities will be discussed in the follow-up WG meeting in winter and spring 2010.

9 Request for new members

There were no requests for new members.

10 Promotion of gender balance and of Early Stage Researchers (ERS)

The Action has a very good gender balance in general e.g. approximately 40 % of the MC members are female. The ERS are encouraged especially to take part in the STSMs.

11 Non-COST country participations

There was one application from non-COST country - China – sent by Dr. Li-Dong Lou (China Jiliang University). The benefits for the Action were discussed and the MC committee was approving Dr. Lou's application.

12 Web news

The MC meeting discussed lively about the contents and the purpose of the web site. Currently it contains only very basic information of the Action and it is operated by web

page manager, Petr Soudek from the Czech Republic.

The following decisions were made:

- All the new information and suggested changes should be sent to vice-chair of the Action, Julian Ma. He will filter and pass the changes and additions to the web page manager.
- The web pages manager has requested the COST office to add a link from the official COST web pages to our Action web. This has not yet happened. The chair of the Action will contact Scientific officer (Albino Maggio).
- COST logo should appear in each page of our Action.
- The WG leaders will check the contents of the text. It was advised to shorten the text and use more bullets and links.
- The meeting page should contain presentations as pdf format.
- The new page called “join us” will be added in which the link to COST Office web page, contact persons’ names (list of MC members) and the instructions are found. The national MC members will primarily evaluate the candidates of the respective country.
- The mailing list of the Action participants will not be available in the web page.

The current links: cost.esf.org; europabio.org; epsoweb.org, molecularfarming.com were approved. Additionally it was decided to add the web pages of European companies and EU-FP program projects dealing with plant molecular farming

13 AOB

Joachim Schiemann advertised Biosafety of GMOs meeting to be held in Buenos Aires, Argentina in 14th – 19th November 2010. The conference will have a session dealing with non-food and non-feed uses of GM plants with four invited speakers.

14 Closing

The meeting was closed at 17.30

Annex 1

List of participants

Name	Country
1. Basinskiene Loretta	(LI)
2. Bellucci Michele	(IT)
3. Bosch Dirk	(NL)
4. Brinch-Pedersen Henrik	(DK)
5. Buh Gasparic Meti	(SLO)
6. Cardi Teodoro	(IT)
7. Castilho Alexandra	(AU)
8. Cusido Rosa	(ES)
9. Depicker Ann	(BE)
10. Faye Loic	(F)
11. Häkkinen Suvi	(FI)
12. Juodeikiene Grazina	(LI)
13. Liaimer Anton	(NO)
14. Lomonossoff George	(UK)
15. Ma Julian	(GB)
16. Mäkinen Kristiina	(FI)
17. Mäntylä Einar	(ICE)
18. Oksman-Caldentey Kirsi-Marja	(FI)
19. Ritala Anneli	(FI)
20. Sakellaris George	(GR)
21. Schiemann Joachim	(GE)
22. Sirko Agnieszka	(PL)
23. Schillberg Stefan	(DE)
24. Van Droogenbroeck Bart	(BE)
25. Vanek Tomas	(CZ)

Annex 2: Program of the workshop prior to MC meeting

Monday 5th October 2009

9.00 Introduction to the Action
(Kirsi-Marja Oksman)

WG2 and WG3 Session (Chair: Stefan Schillberg and Dirk Bosch)

9.30 Introduction to WG2 and WG3
Dirk Bosch and Stefan Schillberg

Viral expression systems

10.00 Potato virus A infected plants as a production platform for heterologous proteins
Mäkinen K, Kelloniemi J, Hafren A, Valkonen J – University of Helsinki, Finland

10.25 Transient expression of the human papillomavirus type 16 epitopes derived from E7 and L2 proteins using the *Potato virus X*-based vector
Cerovska N, Pichova H, Moravec T, Hoffmeisterova H – Institute of Experimental Botany, Prague, Czech Republic

10.50 *Coffee break*

11.15 pEAQ: versatile vectors for easy and quick transient expression of heterologous proteins in plants
Lomonosoff G – John Innes Centre, Norwich, UK

Plastid transformation

11.40 Plastid transformation as a means to produce subunit recombinant antigens in plants
Cardi T, Scotti N, Rigano MM – CNR-IGV, Portici, Italy

12:05 General discussion

12.35 *Lunch*

Seed based systems and down-stream processing

13.35 Recombinant production of a full length and of a 45-kDa fragment of collagen type I α 1 in barley seeds
Ritala A, Eskelin K, Suntio T, Blumer S, Holkeri H, Wahlström EH, Baez J, Mäkinen K, Nuutila AM – VTT, Espoo, Finland

14.00 Fusion protein technologies for efficient production and purification in plants
Joensuu JJ – VTT, Espoo, Finland

Suspension cultures

14.25 The Bryotechnology: contained, secretion based production of glyco-engineered biologicals
Jost W – Greenovation Biotech GmbH, Freiburg, Germany

Glyco-proteins

14.50 Customized protein glycosylation in plants: an advantaged over established expression platform
Castilho A – BOKU, Vienna, Austria

15.20 *Coffee break*

Technical proteins

- 15.45 Genetic engineering of spider silk protein derivatives, plant-based expression and characterization
Hauptmann V, Junghans F, Schallau K, Menzel M, Gunkel P, Spohn U, Conrad U – IPK Gatersleben, Germany
- 16.10 Expression of storage proteins designed for elastomeric properties
Saumonneau A, Allami M, Marché L, Lourdin D, Conrad U, Jones H, Shewry P, Popineau Y, Guéguen J – INRA, Nantes, France

Metabolites

- 16.35 Production of recombinant proteins involved in secondary metabolite biosynthesis
Cusido RM – University of Barcelona, Spain
- 17.00 General discussion
- 17.30 End

Tuesday, 6th October 2009

WG1 Session (Chair: Bart Van Droogenbroeck)

- 8.30 **Introduction to WG1**
Bart Van Droogenbroeck - ILVO, Flemish Government, Belgium

Focus group 1 – Regulatory Framework

- 8.35 Improving the Regulatory Framework for Molecular Farming
Introduction by Joachim Schiemann - Julius Kühn Institute (JKI), Germany
- 8.45 **Plenary lecture:**
Reducing the regulatory Burden for Molecular Farming in the US
Elizabeth E. Hood - Arkansas State University, USA
- 9.30 EFSA-Guidance for the assessment of genetically modified plants for non-food/feed purposes
Schiemann J - Julius Kühn Institute (JKI), Federal Research Centre for Cultivated Plants, Germany
- 9.50 Discussion and further planning
- 10.20 *Coffee break*

Focus group 2 – Public perception and stakeholder interaction

- 10.35 Introduction by *George Sakellaris – EIE, Athens, Greece*
- 10.45 Molecular Farming in Flanders: the opinion of the Flemish greenhouse grower
Demeyer R – ILVO, Flemish Government, Belgium
- 10.55 Discussion and further planning

Focus group 3 – Developing country aspects

- 11.25 Introduction by *Julian Ma – St. George's, University of London, UK*

11.35 Short presentation by Fernando Ponz – *INIA, Madrid, Spain*

11.45 Discussion and further planning

12.15 *Lunch*

Focus group 4 – IP Licensing strategies

13.15 Introduction by Antonio Molina - *Agrenvec, Madrid, Spain*

13.25 Discussion and further planning

13.55 **Links of WG1 with WG2 & WG3**

WG Leaders – Bart Van Droogenbroeck, Stefan Schillberg, Dirk Bosch

14.15 **Management committee meeting (only for MC members)**