

Exploratory Workshops Scheme

Standing Committee for the European Medical Research Councils (EMRC)

ESF Exploratory Workshop on

Genetic Models of Disease Resistance in Livestock

Edinburgh, United Kingdom, 1 - 2 October 2007

Convened by: Bruce Whitelaw and Helen Sang

Division of Gene Function and Development, Roslin Institute



The European Science Foundation (ESF) is an association of 76 Member Organisations devoted to scientific research in 30 European countries. The Mission of ESF is to provide a common platform for its Member Organisations in order to advance European research and to explore new

directions for research at the European level. Through its activities, the ESF serves the needs of the European research community in a global context.

The main objectives of ESF for the years 2006-2010 as defined by its current *Strategic Plan* are to promote Science Strategy and Science Synergy, paving the way for initiatives across disciplinary and geographic boundaries in the European Research Area (ERA).

The Exploratory Workshops scheme is one of the key instruments of the Science Strategy "pillar". Each year, ESF supports approximately 50 Exploratory Workshops across all scientific domains. The focus of the scheme is on workshops aiming to explore an emerging and/or innovative field of research or research infrastructure, also of interdisciplinary character. Workshops are expected to open up new directions in research or new domains. It is expected that a workshop will conclude with plans for specific follow-up research activities and/or collaborative actions or other specific outputs either within the frame of ESF (e.g. prepare the ground to develop a Forward Look, a Research Networking Programme or a EUROCORES proposal; publication of a Policy Briefing...) or for submission to the EU 7th Framework Programme or to other European or international funding organisations.

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Main Objectives of the Workshop:

The expanding knowledge of the genomics of host-pathogen interactions of key livestock diseases, together with latest techniques on genetic modification, now allow us to establish a new platform for research into genetic models of disease resistance in farm animals. This research will have major impact on animal welfare, food safety, the economy of the sector and human health. In the longer term we wish to establish a new European consortium to develop such research.

This Workshop has the following specific objectives to:

- 1. identify the expertise that resides in Europe to enable an overview of the European position with regard to International activities.
- 2. identify how to best utilise new GM technology to overcome limitations.
- 3. identify highest priority disease projects to establish European science as leading the field.
- 4. make the appropriate European science community (through the invited participants) aware of the initiative to build Scottish Network of Excellence "Development of Novel Technologies to Fight Viral Diseases in Farm Animals"
- 5. provide input into the International Symposium on Animal Genomics for Animal Health to be held later this year at the OIE Headquarters in Paris (through Bruce Whitelaw member of the OIE Ad hoc group on Biotechnology).



PRELIMINARY PROGRAMME

Presentations will be 20 minutes followed be 5 minutes discussion.

Monday 1 October 2007

12.00-14.00 Arrival and Lunch

14.00-14.20 Welcome by the convenors

Presentation of the European Science Foundation (ESF)

Martin Röllinghoff (Standing Committee for the European Medical

Research Councils)

Session One: What models are needed 14.20 - 15.30

(chaired by Bruce Whitelaw)

What diseases are important Ivan Morrison (Edinburgh, UK)

What does industry want

Graham Plastow (Edmonton, CA)

What does our conscience want Kenneth Boyd (Edinburgh, UK)

15.30-16.00 Coffee

16.00-18.00 Session Two: GM technologies

(chaired by Helen Sang)

Nuclear transfer **Heiner Niemann** (Neustadt, DE)

Lentiviral transgenesis (into NT) Bruce Whitelaw (Edinburgh, ÚK)

Large transgenes

Lluis Montoliu (Madrid, ES)

New transgenic vectors **Chamsy Sarkis** (Paris, FR)

Dinner

Tuesday 2 October 2007

09.00-11.00 **Session Three: Example Projects**

(chaired by Bruce Whitelaw)

Combating flu in birds Helen Sang (Edinburgh, UK)



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Prp-null cattle **Dario Brunetti** (Cremona, IT)

Transgenic rabbit projects **Zsuzsa Bosze** (Gödöllö, HU)

Investigating Jaagsiekte in sheep Massimo Palmarini (Glasgow, Uk)

Mastitis and other US projects **Bob Wall** (Beltsville, US)

11.00-11.30 Coffee

Session Four: Wash-up 11.30-12.30

(chaired by Helen Sang and Bruce Whitelaw)

12.30-14.00 Lunch and Departure

European Science Foundation

Objectives of the ESF Standing Committee for European Medical Research Councils (EMRC)

The ESF Standing Committee for the European Medical Research Councils (EMRC) has overall responsibility for initiating and coordinating ESF's scientific activities in medical sciences and for providing expert advice on issues of science policy. It covers a broad range of disciplines and the Committee's main objectives range from promoting interactions between the biomedical and clinical research communities, through providing policy advice, to stimulating collaboration in emerging research areas.

The EMRC covers fields such as:

- Diagnostic and therapeutic medicine
- Neurobiology
- Immunology
- Clinical studies
- Communicable diseases
- Human genetics & functional genomics
- Medicinal biotechnology
- Public Health, etc.

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Provisional List of Participants

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ESF Exploratory Workshops

ESF/EMRC Exploratory Workshop:

Genetic Models of Disease Resistance in Livestock

CUNDATION Edinburgh, United Kingdom, 1 - 2 October 2007

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vak - 14/09/2007