

COST Action no. BM0901

SYSGENET

European systems genetics network for the study of complex genetic human diseases using mouse genetic reference populations

2009 | 2013

Objectives

- create a European network on systems genetics for complex genetic trait studies in mouse models by combining expertise, exchanging results and connecting different ongoing national programs
- link to research groups studying human complex genetic diseases
- prepare concepts for an EU mouse resource infrastructure for GRPs
- interact with world-wide systems genetics programs
- prepare calls for research programs in the field of systems genetics in Europe

Main Achievements

- **Scientific outputs obtained due to networking:**
- scientific meeting on systems genetics in Europe (published in Mamm. Genome, 2010)
- review on bioinformatics tools for systems genetics (published in Briefings in Bioinformatics, 2011)
- scientific workshop on cross-species research on schizophrenia (published in Sci. Transl. Med. 2011)
- generation of the Collaborative Cross as a new mouse resource (published in Genetics, 2012)
- scientific workshop on the use of mouse models to identify complex genetic traits in infection and immunity
- **Capacity building due to networking:**
- strategic meetings with US consortium to build an infrastructure for EU access to the Collaborative Cross mouse resource
- eight STSMs in 2011 for ESR, summer school planned in 2012.
- approval of two national funding grants because of participation in SYSGENET

www.cost.eu/bmbs**Biomedicine and Molecular Biosciences (BMBS)**

Participating countries

AT, BE, CH, CZ, DE, DK, EE, ES, FI, FR, GR, IL, IT, LU, N, NL, PL, UK, EL, TR

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Working Group activities

Working Group 1

- will collect information about existing GRPs in Europe and identify concepts and business models to maintain and distribute them in Europe. Furthermore, the WG will specify standards for quality control of the resources. A special focus will be the establishment of a common European resource for the collaborative cross strains.

Working Group 2

- will review the scientific progress of SYSGENET. In addition, the WG will collect information on ongoing phenotyping studies in the network and organize scientific workshops on specific disease models. Furthermore, interactions with existing EU programs will be established and discussions initiated for future funding of large scale phenotyping projects.

Working Group 3

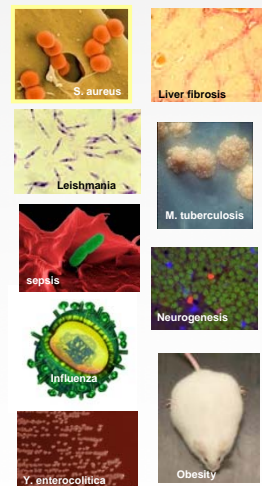
- will identify and develop tools for the analysis of complex traits, suggest concepts for data integration as well as for large scale data storage and handling. Training courses will be held to train bench scientists in the proper choice and use of systems genetics bioinformatic tools.

Working Group 4

- will build connections to other international systems genetics programs, especially with the Collaborative Cross initiatives in the United States and Australia and the international mouse phenotyping consortium. Furthermore, it will foster interactions with on-going systems genetics studies in other species, especially in humans.

Working Group 5

- will identify the needs for training of researchers in the field of systems genetics and develop concepts for training courses. In addition, the WG will oversee the use of STSMs: review of applications, selection of candidates and activities, and their follow-up.



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