

# Al. Fleming researchers participate in consortium to collate mouse genetics

News release from BSRC Alexander Fleming

**A new international consortium aimed at linking together the world's databases of mouse genetics.**

The Al. Fleming Institute participates in [CASIMIR](#), a coordination action focusing on the integration and sustainability of databases containing experimental data, including sequences, and material resources such as biological collections, relevant to the use of the mouse as a model organism for human disease. Interoperability of disseminated databases will potentially provide enormous synergy in the provision, integration and analysis of a wide range of data with concomitant added value to new medical advances and potential reduction in the number of animals used in research.

Because they are so genetically similar to humans, the mouse has become the animal of choice for studying human disease. The importance of using mice in basic research may be exemplified by a transgenic mouse, created at the BSRC Al. Fleming, over-expressing human TNF, which as a result develops pathological symptoms closely resembling those of Rheumatoid Arthritis. The transgenic mouse has been instrumental in the development of the most successful to-date treatment of the disease (a-TNF therapeutics) and is widely used in pharmaceutical industry for assessing the effectiveness of novel therapies with enormous social and economical benefits.

The success of research programmes in the field, particularly following advances in genome sequencing and other high-throughput technologies, means that the volume of data available has become enormous. The new consortium, funded by the Commission of the European Union, is essential if we are to make the best use of the data, both for discovery and for experimental design.

Researchers said the existing information system is "currently a virtual Babel" and that unifying the global data systems would produce "a well-ordered network in which all databases will be able to speak to each other fluently in the same language". Maximising the availability and ease of use of the information, "Will allow discoveries to be made from existing data and potentially reducing the use of animals in research," they added.

The Commission has awarded €1.3 million over three years for the new Coordination Action, CASIMIR, directed by leading European Institutions, that will make recommendations on the integration and funding of databases across the European Union that hold information on the biology and genetics of the laboratory mouse.

The interdisciplinary team is drawn from ten European countries and includes:

- In the UK: the Medical Research Council's Harwell and Edinburgh Units, the European Bioinformatics Institute, Hinxton, the Biotech company Geneservice, Cambridge, with the University of Cambridge acting as Co-ordinator.
- In Germany: the Helmholtz Centre for Infection Research, Braunschweig, and the GSF National Research Center for Environment and Health, Munich.
- In Italy: the European Molecular Biology Laboratory EMBL- Monterotondo Outstation, and the Cell Biology Institute of the Italian National Research Council.
- In Greece: the Alexander Fleming Biomedical Sciences Research Center, Athens

- In France: the Institut Clinique de la souris, Strasbourg
- In Sweden: the Karolinska Institute, Stockholm

The consortium is joined in its discussions by the Wellcome Trust Sanger Institute, the Jackson Laboratory, USA, the Riken Genome Science Centre, Japan, and the United States National Institutes of Health, amongst many other major players, to establish a way forward to a global scientific information network.