

To continue as an FP7-funded project

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## EMMAinf: European Mouse Mutant Archive Infrastructure

Improving our understanding of multiple sclerosis, breast cancer and many other diseases that are entirely or partly inherited depends to a large extent on mutant mice that have been deliberately bred with genetic defects. European medical researchers have created hundreds of these 'mouse models', but lack of money and space means that not many of them are preserved once their original purpose has been fulfilled. The EU-funded EMMAinf project is helping to save valuable mutant mouse strains collected by EMMA, the European Mutant Mouse Archive.

### ● BETWEEN THE DEVIL AND THE DEEP BLACK SEA

Experiments on animals are an essential part of modern medical research and, of these animals, the most important is the mouse. After human beings, the mouse was the second mammalian genome to be fully sequenced. Thanks to recombinant DNA technology and embryonic stem cells, if a gene can be identified, scientists can now breed a strain of mutant mouse in which the gene is disabled or otherwise modified. The resulting 'mouse model' can provide valuable insight into how the same gene causes inherited disease in people.

Mouse models are so useful that scientists in European research institutions and drug companies produce hundreds of them every year. In fact, they produce so many that they do not have

the resources to preserve every strain once they have served the purpose for which they were originally produced. Anyone who wants to work with the same gene in the future must recreate the relevant mouse model – a task that is costly, time-consuming, and ultimately frustrating to the researcher who thinks the strain should have been preserved for posterity.

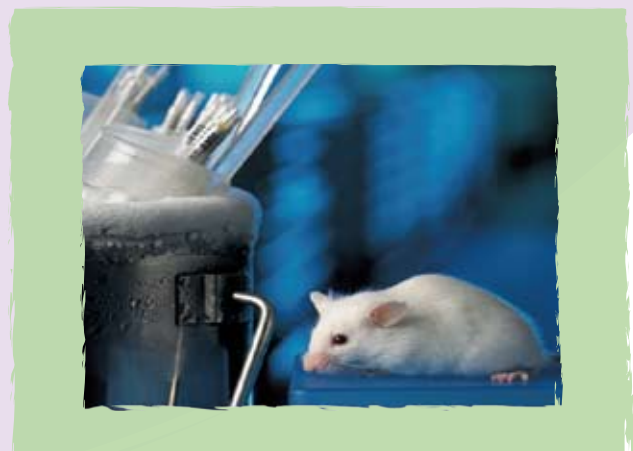
To avoid such wasted effort, the European Mouse Mutant Archive (EMMA) was set up in 1999 to preserve useful mouse strains so that they can be used by other researchers. With partner organisations in Italy, France, Germany, Sweden, Portugal and the UK, EMMA provides a valuable service to Europe's medical and biomedical research community.

### ● FURTHER DEVELOPING EMMA

The EMMAinf project is generating a large-scale and distributed repository of mouse lines that appears to the outside world as one unique centre, and that distributes the lines to the scientific community. Hundreds of new mouse lines of high interest will be cryo-preserved as embryos or spermatozoa during the life of the project.

The archived strains will be supplied to users on request, as frozen material, for a nominal charge. For highly-demanded strains, a stock of living mice will be constantly renewed according to the needs of the users. These strains will be distributed as live breeding pairs. Germ-free lines, required particularly for immunological studies, will also be generated and maintained.

The database of available mouse mutants is being improved, and the web interface for choosing and ordering mice is being made easier to use. The overall management and coordination of EMMA, including dissemination of information and biological



material, is also being upgraded with the help of the EU funding in EMMAinf.



EUROPEAN COMMISSION

## ● EUROPEAN MOUSE MUTANT ARCHIVE INFRASTRUCTURE IN SUMMARY

**Project acronym:** EMMAinf

**Funding scheme (FP6):** Integrated Infrastructures Initiative (I3)

**EU financial contribution:** €5 965 949

**EU project officer:** Brigitte Sambain

**Duration:** 48 months

**Start date:** 1 July 2004

**Completion date:** 31 June 2008

**Project webpage:** [www.emmanet.org](http://www.emmanet.org)

**Coordinator:** Glauco Tocchini-Valentini, CNR-IBC, [gtocchini@ibc.cnr.it](mailto:gtocchini@ibc.cnr.it)

**Partners:** Consiglio Nazionale delle Ricerche, Istituto di Biologia Cellulare, Monterotondo Scalo – Rome (CNR-IBC) (IT), Centre National de la Recherche Scientifique–Centre de Distribution, de Typage et d'Archivage Animale (CNRS-CDTA) (FR), Karolinska Institutet, Clinical Research Centre (SE), Fundação Calouste Gulbenkian Oeiras (PT), HGF/GSF/Institute of Experimental Genetics (IEG) (DE), European Molecular Biology Laboratory (EMBL)/ European Bioinformatics Institute (EBI) (UK)