



**LSHG-CT-2005-005283**

**PRIME**

**Priorities for mouse functional genomics research across Europe:  
Integrating and strengthening research in Europe**

**Instrument: Coordination Action**

**Thematic Priority: Life sciences, genomics and biotechnology for health**

**Deliverable No. 05**

**Report from Resources Expert Group – major advances and the way forward**

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<b>Dissemination Level</b>		
<b>PU</b>	<b>Public</b>	√
<b>PP</b>	<b>Restricted to other programme participants (including the Commission Services)</b>	
<b>RE</b>	<b>Restricted to a group specified by the consortium (including the Commission Services)</b>	
<b>CO</b>	<b>Confidential, only for members of the consortium (including the Commission Services)</b>	



## PRIME

### **Deliverable No. 05: Report from Resources Expert Group, major advances and the way forward**

The aim was to establish consortia develop a coherent strategy for the maintenance and sustainability of essential European database resources for functional genomics research. The first meeting was held in Rome on 2<sup>nd</sup> September 2005. A full report of the meeting can be found at Appendix 5.1.

The priorities identified and currently being developed by the committee are:

*Database resources - Identify datasets that are, or will become important over the next 10-15 years.*

We have collated information on the various databases that are available worldwide on mouse functional genomics (see table at Appendix 5.2). We have also contacted the EuroMouse projects to find out what databases they are setting up and using in their projects. A summary is attached at Appendix 5.3.

*Ontologies and standards - Identify ontologies and standards used in the various datasets.*

The Mouse Phenome (MP) ontology has been developed by the JAX laboratory and is used in their mouse phenome and other databases. An alternative strategy has been developed in Europe called PATO. This committee will explore the potential to harmonise these two ontologies and form links between the terms in them. In addition, it will monitor any other ontologies that are being developed.

*Communication standards - Identify which databases could be integrated and explore methods for doing this.*

The next step after large scale mutagenesis will be large scale phenotyping. The committee identified that existing resources for storing mouse phenome data should be harmonised and linked so that data from all of the databases can be accessed in one search. In order to do this, the expert group established two sub-groups:

- The EuroPhenome working group to develop a common access point for phenome data collected in the European mouse clinics during the large-scale phenotyping projects. (See Appendix 5.4 for notes of the first meeting, 20<sup>th</sup> June 2006, MRC Harwell.) The major mouse clinics in Europe (German Mouse Clinic, GSF, Mouse Clinical Institute, ICS and MRC MGU, Mary Lyon Centre) have developed databases to store their local phenotype information. The Group will explore ways to provide a common access point to these databases so that data from the primary screens can be made publicly available from one web address ([www.europhenome.eu](http://www.europhenome.eu)).
- In addition, there are a number of mouse phenome databases being developed worldwide at the moment. The International Phenome working group has been established under PRIME to bring together the people working on these to explore methods to link the databases, standards for the data, common ontologies and search mechanisms to search across the databases. (See Appendix 5.5 for notes of the first meeting, 25<sup>th</sup> February 2006.)

*Biological resources - Determine physical biological resources that are or will need to be maintained.*

One of the main mouse resources that needs to be maintained are the physical libraries of frozen mouse lines and ES cells. In Europe the major mouse archives are coordinated under EMMA. It was recognised that there is a need to coordinate this with other mouse repositories worldwide. Members of PRIME have therefore established an international committee, FIMRe, the Federation of International Mouse Resources ([www.fimre.org](http://www.fimre.org)) to consider these issues. Current members and business are given at Appendix 5.6.

*Sustainability - Consider ways to sustain these physical and information resources beyond the life of the current funding.*

The issue is not if we want to pay for these resources to be maintained, but how to.

**Appendix 5.1: Expert group on improved resources report from first meeting 2 September  
2005 meeting**



**Appendix 5.2: Mouse functional genomics databases**



**Appendix 5.3: EuroMouse databases**



**Appendix 5.4: EuroPhenome working group**



**Appendix 5.5: International Phenome working group: Mouse Database Integration Consortium**



**Appendix 5.6: FIMRE the Federation of International Mouse Resources**

