



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

Second Activity Report (Months 19 to 36)

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Project coordinator name: Professor Steve Brown

Project coordinator organisation name: Medical Research Council, Mammalian Genetics Unit

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Executive summary

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Andrea Ballabio, TIGEM, Fondazione Telethon, Italy
Johan Auwerx, CERBM-GIE, Institute Clinique de la Souris, France
Phil Avner, IP, Institute Pasteur, France

Objectives

To better structure and integrate European mouse functional genomics by:

- Benchmarking, mapping and assessment of European activities devoted to mouse functional genomics
- Exploring methods for convergence of policy, communality of research and communication
- Extending and consolidating new coordination activities

Achievements to date

PRIME brought together the members of the EuroMouse community at a meeting in Heathrow in July 2008. Priorities for research were discussed amongst the whole community. The PRIME SAG then met to discuss the priorities identified and agree the structure for a second PRIME position paper. This position paper has since been released.

A white paper has been produced on the future of research in mouse functional genomics following a workshop in Genval, Belgium (March 2007) which brought together high-level scientists in mouse functional genomics with members of the European Commission, NIH and Genome Canada. This meeting enabled debate on research priorities which formed the basis of the white paper.

PRIME was represented EuroBioForum meeting (Helsinki, December 2006). This brought together scientists and policy makers. PRIME also successfully lobbied the ESFRI and Infrastructure unit of the European Commission (Directorate B European Research Area – Research Programmes and Capacity) so that life science projects could also be added to the ESFRI roadmap.

PRIME brought together members of the mouse phenotyping community to form the International Mouse Phenotyping Consortium. PRIME organised the first meeting of the consortium (Rome November 2007) in order to develop a coordinated global approach to mouse phenotyping goals. The consortium subsequently released a position statement and plans to meet again in November 2008.

PRIME has worked to address animal welfare issues. Members of PRIME are on the joint EUMODIC/EUCOMM welfare committee. The PRIME project office has worked with the COST Action B24 to produce a draft chapter for the manual of laboratory animal care. PRIME also presented a talk and posters at the FELASA meeting in Cernobbio, Italy (June 2007).

PRIME has completed the analysis of the responses to the questionnaires on the need for mouse pathologists and has drafted a paper on the results for publication.

PRIME has continued its work with the EuroPhenome working group to standardise exchange of data on phenotyping across Europe. It has also established the InterPhenome working group to explore the need for coordination of efforts globally. The group has published a paper (Hancock et al. 2007: Mouse Phenotype Database Integration Consortium: Integration of Mouse Phenome Data Resources, *Mammalian Genome*, Volume 18, 157-163).

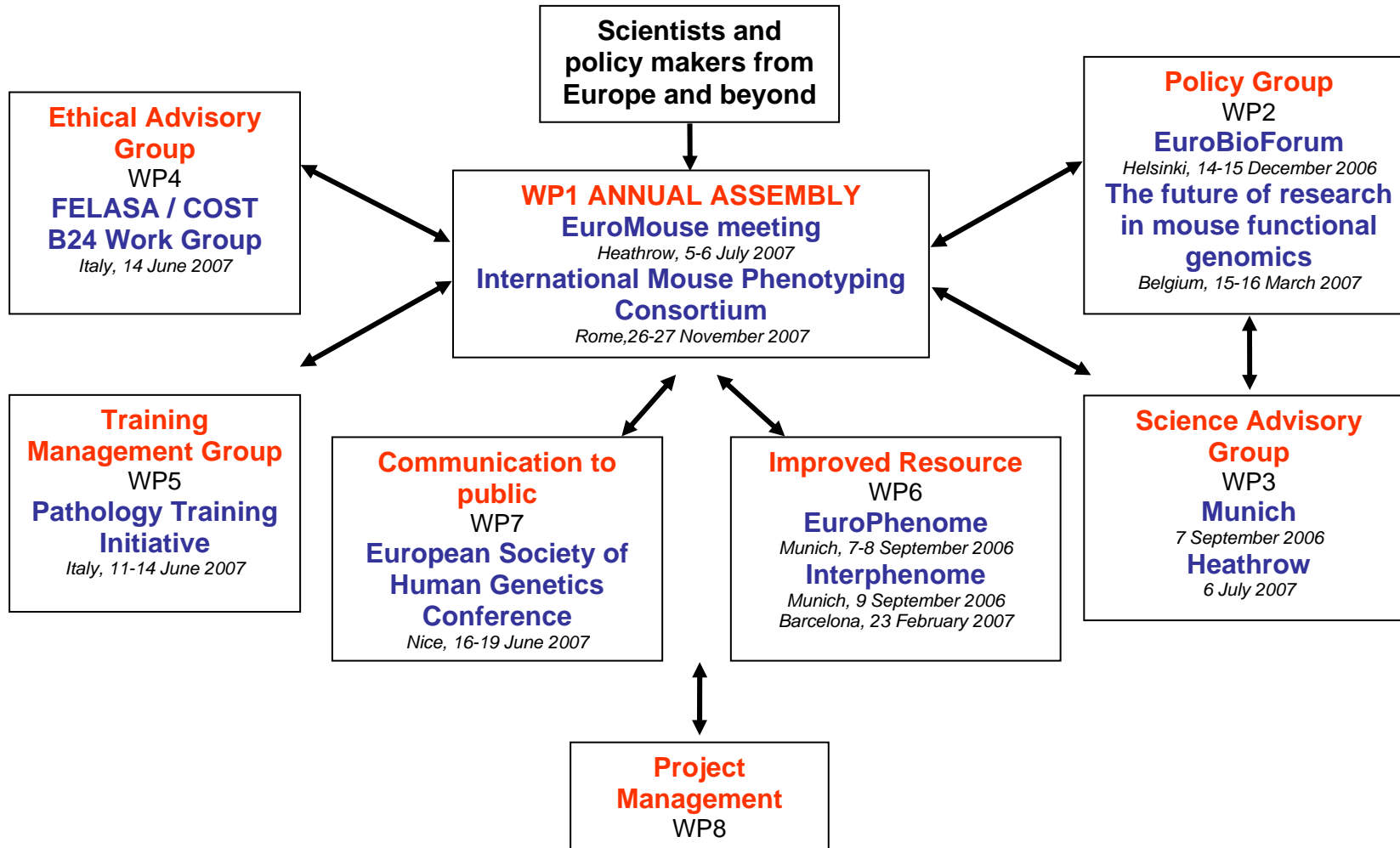
PRIME has produced the brochure (The Mouse as Model of Human Disease) which also contains A5 flyers describing each of the EuroMouse projects. Around 1000 copies have been distributed to date.

PRIME also presented a display stand at the European Society of Human Genetics conference in Nice (June 2007) to promote the use of the mouse as a model of human disease.

Summary

PRIME has continued its role to coordinate mouse functional genomics research across Europe and widened its role to coordinate areas of the research worldwide. Many members of other research communities comment how cohesive the mouse research community is in Europe. PRIME has enabled the coordination and planning of large-scale mouse functional genomics projects across Europe and coordination with similar efforts worldwide. It has also brought together the wider mouse community in Europe who work on collaborative 'disease area' projects.

PRIME meetings and workgroups



Workpackage 1 – Networking meetings

Objectives

- All partners and participants to meet once per year to coordinate mouse functional genomics research across Europe.
- Consider benchmarking reports in year 1 and ways forward for research coordination within PRIME.
- Discuss priorities for the direction of mouse functional genomics research for later consideration in the joint networking meeting of the science advisory group and policy group.
- Allow meetings of the Project Committee.

Progress during the second reporting period

PRIME EuroMouse Meeting, 5th and 6th July, Heathrow, UK

The second EuroMouse conference was held in Heathrow, UK on 5th and 6th July 2007. This conference brought together the mouse community for the first time to discuss mouse functional genomics and its current and future position in Europe. Fifteen mouse functional genomics projects funded by the European Commission were represented. Around 80 scientists attended; from over 51 institutes across 15 European countries, including delegates from industry. A full report of the meeting is given in the report for Deliverables 09 & 13 (Report of networking meetings).

The meeting was followed by a meeting of the SAG. The issues raised during the EuroMouse meeting and open discussions were discussed and prioritised to give a framework for the second PRIME position statement. A draft of the position statement was later put together using this by MRC and circulated to SAG members for comment. The final version can be found in the report for Deliverables 10 & 14 (Report on the activities of the advisory and training groups).

PRIME involvement: The meeting was organised by the PRIME Project Office at MRC Harwell. The meeting was chaired by Steve Brown (coordinator of PRIME). Presentations were given by PRIME partners, Steve Brown (MRC MGU) and Martin Hrabé de Angelis (HMGU) and Graciana Diez-Roux (TIGEM). The meeting was also attended by members of the SAG (Steve Brown, Martin Hrabé de Angelis, Phil Avner, Paul Schofield, Erwin Wagner, Rudi Balling, Wolfgang Wurst, Glauco Tocchini-Valentini, Nadia Rosenthal, Alan Bradley, Mariano Barbacid, Björn Vennström, Ian Jackson and George Kollias.)

International Mouse Phenotyping Consortium – 26-27 November 2007, Rome

There are currently a number of large-scale phenotyping programmes underway across the globe and there are many mouse facilities that have or are improving their phenotyping skills and capacity. The International Mouse Phenotyping Consortium (IMPC) was established by PRIME in order to coordinate these efforts. A similar initiative exists for the large-scale mutagenesis programmes (the International Mouse Mutagenesis Consortium (IMMC)). The two will coordinate their efforts.

The first meeting of the IMPC was held in Rome on 26th and 27th November 2007. It brought together 39 leading scientists from mouse clinics and phenotyping laboratories in 11 countries including USA, Australia, China, Italy, UK, Japan, Germany, Canada, Spain, France and Greece. A full report of the meeting is given in the report for Deliverables 10 & 14. The various institutes were

given the opportunity to give a presentation on their clinics and current phenotyping programmes. There were then round table discussion sessions led by panels of experts on areas of relevance to IMPC such as standardisation of methods, development of technologies, informatics issues and the development of infrastructures and funding.

As a result of these discussions it was agreed that the aims of the IMPC will be to:

- Carry out systematic phenotyping of 20,000 mutant lines representing the bulk of mouse genes within 10 years, employing a broad based disease-oriented primary screen
- Develop genetic and informatics approaches and improved phenotyping technologies to meet this goal
- Deliver a business plan and seek funding to deliver an intermediate goal of broad based phenotyping of 5000 mutant lines by 2013

A white paper was subsequently produced which can be found in the report for deliverable xx. The next steps were also agreed. These are to:

- Establish regular meetings of the IMPC to develop a coordinated global approach to mouse phenotyping goals
- Elaborate a business plan to meet the intermediate goal of carrying out broad based primary phenotyping of 5000 mouse lines by 2013
- Ensure visibility of the IMPC's goals and plans to funding agencies worldwide
- Institute a working group to develop an agreed, disease-orientated and broad based primary screen that will be the core of future phenotyping efforts across the consortium
- Support the work of InterPhenome as it continues to build a cooperative approach to community standards for phenotype datasets and data exchange
- Engage proactively and widely across the functional genomics and biomedical sciences spectrum, ensuring integration of datasets, and adding value to the IMPC phenotyping efforts

The next annual meeting will be held in November 2008 in Canada.

PRIME involvement: The meeting was organised by the PRIME Project Office at MRC Harwell. The meeting was chaired by Steve Brown (coordinator of PRIME). Presentations were given by PRIME partners, Steve Brown (MRC MGU) and Martin Hrabé de Angelis (HMGU) and Karen Steel (Sanger). The meeting was also attended by PRIME members: Wolfgang Wurst (HMGU), Paul Schofield (UNICAM), Fatima Bosch (UAB), Phil Avner (Institute Pasteur), Allan Bradley (Sanger), Yann Herault (CNRS), Ian Jackson (MRC MGU), Nadia Rosenthal (EMBL) and Glauco Tocchini-Valentini (CNR).

Workpackage 2 – Formation of policy group and meetings

Objectives

- Identify key European policy makers in the area of mouse functional genomics research.
- Set up a Policy Group to review the results of the benchmarking exercise and discuss national research priorities in collaboration with the Science Advisory Group.
- Discuss sources and methods of national research funding and possibilities for convergence.
- Identify a wide range of policy makers to become participants in PRIME, attend the annual meeting and contribute to PRIME's aims

Progress during the second reporting period

It is recognised that one weakness of the PRIME project was its inability to establish a formal working policy group. Members of PRIME have however had extensive contact with their national policy makers during the lifetime of PRIME and have been seeking their own methods of national funding to match any funding from the EC and to support projects and infrastructures beyond the life of the EC funding. For example, we have identified a number of policy makers and funders who have signed up as full partners to the InfraFrontier project. Several meetings were planned to bring together scientists and policy makers (EuroBioForum and the so-called Banbury II meeting which was held in Genval, Belgium). PRIME probably relied too heavily on these fora to bring together scientists and policy makers, rather than establishing its own mechanisms and meetings. However good use of these meetings was made to set policies and priorities, such as the white paper from Geneval "Mapping the future of mouse functional genomics: driving the translational engine".

EuroBioForum 2006, 14- 15 December 2006, Helsinki, Finland

PRIME sent a representative (George Kollias) to the EuroBioForum 2006 meeting which was held on 14-15 December in Helsinki, Finland. Around 150 people attended, with approximately 40% from academia, 40% from research funding organisations and 20% from industry. George Kollias presented on the proposed ESFRI roadmap project, InfraFrontier, on the first day. The presentation went very well and received congratulations from several different people during the breaks. Generally it was thought (by ESFRI president and secretary) that InfraFrontier is backed up by ESFRI and that it does not necessarily need to seek funding from other programmes. PRIME feels however that, while ESFRI is providing essential funding for core infrastructures, there is still a requirement to fund research programmes to investigate models generated and held within these facilities and to improve procedures (e.g. sperm freezing techniques, phenotyping protocols). Funding is also required from national sources to support the EC funding and ensure sustainability.

The meeting also set up a brokerage session to allow further discussion. Some general points in the discussion were:

- INFRAFRONTIER could serve as a pot for fragmented funds now allocated to many different research projects.
- Governments should be lobbied
- Self-funding should be planned to offer sustainability
- Industry should be attracted perhaps by privatizing small parts of the project which at large should remain public and non-profit
- The European Association of Pharmaceuticals may also be approached

- ERA-NET + could also be targeted
- A business plan is needed for further steps

Attended by: PRIME SAG member George Kollias, Alexander Fleming.

Workshop "The future of research in mouse functional genomics" - 15-16 March 2007, Genval, Belgium

This workshop was a follow-up meeting from the Banbury meeting and the AAAs meeting which established the future of the international effort and collaboration in mouse functional genetics. The workshop was organised by the European Commission in collaboration with the US National Institutes of Health (NIH) and Genome Canada. It brought together high-level European and international experts involved in mouse functional genomics, as well as policy makers, from the three funding agencies. The overall aim was to set future priorities in mouse functional genomics research for understanding human gene functions in health and diseases.

It brought together the three large-scale mouse mutagenesis projects: the North American Conditional Mouse Mutagenesis Project (NORCOMM), The European Conditional Mouse Mutagenesis Project (EUCOMM), and The Knockout Mouse Project (KOMP), initiated by Genome Canada, the European Commission (under FP6) and the US National Institutes of Health (NIH), respectively.

Attended by: PRIME partner, GSF, Martin Hrabé de Angelis and SAG member Allan Bradley, Sanger, UK.

ESFRI and Infrastructure projects.

PRIME members Glauco Tocchini-Valetini (CNR), Martin Hrabé de Angelis (HMGU) and George Kollias (Flemming) worked hard in 2005 to persuade the ESFRI committee to open their Infrastructure funding and roadmap to the biological sciences. As a result we submitted a proposal for a new pan-European Research Infrastructure, called InfraFrontier, for ESFRI consideration. It was proposed that Infrafrontier would organise two complementary and linked European infrastructure networks for large scale and comprehensive phenotyping (Phenomefrontier) and archiving (Archivefrontier) of mouse models. Infrafrontier would be embedded in a global effort to standardise and optimise the phenotypic characterisation of medically relevant models and provide for state of the art archiving and dissemination of these models.

InfraFrontier was added to the ESFRI Roadmap which was published in October 2006 and funding has subsequently been provided for a preparatory phase. InfraFrontier is unique in mouse functional genomics projects as it has managed to attract the national funding bodies to be full partners in the project.

- Medical Research Council (MRC), UK
- Centre Européen de Recherche en Biologie et en Médecine (GIE-CERBM), France
- Centre National de la Recherche Scientifique (CNRS), France
- Consejo Superior de Investigaciones Científicas (CSIC), Spain
- Hellenic Republic Ministry of Development, Greece
- Helmholtz Association, Germany
- German Ministry for Research and Education, Germany

- Swedish Research Council (SRC), Sweden
- Generalitat de Catalunya, Departament de Salut (GENCAT), Spain
- Parque Científico de Madrid, Spain
- Comunidad de Madrid, Spain

Meetings Attended by: PRIME partner, GSF, Martin Hrabé de Angelis and SAG members George Kollias, Alexander Fleming and Glauco Tochinni-Valentini, CNR.

Workpackage 3 – Formation of science advisory group and meetings

Objectives

- Identify key European researchers in the area of mouse functional genomics research.
- Set up a Science Advisory Group to review the results of the benchmarking exercise and discuss national research priorities in collaboration with the Policy Group.
- Set up communality of research currency by identifying areas for coordination of research and resources.
- Identify a wide range of scientists to become participants in PRIME, attend the annual meeting and contribute to PRIME's aims

Progress during second reporting period

The SAG met twice during this reporting period: Munich, 7th September 2006 and Heathrow, 6th July 2007. It has been in email communication since to produce final versions of the second PRIME position paper and the IMPC white paper.

Munich, 7th September 2006

The meeting updated members on the outcomes following the AAAs meeting (St Louis, 18th February 2006) and subsequent discussions between members of the SAG and the European Commission (Munich, 6th July 2006). The upcoming EuroBioFund 2006 meeting was discussed along with the Expression of Interest (InfrFrontier) that had just been submitted to ESFRI.

The first PRIME position paper was discussed. It was concluded that it was important to have a strategy to be able to manage the 20,000 mutant lines that would be produced under EUCOMM, KOMP and NorCOMM. This should include issues other than storage, such as genotyping.

Heathrow, 6th July 2007

The SAG met on the second day of the EuroMouse meeting in order to discuss issues arising from the meeting and determine priorities for mouse functional genomics research to be included in the second PRIME position statement.

PRIME involvement: The SAG meetings were organised by the Project Office at the MRC and chaired by Steve Brown (MRC) and attended by representatives from all of the PRIME partners and other members of the SAG.

Workpackage 4 – Formation of Ethical Committee and meetings

Objectives

- Form a group of experts to advice on the use of animals in research and on husbandry issues
- Increase awareness of the scientific aspects of proposed new legislation to national policy makers, the Commission and law makers

Progress during second reporting period

Members of the PRIME SAG have been actively taking forward areas of mouse welfare. This has consisted of three lines of approach: attendance at meetings and working groups on animal welfare, contribution to the new EC Directive on the use of animals in research and the establishment of committees to oversee animal welfare in specific collaborative projects.

Meetings and working groups on animal welfare

COST Action B24: laboratory animal science and welfare

The main objective of COST Action B24 is to increase knowledge necessary for both ethically sustainable and scientifically valid use of laboratory animals in research (<http://www.cost.esf.org/index.php?id=382>). As part of its work, the group is producing a manual called “The COST Manual of Laboratory Animal Care and Use: Refinement, Reduction and Research”. The manual will be a resource for scientists, care staff and others who wish to benchmark or improve practices relating to the scientific use of animals.

Working Group 3 is concerned with genetically modified (GM) animals and other new models. PRIME is represented on this group by Hilary Gates (MRC). The group met several times during the year: Rikke Thon visited MRC Harwell on 11 December 2006 to tour the Mary Lyon Centre (animal facility) and observe the primary phenotyping. This was combined with a teleconference for the workgroup. They also met at the FELASA conference in Italy (Cernobbio, 14th June 2007). As a result, the group has produced a draft chapter on phenotyping for the manual. This is included in the report for deliverables 10 & 14.

FELASA/ICLAS Joint Meeting, Cernobbio, 11th-14th June 2007

Steve Brown (MRC) was invited by FELASA to present a talk on animal models of human disease. In addition PRIME presented a poster on the aims of the project and its role in animal welfare.

Joint EUCOMM/EUMODIC Welfare Committee

Members of PRIME are represented on the Joint EUCOMM/EUMODIC Welfare Committee which is chaired by Steve Brown (MRC).

PRIME participation: the PRIME Project Office is a member of the COST B24 Action. The FELASA/ICLAS meeting was attended by PRIME partners Steve Brown (MRC) and the PRIME Project Office (Hilary Gates and Mandy Studley).

Workpackage 5 – Training management group

Objectives

- Identify scientists expert in diverse aspects of mouse functional genomics to join the training management group
- Identify the need for training in mouse functional genomics and possible sources of funding.
- Identify institutes able to offer training and design courses. Seek sources of funding for these courses.

Progress during second reporting period

The Pathology Training Initiative was formed under PRIME to address the perceived shortfall in the numbers of trained mouse pathologists in Europe. Two surveys were designed by PRIME and distributed to relevant pathologists and researchers within Europe to determine whether this perceived shortage is real and, if so, what are the reasons and what are the optimal qualifications/training routes for mouse pathologists. The surveys were:

Principle Investigators (PIs) Questionnaire - This was to be completed by lead researchers working in the field of mouse functional genomics across Europe. The aim was to determine: how many mouse pathologists are needed, how the pathology workload is perceived by researchers and to find the training history and qualifications of the people who are currently performing their pathology.

Pathologists Questionnaire - This questionnaire was aimed at pathologists to find out: how many blocks or tissues they handle per year, how many mouse lines they investigate and questions on optimal training/qualifications for the job and career satisfaction.

The results from the two questionnaires have been released in a report on the PRIME website (www.prime-eu.org/pti.html) and are included in the report for deliverables 10 &14. Members of PRIME have also drafted a paper for submission to a journal which summarises the findings of the surveys. The latest draft of this paper is included in the final report for PRIME.

PRIME participation: Members of MRC, GSF, are part of the Training Management Group as well as SAG members Karolinska Institute and CNR. Initial meetings were chaired by PRIME SAG member (Paul Schofield). The analysis of the questionnaires was performed by the PRIME Project Office.

Workpackage 6 – Expert Group on Improved Resources

Objectives

- Establish an expert group of bioinformaticians will be formed to meet in the first year of the project.
- Establish a new consortium or consortia to develop a coherent strategy for the maintenance and sustainability of essential European database resources for functional genomics research.

Progress during second reporting period

EuroPhenome - 7th – 8th September 2006 - Munich

The EuroPhenome group met to discuss standardisation of mouse phenotyping databases across Europe. It was attended by representatives from the four mouse clinics (HMGU, Sanger, ICS and MRC MGU), their bioinformaticians and representatives from the InterPhenome group. Further details and the agenda are given in the report for deliverables 09 & 13.

InterPhenome – 9th September 2006 – Munich

This meeting discussed data exchange, ontologies and SOP formats and XML. The meeting followed on from EuroPhenome meeting and so was valuable for feedback of the new phenotyping initiative to the international community. Further details and the agenda are given in the report for deliverables 09 & 13.

The group subsequently published a paper on the integration of mouse phenotype data resources as a result of this meeting. Reference: J. Hancock *et al.*: Mouse Phenotype Database Integration Consortium: Integration of Mouse Phenome Data Resources, Mammalian Genome, Volume 18, 157-163 (2007).

InterPhenome - 23rd February 2007 – Barcelona

Following on from September's meeting, a small number of people including representatives from RIKEN, EuroPhenome, The Jackson Laboratory and MGI met to discuss phenotyping procedure (SOP) formats and what would be required in designing an XML for the procedures that can be used by everyone. The full report of this meeting is given in the report for deliverables 09 & 13.

Contribution of partners: The PRIME partners (MRC, GSF, ICS and TIGEM) are represented on the resources expert group and the EuroPhenome and International Phenome working groups; along with representatives from the SAG. The EuroPhenome database has been developed by the PRIME project office at the MRC.

Workpackage 7 – Communication to the Public

Objectives

- Increase the awareness and understanding of the public to mouse functional genomics research
- Raise the profile of mouse functional genomics research in politicians

Progress during the reporting period

Mouse Brochure

The full mouse brochure, titled “The Mouse as a Model of Human Disease” has been completed and is presented in a folder accompanied by A5 fliers describing the EuroMouse projects.

A copy submitted at the same time as this report. Members of the PRIME project can request copies of the brochure for themselves or distribution. To date around 1000 copies have been distributed.

European Society for Human Genetics annual meeting, Nice 16-19 June 2007

The PRIME SAG decided that communication should focus on human genetics and the relevance of the mouse as a model of human disease. It was therefore decided to attend the European Society for Human Genetics annual meeting in Nice (16-19 June 2007). The PRIME project office designed a set of display stands to highlight the relevance of the mouse as a model of human disease and to outline the new large-scale mouse functional genomics projects: EUCOMM, EUMODIC and EMMA. The PRIME mouse brochure which includes information on the relevance as a mouse as a model for human disease and also A5 flyers for all of the EuroMouse project was on display. Members of the PRIME project office manned the stand and handed out the brochures giving quick talk on the EC-funded projects to each delegate. Around 250 brochures were distributed.

The stand was consistently busy with delegates showing a great interest in the brochure and the EuroMouse projects. They were very interested in the large-scale projects (EUCOMM, EUMODIC and EMMA) and said that they would consider using a mouse model to investigate their area of speciality. Many were very interested in the concept of service phenotyping, i.e. researchers submitting their own mouse lines for detailed primary phenotyping and the concept of being able to request an ES cell to be turned into a mouse and then phenotyped.

PRIME participation: The above actions were coordinated by the PRIME Project Office. The ESHG meeting was attended by PRIME SAG Steve Brown and Andrea Ballabio. All PRIME members have contributed to the drafting of the brochure.

Table 1: Deliverables List

Del. no.	Deliverable name (from deliverables list, Annex I, Section 7.5)	WP deliverable name (from workpackage descriptions Annex I, section 7.6)	WP no.	Date due	Actual/For ecast delivery date	Estimated indicative person- months *)	Used indicative person- months *)	Lead contractor
D1	WP2, 3, 4, 5, & 6 Reports of members selected for advisory groups	Identify key players to form the Policy Group	2	Mo 10	Mo 10	1	1	MRC MGU
D1		Form Scientific Advisory Group	3	Mo 10	Mo 01	0.3	0.3	MRC MGU
D1		Form Ethical Advisory Committee	4	Mo 10	Mo 01	1	0	CERBM & MRC MGU
D1		Form Training Management Group	5	Mo 10	Mo 06	0.5	0.5	GSF & MRC MGU
D1		Establish expert group on improved resources	6	Mo 10	Mo 06	0.5	0.5	TIGEM & MRC MGU
D2	WP8 Submit benchmarking reports	See D8	8	Mo 12	Mo 18*	See D8	See D8	
D3	WP1 Report of networking meetings held - aims and main conclusions	Put reports of networking meetings held on the PRIME website – summarising the aims and conclusions and the meetings	1	Mo 12	Mo 12	14	10.4	MRC MGU
D4	WP2, 3, 4, & 5 Report on activities of the advisory & training groups	Report on needs and actions identified by the Policy Group	2	Mo 12	Mo 18*	1.75	0.5	MRC MGU
D4		Report on needs and actions identified by the Science Advisory Group	3	Mo 12	Mo 18*	2.45	2.45	MRC MGU
D4		Report on key recommendations and actions of the Ethical Advisory Committee	4	Mo 12	Mo 18*	3.9	1.5	CERBM & MRC MGU

Del. no.	Deliverable name (from deliverables list, Annex I, Section 7.5)	WP deliverable name (from workpackage descriptions Annex I, section 7.6)	WP no.	Date due	Actual/For ecast delivery date	Estimated indicative person- months *)	Used indicative person- months *)	Lead contractor
D4		Report on training required, institutes that could offer the training and possible sources of funding	5	Mo 12	Mo 18*	4.1	2	GSF & MRC MGU
D5	WP6 Report from Resources Expert Group - major advances and way forward	Formation of a new consortium to develop a coherent strategy for the maintenance and sustainability of essential European database resources for functional genomics research	6	Mo 12	Mo 06	2.75	1.5	TIGEM & MRC MGU
D5		Report on activities of the resources expert group and the new consortium	6	Mo 12	Mo 18*	0.5	0.5	TIGEM & MRC MGU
D6	WP7 Produce brochure on mouse functional genomics	Production of a brochure outlining the importance of mouse functional genomics research	7	Mo 5	Mo 16	4.4	2.2	CERBM & MRC MGU
D7	WP7 Report on activities in public communication	Produce reports on the activities to increase public awareness of mouse functional genomics research	7	Mo 12	Mo 18*	0.5	0.5	CERBM & MRC MGU
D8	WP8 Submit reports from other WP with management overview	Report on networking and committee meetings	8	Mo 12	Mo 18*	12	11.5	MRC MGU
D9	WP1 Report of networking meetings held - aims and main conclusions	Put reports of networking meetings held on the PRIME website – summarising the aims and conclusions and the meetings	1	Mo 24	Mo 24	5	4	MRC MGU
D10	WP2, 3, 4, & 5 Report on activities of the advisory & training groups	Report on needs and actions identified by the Policy Group	2	Mo 24	Mo 36**	1	0.25	MRC MGU

Del. no.	Deliverable name (from deliverables list, Annex I, Section 7.5)	WP deliverable name (from workpackage descriptions Annex I, section 7.6)	WP no.	Date due	Actual/For ecast delivery date	Estimated indicative person- months *)	Used indicative person- months *)	Lead contractor
D10		Report on needs and actions identified by the Science Advisory Group	3	Mo 24	Mo 36**	1	1	MRC MGU
D10		Report on key recommendations and actions of the Ethical Advisory Committee	4	Mo 24	Mo 36**	2	0.75	CERBM & MRC MGU
D10		Report on training required, institutes that could offer the training and possible sources of funding	5	Mo 24	Mo 36**	1.5	2	GSF & MRC MGU
D11	WP7 Report on activities in public communication	Produce reports on the activities to increase public awareness of mouse functional genomics research	7	Mo 24	Mo 36**			CERBM & MRC MGU
D12	WP8 Submit reports from other WP with management overview	Report on networking and committee meetings	8	Mo 24	Mo 36**	1.6	1.6	MRC MGU
D13	WP1 Report of networking meetings held - aims and main conclusions	Put reports of networking meetings held on the PRIME website – summarising the aims and conclusions and the meetings	1	Mo 36	Mo 36	4	2	MRC MGU
D14	WP2, 3, 4, & 5 Report on activities of the advisory & training groups	Report on needs and actions identified by the Policy Group	2	Mo 36	Mo 36	9	7	MRC MGU
D14		Report on needs and actions identified by the Science Advisory Group	3	Mo 36	Mo 36	1.75	0.25	MRC MGU
D14		Report on key recommendations and actions of the Ethical Advisory Committee	4	Mo 36	Mo 36	1.75	1.9	CERBM & MRC MGU

Del. no.	Deliverable name (from deliverables list, Annex I, Section 7.5)	WP deliverable name (from workpackage descriptions Annex I, section 7.6)	WP no.	Date due	Actual/For ecast delivery date	Estimated indicative person- months *)	Used indicative person- months *)	Lead contractor
D14		Report on training required, institutes that could offer the training and possible sources of funding	5	Mo 36	Mo 36	2.85	0.5	GSF & MRC MGU
D15	WP7 Report on public information	Produce reports on the activities to increase public awareness of mouse functional genomics research	7	Mo 36	Mo 36	3.2	3	CERBM & MRC MGU
D16	WP8 Submit reports from other WP with management overview	Report on networking and committee meetings	8	Mo 36	Mo 36	3.2	3	MRC MGU
						8	3	

*) if available

*A number of the reports have been delayed from month 12 to month 18. This does not reflect a delay in providing the reports per se, but rather a mismatch between the deliverables were still due at month 12 even though the period for the first activity report had been extended to 18 months.

** Likewise a number of the reports have been delayed from month 24 to month 36, again because the deliverables were not altered when the reporting period was changed to 18 months.

Table 2: Milestones List

Milestone no.	Milestone name	WP no.	Date due	Actual/Forecast delivery date	Lead contractor
1.1	Project Committee assess progress and future direction of PRIME and pilot initiatives	1	Mo 12	Mo 01, Mo 07, Mo 15, Mo 16	MRC MGU
1.2	Joint meeting of Science Advisory Group and Policy Group to determine ways to improve coordination of mouse functional genomics research across Europe	1	Mo 12	Mo 16	MRC MGU
2.1	Assess membership of the Policy Group and recruit new members if appropriate	2	Mo 12	Mo 07	MRC MGU
2.2	Assess effectiveness of information sharing	2	Mo 12	Mo 12	MRC MGU
3.1	Assess the progress of the pilot initiatives and alter or add to them as required	3	Mo 12	*Not applicable.	MRC MGU
4.1	Meet with joint meeting of Science Advisory and Policy Groups to discuss ethical issues and priorities – adapt work for the year if necessary	4	Mo 12	Mo 16	CERBM & MRC MGU
5.1	Following the annual meeting and joint meeting of the Science Advisory and Policy Groups, alter or fine-tune training requirements if necessary.	5	Mo 12	Mo 08	GSF 7 MRC MGU
6.1	Establish an expert group with representatives running existing resources and resource centres	6	Mo 12	Mo 06	TIGEM & MRC MGU
7.1	Production of a brochure on mouse functional genomics	7	Mo 5	Mo 16	CERBM & MRC MGU

Milestone no.	Milestone name	WP no.	Date due	Actual/Forecast delivery date	Lead contractor
1.3	Project Committee assess progress and future direction of PRIME and pilot initiatives	1	Mo 24	Mo 19	MRC MGU
1.4	Joint meeting of Science Advisory Group and Policy Group to determine ways to improve coordination of mouse functional genomics research across Europe	1	Mo 24	Mo 19	MRC MGU
2.3	Assess membership of the Policy Group and recruit new members if appropriate	2	Mo 24	Mo 22	MRC MGU
2.4	Assess effectiveness of information sharing	2	Mo 24	Mo 22	MRC MGU
3.2	Assess the progress of the pilot initiatives and alter or add to them as required	3	Mo 24	*Not applicable.	MRC MGU
4.2	Meet with joint meeting of Science Advisory and Policy Groups to discuss ethical issues and priorities – adapt work for the year if necessary	4	Mo 24	Mo 25	CERBM & MRC MGU
5.2	Following the annual meeting and joint meeting of the Science Advisory and Policy Groups, alter or fine-tune training requirements if necessary.	5	Mo 24	29	GSF 7 MRC MGU
8.1	Report on networking and committee meetings	8	Mo 24	36	

Milestone no.	Milestone name	WP no.	Date due	Actual/Forecast delivery date	Lead contractor
1.5	Joint meeting of Science Advisory Group and Policy Group to determine ways to improve coordination of mouse functional genomics research across Europe	1	Mo 36	Mo 25	MRC MGU
2.5	Assess membership of the Policy Group and recruit new members if appropriate	2	Mo 36	Mo 25	MRC MGU
2.6	Assess effectiveness of information sharing	2	Mo 36	Mo 39	MRC MGU
3.3	Assess the progress of the pilot initiatives and alter or add to them as required	3	Mo 36	*Not applicable.	MRC MGU
4.3	Meet with joint meeting of Science Advisory and Policy Groups to discuss ethical issues and priorities – adapt work for the year if necessary	4	Mo 36	Mo 28	CERBM & MRC MGU
5.3	Following the annual meeting and joint meeting of the Science Advisory and Policy Groups, alter or fine-tune training requirements if necessary.	5	Mo 36	Mo 32	GSF 7 MRC MGU
8.2	Report on networking and committee meetings	8	Mo 36	Mo 36	MR MGU

* Milestone 3.1 should have been removed when the pilot initiatives were removed at contract negotiation at the referees' recommendation

Section 3 – Consortium management

The Project Secretariat at MRC Harwell has been responsible for the day-to-day management of the project. It has organised the networking and committee meetings, sorting venues, agreeing agendas and helping to produce and circulate the meeting reports. It has also coordinated the analysis of the training questionnaire and contributed to the drafting of the paper on the results from the questionnaires. It has also maintained the PRIME website and set up a EuroMouse microsite with information on each of the EuroMouse projects. The secretariat has been an active member of the team producing the chapter for “The COST Manual of Laboratory Animal Care and Use: Refinement, Reduction and Research”. The Secretariat has also coordinated the production of the PRIME second position paper and the International Mouse Phenotyping Consortium (IMPC) white paper. It has also worked closely with the Casimir project to ensure coordination between the two projects.

The PRIME Secretariat has produced the reports for the deliverables met during this reporting period. The reports for a number of the deliverables have been combined into joint reports. The reporting period for PRIME was changed from 12 months to 18 months during the negotiation of the contract. We forgot to

The project has progressed well during the year, completing most of its original aims and adding more, such as the formation of the International Mouse Phenotyping Consortium (IMPC).

Table 3: Workpackages - Plan and Status Barchart

	0-3	3-6	6-9	9-12	12-15	15-18	18-21	21-24	24-27	27-30	30-33	33-36
<i>Phase I – Benchmarking mapping & assessment</i>												
<i>Phase II – Convergence, communality and communication</i>												
<i>Phase III – Consolidation of coordination</i>												
WP1 Networking – annual assembly of all participants												
Manage networking meetings for pilot initiatives												
Annual meeting of Project Committee												
Annual joint meeting of Science Advisory and Policy Group												
WP2 Form Policy Group												
Policy Group meetings												
Manage activities of Policy Group												
WP3 Form Science Advisory Group												
Science Advisory Group meetings												
Manage activities of Science Advisory Group												
WP4 Form Ethical Committee												
Ethical Committee meetings												
Manage activities of Ethical Committee												
WP5 Form Training Advisory Group												
Training Advisory Group meetings												
Manage activities of Training Advisory Group												
WP6 Form Resource Expert Group												
Report on activities of Resource Expert Group												
WP7 Communication to Public												
WP8 Project Management												
Project reports												