

UK BIOBANK CONSULTATION WITH INDUSTRY WORKSHOP

**HELD ON 4 APRIL 2003 AT ABPI HEAD OFFICE, 12 WHITEHALL,
LONDON, UK, SW1A 2DY**

Chair's Opening Remarks by Dr Richard Tiner, ABPI Medical Director

Richard Tiner welcomed everyone and congratulated Dr John Newton as the newly appointed CEO of the UK Biobank.

Introduction by Dr John Newton, UK Biobank CEO

Dr Newton welcomed everyone to the meeting. He noted that Biobank is moving into a new phase of the project, and acknowledged that there is substantial work yet to be undertaken to develop the scientific protocol. In so doing, it is important to maintain dialogue with industry and among other stakeholders.

Biobank will build on experience of previous cohort studies but differing in its position as a large population study to be undertaken in the post-genomics era. The UK Biobank has the added advantage of having the capacity to capitalise on increased IT infrastructure and know-how and increased government spending on NHS IT and informatics.

Dr Newton hopes the Biobank will eventually make significant contributions to the following fields:

- public health
- genetics, proteomics and metabonomics
- clinical science

In developing this public resource, the UK Biobank recognises the special role of industry in certain areas of biomedical science. Biobank will welcome appropriate industrial participation in the project provided any such involvement is consistent with the public sector focus and public interest aims of the project.

Presentations

Presentations were made in regard to key aspects of the Biobank. At the end of each session, participants were invited to ask questions pertaining to the areas presented. The following presentations were made:

- Dr Alan Doyle from the Wellcome Trust presented the major features of the Biobank;
- Dr Frances Rawle from the MRC presented on the management structure and ethics and governance for the UK Biobank.

- Dr Alison Campbell of the MRC presented on the current view of IPR and access arrangements for the Biobank;

KEY ISSUES AND QUESTIONS ADDRESSED

The workshop took the form of a question and answer session, as summarised below.

UK BIOBANK PROTOCOL:

Is the UK Biobank considering the development of diagnostic criteria?

Different approaches will be required for different studies depending on the case definitions specified by individual protocols. In some cases further data will be needed to verify case definitions following an initial "screening" assessment based on the routine data. The Biobank will undertake quality control and assurance measures and will advise on the strengths and weaknesses of the data. Some active validation may also be possible but will depend on the resources available.

Will participants be able to withdraw their samples?

The UK Biobank is currently seeking advice on this issue from their Interim Advisory Group (IAG) who are advising the funders on the Ethics and Governance Framework (EGF). To date the IAG have agreed that there should be a right to withdraw. There is still a question as to what would happen to samples that have already been manipulated and used in data collections. The option(s) will be outlined in first public draft of the EGF which will be published later in the year for comment. The aim is to adopt an efficient approach that would also be considered acceptable and appropriate by participants.

Potential participants will have explained to them, before they consent to participate in the project, the special long-term nature of the study and how it is proposed the samples will be used. If, after this explanation, people have significant concerns about the nature of the study, and the potential use of their samples, then it will be prudent to suggest that they do not take part. Although some withdrawals must be expected, it is important that the UK Biobank maintains a high retention rate, so as to not undermine the value of the data collected. The best way to achieve this is at recruitment.

DNA, serum and plasma are finite resources, how will the UK Biobank prioritise access to these resources?

It is currently envisaged that calls for access will be made and all applications will be peer-reviewed. It is anticipated that it will be the responsibility of the Science Committee (SC) to develop a policy for the prioritisation of access although the committee itself will not necessarily undertake the peer review. Access to the data and samples will be based on the scientific merit of the proposals and congruence with the stated aims of the UK Biobank.

Shall there be further collecting of information relating to lifestyle and are there any current thoughts on sequencing, by whom and with what techniques?

It is assumed that some lifestyle information will be elicited from NHS records and that further information will be requested as and when required by specific studies. The aim of further data collection is to ensure that the data collected is fit for the purpose. The current draft protocol suggests that lifestyle information will be re-ascertained at 5 years along with self-reported health information.

In regard to genetic analysis of individuals and the platform used for analyses, a definitive approach has not yet been developed and comparative studies will need to be undertaken to develop this further. The contracting for this work will be managed by the coordinating centre (a charitable company). There is an assumption that techniques for genetic analysis are likely to improve and costs come down over the lifetime of the project. A careful review of options for storage will be made before final decisions are made so as to maximise the value of the biological resource while also minimising costs. It is recognised that industry has considerable expertise and experience of handling large numbers of biological samples and the advice of relevant academic and commercial groups will be sought in the near future. It seems likely that genetic analysis of the full study population for a modest number of genetic variations [polymorphisms] could be feasible soon after recruitment.

How important is family history and blood analysis to the project?

The UK Biobank will collect data in regard to family history, however the main objective of the study is to be a population study, not a family study. Further consideration will be given to maximising the value of the data for family studies and discussions have taken place with human genetics experts (e.g. Professor John Edwards and the European Society for Human Genetics). There are special confidentiality issues if data are held on family members as well as participants themselves.

Will there be feedback to participants?

A clear distinction needs to be made between personal data collected from individual participants and data from the population of participants. The IAG have considered the issue of feedback of data to the participants, and its current position is that there should be limited feedback of individual data at recruitment and extensive feedback on overall progress and research outputs. The nature of any feedback arrangements will be fully explained to participants at recruitment. The emphasis of the project is on research for the public good rather than the interests of individual participants.

How will the UK Biobank ensure that broad ethics provisions are equally implemented across pharmacogenetics?

There are a number of international directives which are currently being developed in this area. The UK Biobank will wish to build on the international framework which is already developing. Dr Newton does not believe that tight ethical frameworks will be an obstacle to the progress of such studies, rather the requirement for a tough ethics framework ensures the robustness of the study, protects participants' interests and engenders public trust in the process.

Will there be the opportunity to collect detailed prescribing information?

There will be a wealth of prescribing information in the UK Biobank database because much of this information is contained in NHS primary care records. However, such information can only be used for biomedical research in the public interest (i.e. not for marketing or other commercial purposes).

MANAGEMENT AND ETHICS AND GOVERNANCE OF BIOBANK:

How can industry input into the Biobank to help improve the system?

The coordinating centre will play a key role in communicating the development of the Biobank to the community. The Science Committee will develop strategies to use data, which shall include workshops and user consultations.

Industry representatives noted that there may be pre-competitive work which should be encouraged to be undertaken which would add value to the resource provided by the UK Biobank.

Since the project will be accountable to the public, will the ethics framework be revisited at later stages of the project?

The draft Ethics and Governance Framework will be published for public comment and will be revised by the funders following the comment period. The piloting phase will review the initial questions to be asked of participants, and the EGF will take into account any issues arising. The EGF will be an evolving document that will take into account any developments that may impact on the project during its lifetime.

Are there any benefits to participants?

Any findings that arise from the project that may impact on health should have the potential to benefit the entire population, not just those who take part in the project. There may be very little direct benefit to participants in being involved in the project, however correspondingly little effort will be required of participants in the study. It is likely that there will be some limited feedback on some health parameters at the time of an initial assessment. The UK Biobank is a long term endeavour and the altruistic contribution of participants will benefit future generations. Participants will not be receiving a health check and it will be made clear that the aim of the project is to allow research that will impact on health in the future. It is hoped that the same level of community enthusiasm can be developed around the Biobank as was developed around the Children of the 90s Study (Avon Longitudinal Study of Parents and Children; ALSPAC). The contribution of participants to the project should be seen as a gift to biomedical science in the public interest.

Will the population be representative of the UK?

Because participation is voluntary, the study population will include more people from certain groups than others. Every effort will be made to remove barriers to the inclusion of ethnic minority groups in the study. As there are numerous ethnic minority groups in the UK not all are represented in the UK population in sufficient numbers to allow statistically meaningful comparisons. It may be that the the results are generalisable rather than strictly representative.

Does the Biobank have any indication of the potential level of recruitment?

It is difficult to predict the level of recruitment; however, the response to date has indicated that a majority of the people approached would be willing to take part. The pilot study will be a good indicator of the level of recruitment to be expected.

Since the study is essentially cohort based, how will the Biobank obviate the need to provide feedback on diagnostic data if participants have an interest in the tool developed?

As currently envisaged, the UK Biobank will work on the premise that research-based data will not be fed back to the individual participants, unless there are exceptional circumstances. Results from the UK Biobank may not have clinical significance for individuals for some time and are only likely to be interpretable at a population level. Participants will be advised at the outset that feedback will be limited to communications about the project as a whole.

Would information be provided to the participant if it relates to a situation that is life threatening?

The population being studied is not a high risk one. Participants will tend to be healthy volunteers at the start of the study. This matter is being discussed by the IAG, which is currently tending towards the premise that no feedback will be given on the basis that the study is research-based. The overriding principle is that the project should not disclose information to participants that they were not expecting to receive.

Is there a legal requirement to provide participants with information from the study if so demanded?

The Data Protection Act (1998) does not require information collected on participants to be fed back to them once informed consent for such study has been obtained at the outset, provided those data are only used for research and the care of the individual is not affected. It is important to note the project is organic in nature and the Ethics and Governance Framework can always be amended to reflect the critical opinion at the time. The process of development of the EGF shall be interactive including community consultations, workshops and website questionnaires.

IPR AND ACCESS:

It has been suggested that NHS shall have preferred access rights to diagnostic tools, how is this justified?

This suggestion has been made on the basis that the NHS should receive direct benefit from its contribution to the UK Biobank. However, further dialogue will be needed to investigate this issue further. There are a

number of competition law issues which will need to be considered when exploring this issue.

Could this position be seen as a disincentive for biotechs?

The UK Biobank is aware of the need to balance the needs of the academic community and the NHS with the needs of industry.

How will the quality of data emanating from Regional Collaborating Centres be controlled?

The coordinating centre will set the standards required of all collaborations and all data and studies from outside sources will have to meet these criteria.

How will access to data be regulated? Will there be open access to browse information on the database?

There will not be open access to the database for browsing information. Any access to data will need to be on the basis of a certified study. All requests for information will be subject to scientific and ethical approval.

Will there be any exception for studies to be undertaken by the regional collaborating centres?

Studies to be undertaken by the regional collaborating centres will also need to be approved by the Science Committee and an MREC.

GENERAL QUESTIONS:

What is the role of pharmacogenetics? It would be a shame if this aspect cannot be pursued within the study.

The most important step for pharmacogenetics is genetic analysis to discover areas of serious adverse reactions. This will be an important area of study for the UK Biobank. As the UK Biobank is population-based and prospective, it will be in a special position to undertake such studies. The UK Biobank may also be able to show how prevalent common genetic variances are in the general public.

Will Biobank provide the opportunity to collect other samples of human tissue and will the resources be available for this to occur?

The UK Biobank would like to operate on the premise that the initial consent will allow the ability for collection of further data and samples during the course of the project, with further consent

How will the Science Committee respond to proposals which are outside the study areas mentioned by the Biobank?

All submissions for study will be treated on their scientific merit. All proposals will be peer reviewed. It is not the intention that the protocol (currently in draft form) is exhaustive, The document did, however, attempt to take into account the areas most likely to affect the age group of the participants being studied. Any proposals for other areas of relevant study are welcomed.

How available will the database be for studies on environmental issues?

It is acknowledged that the UK Biobank will potentially be a useful resource for such studies, including as a general public health resource. Current consultation indicates a lack of useful alternative database sets which contain such data and therefore the Biobank may assist in filling this gap. Numerous environmental databanks have indicated an interest in collaborating with the Biobank in this area.

Will users be able to access archives from the database and will data be able to be followed up?

There will be a role in surveillance of the database and disease registers. Interim sets of data and studies will be archived for future reference. In regard to the treatment of data, it is hoped that data can be updated and frozen for later analysis and update.

NEXT STEPS FOR UK BIOBANK

- Communications will develop quickly now that the tendering process for the coordinating and regional collaborating centres has been completed and the basic framework has been developed further.
- It is important for the Biobank to know that it has the support of industry and is aware of what benefits industry hopes to gain from the Biobank.
- Industry spokespeople indicated that there was great value in the data to be supplied by the UK Biobank and that industry should encourage the development of pre-competitive projects which will assist the development of Biobank and add value to the information which will be collected and stored by Biobank.

- The UK Biobank recognises the importance of maintaining a dialogue with industry and including them in the consultation process to develop the framework for the Biobank.
- The next crucial steps for the UK Biobank is the development of the protocol and the recruitment of key staff and build up of the IT infrastructure.
- The regional collaborating centres are very keen to commence work as soon as possible and it is hoped that formal meetings will soon be held to review ideas of projects and scenarios.