EMBL-EBI Press Release

European Molecular Biology Laboratory
European Bioinformatics Institute

For immediate release

European bioinformatics grid receives €8 million

Hinxton, February 1, 2005 – The Commission of the European Union has awarded €8.3 million to a pan-European task force who will improve access to biological information for scientists throughout and beyond Europe. The EMBRACE Network of Excellence, which encompasses computational biologists from 17 institutes in 11 countries and is coordinated by the European Bioinformatics Institute's Associate Director Graham Cameron, will use these funds to simplify and standardize the way in which biological information is served to the researchers who use it.

Scientists now depend on databases to access the avalanche of information that they produce. For example, geneticists are trawling through the human genome for genes that are involved in diseases. Data providers put a huge amount of effort into providing data resources that are comprehensive, user-friendly and cross-linked to other databases; but different data providers use different methods. This means that a researcher might have to search ten or more different databases to find all the information pertaining to a particular set of candidate genes. If they're doing these kinds of searches on a regular basis, they'll want their own local copies of the databases. Maintaining up-to-date and fully functioning versions of all those databases and the tools to search them is a huge and complex task.

Vincent Breton (CNRS, Clermont-Ferrand, France), a member of EMBRACE's Executive Board, describes the problem as analogous to the use of electrical items before the electrical grid. "You didn't know whether your gadget's plug would fit the socket," he says.

EMBRACE will turn the relationship between user and provider on its head by enabling data providers to provide well-defined interfaces to their databases that will conform to the same standards, essentially creating a 'data grid' – the EMBRACEgrid – that will allow users to make the most of dispersed data resources.

To ensure that EMBRACE's efforts are immediately useful to biologists, Europe's most heavily used biomolecular databases and tools will be integrated into the EMBRACEgrid. A 'technology watch' will ensure that the EMBRACEgrid doesn't become locked into technology that is quickly superseded. The grid will also receive regular workouts using test problems, such as identifying candidate genes for a disease or linking viral mutations to their ability to cause disease. Disseminating information about the EMBRACEgrid will be vital to ensure that scientists throughout Europe not only use the new technology, but also help to expand the capabilities of the EMBRACEgrid by 'grid enabling' their own data resources.

"Many elegant and powerful computational biology tools are under-utilized," says EMBRACE Executive Board member Erik Bongcam-Rudloff (University of Uppsala, Sweden). "EMBRACE will allow us to unlock their potential by standardizing access to them." ●

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18 EMBL Member States: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom

About EMBL:
The European Molecular Biology Laboratory is a basic research institute funded by public research monies from 18 member states (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom). Research at EMBL is conducted by approximately 80 independent groups covering the spectrum of molecular biology. The Laboratory has five units: the main Laboratory in Heidelberg, and Outstations in Hinxton (the European Bioinformatics Institute), Grenoble, Hamburg, and Monterotondo near Rome. The cornerstones of EMBL's mission are: to perform basic research in molecular biology; to train scientists, students and visitors at all levels; to offer vital services to scientists in the member states; and to develop new instruments and methods in the life sciences. EMBL's international PhD Programme has a student body of about 170. The Laboratory also sponsors an active Science and Society programme. Visitors from the press and public are welcome.

About the EBI:
The European Bioinformatics Institute (EBI) is part of the European Molecular Biology Laboratory (EMBL) and is located on the Wellcome Trust Genome Campus in Hinxton near Cambridge (UK). The EBI grew out of EMBL's pioneering work in providing public biological databases to the research community. It hosts some of the world's most important collections of biological data, including DNA sequences (EMBL-Bank), protein sequences (UniProt), animal genomes (Ensembl), three-dimensional structures (the Macromolecular Structure Database) and data from microarray experiments (ArrayExpress). The EBI hosts several research groups and its scientists continually develop new tools for the biocomputing community.

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