Global scientific research project launched to improve understanding of the human brain

Seven member countries of the OECD’s Global Science Forum have launched a project to promote international collaboration among scientists and create new ways of sharing and analysing data to improve our understanding of how the human brain works.

Advances in information technology are enabling scientists to develop increasingly sophisticated methods of measuring a brain’s functions. To spur developments in this new research field, called neuroinformatics, the seven founding countries (the Czech Republic, Finland, Germany, Norway, Sweden, Switzerland and the United States) have set up the International Neuroinformatics Coordinating Facility (INCF).

Other countries are expected to join the INCF in the coming months, with membership open to both OECD member and non-member countries. The host country for the headquarters of this new international body will be announced in Paris on Monday 28 November.

Better understanding the human brain could lead to breakthroughs in the prevention and cure of nervous system disorders, such as Parkinson’s or Alzheimer’s disease, as well as new treatments for depression or schizophrenia.

But to date it has proved difficult for the scientists and researchers working on thousands of different projects around the world to manage the vast amounts of data being collected, given that a single human brain has over 100 billion nerve cells and 5 million kilometers of neural interconnections. They then need to share these data and analyse them, often using different modeling tools across different computing platforms.

To address these challenges and others, the International Neuroinformatics Coordinating Facility will:

• Promote international collaboration in the management of neuroscience data and associated knowledge databases
• Create new internationally agreed analytical and modeling tools
• Develop mathematical/computational models of brain function
• Promote the development of standards, guidelines, ontologies and software tools to facilitate interoperability across multiple computing platforms.

In the near future, INCF will also manage a new funding programme in neuroinformatics, to bring together international teams of scientists to collaborate on creating new databases, analytical tools and computational models.

For further comment, journalists are invited to contact Professor Sten Grillner, interim Chairman of the INCF Governing Board, Department of Neuroscience, Karolinska Institute, SE-17177 Stockholm, Sweden (tel. +46-8-524 86900 or sten.grillner@neuro.ki.se) or Frédéric Sgard (tel. 33 1 45 24 78 09 or mailto:frederic.sgard@oecd.org) or Stefan Michalowski (tel. 33 1 45 24 92 89 or mailto:stefan.michalowski@oecd.org) of the OECD’s International Futures Programme.

For further information, go to http://www.oecd.org/sti/gsf

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