Row hits flagship brain plan

Jean-Christophe Bott/EPA/Corbis

The Blue Gene Q supercomputer in Switzerland is being used in the Human Brain Project to run simulations of rodent brain activity.

The European Union's high-profile, €1-billion Human Brain Project (HBP), launched last October, has come under fire from neuroscientists, who claim that poor management has run part of the effort's scientific plans off course.

Around 150 scientists have signed a protest letter that was delivered to the European Commission on 7 July. The letter requests that the commission seriously consider whether the project is still fit for purpose as it reviews proposals for the second round of funding, to be awarded in 2016.

The HBP was originally designed to promote digital technologies by supporting and learning from neuroscience. A key element of the project, which has inspired other brain-research initiatives around the world (see *Nature* **503,** 26–28; 2013), is to develop supercomputers that neuroscientists will use to try to simulate the brain. But as the initiative has developed, its goal has become more and more diffuse. And after months of often fractious discussions about the programme's scientific scope, tempers boiled over at the end of May, when the HBP's three-man executive board decided to cut parts of the project, including one on cognitive neuroscience, from the second phase — in a manner that the signatories say was autocratic and scientifically inappropriate.

Stanislas Dehaene, director of the Cognitive Neuroimaging Unit run by the French Institute of Health and Medical Research (INSERM) and the French Alternative Energies and Atomic Energy Commission (CEA) in Paris and one of the winners of this year's prestigious Brain Prize, had led this part of the effort. On 30 May, he withdrew his participation from the second phase, citing lack of confidence in some of the decisions being made and in the programme's management; he has not signed the letter.

The escalating row has dismayed the HBP's internal and external advisory boards, which had hoped to resolve tensions that, they acknowledge, arose partly from non-transparent management. Sten Grillner, a systems neuroscientist at the Karolinska Institute in Stockholm and a member of the internal advisory board, says that it is "disappointing" that the issue has exploded so publicly. "I hope it will not be damaging," he adds.

The HBP is one of the European Union's two Future and Emerging Technologies flagship programmes, which are designed to promote information and communication technologies through interdisciplinary research. The project is partnered by around 80 universities and research institutes and its work is organized into three broad interlocking sections: computing, neuroscience and medicine. The cognitive-neuroscience sub-project addresses how the brain contributes to tasks such as generating and controlling emotion and making decisions.

The HBP's coordinator, neuroscientist Henry Markram of the Swiss Federal Institute of Technology in Lausanne (EPFL), says that the criticisms represent a minority view of HBP participants and that accusations of lack of transparency are "entirely groundless". "It would be difficult to be more transparent or responsive to our members than we are," he says. He declined to comment specifically on the letter.

Still, he agreed to implement recommendations made by the HBP's advisory boards last week in their bid to diffuse tensions. The boards say that the chair should be elected by the research board — currently the leaders of the 13 scientific subprojects — and should not be a subproject leader, to avoid conflict of interest. They also recommend that the research board elect the executive committee for terms limited to three years.

But some do not think that these measures are sufficient. Cognitive neuroscientist Zachary Mainen, director of the Champalimaud Neuroscience Programme in Lisbon, who helped to organize the protest letter says that they do not deal with a fundamental failing. The HBP should represent the views of all its members and the neuroscience community at large, he says — not just of the executive board.

The letter, signed by many leading research-institute directors, some of whom are not connected with the project, calls for the review process for the second phase to proceed in an open fashion and for the identity of the reviewers to be made public. It also wants representatives of the reviewing panel on the external steering committee for the period of the funding under review to ensure that the panel's recommendations are put into effect.

Boycott threat

The 154 signatories say that if their requests cannot be implemented, the European Commission should reallocate the project's funding — perhaps to the European Research Council, Europe's basic-research funding agency, for broad neuroscience-directed investigator-driven grants. The commission provides only half of the HBP's €100-million (US$136-million) annual budget; the rest must come from the member states of the European Union through competitive grants. The signatories pledge not to apply for such funds unless their concerns are addressed.

Preparations for the next round of funding began in January, and the rift between neuroscientists immediately became apparent. Dehaene, for instance, says that he was "dismayed at the unprecedented level of bureaucracy, gobbledegook and absence of transparent democratic reviewing" in the HBP's governance. "There was no need to rewrite the project only months after it came into existence," he says.

The tensions seem to be confined to the neuroscience section of the programme. Physicist Karlheinz Meier of Germany's Heidelberg University, who heads the HBP's computing and robotic section — as well as its futuristic computing platform — says that his section is happy. "I don't see any difference in openness and transparency than in any other mega-project as it approaches a transition stage," he says. "Maybe biologists are less used to projects of this scale than physicists are."

Thomas Skordas, who heads the European Commission's flagships programme, says that the commission closely monitors the progress of the projects and has the power to intervene if it deems it necessary. In a few months, he says, the commission will publish a policy document that will clarify in detail its expectations regarding governance.