Top London colleges consider merger to form research giant

David Adam, London

In a move that has sent shock waves through both colleges, London's two largest research institutions have revealed that they are considering plans to merge. University College London (UCL) and Imperial College say that they are discussing the move in a bid to compete more effectively with top US institutions.

If the merger happens, it will create a university with 28,000 students and almost £400 million (US$620 million) in yearly research funds — far more than Oxford or Cambridge, which will each spend about £200 million on research this year. A decision to merge could be made as early as this December, with the new institution taking its first steps by this time next year.

The possible merger is a "once-in-a-lifetime opportunity", says Derek Roberts, provost of UCL. "We're talking about creating the world's leading university, full stop. We see this as an institution not for the next two or three years but for two or three centuries."

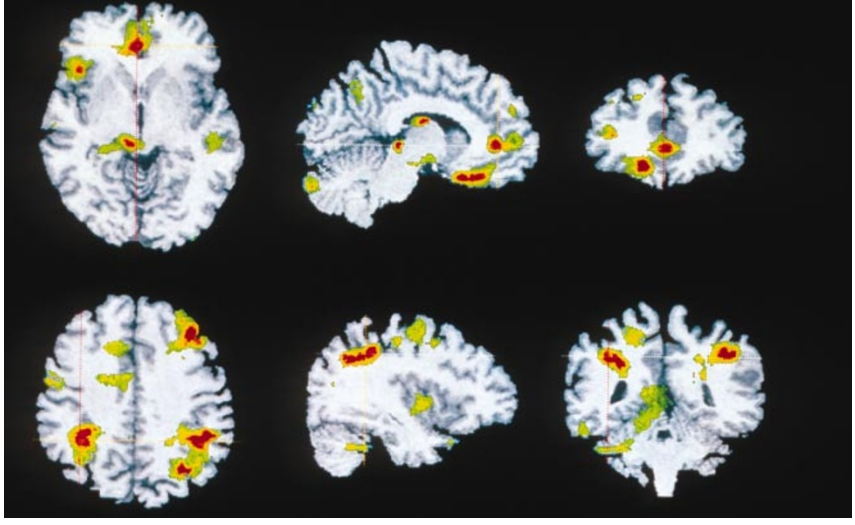
Richard Sykes, rector of Imperial College, says that both colleges are embarking on a consultation exercise "to ensure that if the merger does go ahead we carry most people with us". If it does happen, the new body is likely to leave the loosely federated University of London.

Roberts and Sykes both have industrial backgrounds, and it isn't clear if academics at the universities will share their enthusiasm for a larger institution that would combine Imperial's strengths in engineering and the physical sciences with UCL's broader tradition in science, medicine and the humanities.

"Everyone's a bit shell-shocked round here and its causing a lot of concern," says one physicist at UCL, who did not want to be identified. "To get any benefit from a merger they'll have to re-site a lot of people and while that's sorted out, there will be enormous disruption."

A joint working group will report to the respective universities' ruling bodies at the end of the year — although a formal merger would require an act of parliament. One issue that will not complicate any potential combination is leadership. Sykes would head it, as Roberts is only in charge of UCL temporarily (see *Nature* 418, 576; 2002).

The British government is preparing a discussion paper on higher education that is widely expected to intensify competition for cash and students between the country's 114 universities. ■



WELLCOME DEPT COGNITIVE NEUROL./SPL

Knowledge of the brain areas active in obsessive disorders makes them ideal for deep brain stimulation.

Brain implants show promise against obsessive disorder

Alison Abbott, Rome

A controversial experimental technique for treating certain psychiatric disorders is producing encouraging results, according to the neurologists who are testing it.

The technique, known as deep brain stimulation, uses an electric current from implanted electrodes to modulate brain function and has already raised ethical concerns (see *Nature* **417,** 677; 2002).

But at the The Human Brain, an international conference held in Rome earlier this month, researchers said that the technique is showing promise. As a result, they pledged to set up an international collaboration to speed its development.

At the meeting, neurosurgeon Volker Sturm of the University of Cologne presented data on 3 of the first 20 or so patients to have the therapy for obsessive-compulsive disorder. All showed improvements in their symptoms, he said. One patient, for example, who had been unable to look after her young son because of her compulsion to check repeatedly if he had been suffocated by his pillows at night, showed a marked reduction in her compulsion a few weeks after the treatment, Sturm said.

FONDAZIONE SANTA LUCIA, ROME

Volker Sturm: electrode therapy can help.

Bart Nuttin, of the Catholic University of Leuven in Belgium, published the first pilot study of four patients using this technique (B. Nuttin *et al. Lancet* **354,** 1526; 1999), which has now been replicated at three centres in the United States. These centres plan to join several others in Europe to cooperate on optimizing the technique.

Ethical guidelines for the use of deep brain stimulation to treat psychiatric illness were published two months ago (B. Nuttin *et al. Neurosurgery* **51,** 519; 2002). The technique has already been used to help hundreds of people with Parkinson's disease to move more normally, says Sturm, who has operated on over 200 Parkinson's patients.

The neural pathways that underpin obsessive-compulsive disorder are better understood than those of most psychiatric disorders, which means that very precise anatomical structures in the brain can be targeted by neurosurgeons. Some 15% of people with the disorder commit suicide, although prospects for patients who are resistant to drug or behavioural therapy have been improved by lesion of brain structures known as internal capsules. But such surgery is irreversible. "Deep brain simulation is theoretically preferable to lesioning," says Nuttin. "An electrode can be switched off or removed."

The international collaboration will seek to determine the most effective location for the electrodes and the optimal level of current. Most of the operations performed so far have placed electrodes in the anterior limbs of the internal capsules. Sturm places his electrodes in a nearby structure, the shell of the nucleus accumbens. "We have been able to use a much lower level of current than studies using implants in the internal capsules," he says.

Neurologists do not understand how the technique brings obsessive-compulsive disorder under control. Suppression of obsessive symptoms can require weeks of stimulation, although a patient's mood can be altered within seconds. In contrast, the clinical improvement derived from the technique in Parkinson's patients is immediate. ■