

# Chemists get out begging bowl to avert closure

Chemists desperate to save their university department from closure have launched a £1.2-million (US\$2-million) fund-raising drive. The proposed closure is part of a growing trend in Britain that many say is triggered by insufficient funding for chemistry courses, and it has drawn condemnation from chemists around the world. But researchers at the University of Sussex in Brighton are fighting back.

They aim to persuade pharmaceutical companies to come up with the cash, which would fund three new posts in the department for five years. Gerry Lawless, head of chemistry at Sussex, hopes the pledges would be enough to convince officials at the university to keep the subject alive.

Although such enterprises are relatively common on US campuses, they are more unusual in Britain. "I think it's inherent in British culture that we don't like going cap in hand," says Lawless. "But that shouldn't be the case."

The crisis started when an investment strategy championed by the university's vice-chancellor, Alasdair Smith, became public in March this year. The controversial plan proposed to end teaching and research in physical and inorganic chemistry, and to create a new department of chemical biology.

"Sussex has not been accepting chemistry students at a high enough rate to maintain a broad chemistry department," explains Smith. The department's annual intake has stood at just 20–25 students for several years. Although applications are up by 40% this year, "converting applications into acceptances is by no means guaranteed," Smith says. The department has also lost five key staff to other universities in the past three years, reducing coverage of certain areas of chemistry and making it difficult to attract enough government funding for teaching. Smith says this will result in a substantial deficit if the situation continues.

But eminent chemists around the world have reacted with dismay, bombarding Smith with letters of stinging criticism (see 'Messages of rebuke'). Former Sussex chemist and Nobel laureate Harry Kroto even weighed in with a video message to the university senate. The plan for a chemical-biology department has

now been dropped, says Lawless, but chemistry still faces an uncertain future.

Smith has also been criticized by the UK Parliament's Science and Technology Committee for not consulting with members of Sussex's chemistry department before unveiling his plan. The committee will publish a report on 4 May calling for greater efforts to sustain university chemistry departments.

Smith, a professor of economics, told the committee at a hearing on 27 March that he did not accept that "a serious science university must have a chemistry department". "I absolutely stand by that," he told *Nature* last week, insisting that universities must evolve with student demand. But opponents of the closure claim that the department has been allowed to go to seed, with no effort made to retain or replace lost staff.

So the campaigning continues, with chemistry students at the university staging protest meetings and collecting more than 1,000 petition signatures and messages of support. The drive has been boosted by offers from Sussex's life-sciences departments to temporarily forgo making new appointments so that the cash can instead be funnelled into chemistry.

Sussex would be the latest in a string of department closures that have left UK chemists

**"Government funding ignores how expensive chemistry is to teach compared with other subjects."**

## Messages of rebuke

**"You are making a horrible mistake. To close the department will be an enormous loss to Sussex, to Britain and to science around the world."**

**Alfred Bader**, Austrian founder of the Aldrich Chemical Company, now Sigma-Aldrich

**"The neglect of chemistry at Sussex over recent years is nothing short of a disgrace."**  
Letter signed by 20 members of the **University of Oxford's chemistry department**

**"As a Frenchman, I should perhaps be goading you into pursuing this unwise decision. A shortage of good British chemists will be a godsend for our young graduates."**  
**Samir Zard**, chairman of chemistry at the École Polytechnique in Palaiseau, France



increasingly concerned for the future of their field (see 'Recent closures'). But with a rating of 5 (the second highest score possible) in the government's latest research assessment exercise, it is the highest-profile case so far.

"Every chemistry department is operating at a deficit," says Richard Pike, chief executive of the London-based Royal Society of Chemistry. He laments the fact that government funding ignores how expensive chemistry is to teach compared with other subjects. Laboratory space, fume hoods and equipment all send costs soaring, but chemistry departments are given just 1.7 times as much money per student as history or English departments, compared with 4 times as much for medical students. Because the subject underpins so many industries, not least the pharmaceutical business, Pike argues that investing in it is essential for the country's economic future.

"Closing chemistry departments is ultimately suicide for the country," agrees Keith Smith, head of chemistry at the University of Wales Swansea, which will teach its last group of undergraduates next year. Fresh crops of graduates are clearly essential to maintaining chemistry research in Britain, but Smith also points out that small departments such as Swansea's produce a relatively large proportion of chemistry teachers. Without them, he fears that secondary-school students will increasingly be taught by teachers without a chemistry degree, who may lack the enthusiasm to



**Strong reaction:** Students at the University of Sussex protest over plans to end teaching and research in physical and inorganic chemistry.

P. CECIL

## Recent closures

- 2005:** University of Exeter merges reduced chemistry department into biological sciences
- 2005:** University of Dundee closes divisions of physical and inorganic chemistry
- 2005:** Queen Mary, University of London, merges chemistry with biology
- 2004:** University of Wales Swansea stops taking in new chemistry undergraduates
- 2004:** King's College London closes chemistry department

inspire future generations to pursue the subject.

It is hard to imagine the same thing happening in the United States, says Catherine Drennan, a chemist at the Massachusetts Institute of Technology (MIT) in Cambridge. Chemistry departments are considered indispensable by US universities, she says, because the basic science they teach is relevant to so many other disciplines. Every student at MIT learns some chemistry, for example, regardless of their subject area. "Chemistry is one of the absolute core sciences," she says.

GETTY



**WRINKLED CELL NUCLEI MAY MAKE US AGE**  
Blocking an aberrant protein could keep cells perky and young.  
[www.nature.com/news](http://www.nature.com/news)

"You really need those fundamentals."

Germany experienced a similar chemistry crisis in the 1990s, says Kurt Begitt, director of education for the German Chemical Society. This resulted in several department closures and mergers. But a renewed drive to attract students to the subject has been successful. "Departments are full," he says, adding that packed schools are difficult to close.

Back in Britain, Lawless says his fundraising effort has already won interest from two companies, but he is reluctant to name them at such a "delicate stage of negotiations". But their offers require Smith's support, and there are yet more hurdles to face in the coming weeks, as Lawless's plan faces a plethora of university committees. If it gets through them all, a final decision on the department's future is due from the university's council on 15 May.

Frustratingly for Lawless, Smith says the meetings may merely conclude that more discussion is needed. And if they reject the plan outright, "I've no idea what we'll do", sighs Lawless. "I suppose we'll have to look at closing the department." ■

**Mark Peplow**