BRITISH HIGHER EDUCATION

Drug Magnate Applies Strong Therapy at Imperial

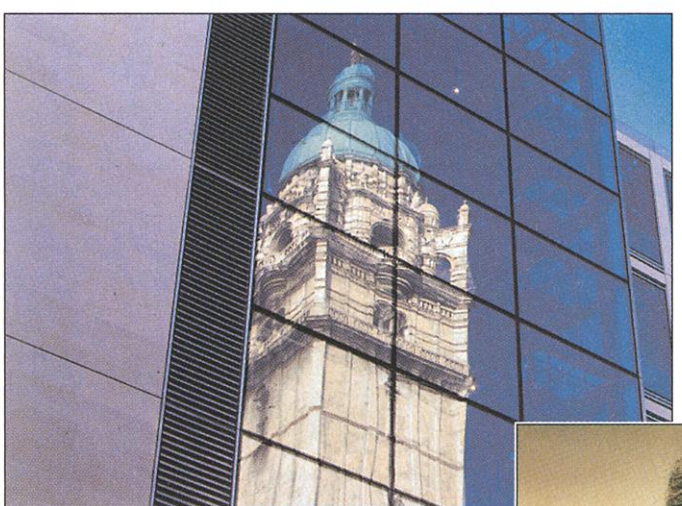
The former Glaxo Wellcome chief hopes his experience of the corporate battleground will help rejuvenate a top research institution

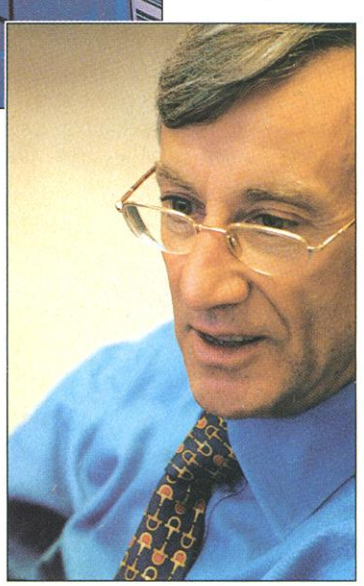
LONDON—It can be frustrating being the also-ran, always in someone else's shadow. Imperial College knows exactly how it feels. Ask anyone on the street to name Britain's top research universities, and Oxford and Cambridge will invariably get a mention. Ask about number three, and you may get blank looks. But now, after 100 years as runner-up, Imperial may be about to offer a strong challenge to the leaders.

Earlier this year the college, situated in a leafy and expensive west London district among sprawling gothic museums and avenues of smart Victorian residences, broke with tradition and appointed a nonacademic as its new rector. At the helm now sits Richard Sykes, until recently chief executive of Glaxo Wellcome and chief architect of a merger that formed GlaxoSmithKline, the world's largest pharmaceutical company. Sykes is now hard at work reinventing Imperial. He's not interested in joining the Oxbridge club. Instead, his sights are set farther afield. "I don't want the U.K. as our benchmark," he says, preferring to model the college on the top U.S. research universities —the likes of the Massachusetts Institute of Technology, the California Institute of Technology, and Stanford University—with stronger links to industry and a sizable endowment to allow financial independence.

Views differ on whether he can achieve this goal, but there's little disagreement that Imperial needs to hone its competitive edge. Over the past decade, British higher education has undergone dramatic changes. Nine years ago, 29 polytechnic colleges were elevated to university status, increasing the total by more than a third. Student numbers have also swelled, with more than 35% of school leavers entering university today compared to fewer than 10% 3 decades ago. There are now many universities with research reputations eager to usurp Imperial's number three spot.

The college itself has also changed enormously over the past decade. Imperial, which was founded in 1907 and traditionally specialized in science and engineering, has now acquired a large medical school and an agricultural college. The number of students—9900 undergraduates and graduates in the 1999–2000 academic year—is up 30% in the past 5 years. "We have all the disciplines that can be brought to bear on the big issues, [and] we attract some of the very best people," says Sykes. "The challenge will be to ensure that we realize all this potential."





No time for reflection. Richard Sykes wants to model Imperial College on the likes of the Massachusetts Institute of Technology.

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Sykes was an inspired choice for a university keen to strengthen ties with industry. Sykes became head of Glaxo in 1993 and guided mergers with Wellcome in 1997 and SmithKline Beecham last year. He retains a figurehead position as nonexecutive chair of GlaxoSmithKline. Prior to his managerial career, Sykes was a researcher, earning a doctorate in 1973 from Bristol University and then working as a microbiologist for many years, both at Glaxo and at Princeton's Squibb Institute for Medical Research. He became a fellow of the Royal Society, Britain's premier scientific club, in 1997.

When Sykes arrived at Imperial in January, he found about 35 academic departments all reporting directly to him, a model he deemed totally unmanageable. Following much expansion in the past 10 years, the existing structure was "disorganized and compartmentalized," agrees John Pendry, principal of the new faculty of physical sciences. Sykes quickly reorganized the jumble into four faculties—engineering, life sciences, medicine, and physical sciences—which will be established officially next August. Part of the rationale, he says, is to encourage cross-disciplinary research: "With four faculties, the focus is clear and each can drive the mechanisms of bringing [disciplines] together."

Researchers have welcomed the reforms, even if they are a bit breathless at the pace of change. "Sir Richard doesn't muck about," says Andy Purvis, an evolutionary biologist. "It seems a good strategy, which inertia wouldn't have been. ... The old setup was showing its age, both because recent college expansion has outgrown it and because research trends have brought some previously distinct fields together."

With internal restructuring under way, Sykes is turning his attention to money. Although Imperial has a large research budget—$174 million from grants and contracts in 1999–2000, again second only to Oxford and Cambridge—funding is hand to mouth and reserves are small. Like virtually all British universities, running costs are covered by government grants and minimal tuition fees paid by students, whereas research is supported by the government-funded research councils, foundations, and industrial contracts. Sykes, however, wants Imperial to have more financial freedom.

Greater independence will be vital, Sykes says, to attract the best researchers. "We want to be able to offer increasingly decent packages to encourage the best," says Sykes, "to offer them something in the same way as the American universities can, because they have large endowments." A healthy endowment would also allow a more

flexible research strategy. "We need access to money so that we can do things quickly," such as refocusing research on a topical problem, says Sykes.

But where will this nest egg come from? Imperial can't hike tuition fees, which are set by the government, so Sykes plans to copy an American tradition: tap alumni for cash. "We haven't gone after the money in a professional way like the Americans do," says Sykes, who has now set up an office to raise funds from past students. One former student, technology investor Gary Tanaka, has recently set the ball rolling by bestowing $36 million to create a new business school and upgrade dated 1960s entrance buildings. "Just think of the wealth generated by the people who have come out of here in the last 100 years," says Sykes.

Sykes also hopes to increase the financial returns from Imperial's intellectual output. Imperial is no stranger to industry: It has generated 57 spin-off companies and begets new ones at a rate of about two a month. "These will have a significant role in moving the college forward," says Sykes, who boasts that some are quoted on the stock exchange and that the college has already reaped wealth from investments in these companies. Others are less enthusiastic. "Spin-offs will never bring in large proportions of funding. Even the most successful institutes in this field only generate a few percent of their income from them," says Peter Cotgreave of the pressure group Save British Science.

Sykes's keen commercial instinct is also persuading him to develop the Imperial brand: He has assigned several senior members of his administration the task of raising the college's profile and selling Imperial abroad. "In the past we have been arrogant enough to believe marketing wasn't necessary," says Chris Towler, director of strategy development, but this is no longer viable in today's competitive world. Sykes admits, however, that developing a brand to match Oxford or Cambridge will be a challenge. "We're up against 700 years history," he says. But he's determined to give it a shot.

–JOHN PICKRELL

John Pickrell writes from Hertfordshire, U.K.

ECOLOGY

A True-Blue Vision For the Danube

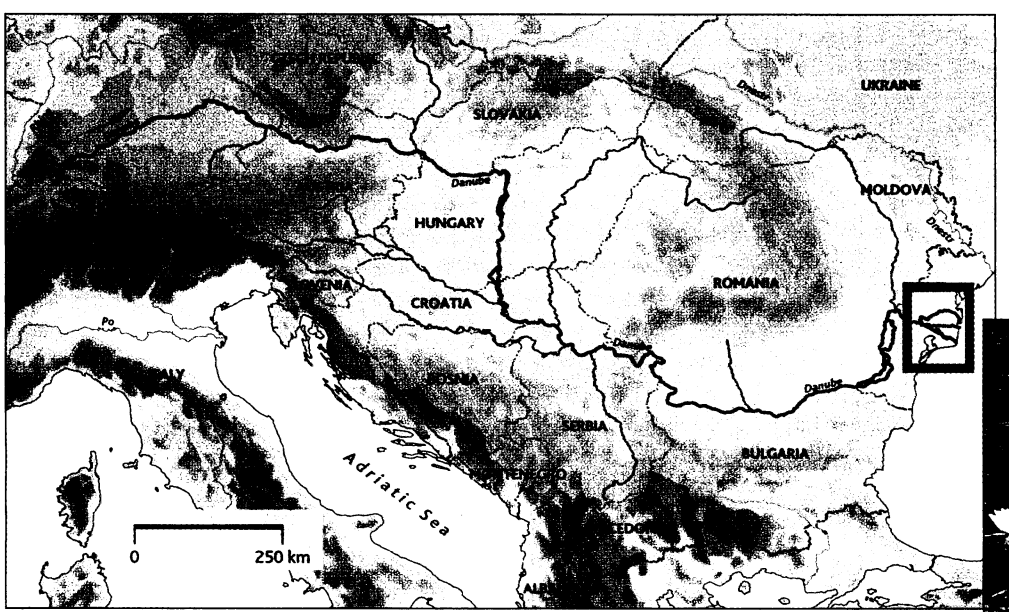
Romanian scientists are at the forefront of a European effort to balance the protection and exploitation of vast, diverse wetlands

BUCHAREST—In 1983, dictator Nicolae Ceausescu decreed that the Romanian Danube delta, one of Europe's largest wetlands, be diked for growing rice and maize. The edict came despite evidence that the soil was too salty for agriculture and after industrial-scale reed production in the 1950s and fish farming in the 1970s had produced disastrous results. "Every time the scientists had the opposite opinion, but these were political decisions," says Basarab Driga of the Romanian Academy's Institute of Geography in Bucharest. Nearly 15% of the delta had been transformed into marginal cropland by December 1989, when both Ceausescu and his grand plans for the Danube were laid to rest—just in the nick of time, say many Romanian scientists.

Fast forward to 30 April 2001, when, ironically, Ceausescu's extravagant House of the People here in the Romanian capital hosted a major conference on the Danube region. In a speech, Romanian President Ion Iliescu, a reformed Communist, acknowledged that past economic development along the Danube had caused "unacceptable material and human costs." He vowed to cooperate with 13 other European countries on an ambitious effort to restore the Danube—particularly its unique delta wetlands—while economically energizing the mainly impoverished region.

In their efforts to undo the ecological harm of the past, Romania and other countries are trying to implement the trendy, complex notion of sustainable development. Although this term means different things to different people, in Romania, at least, scientists are poised to play an important role in studying the Danube delta's pollution and wildlife and advising the government on policies to remedy the watershed's problems. "Scientists are very important, because they are the ones who can imagine new processes, who can try to make activities more friendly to nature but at the same time economical and efficient," says George Romanca, an ecologist at the National Center for Sustainable Development, funded by the United Nations Development Program. "It's our duty to realize projects that will lead to long-term development."

How well they will succeed, however, is an open question—particularly in the



CREDITS: (LEFT TO RIGHT) WWF–AUEN INSTITUTE; ERIKA SCHNEIDER

A new vision. Romania's Cold War dictator, Nicolae Ceausescu, hoped to transform the Danube delta (box) into cropland. Today, scientists are helping to forge a sustainable development plan for the delta's rich but fragile resources. (The Danube River basin is shown in green.)