

BIOTECHNOLOGY

Great oaks from little acorns grow

Spain is building the sector from scratch and without a tradition of collaboration between science and industry, reports Leslie Crawford

Spain has good scientists. They account for 4 per cent of the world's output of published research. But because scientists have little contact with businessmen, Spain is trailing behind its European peers in all aspects of the "knowledge economy", from the registration of patents to the creation of high-tech start-ups.

As a whole, Spanish companies spend less than half the European average on research and development.

With Spain's traditional industries – car manufacturing, textiles, footwear – under threat from globalisation, politicians, scientists and businessmen are finally getting together to repair the "missing link" that is hindering the transfer of knowledge in the economy.

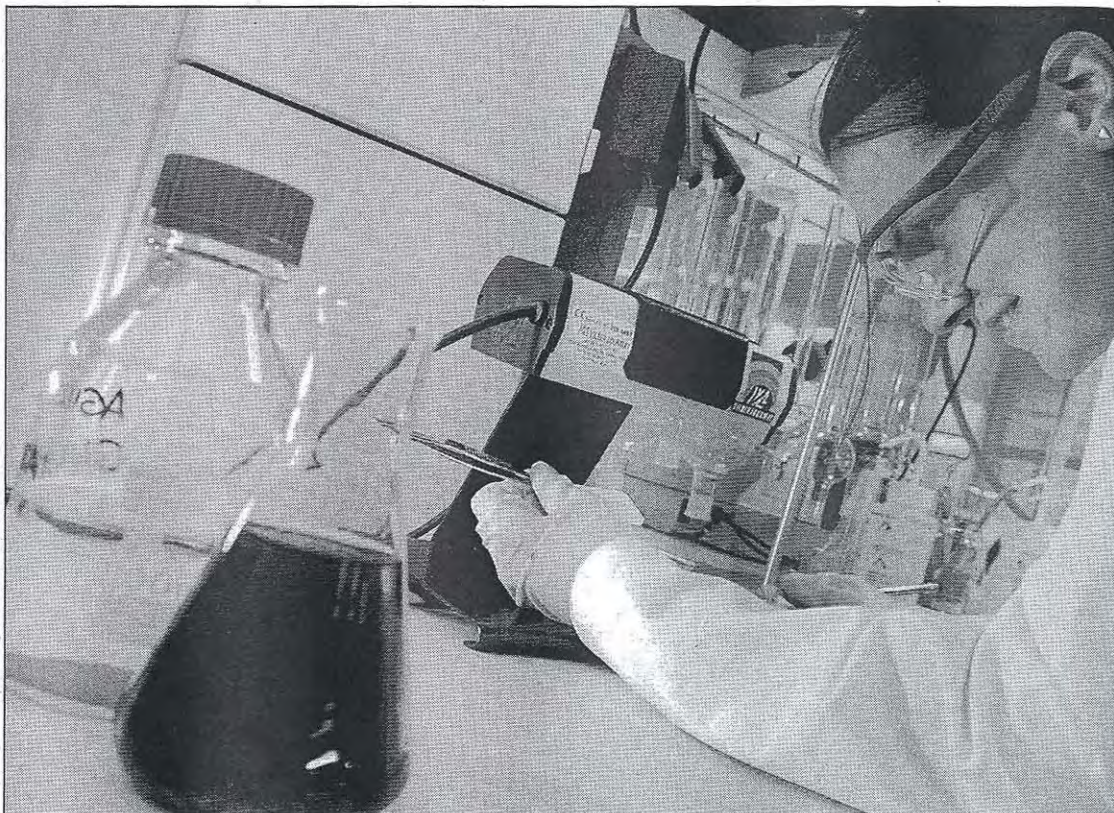
"It is a question of absolute survival for us," says Jordi Camí, director of the soon-to-be-inaugurated Barcelona Biomedical Research Park (PRBB), an ambitious project to create a Catalan biotechnology cluster from scratch.

When it opens in early 2006, the PRBB will house 60 international research groups on the cutting edge of the life sciences, from stem-cell research and regenerative medicine to genetic sequencing. The Catalan government has opened its chequebook to sign up some of the hottest tickets in the biomedical research field from the US and northern Europe. They include top Spanish scientists who were working abroad due to the lack of funding and facilities in Spain.

Some of the teams are already working in provisional labs. By the end of 2006, Mr Camí says, there will be 1,000 professors, researchers and students working on a host of projects ranging from molecular sciences to big epidemiology studies.

"We are building a critical mass of leading international scientists because the experience of the rest of Europe shows us that if you don't have the basic research, any attempt to create a biotech industry will fail," says Reimund Fickert, the PRBB's German director of projects.

One of Mr Fickert's goals is to address the "missing link" between research and business. Spain does not have a large pharmaceutical industry, while the amount of venture capital channelled to biotech start-ups is insignificant: less than €6m last year.



What's brewing? The Catalan government has opened its chequebook to sign up researchers from the US and northern Europe AFP/Getty Images

"Having 30 big stars in the research universe is one way to attract big Pharma," says Mr Fickert. "There has been a surge of interest since we launched the biomedical research project, because the industry's R&D teams have access to many experts in just one visit."

Mr Camí says he does not want the biomedical research park to be "just another academic centre". He says: "We want to find practical applications for the research conducted at the site, and we want to find backers for promising business opportunities."

"What is missing in Spain right now is the path from pure research to the registration of patents to the development of new drugs," says Mr Fickert.

Mr Fickert is building a network of biotech experts in the financial world to attract investors to fund start-ups. Biotech in Spain does not work with local money yet, he says. Too few investors understand the science, or are willing to back projects that have a high failure rate, and whose fruits may not be seen for 10 or 20 years.

So Mr Fickert is reaching out to

biotech venture capital specialists in the US and northern Europe who might be interested in the research that will be conducted at the research park. "We are beginning to create a buzz about Barcelona," Mr Fickert says.

Even the local financial community is beginning to respond. "We now have fairs to put scientists in touch with investors," says Christian Fernandez, a former banker who heads BCNemprén, a local fund that provides seed capital to high-tech start-ups. "We have networks of business "angels" and we have the biomedical research park. Five years ago, this was science fiction in Spain."

"We are starting with a 15-year lag to the UK, but it also means that we can learn from the mistakes of others," Mr Fernandez says. He has much faith in the new generation of Spanish scientists, "who are young, have done post-doctorates abroad, and have seen academics successfully establish university spin-offs. They are the ones who will make this leap in Spain," he says.

But Mr Fernandez is also struggling with their lack of financial expertise.

"I've had to import managers for biotech start-ups from Sweden, Norway and Germany, because few scientists in Spain know how to register patents or negotiate licensing agreements with big Pharma," he explains.

Other regions, notably Madrid, the Basque country and Valencia, are also setting up biomedical research centres with a view to creating their own biotech clusters. GlaxoSmithKline has located a big tropical medicine research centre on the outskirts of Madrid, while Valencia has just inaugurated a big research facility for 500 researchers in the life sciences.

It is a safe bet that not all will succeed. "Barcelona will never be a Boston or a Cambridge," Mr Fernandez says. "But we have good hospitals, good scientists and some local pharmaceutical industry. What Catalonia is trying to do is to link these people in an intelligent way."

Mr Camí adds: "This is our strategy to enter the knowledge economy. We must at least try to make a go of it. If not, the only thing that is certain is that we will have missed the boat."