

In Germany, academic research is supported by most of the major companies. For example, Bayer, one of the biggest investors in research and development worldwide, spent 7 per cent of turnover — or DM3 billion (\$1.8 billion) — on R&D in 1992. Nearly 40 per cent of this budget is spent on health research; two thirds is spent in Germany. It sponsors studentships and fellowships, a chair at the Institute of Genetics in Cologne and a range of prizes including the DM60,000 Otto Bayer prize. Bayer also supplies medical students with academic literature for research, a popular service that attracts between 100 and 150 written requests daily. Bayer also supports a DM4 million multicentre project in genetic engineering, related to its own drug development programme.

The pharmaceutical industry is regarded with some suspicion in Germany, and companies admit that their support of research in academic institutions is intended to improve the company's image by returning, without strings, part of their profits to academics. With an annual fund of around DM5 million, the Boehringer Ingelheim Fund targets young scientists with studentships and fellowships in fundamental medical research. Since its inauguration in 1983, the fund has awarded 336 grants and at present has almost 150 fellowships, around a quarter of the number offered by Germany's research council, the Deutsches Forschungsgemeinschaft. In 1992, Boehringer Ingelheim gave an additional DM5.8 million to research, including two posts at the University of Mainz in clinical and theoretical medicine. The company has established prizes and scholarships in Italy, Spain, the United States, Canada and the Philippines. It also organizes the international Titisee conferences, which deal with current topics in basic biology.

Academic research support from Schering AG Berlin (not to be confused with the US company Schering Plough) is also steered by a research foundation. It gives 12 fellowships/studentships, funds a chair in developmental molecular biology and biochemistry at the Free University of Berlin and has endowed the Institute of Organic Chemistry at the Technical University of Berlin. The company invests annually DM100,000 in prizes for basic research and endocrinology. With Astra-Medica in Frankfurt and Ciba-Geigy in Basel, the company sponsors a cancer research project at the Tumour Biology Clinic in Freiburg.

Within Scandinavia, the pharmaceutical industries of Sweden and Denmark are the most supportive of academic research. For example, the Swedish Astra group spends 18 per cent of turnover on R&D, although up to 85 per cent of this is spent on clinical trials. Astra

Fidia — hands across the ocean

FIDIA is a name that all pharmacologists and neuroscientists know. For the past several years it has popped up in association with virtually all areas of scientific activity. Lavishly sponsored meetings, authoritative books, seemingly limitless research funds. But, from the outside, it is also becoming apparent that the high-profile money is now drying up. A tightening of belts at the company's Italian headquarters in Padua has clipped the wings of the Fidra Research Foundation, set up in 1985 to fund cultural activities relating to science. But one project that has not been touched is the Fidra-Georgetown Institute of Neurosciences founded with Georgetown University in Washington DC. This institute is expected to move into its new building next year, and has another 20 years of funding guaranteed.

The institute began life in 1985 as a group of 20 scientists setting up shop in close collaboration with Georgetown University. It now has 75 staff. They are paid by a grant from the Fidra Research Foundation to Georgetown University, which, for an 18 per cent overhead fee, administers all the appointments and research finances. All staff hold joint appointments with appropriate university departments. Their appointments are recommended by the institute but selected by the department, which has complete control over their promotion. Each member of staff must spend 20 per cent of his or her time working for the department (teaching and so on), but the rest of the time is spent on research in institute laboratories. As members of the university, staff members apply for grant money to sources such as the National Institutes of Health (NIH), although Fidra pays for much of the equipment

and materials.

Although the planned new building was originally intended for the institute alone, the university asked to share it. This agreement, which delayed building for a few years, means that all Georgetown's neuroscience activity (70 per cent of which is done by Fidra) will be housed together when the building is completed next year.

Most of the work at the institute centres on GABA and glutamate neurotransmitter systems (from molecular biology to behavioural approaches) and therefore addresses concepts such as synaptic plasticity, anxiety and neurodegenerative disorders. Fidra has first rights on any patentable item arising from work at the institute, but the agreement between the two parties gives the university a 40 per cent share of royalties. There are two products now approaching the development stage. An antipanic agent is going through toxicity testing prior to Phase 1 trials, and a proposed antiepileptic is already in Phase 1. Both are benzodiazepine-like structures.

In addition to supporting the institute, the Fidra Foundation continues, on a modest scale compared with earlier times, to sponsor lectures, publications and meetings. A change in management at the parent company coinciding with a new foundation president resulted in a reduction of funding for these activities and a halving of foundation staff. The news bulletin *Neuroscience Facts* continues to be published from the institute twice monthly and is sent without charge to 6,000 scientists throughout the world, including 3,500 North American scientists who receive it by fax. This in itself keeps Fidra's public profile high. Alison Abbott

firmly believes in decentralization of research; it has set up research centres in regions with established research environments such as Stockholm, Lund and Gothenburg, at universities, research institutes and teaching hospitals. It also funds 35 adjunct professorships; holders of these posts split their time between company and university work. Collaboration with the academic world, so the company believes, is most fertile when done informally: 'small is beautiful'. Astra's head of research Claes Wilhelmson says this policy "will continue to provide many ideas for future drugs".

In Denmark, research spending by the large drug companies is in the hands both of the companies and their related foundations. The foundations, set up

primarily to prevent unfriendly takeovers, commit an amount for academic research spending. This contribution remains constant, whereas the R&D cost varies according to annual sales.

Novo Nordisk maintains control of research policy by issuing two types of shares. 'A' shares are the sole property of the foundation and entitle the holder to majority voting rights: all of these shares are held by the Novo Nordisk Foundation. This gives the original founders of the company control of policy decisions, including those on R&D, and allows them to resist pressure from public shareholders.

Novo Nordisk spends 13 per cent of its turnover on R&D. Of this, Dkr14.5 million (\$2.3 million) is spent on academic grants, Dkr2.5 million on sym-