A Lot More Than a Nobel Heritage

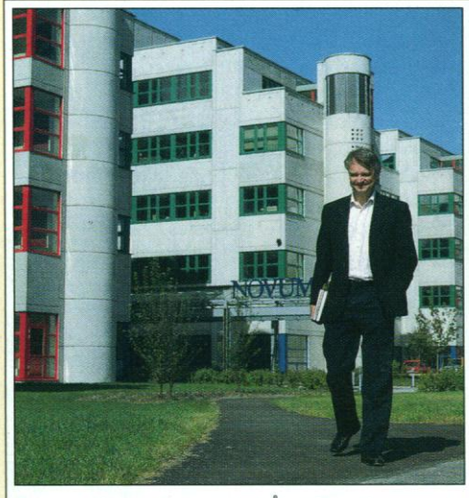
Every fall, the biomedical research community's attention turns to the Karolinska Institute in Stockholm—as the world waits to learn who has won the Nobel Prize for physiology or medicine. But suggest to professors at this unique, free-standing medical school that their institute owes its reputation to the tradition of staging medicine's version of the Oscars, and you'll get an indignant response. "Our tradition is to avoid tradition," says neurobiologist Lars Olson. "We've been able to stay on top by doing new things."

Olson is referring to the consistently innovative research that has won the Karolinska its reputation as Europe's premier center in his discipline. But institute president Bengt Samuelsson notes that the Karolinska can also innovate in response to a changing political environment: It has pre-empted many of the government's current ideas to reform Sweden's universities (see main story). Next month, its archaic structure under which some 1300 researchers are divided into 150 tiny departments will be scrapped—creating 30 multidisciplinary units, chaired by department heads given real power to decide which projects should get the most bench space. And echoing the government's call for elitism, Samuelsson is setting up committees of senior faculty members that will act like "mini-research councils," rewarding groups doing the highest quality work with an extra-generous slice of the Karolinska's $42 million a year central research budget. The aim is to free resources that are "locked into petrified organisms," says virologist Erling Norrby, dean of the medical faculty.

Stewardship of the Nobel does have its advantages, however. "We always have lots of scientists coming through here," says Samuelsson—himself a laureate in 1982 for his pioneering work on prostaglandin biochemistry. Who, after all, would pass up an opportunity to come and talk to the people who hold sway over biomedicine's most glittering prize? But judging the Nobel is hard work: If you are one of the 15 Karolinska professors on the Nobel committee, "you leave for your summer vacation with a suitcase full of reprints," says committee secretary Nils Ringertz.

Certainly, no one can accuse the Karolinska of standing still. Construction workers are now midway through renovating the imposing 1940s red-brick lab blocks that make up most of the main campus in the Solna region of north Stockholm. And the last decade has witnessed an explosion of growth at the Huddinge campus, south of the city—courtesy of the local council, which has pumped money into the Huddinge site as part of a wider investment program designed to prevent the city's poor southern suburbs degenerating into a Swedish version of south central Los Angeles.

The driving force behind this development is steroid hormone receptor biochemist Jan-Åke Gustafsson, director of three research centers at Huddinge set up under the Karolinska umbrella, but paid for largely by the city council. The 100-person Center for Biotechnology opened in 1985 and has since been joined by similar initiatives in structural biochemistry and in nutrition and toxicology. Gustafsson says the idea was for all three to serve as "centers of excellence" in their respective fields—just like the campus-based research centers that science minister Per Unckel now wants to see established all over Sweden. Indeed, the Huddinge site is virtually a blueprint for many of Unckel's policies. As the minister is now urging, Gustafsson set out to attract top foreign scientists: An early recruit to the biotech center was the respected Finnish molecular virologist Henrik Garoff, brought in from the European Molecular Biology Laboratory in Heidelberg. And the gleaming building, called Novum, that houses the three centers is a model of academic-industrial partnership: It also hosts two regular Karolinska departments, a small spin-off drug company and a pain control research group from the Swedish drug company Astra.



Center of excellence. Jan-Åke Gustafsson outside the Karolinska's modern southern outpost.

Gustafsson's entrepeneurial style isn't to the taste of all of his colleagues, however. And the millions of dollars spent on the spacious modern labs at Huddinge have galled some researchers forced to endure cramped conditions at Solna—still the Karolinska's undisputed research powerhouse. Gustafsson dismisses the rivalry between the two sites as "playful tension," but others see dangers from this north-south friction. With Sweden's universities being encouraged to compete more strongly for funding, failure to present a united front could prove costly, warns Håkan Eriksson, one of Unckel's close advisers and a reproductive endocrinologist at the Karolinska Hospital.

So far, at least, Eriksson's prophesy shows no sign of coming true, as the Karolinska is slated to receive a full one-third of the government's investment in new university buildings over the next 3 years. There is no suggestion that standards are slipping, either: The only Swedes among the 100 most cited researchers of the 1980s—neuroscientists Tomas Hökfelt and Jan Lundberg—are both at the Karolinska. But Norrby agrees that there's no room for complacency. Aiming to be the best medical school in a small country like Sweden is not good enough, he says: "We want to compete with Harvard and with Yale."

–P.A.

the present government does not command an overall parliamentary majority. The Social Democrats have already said that they would not allow private universities to receive government funds. No one, however, expects the next government to reverse the general trend toward elitism. "[T]his will be a policy for the future," says neuroscientist Tadeusz Wieloch of Lund University.

Researchers elsewhere in Europe should get a taste of the Swedes' tough new competitive edge any day now. Although they have all the usual reservations about the Brussels bureaucracy, most Swedish scientists back their government's decision to join the EC—as they know that labs lying at Europe's northern fringes cannot rely on their location to ensure rich collaboration with their counterparts to the south. As part of the move toward EC membership, Sweden is about to become a full partner in the EC's research programs. Unckel, for one, confidently expects his scientists to win back in EC grants all of the money that Sweden is being asked to pay into the programs—and half as much again.

–Peter Aldhous