

New prion research laboratory in Linköping

Per Hammarström, protein chemist at Linköping University, has been awarded a research grant of SEK 6 million over four years by the Swedish Foundation for Strategic Research.

Hammarström is one of 18 young researchers in Sweden to be hailed as a research leader of the future. His reward is not only research funding, but also a tailor-made leadership development programme.

“The money will be used to equip, operate and staff a spe-

cial laboratory for prion research due to open in April,” says Hammarström, a chemistry research assistant at the Department of Physics and Measurement Technology, Biology and Chemistry at Linköping University. The lab is the first of its kind in Sweden and one of only a handful worldwide. Here the five-strong research group will study the molecular mechanisms behind the serious diseases caused by prions, such as Creutzfeldt-Jakob’s, and other

types of misfolded protein implicated in diseases such as Alzheimer’s and familial amyloidosis.

“If the majority of diseases caused by misformed proteins are infectious, this will have huge implications for treatments such as transplants, blood transfusions and surgery,” says Hammarström.

Source: www.lio.se

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The prion protein (PrP) comes in at least two forms. On the left is the correctly folded normal form of the protein (PrPC); on the right is a model of the misfolded pathogenic form (PrPSc).

New telemedicine company starts up in Linköping

Spanish company European Telemedicine Clinic SA is establishing radiology operations at the former Berzelius Science Park premises at Linköping University Hospital.

Based in Barcelona, the company was founded three years ago by two Swedes and is Europe’s largest magnetic resonance imaging (MRI) clinic, examining 6,000 to 7,000 images every month. Its business concept is to offer EU hospitals specialist expertise in radiology and pathology. The company’s

specialists examine images and make remote diagnoses from clinics in Barcelona, Linköping, Örebro and Stockholm. The team in Linköping consists of five radiologists headed by Bengt Norén. The market is primarily in the UK and the Nordic region, but the company’s founder, Henrik Agrell, anticipates rapid growth in the rest of Europe. The company is working with a number of radiology clinics in Sweden, including those at Södra Älvsborg Hospital and Sollefteå Hospital.

Transmitting digital radiology images to Barcelona or Linköping for assessment frees up resources to increase the numbers of patients being scanned and reduce waiting times. The current shortage of radiologists in Sweden often places an unreasonable burden on staff at radiology clinics.

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New Tools for Life – new opportunities

Trollhättan is the Swedish Hollywood, Hultsfred is the country's music capital, Karlskrona calls itself Telecom City. Now it's Östergötland's turn to make a name for itself.

As one of the winners in the VINNVÄXT programme organised by the Swedish Agency for Innovation Systems (VINNOVA), Östergötland's New Tools for Life initiative will receive government funding of SEK 60 million over the next ten years. With this money – matched by at least as much regional co-funding – we aim to make the region the driving force in the development of individually tailored solutions for optimum health. Put simply, we intend to put the region on the map when it comes to healthcare. Östergötland will be the obvious first choice for goods and services that reflect the needs and potential of tomorrow's healthcare market for both public- and private-sector customers. We know that the healthcare system needs to evolve to meet the needs of an ageing population. Among other things, this will mean more home care and more self-care – areas where there is considerable scope for innovation. At the same time, the market for health-promoting consumer products is growing. Here academic researchers, local authorities and industry must work hand-in-hand. The result will be 3,000 new jobs and better public health. But we all have to play our part to make this happen. The government is putting up this money because New Tools for Life represents an innovative approach and because we have proven skills in this area. Now we must show what we can do in practice.

For companies, this is a fantastic opportunity to find attractive partners and new markets. Make sure you don't miss the boat – chances like this don't come along every day. And the time to come on board is now! The journey has already begun.

By pooling our resources in the New Tools for Life programme, we can give the region a new multidisciplinary image. But naturally not everything will centre on this. The region is big enough to have several different profiles and faces – just like lowly Trollhättan. It's interesting that SAAB now advertises its cars by portraying itself as part of the entertainment industry...

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Cambio Health Care Systems lands major contract

Östergötland County Council and Jönköping County Council have together decided to invest in a new IT support system for healthcare administration. This will be phased in to replace the existing IT solutions for healthcare planning and administration in the two counties from 2006. The decision is the result of a long-term strategic alliance

between the two local authorities on the development of IT support. Linköping company Cambio Health Care Systems AB will supply the new system and provide maintenance and support.

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AstraZeneca cultivates links with Linköping

Hans Hultberg, who heads the work of managing AstraZeneca's external research collaborations worldwide, visited BioMedley at the Faculty of Health Sciences Campus at Linköping University to present a fascinating insight into how R&D collaborations with companies and research groups

work in practice. He also took part in a discussion with the university's business development organisation on ways of developing collaboration with AstraZeneca.

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Latest news

Linköping Life Science to take part in BIO2005

To help market Linköping's unique multivalent development environment, a number of new companies and development projects stemming from research at Linköping University will be showcased at the world's largest marketplace for pharmaceuticals and biotechnology, BIO2005, in Philadelphia on 20–22 June.

Linköping hosts the year's biggest cleanroom event

The annual R3 Nordic Symposium & Exhibition, the most important forum for cleanroom technology in the Nordic region, will be held at the Konsert & Kongress convention hall in Linköping on 23–25 May. The programme includes seminars for various industrial sectors, including electronics, foods, biotechnology and pharmaceuticals. Many internationally renowned experts are among the speakers.

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Tragicomic episode at BioMedley meeting

A thief struck during the BioMedley presentations at the Faculty of Health Sciences Campus at Linköping University recently. The perpetrator, probably one of the students, was unable to resist the temptation to slip a bottle of wine into his coat pocket. But little did he realise who he was dealing with. Our hero, researcher Knut Johansen, gave chase. The thief panicked and dropped his glove, to the delight of the other participants, including senior staff from the National Laboratory of Forensic Science and the National Board of Forensic Medicine in Sweden, as well as a former employee of Dynamic Code AB, to whom the glove has now been passed for DNA analysis...

Computer simulations to replace animal testing

Linköping researchers are part of a major new EU research project to make drug development more efficient. In the future medicines may be tested using computers rather than animals and humans.

A groundbreaking European research project with Swedish involvement to develop computer models for functions in human cells and organs is now getting under way. Biosimulation – A New Tool in Drug Development is a collaborative venture involving 25 universities and research centres in the EU, ten medium-sized companies, and the medicines control bodies in Sweden, Denmark, Spain and the Netherlands. The project is being managed from the Technical University of Denmark in Lyngby, and will receive EU funding

over five years equivalent to SEK 95 million.

“Signals from the US Food and Drug Administration suggest that, as a complement to ordinary tests, the FDA may also require the pharmaceutical industry to perform computer-simulated safety tests of how medicines act in the body,” says project manager Erik Mosekilde. “That’s why we in Europe also need to develop similar expertise in this field.”

The researchers hope to use computer simulations to reduce the number of animal experiments and shorten the time to market for new medicines, making them cheaper by doing so. They also want to use computer models to gain

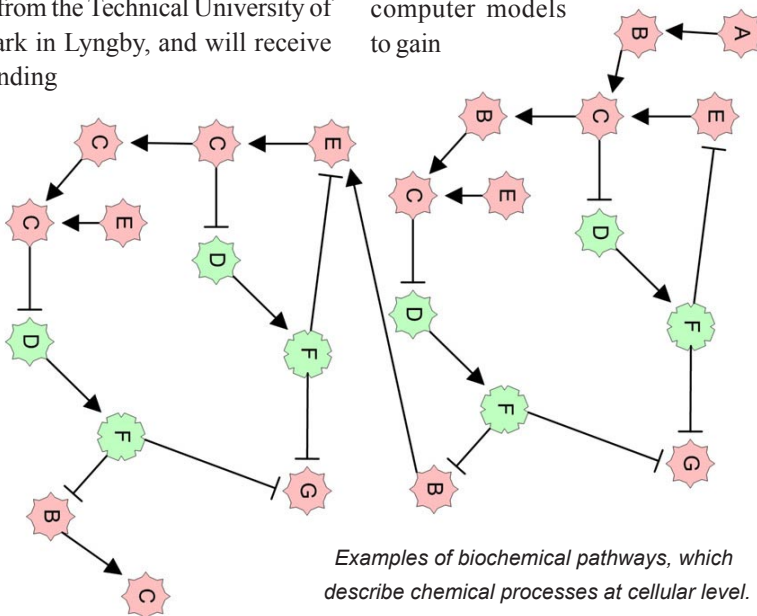
a better understanding of how medicines act in the body.

One of the models being set up is looking at insulin production and diabetes patients. Professor of Cell Biology Peter Strålfors, Assistant Professor Alex Vener and postgraduate student Nabila Aboulaich from Linköping University are conducting experiments on fat cells removed from the abdomen during surgery. Among other things, they are looking at how insulin acts in the body in both healthy subjects and diabetes patients.

“Our role is to map these processes experimentally so that we can subsequently simulate them using computers,” explains Professor Strålfors. This will be done in conjunction with Mats Jirstrand, system biology research manager at the Fraunhofer-Chalmers Centre in Gothenburg (formerly InNetics AB in Linköping), who will be working with postgraduate students to develop computer models for obesity-related diseases and diabetes. The researchers also aim to look into areas such as Parkinson’s disease, childhood illnesses, high blood pressure and depression.

Source: www.nyteknik.se

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Linköping University joins ScanBalt life sciences network

Linköping University has become a member of the ScanBalt network, an umbrella network for biotechnology and life sciences in the Baltic region.

The countries involved are Iceland, Norway, Denmark, Sweden, Poland, Lithuania, Latvia, Estonia, Russia, Finland and federal states in northern Germany. The region is home to 85 million people, 67 universities and 700 biotechnology companies.

The overriding aim is to establish the region as a world-class competitor in life sciences. The initiative is being financed by the Nordic Innovation

Centre and the European Commission’s Sixth Framework Programme.

“Researchers looking for funding from the EU or the Nordic Council can turn to ScanBalt to further their case,” explains Carl-Fredrik Mandenius, who represents Linköping University on the network’s board.

In concrete terms ScanBalt will coordinate joint projects for research, education and technology transfer in the prioritised fields of marine biotechnology, agrobiotechnology, nanobiotechnology, biobanks, stem cells and clinical research. There are

also plans for a ScanBalt Campus – a virtual campus with experts from the university world and industry, which will serve as a common resource for education and lifelong learning, opening up new opportunities for both undergraduate and postgraduate students at Linköping University.

Source: www.liu.se

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