

Protein chemistry in Linköping best in Sweden

With ten research teams in the field, Linköping University is one of the leading centres for protein chemistry research in Sweden. Best known perhaps is the research into protein folding led by Professors Uno Carlsson and Nalle Jonsson, and the research into protein design led by Professor Lars Baltzer.

In addition to this, however, Linköping also boasts expansive research teams in various other areas, including the link between misfolded proteins and disease (Per Hammarström), protein interaction (Maria Samuelsson), protein engineering (Kerstin Broo) and bioinformatics (Bengt Persson).

There is also a new chemical biology programme to educate a new generation of protein chemists. Chemical biology at Linköping has proved a continued success with high numbers of applicants during a period of decline for programmes at other Swedish universities. The entrepreneurial spirit at Linköping University means that there is also considerable interest in developing applications for existing protein technologies, and there are numerous interfaces with related research fields. It is hoped that several spin-offs will follow in the footsteps of ModPro AB, the pioneer in this field in Linköping, in the near future.

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Per Hammarström leads a research group at Linköping University's Department of Physics and Measurement Technology. Photo: Vibeke Mathiesen

SMM Medical AB raises venture capital

Iteksa Venture AB is investing SEK 1.6 million in Linköping company SMM Medical AB.

SMM Medical is developing a new kind of compression device based on active materials for the treatment of vascular disorders. The company has embarked on the development of a prototype and is strengthening its alliance with global medical tech-

nology group Smith & Nephew. Landy Toth, a Canadian expert in active materials, was also recently recruited to the company's new offices at Berzelius Science Park.

SMM Medical AB is a spin-off from Saab Aerospace in Linköping.

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News

Breakthrough order from Stryker Corporation

Linköping-based Melerit Medical AB is entering into a long-term alliance with global medical technology player Stryker Corporation to whom the company has recently delivered the first of its Melerit TraumaVision simulator systems. www.meleritmedical.com

VR Forum 2003

This year's Virtual Reality Forum will be held in Linköping on 5-7 November on the theme of crises and emergencies. Participants from both the private and the public sector will experience the effects of a simulated disaster in the nearby Bråviken Fjord in Sweden. The intention is to demonstrate the potential of using modelling, simulation and visualisation as tools in an emergency scenario that could have catastrophic implications.

For further information: www.mosiv.org

Collaboration with Sophiahemmet University College

Linköping company Bäwer och Nilsson AB has entered into a strategic alliance with Sophiahemmet University College in Stockholm. Together they aim to develop new web-based training courses aimed mainly at nurses. The nursing college already uses Bäwer och Nilsson's ECG interpreting product (EKGtolkning.com) as part of its course on cardiological nursing with the emphasis on cardiac intensive care. www.bawernilsson.com

Berzelius Institute to open in Linköping

Linköping's Life Science Technologies & Biomedicine initiative is stepping up a gear with the new Berzelius Institute – a powerful hub for research, research schools and commercialisation. More information will follow in the next newsletter.

First in Sweden to offer paternity tests to the public

Dynamic Code AB, a spin-off company from the Swedish National Laboratory of Forensic Science in Linköping, is the first private lab in Sweden to offer paternity testing to the public. The tests are performed to the same standards and using the same technologies as Sweden's National Board of Health and Welfare requires of the National Laboratory of Forensic Science and the Department of Forensic Genetics.

Previously paternity tests in Sweden were carried out exclusively by the National Board of Forensic Medicine's Department of Forensic Genetics and only with consent from the National Board of Health and Welfare. Dynamic Code will now be performing these tests – more quickly and at half the price. Founded in autumn 2000, the company has wide-ranging expertise in forensic DNA analysis with biotraceability. Dynamic Code also provides pharmacogenetic services.

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New mobile digital X-ray system

Linköping company Swemac Medical Appliances has continued to develop its Biplanar mobile X-ray system and is now launching the Biplanar 500.

Mobile X-ray systems are used primarily in fracture surgery, but also for other applications, such as neurosurgery and pacemaker implantation. Swemac has its origins in Saab Aerospace's former medical technology division. The main markets for the company's products are currently in the Far and Middle East: primarily Japan and China, but also South Korea, Taiwan, Saudi Arabia and the United Arab Emirates.

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*Swemac's latest mobile X-ray system,
Biplanar 500*

Top marks for biotech project

A research project at Linköping University has been ranked as "excellent" in an international assessment of 32 Swedish biotechnology projects carried out on behalf of the Swedish Science Council.

Professor of Applied Physics Bo Liedberg heads the project, which aims to develop new methods for studying the proteins involved in photosynthesis.

This involves getting these proteins, which in plant cells are bound to membranes, to attach to a chip which can then be studied using a standard analytical instrument. The project team includes guest researcher Thomas Ederth and biochemistry professor Bertil Andersson, a specialist in photosynthesis.

Last spring Professor Liedberg's programme of research into biomimetic materials (where researchers attempt to mimic nature's own solutions to various problems) was awarded the top rating in an international assessment of Swedish materials research.

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University's new Rector committed to continue life science initiative

The Swedish government has appointed Mille Millnert to serve as Rector of Linköping University from 1 October 2003 to 30 September 2009.

In his inaugural address Professor Millnert emphasised how important it is that the university continues to promote inter-disciplinary collaboration in both teaching and research. The university has a unique starting point and a strong tradition in this respect. He also stressed that the major initiative in Life Science Technologies & Biomedicine, which includes 16 new professorships, will be seen through to its completion. Mille Millnert is a professor of control technology and comes from Linköping Institute of Technology, where he has been dean since 1996.

Departing Rector Bertil Andersson will take over as Secretary General of the European Science Foundation at the start of 2004.

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Linköping researchers launch high-speed DNA analysis

A new method for detecting genetic anomalies using a fluorescing polymer was published recently in the journal "Nature Materials". The authors were PhD student Peter Nilsson and Professor Olle Inganäs from the Biomolecular and Organic Electronics Unit at Linköping University's Department of Physics and Measurement Technology.

External expertise lifts Linköping life science companies

Several Linköping companies in the life science field have recently brought in key personnel from outside the region.

Berzelius Clinical Research Center AB has previously recruited Gudrun Tiger, who has many years of experience of clinical trials at companies like Quintiles in Uppsala and Astra in Gothenburg, to head its Proof of Concept Clinic.

Now the company's team is being reinforced even further with the appointment of Marie Rexelius as head of the so called "Bridge of Knowledge", which provides science-based marketing support for the launch of new pharmaceuticals.

Marie Rexelius studied chemistry in Linköping and has 20 years of experience from the pharmaceutical industry in the Öresund region (Copenhagen-southern Sweden), with companies such as Boehringer Mannheim, Ferring Pharmaceuticals, Bioglan Pharma and Skye-Pharma. She has worked with the various phases of drug development as project manager for the chemical-pharmaceutical, preclinical and clinical development of new pharmaceuticals. Marie Rexelius also brings experience of major development collaborations with US and Japanese drug companies.

Genetics company Dynamic Code AB is also strengthening its ranks with external expertise. Recent recruit Catrin Molander, a doctor of medical cell biology from the Ludwig Institute for Cancer Research in Uppsala and Gothenburg University, is now being joined by Greger Brodin, a doctor of molecular cell biology from the Ludwig Institute. Dr Brodin has been recruited from

The method was discovered and developed by Peter Nilsson as part of his doctoral studies. A polymer (plastic) with fluorescing properties binds to the DNA under investigation. Any anomalies in the DNA molecule are revealed by changes in the light emitted, which can be detected using, for example, a spectrometer.

The analysis is easy to perform and the results are available in a matter of minutes. One goal now is to produce a chip with space for a large

number of samples. Linköping company Dynamic Code is a partner in the project. Peter Nilsson, Olle Inganäs and Peter Åsberg have filed a patent application for the method.

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*Catrin Molander, Lab Manager at Dynamic Code.
Photo: Teres Huitema*



*Marie Rexelius (left), Manager for the Bridge of Knowledge, and Gudrun Tiger, Manager of the Proof of Concept Clinic – both at Berzelius Clinical Research Center AB.
Photo: Jonas Bäwer.*

Xenerate AB in Uppsala to assume responsibility for the new DNA

Analysis business area at Dynamic Code in Linköping.

orthoRIGHT AB launches new product – pelvRIGHT

A brand new type of fixing device for hip operations (the pelvRIGHT concept, for which patents are pending) has been developed by orthoRIGHT AB of Berzelius Science Park in Linköping.

Every year 10,000 hip operations are performed in Sweden and this figure is set to rise. There is an ever increasing need for safer, quicker and less expensive invasive techniques with higher levels of quality and reduced risk for follow-up operations. In this respect the correct orientation and fixation of implants is absolutely crucial for success, although even today orthopaedic surgeons have to rely on outdated and imprecise instruments to help them with this.

That is what orthoRIGHT AB intends to remedy, and the company already has a string of other patented products in the pipeline. The device, which has been developed in consultation with experienced orthopaedists at Linköping University Hospital and technicians in Ätvidaberg and Gothenburg, will be marketed by medical technology company Swemac Medical Appliances AB of Linköping.



orthoRIGHT's brand new fixing device for hip operations

The pelvRIGHT concept was launched in conjunction with the orthopaedic surgeons' annual conference in Sweden, held at the beginning of September. Four clinics immediately signed up to express their interest in contributing to the introduction of pelvRIGHT technology in Sweden. Now orthoRIGHT AB and Swemac

Medical Appliances AB are looking for further partners to expand into the international market.

For further information, please contact:
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For the third year in succession you can meet us at Scandinavia's biggest meeting place for the biotech industry, BioTech Forum, which takes place in Stockholm 26-28 november 2003.

Together researchers and companies will be on hand to show the strength and versatility of Linköping.

We look forward to seeing you at our stand C10:31!