

Many new jobs in medical imaging

Medical imaging is one of Linköping's real fortes in the life science field, and things are going well for companies involved in this sector. A long tradition of research at the university has resulted in a series of successful spin-offs. Several of them are now recruiting qualified personnel to start immediately. Sectra Medical Systems (www.sectra.com) is employing 17 people after enjoying

success with its digital mammography and X-raysystems, ContextVision (www.contextvision.com) is looking for six people to join its development department in Linköping, and newly established US company Sapheneia (www.sapheneia.org) is keen to employ more staff for its Linköping office at Mjärdevi Science Park.



Forensics is essentially about solving crimes using scientific methods. The word derives from the Latin word *forum* – the place where the Romans held their trials. As a science, forensics is just over 130 years old and focuses mainly on the traces left behind at the scene of a crime. The potential of fingerprints as incontrovertible evidence was discovered at an early point in the history of the science, while today it is DNA technology

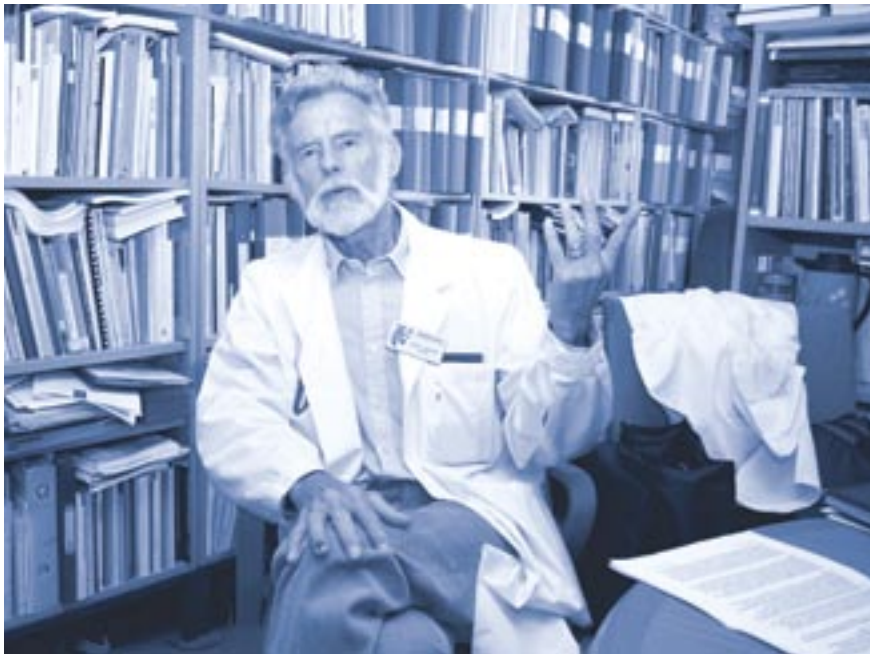
which dominates. But it is rare for a forensic scientist to actually identify the culprit. More usually, their help is sought when a suspect needs to be linked to the crime. The one-year programme has been developed by Linköping University in conjunction with Sweden's National Laboratory of Forensic Science (SKL) and the National Board of Forensic Medicine (RMV), which are both based in Linköping. The main entry requirement is three years at university (120 university points) studying engineering, biology or chemistry. After a general introduction to law, forensic science and quality technology during the autumn, the students will go on to specialise in different areas, with in-depth courses culminating in a special project.

Linköping University introduces new forensics programme

A new programme in forensic science started up at Linköping University recently. A total of 24 biology, chemistry and engineering students will spend a year gaining specialist expertise in the fight against crime. The inaugural lecture for the new course was given by Leif G W Persson, author and Professor of Criminology specialising in police research, who said that he would have loved to have joined the programme himself had he been a little younger.

It is no coincidence that Linköping University offers courses in forensic science and technology: a number of Swedish authorities with forensic associations are based in the city. Besides the SKL and the RMV with its departments of forensic medicine, forensic chemistry and forensic genetics, Linköping is home to offices of the police, the Swedish Defence Research Agency (FOI) and the public prosecutor. This means that courses can be run in close collaboration with both the legal system and forensic and medical laboratories. Source: www.liu.se

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Professor Johnny Ludvigsson

New diabetes vaccine – a breakthrough in diabetes research

A new diabetes vaccine has been developed by researchers at the Faculty of Health Sciences at Linköping University. Diamyd helps to maintain endogenous insulin production in children and adolescents with type 1 diabetes, so substantially increasing the chances of treating the disease.

– This marks a breakthrough in diabetes research, says the doctor leading the study, Johnny Ludvigsson, Professor of Paediatrics at Linköping University's Department of Molecular and Clinical Medicine. The body's own insulin production is very important because it not only helps patients to control their disease better, but also reduces the risk of complications.

The vaccine's active ingredient is an enzyme called GAD, which was discovered in children in Linköping back in the early 1980s. At the time Ludvigsson and researchers from Copenhagen were examining surplus plasma after blood separation from a group of patients, and found an antigen that was present in diabetic children but not in healthy children. A few years later it was confirmed that this antigen was

GAD, which is now used as a marker for type 1 diabetes.

A study of the vaccine in children and adolescents with autoimmune type 1 diabetes has now been completed at eight hospitals in Sweden. Even 15 months after treatment, the 35 patients who received Diamyd were producing roughly twice as much insulin as those who received placebo.

The vaccine will be commercialised by pharmaceutical company Diamyd Medical, whose CEO Anders Essen-Möller hails the results of the study as a milestone in the company's history.

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Source: www.lio.se

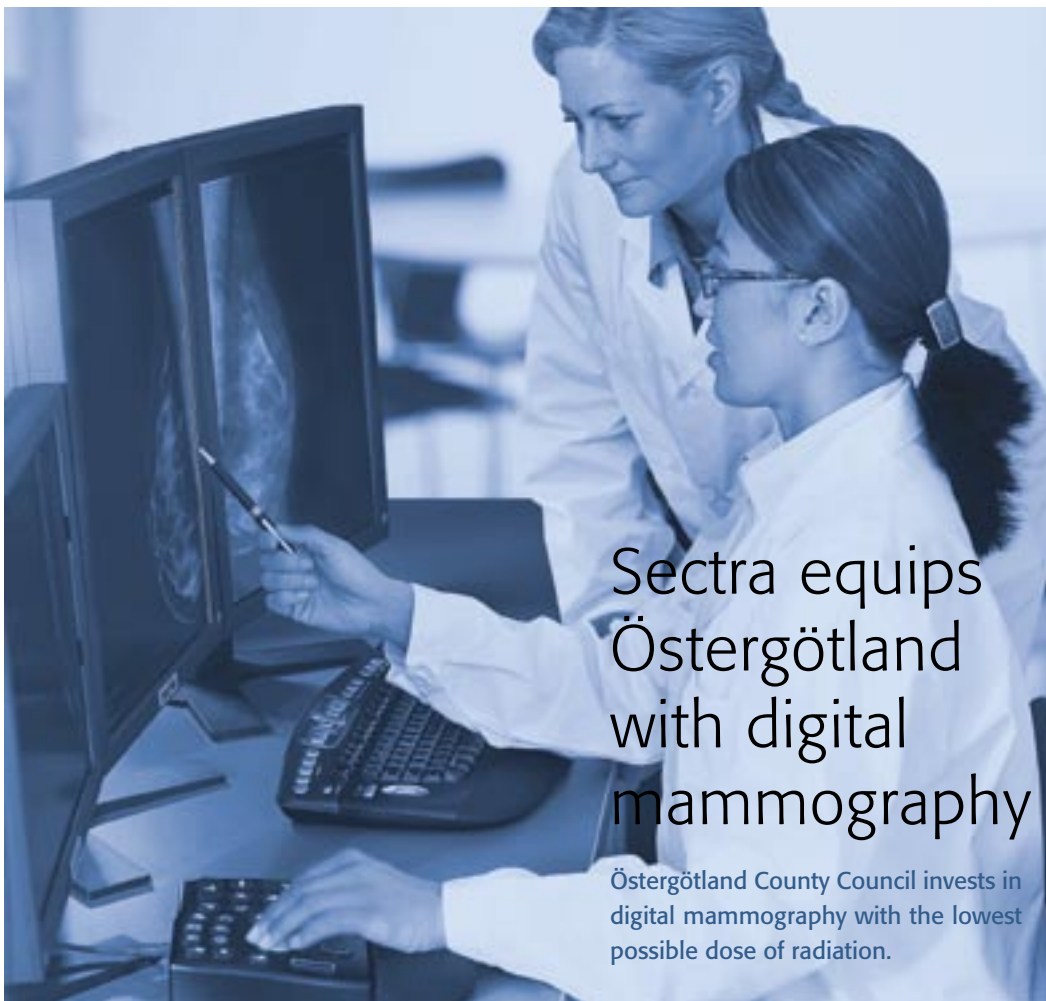
the latest

ContextVision and CMIV win VINNOVA funding. In the third round of the Research & Grow programme funded by VINNOVA, the Swedish Governmental Agency for Innovation Systems, 52 small companies will receive a total of almost SEK 48 million for R&D work. Linköping company ContextVision has been awarded around SEK 2 million to develop a new clinical quality standard for medical image volumes in collaboration with the Center for Medical Image Science and Visualization (CMIV) at Linköping University Hospital.

ContextVision recruiting. Linköping company ContextVision, which develops systems for medical imaging, has entered an exciting phase of strong sales growth. It is also moving into very interesting new product areas with the aim of securing further growth. The company is now looking for new staff to be based primarily in Linköping, namely a Business Development Manager, Product Manager, Marketing Coordinator, Sales Representative, Applications Specialist and Senior Development Engineer.
www.contextvision.com

Opening of CMIV's new VR theatre. The new Wranne Virtual Reality Theatre was opened at the Center for Medical Image Science and Visualization at Linköping University Hospital on 6 October. In conjunction with the opening, a symposium was held on the theme "Medical image science – uniting the research lab and the clinical routine". Several international guest speakers took part.
For more information, please see:
www.cmiv.liu.se

Digital Mammography provides a faster transmission of images



Sectra equips Östergötland with digital mammography

Östergötland County Council invests in digital mammography with the lowest possible dose of radiation.

Östergötland County Council is investing SEK 16 million in digital mammography systems from Linköping company Sectra. The new Sectra MicroDose Mammography system offers the lowest dose of radiation on the market, and digitalisation will promote safe, ergonomic and efficient breast screening for women in Östergötland. The county's screening units are now introducing a fully digital solution in combination with Sectra's system for handling and archiving patient details and images. With images viewed on computer screens, developing and handling heavy film will be a thing of the past. Doctors and radiography nurses will also have quicker access to images and information.

– The changeover to digital mammography brings a number of advantages over the current system, says Jan Kåredal, who heads the work at Östergötland County Council's

Medical Imaging Centre. One big benefit is the fact that the new equipment subjects patients to a much lower dose of radiation. This is extremely important for our screening programme, as healthy women are routinely examined on a relatively frequent number of occasions.

– The introduction of digital mammography in Östergötland is our largest mammography project in Sweden to date, says Marie Ekström, CEO of Sectra Skandinavien AB. Östergötland became the first county in Sweden to boast a fully film-free radiography department back in 1993, also with Sectra's help.

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Sectra Medical Systems recruiting

Sectra Medical Systems is looking for new staff to meet brisk demand for its digital mammography and X-ray radiology systems. Sectra's systems are currently in use at more than 800 hospitals worldwide, and perform more than 35 million radiological examinations a year.
www.sectra.com

US medtech company invests in Linköping

US medical technology company Sapheneia has chosen to locate its development unit at Mjärdevi Science Park in Linköping. The high level of expertise in medical imaging in the region was a decisive factor. Swedish site manager Hans Grahn is predicting rapid expansion.

– Being located in Linköping provides us with opportunities to work with various networks, as well as proximity to research groups at the university and university hospital, says Hans Grahn, site manager for the Swedish operation and deputy CEO of the international Sapheneia organisation. We're also working on recruiting more staff, and a base in Linköping is a good choice in this respect.

Sapheneia, which has its head office in Jackson, Mississippi, was established in November last year. It has since opened a cancer clinic with capital from US business angels. Efficient digital imaging during surgical procedures makes it possible to reduce the dose of radiation required for this imaging. The venture has its origins in one of the American founders having developed what could popularly be described as a “freeze-and-burn” surgical technique, where digital images help the surgeon to make the right decisions when removing a tumour.

Since 1 June Sapheneia has been building up a development department in Linköping to fine-tune this technology.

– Right now we're working on obtaining more knowledge about the results of surgi-

cal procedures – knowledge that can be used not only during the course of the operation, but also afterwards when the results are being analysed, says Grahn, who expects the current team of five employees at Mjärdevi to double by the end of the year. Although much of the initiative is being financed by venture capital, there has also been a clear focus on sales right from the outset, and Grahn is delighted to report that a first, relatively large contract has already been signed in the US market.

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More new private clinics in Linköping



Crocus is a new clinic in Linköping which performs ultrasound examinations to assess the risk of chromosomal anomalies in the foetus in the 11th to 20th weeks of pregnancy. It also carries out organ screening and growth checks, and takes samples from pregnancies.

The Crocus Clinic takes blood samples from the mother and performs analyses for risk assessment between the 9th and 20th weeks of pregnancy (combined ultrasound and biochemical screening, OSCAR, triple test and double test). There is also the option of further combined ultrasound and biochemical screening tests (such as nuchal translucency + blood sample) for those who want to be extra certain. Crocus also offers clients the opportunity to take home 3D ultrasound and moving 3D images (4D) on CD.

Crocus is operated by Selbing Medical AB and was founded by Professor Anders Selbing who previously headed the Antenatal Ultrasound Department at Linköping University Hospital. Since the 1980s the department has taken referrals for advanced

ultrasound examination from the whole of south-eastern Sweden (i.e. the counties of Kalmar, Jönköping and Östergötland). Selbing has been certified by the Foetal Medicine Foundation in London for nuchal translucency (NT) and nasal bone screening, which are both included in the risk assessment for chromosomal anomalies. Professor Selbing personally performed around 1.000 ultrasound examinations in 2005.

Crocus is also involved in several research projects in the field of foetal diagnostics, such as the foetal heart's functional development and the detection of chromosomal anomalies in the foetus through blood samples.

Other private clinics have also started up in Linköping. The Wahlbäck area is home not only to Crocus but also to Cordinator Medical Service AB (www.cordinator.se), which has several different specialities, and to the heart specialists Hjärtspecialisterna.

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