



# Newsletter

CREATE Health - a Strategic Centre for Translational Cancer Research at Lund University May - 2011

## CREATE Health

CREATE Health is a Strategic Centre for Translational Cancer research, located at the Biomedical Centre in Lund. The vision of CREATE Health is to use an integrative approach to develop novel diagnostics and therapeutics, based on identified markers and molecular signatures and to create a substantial social impact for the patient, through direct application of research for selection of an optimal, individually-based, cancer treatment. "After years of successful research are very close and in some cases even fulfilled this vision. For the next five-year period the focus is on development and translation into the clinic, society and biotech business, says professor Carl Borrebaeck, Program Director of CREATE Health.

## Ideon Medicon Village

CREATE Health will be one of the main research partners at Ideon Medicon Village, that will be established in AstraZeneca's facilities at Ideon in Lund in 2012. AstraZeneca has signed an agreement to sell their research facilities to a foundation, founded by Mats Paulsson. The foundation will support Region Skåne and Lund University and the aim is to establish a new centre for research and innovation within the field of life science, Ideon Medicon Village.

Ideon Medicon Village will include six different areas.

- A **cancer research centre**, comprising CREATE Health and associated activities such as BioCARE, RCC South and biobanks
- A cluster of **activities supporting innovation** including the Bio- and Life Science incubators.
- A **business park** consisting of growing companies in need of laboratory facilities and/or offices, and companies established by former employees of AstraZeneca
- **Medicon Skills Centre**. A cluster of activities, including recruiting division, skills development, HR, etc.
- **Ideon Investment Partners**. A common platform for those active in the financial sector, such as banks, funds, foundations, private individuals or others who support the idea of the Ideon Medicon Village.
- **Life Science Foresight Institute**, focussing on analyses of emerging concepts and technologies within health care.

Mats Paulsson's donation and purchase of AstraZeneca's research facilities will bring new opportunities for life science research, innovation, and entrepreneurship. The new Ideon, together with our medical research centres – BMC in Lund and CRC in Malmö – and the new research facilities, MAX IV and ESS, creates a world-class infrastructure which provides a major boost and attraction for the university and the region.

## Every Ten Minutes



Every third person in Sweden is diagnosed with cancer sometimes during their lifetime. This is 50 000 patients a year - one every ten minutes. This is the name of a movie that describes the cancer research and care in southern Sweden.

Watch the movie at [www.createhealth.lth.se/about\\_create\\_health/every\\_ten\\_minutes\\_movie/](http://www.createhealth.lth.se/about_create_health/every_ten_minutes_movie/)

## Financing

CREATE Health's "Breast Cancer Initiative" has been awarded 25 million Swedish kronor from the Swedish innovation agency VINNOVA. The project focuses on

- 1, the introduction of genomic-based disease classification into the clinic
- 2, the development of a test for risk assessment and treatment efficacy of recurring metastatic breast cancer, utilizing an antibody microarray-based platform, and
- 3, the creation of a Breast Cell Protein Index (BCPI) database, i.e. a map of all proteins involved in breast cancer progression, with a special focus on DNA repair pathways.

This is a great step towards becoming the new CREATE Health, focussing on the transfer of ideas into the clinic and society.



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## CREATE Health Thesis Award

Dr. Elin Gustavsson, Dr. Helena Persson and Dr. Alexander Pietras was awarded the 2011 CREATE Health Doctoral Thesis Prize for best thesis conducted within the framework of the CREATE Health during 2009-2010.

## Biomarkers in Cancer Medicine Improving Health Care, Education and Innovation

Lund University and University of Gothenburg cancer program, BioCARE, is based on cutting-edge omics platforms, extensive biobanks, close multi-disciplinary collaboration between senior cancer researchers from two universities and two university hospitals for identification and analysis of biomarkers and their complex networks. Biomarkers are crucial tools to diagnose and stage disease types, predicting outcome of different therapeutics, as well as monitoring pharmaceutical development. Focusing on a limited number of tumor types, where presently both biomarker and clinical research is strong, our goals include the

1, identification and validation of biomarkers both as diagnostic and therapeutic targets and 2, identification of cancer subpopulations based on clinical behavior and treatment response in tumors.

The overall aim is to introduce “personalized medicine” at the clinic, a development strongly supported by pharmaceutical and biotech industry, and to find means to select those patients benefitting from current treatment protocols and thereby maximizing the effect for the patients, as well as minimizing the cost for the health care system.

For more information visit [www.biocare.nu](http://www.biocare.nu)



## Regional Cancer Cluster - South

In September 2010 the Regional Cancer Centre – South (RCC Syd) was inaugurated. The centre is one of 6 in Sweden aiming for a better treatment, care and research. This is to meet the future challenge of an increasing number of cancer patients, a number that is expected to be doubled in 2030. RCC Syd is collaboration between Region Halland, County of Blekinge, County of Kronoberg and Region Skåne. The initial focus will be to improve patient's path, shortening of the waiting times to advanced treatments and to fasten the transition of translational research into clinical practice.

The overall mission of RCC is to:

- Decrease the risk of getting cancer
- Improve the quality of cancer care
- Prolong the survival time and improve the quality of life after cancer treatment
- Decrease the regional gap in median survival time after diagnosis
- Decrease the ethnical gap in incidence and survival time

- To reach these ambitious goals we have to focus on prevention, better care, clinical and experimental cancer research and improve its implementation, says Carsten Rose, project manager of RCC Syd and deputy program director of CREATE Health.

Read more at [www.cancercentrumsyd.se](http://www.cancercentrumsyd.se)

## Swedish Cancer Society Young Investigator Award

Canceromics researcher Göran Jönsson has been awarded a Young Investigator Award from the Swedish Cancer Society. The purpose of the award is to support full time research for 6 years. Congratulations!



## Ongoing activities - Sven Pålman

The correlation between EPO receptor expression and tamoxifen response in breast cancer and clinical behavior is now followed up by *in vitro* studies on EPO receptor function(s) in breast cancer. With the identification of HIF-2a as a marker



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of putative tumor stem cells in neural tumors and as an oncogene in renal clear cell carcinomas, we have initiated a search for small molecule inhibitors to HIF-2-driven transcription. For proof-of-principle, we are also trying to knock-out HIF-2a in cultured cells by novel technologies. Our efforts to find means to identify and isolate breast cancer cells with retained tumor initiating capacity for their further characterization is still ongoing.

## Recent achievements

The first draft of the Breast Cell Index and Atlas has now being completed. The Index currently contains over 4500 proteins that have been identified with high confidence multiple times. The peptides and their MS/MS spectra form a unique encyclopedia of mass spectrometry-based protein data for proteins expressed in a normal and diseased breast. The index can be used to generate an assay for any protein, which can be implemented in a matter of a few weeks in a format that it can be used in a clinical chemistry environment. The Atlas is a complement for the Index and contains the intra-cellular locations (such as Golgi, endoplasmic reticulum, mitochondrion etc.) for many of the proteins that were determined by two independent methods. For more information contact Peter James [peter.james@immun.lth.se](mailto:peter.james@immun.lth.se)



## New Publications

New microRNAs in breast cancer suggest a dual role for the ERBB2/HER2 gene

Ass prof Carlos Rovira and his postdoc Helena Persson is studying the role of miRNAs and other small non-coding RNAs in breast cancer. They use next-generation sequencing to map the small RNA transcriptome of normal and tumor breast tissue and have found a new miRNA which is encoded within the ERBB2/Her2 gene. This miRNA was shown to be over expressed in tumors and cell lines with ERBB2 amplification, suggesting a new role for this clinically important oncogene. Read more in Persson et al. *Cancer Res*; 71(1) January 1, 2011. For further information contact Carlos Rovira [carlos.rovira@med.lu.se](mailto:carlos.rovira@med.lu.se)

Impact of temperature dependent sampling procedures in proteomics and peptidomics – A characterization of the liver and pancreas post mortem degradome. Peter James and colleagues have studied the impact on various variables for preservation of samples in biobanks and are presenting a new sample handling and biobank tissue preservation approach. Read more in Schultz et al. *Mol. Cell. Proteomics*. (2010)

## Pamphlet

During June 2011 CREATE Health will release a new information pamphlet. It contains updated information of the CREATE Health research and ongoing activities. To receive a copy contact Ulrika.Ringdahl@immun.lth.se