



Anniversary

Newsletter

CREATE Health - a Strategic Centre for Translational Cancer Research at Lund University March 2016

*CREATE Health
celebrates
10 years
2006-2015*



CREATE Health – Cancer Research using Emerging Advanced Technologies for Health – is a Strategic Centre for Cancer research located at Medicon Village 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 impact for the patient, through direct application of research for selecting optimal, individually-based cancer treatment”.

CREATE Health was inaugurated 2006 after being evaluated as the first of 114 applications to SSF. Since then, CREATE Health has been evaluated independently three times, as excellent to outstanding, and has successfully retrieved further funding from KAW and VINNOVA. In total, CREATE Health has had a turnover of 160 million SEK, and in a wider perspective facilitated the generation of an additional 3-400 million in external research grants. Taken together, the CREATE Health team has included 7 research groups, from three faculties, focusing on translational cancer research, represented by PIs Åke Borg, Carl Borrebaeck (Center Director), Peter James, Thomas Laurell (until 2014), Carsten Petersson, Sven Pahlman and Carsten Rose (Deputy Center Director). CREATE Health research has been coordinated by Drs. Ulrika Ringdahl (2005-2014) and Ulrika Andréasson (2014-), whereas the financial terms have been handled by CFO Marianne Olsson.

Several important scientific findings within different research

projects have been made leading to publications in high-impact journals as well as patents. A number of research findings have also been commercialised and contributed to the founding of spin-off companies. The outcome proves the point that interdisciplinary collaborative projects have the capacity to generate disruptive results not easily attainable in more homogeneous research environments.

- CREATE Health has over the last 10 years developed into a translational cancer center that actually delivers scientific results of clinical utility. It is particular satisfying to see that the combination of researchers with different scientific expertise has resulted in novel and creative solutions to clinical problems, as well as facilitated the establishment of younger scientists. We will now continue to build on this success and focus on even more exciting clinical challenges in the years to come, says Carl Borrebaeck.



Photo: Goran James Djordjevic

Here, we present a few significant highlights divided in five categories from the CREATE Health 10 year history.

Scientific highlights



Photo: Kenneth Ruona

Clinical transfer

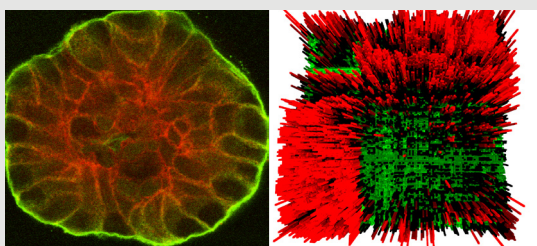
- Identification of transcription factor Sox11 as a prediction marker of epithelial ovarian cancer and mantle cell lymphoma
- Identified HIF-2 α as a therapeutic target of disseminated neuroblastoma and breast cancer

Fingerprinting Breast cancer

- SCAN-B (Swedish Cancerome Analysis Network - Breast Cancer) - a Next Generation Sequencing (NGS) program of tumors for development and validation of new biomarkers for better prognostication and treatment prediction
- SWEA (Swedish BRCA1 & 2 Extended Analysis) - National prospective NGS based gene-panel screening of cancer susceptibility genes in familial breast and ovarian cancer

Improve early diagnosis

- Defined blood based test for early diagnosis of pancreatic cancer using biomarker signatures and affinity proteomics
- Developed a model for prediction of distant recurrence in breast cancer using classification by biomarker signatures
- Isolated clinical risk groups by optimizing artificial neural networks using genetic algorithms
- Developed a mechanistic model for transcriptional regulation of lineage commitment emphasizing the stochasticity of cell fate decisions
- Identified a prognostic gene expression signature for sub-classification of HER2 amplified/expressing breast cancers



Technology and Bioinformatic development

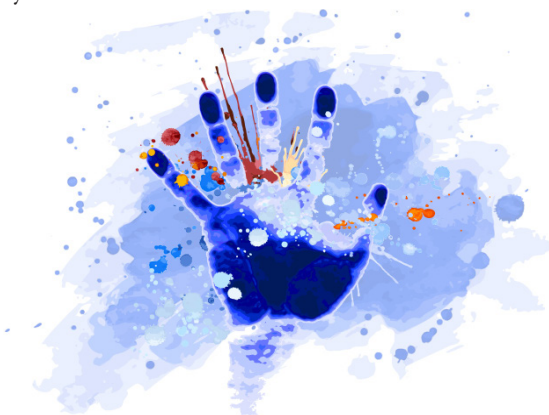
- The Breast Cancer Index comprising over 12,000 proteins in all cells and types of breast tumors
- An SRM (selected reaction monitoring) test, profiling all 6 DNA repair pathways for monitoring response to radio- and chemotherapy
- An SRM test for rapid detection of cancer cells in sentinel nodes and tumour margins
- Validated algorithms and software for powerful biomarker identification in pancreatic and breast cancers based upon proteomics analysis of serum

Understanding Cancer Biology

- Identified *sox11* as a tumor suppressor gene in mantle cell lymphoma and ovarian cancer
- Identification of the putative neuroblastoma stem cell

Cancer Crosslinks

In 2012, CREATE Health organized the first Cancer Crosslinks Conference in Sweden at Medicon Village and in total we have arranged three meetings. The recurring theme of these meetings is “Personalized Medicine” and more recently including “Immuno-Oncology”. The overall aim is to promote interactions between researchers, clinicians and industry and to encourage translational, clinical research activities and new collaborations in order to develop innovative cancer treatment. The concept of Cancer Crosslinks was established in Norway, 2009, when Oslo Cancer Cluster in collaboration with Bristol-Myers Squibb organised the first meeting. The most recent Cancer Crosslinks in Lund, October 2015, was organized in collaboration with SWELife and sponsored by Bristol-Myers Squibb, Merck and Roche and it was highly appreciated and heavily oversubscribed.



External communication and utilization of results

CREATE Health has always worked actively with the information to society about on-going research and research results, as well as described the importance of cancer research in different media. We have regularly published short Newsletters and more detailed pamphlets. In addition, we have been recording short information films, where the most widespread is the “Every ten minutes” (<http://www.createhealth.lth.se/about-create-health/movies/every-ten-minutes/>). CREATE Health has had the clear ambition to contribute to a greater understanding and knowledge of cancer research globally.

