



NEWSLETTER

January 2020

Director's Corner



As we have closed 2019 and start into a new decade, we are very pleased to announce that our successful collaboration with the Swiss Cancer Center Lausanne and their leading scientists Profs George Coukos and Douglas Hanahan has received substantial financial support in the excess of 100 million SEK for the coming three years. The research is focused on identifying novel targets for immuno-oncology and is supported by a joint effort of the Cancera Stiftelse, Mats Paulssons Stiftelse and Stefan Paulssons Cancerfond. This is of course very satisfactory and a sign of trust in CREATE Health's ability to move the cancer field forward. This confidence in CREATE Health is also evident from the prestigious Breast Cancer Association Award 2019 given to our team member Prof. Åke Borg and Prof. Mårten Fernö for their development of methods to identify patients that need additional treatment after cancer surgery. Finally, I would like to thank all our clinical collaborators all over the world that continue to support our projects, and without whom we would not have been able to reach our promising results for the benefit of the patients.

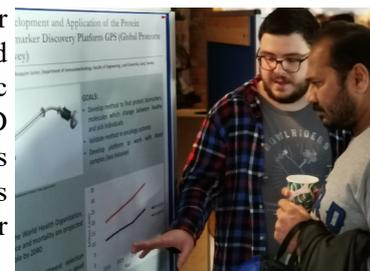
CREATE Health on Stage



In November, CREATE Health researchers participated in the popular science show 'Om X Antal År' (In X number of years) hosted by Cecilia Nebel and comedian Jesper Rönndal at Medicon Village, Lund. Combining research and humor, the show addressed some pressing questions regarding our future. How can we get really old? And how will we fight disease? The importance of cancer screening and early diagnosis in high mortality cancers, such as pancreatic and lung cancer, was highlighted. On stage were director Carl Borrebaeck as well as CREATE Health researchers Prof. Kristian Pietras and Dr. Leena Liljedahl, who is a specialist in proteomics and aims to develop blood sample based diagnostic methods in ovarian cancer to replace risk-filled biopsies. In the expert panel discussions they elaborated on how to diagnose cancer earlier and more precise and whether we should focus more on health (frisk factors) rather than risk factors. *Foto: Roger Nellsjö*

CanFaster at Kulturnatten Lund 2019

The CanFaster program contributed to the outreach activities at Kulturnatten in Lund on September 21st. There was a major interest from the general public visiting BMC this day, to learn more about cancer and immunotherapy in particular. Per Norlén, CEO at Alligator Bioscience AB, held a highly appreciated talk on "How the immune system can be directed towards cancer". Four of our CanFaster students had prepared popular scientific posters describing their PhD projects and the audience was curious to stay and discuss cancer research with our fellows.



Recent Publications

Dihge et al. Artificial Neural Network Models to Predict Nodal Status in Clinically Node-Negative Breast Cancer. *BMC Cancer 19, no.1: 610.*

Axelsson et al. A Scoping Review Exploring Psychological Resilience in Relation to Various Biomolecular variables. *Biomed J Sci & Tech Res, in press*

Prediction of Nodal Status in Breast Cancer

Biopsy of the axillary lymph nodes is a standard procedure to assess tumor spreading in breast cancer. However, in the majority of patients, no metastasis can be found and unnecessary operations could be avoided if there were possibilities to assess the lymph node status without surgical methods. Moreover, in patients with metastasis, pre-operative prediction of nodal status would facilitate applying individualized surgical strategies.

CREATE Health researchers Profs Lisa Rydén, Mattias Ohlsson and Dr. Patrik Edén, together with other scientists from Lund University, have developed three artificial neural network models with the aim to predict nodal status based on patient-related and clinicopathological characteristics. Using the model for no lymph node metastasis, it could potentially be possible to significantly reduce the number of surgical procedures by one forth. 'The results indicate that, by using these kinds of models, we are getting one step closer to individualized treatment, but further studies are needed to confirm our results', says Lisa Rydén.

Congratulations to:

Associate Professor Kristina Lundberg for successfully attracting funding of in total SEK 2.5 M for research in immuno-oncology from the Cancera Foundation (SEK 2M), Craaford Foundation (SEK 300 000), and the Gunnar Nilsson Cancer Foundation (SEK 200 000).

Breast Cancer Association Award 2019

CREATE Health Professor Åke Borg and Professor Mårten Fernö, both breast cancer researchers at Lund University, received the prestigious Breast Cancer Association Award 2019. In more than 40 years, the two scientists have developed methods to distinguish between patients that need additional treatment after cancer surgery and those for whom an operation is sufficient and extra treatment would only cause unnecessary stress. Now they are both recognized by the Breast Cancer Association for their many years of dedicated research and their tireless dedication to the patients in breast cancer care.



Foto: Bosse Johansson

Opening Keynote at CCCO 2019

Carl Borrebaeck was invited to give the opening key-note lecture at the Conference on Cancer and Clinical Oncology held in Singapore the first week in December 2019. His talk with the title "Diagnosis of Stage I pancreatic cancer saves lives" focused on serum protein patterns that can be utilized for improved diagnosis, patient stratification and disease monitoring.



In particular, the development of the first multiplexed, differential proteomic test for early diagnosis of pancreatic cancer using a serum sample was presented. Since the road from biomarker discovery to Laboratory Developed Test (LDT) or FDA cleared tests is rarely a focus in research, aspects of this process were also highlighted to demonstrate the efforts involved in reaching clinical utility.

The Future of Cancer Research



CanFaster, the translational cancer faster forward doctoral program within CREATE Health, trains young international researchers to become true innovators, enforced with a broad set of scientific, transferable, and business skills. Meet our student's in this new series:

Katarina Velickovic

Serbia



Research Aim:

Unravel the relationship of psychological resilience, emotion regulation strategies, and quality of life in breast cancer patients and, subsequently, the development of an evidence-based (psychological) intervention.

The best about CanFaster:

The opportunity to meet other PhD students, with various educational backgrounds, who all work from a multitude of angles towards a common goal.

Jan Kopecky

Czech Republic



Research Aim:

Investigate how malignant brain tumors evade the immune system via changes in the tumor microenvironment and how therapy can overcome that. We focus on local delivery of cytostatics, radiotherapy and different modes of immunotherapy

The best about CanFaster:

It is showing me various ways how pre-clinical researchers can collaborate with clinicians and entrepreneurs to bring discoveries about cancer and its therapy from laboratories up to patients.

Maria Rodriguez Zabala

Spain



Research Aim:

Identification of cell surface receptors critical for cell growth and survival in leukemia. We characterise receptors that protect leukemia cells from immune-mediated eradication, with the aim to translate findings into novel therapies.

The best about CanFaster:

It complements my PhD studies by providing an educational and social platform and the opportunity to learn about entrepreneurship, innovation processes, and the clinical aspects of a career in cancer research.

Aastha Sobti

India



Research Aim:

Delineating the tumor microenvironment in head and neck cancers and establishing a well-defined multi-purpose biomarker profile for use as a diagnostic, therapeutic and prognostic tools.

The best about CanFaster:

Access to research faculty working hard towards translational research, which is opening new horizons to interdisciplinary approaches.