Breakthrough discovery in ERC funded cancer research

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Researchers from the University of Brussels (ULB) have defined for the first time the cellular transition states occurring during the progression of cancer and have identified the tumour cell populations responsible for metastases.

The research team led by Professor Cédric Blanpain made a breakthrough discovery in cancer research by defining for the first time tumour growth phases during cancer progression and identified the types of tumour cells causing metastases in skin and breast cancer.

Commissioner for Research, Science and Innovation Carlos Moedas said: “I am extremely pleased to hear that once again ERC researchers have found a way to solve this issue of research and the importance of curiosity-driven research and how much it contributes to our society.”

This discovery will have major implications for the diagnosis, prognosis and therapy of cancer patients.
Over the last ten years, Professor Blanpain has received ERC grants worth €4m for these research breakthroughs. The new study, published in Nature, show that for the first time the different tumour transition states and the subpopulations of tumour cells responsible for metastases in squamous cell carcinoma of the skin, the second most common cancer, and breast cancer, the most common cancer, in women.

What impacts will the results have on cancer research?

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ERC President Professor Jean-Pierre Bourguignon said: “This breakthrough is a wonderful example of the way in which motivated researchers can deepen our basic understanding when given the means and the freedom to follow their best ideas. Europe needs to nurture more blue-sky research – it can benefit citizens and society at large.”

Blanpain said: “The identification of these different transitional states in cancer with different functional characteristics such as proliferation, invasion and metastatic potential in a wide range of cancers in both mice and humans has very important implications for the development of new strategies to block tumour progression and metastasis. It is likely that these different states of tumour transitions are also important for the response of cancer cells to chemotherapy and radiotherapy.”

Source: ERC