

Could our own bodies provide the cure for skin cancer?

For immediate release

A groundbreaking new study is looking to see if the human body may in fact hold the key to curing the deadliest form of skin cancer.

The year-long study is funded by the leading skin disease research charity the British Skin Foundation, and is taking place at Guy's at St Thomas' Hospital in central London. The main focus of this research is looking at B lymphocyte cells and their role in the spread of malignant melanoma tumours, the deadliest form of skin cancer.

Under normal circumstances, B cells play an important function of fighting off infection and diseases. However, the recent discovery of a particular sub-group of B cells, known as *regulatory B cells*, has shown that they actually suppress the immune system's ability to fight off melanoma cells. The team, led by Dr Katie Lacy, hope to be able to eliminate this sub-group of cells, thus freeing the other B cells to potentially destroy skin cancer cells in the body.

By comparing the blood samples taken from healthy patients in a control group and those suffering from advanced Stage IV melanoma, Dr Lacy and her team can then determine exactly how inhibited these B cells are. Although it's still very early days, this study holds massive potential as a new way of treating and possibly even curing malignant melanoma, a disease that kills approximately 2000 people every year in the UK

The study is part of a larger ongoing research programme that is looking at how other types of B cells could be harnessed in an effort to eradicate skin cancer tumours. Dr Lacy says: "Several other immune cell types including B and T lymphocytes are well recognised to have some ability to fight off melanoma cells and are found to be present in large numbers in tumours. However, in spite of this tumours are still able to escape the immune response and progress. It is possible that certain B cell types are responsible for preventing the anti-tumour effects of other immune cells."

With surgery remaining the most effective form of treatment for malignant melanoma, what Dr Lacy and her team are doing could have a significant impact on treatment and survival rates for the disease in the future. Currently, about a fifth of all malignant melanoma patients will go on to develop metastatic disease, whereby tumours spread throughout different organs in the body, for which there are currently no effective treatments. The results from this study could prove vital in stopping the spread of this potentially life-threatening disease.

Dr Lacy says: “Our work is motivated by the fact that there are currently very few effective therapies for melanoma once the tumour has spread into the body from the skin. Malignant melanoma is now a major public health issue, so it’s key that we can develop new ways of fighting the disease. By gaining a better understanding of the immune response to malignant melanoma, we may also be able to identify novel therapeutic targets in addition to markers that may allow us to provide patients with information on their prognosis.”

Malignant melanoma, the deadliest form of skin cancer, is now the second most common form of cancer in people aged between 15 and 34 and incidence rates are continuing to increase. Over 10,000 people in the UK were diagnosed with the disease in 2007 alone. As a result of the ongoing issue of skin cancers in the UK, at the end of August 2010 the British Skin Foundation launched the 2010/11 Skin Cancer Appeal. The aim of the appeal is to raise £250,000 towards research into developing better treatments, understanding and possibly even a cure for skin cancer. For more information about the appeal, head to www.britishskinfoundation.org.uk

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The British Skin Foundation (BSF) is a charity committed to raising funds for skin disease research. Over the last three years alone, the BSF has awarded in excess of £2.2 million to a number of studies that aim to find new treatments and eventually cures for the many skin diseases in the UK.