

Under the Microscope #6 -- Killer T-cells

February 7 2012

In this video we see a killer T-cell of the immune system attacking a cancer cell.

Under the Microscope is a collection of videos that show glimpses of the natural and man-made world in stunning close-up. They are released every Monday and Thursday for the next few weeks and you can see them here: bit.ly/A6bwCE

Professor Gillian Griffiths said: “[Cells](#) of the [immune system](#) protect the body against pathogens. If cells in our bodies are infected by viruses, or become cancerous, then killer cells of the immune system identify and destroy the affected cells. Cytotoxic T-cells are very precise and efficient killers. They are able to destroy infected or cancerous cells, without destroying healthy cells surrounding them. The Wellcome Trust funded laboratory of Professor Gillian Griffiths, at the Cambridge Institute for Medical Research, investigates just how this is accomplished. By understanding how this works, we can develop ways to control killer cells. This will allow us to find ways to improve cancer therapies, and ameliorate autoimmune diseases caused when [killer cells](#) run amok and attack healthy cells in our bodies.”

Cytotoxic T-cells are just 10 microns in length: approximately one-tenth the width of a human hair. These movies are 92 times real time.

The original footage shown was made by Alex Ritter, a PhD student on the NIH-OxCam program, in the laboratory of Professor Gillian Griffiths at the Cambridge Institute for Medical Research and the

Department of Medicine of the Clinical School of the University of Cambridge. The images were acquired using an Andor Revolution spinning disk system with an Olympus [microscope](#). Professor Griffiths is a Wellcome Trust Principal Research Fellow.

Provided by University of Cambridge

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