

# Tests on drugs to slow down ageing begin

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Calorie-restricted diets long ago showed that life could be extended significantly in mammals. Research into the genetic and biochemical reasons as to why calorie-restriction prolongs life have yielded insights into the way cells age and die. A natural plant-based compound called Resveratrol has been shown to mimic these life-extending processes and testing on Resveratrol-derived drugs to slow down the ageing process have begun in earnest.

## The chemistry behind ageing

The body of research into slowing down the ageing process has been growing in recent years. As advances in genetics and biochemistry have been made, researchers have been able to make initial discoveries of the biochemical processes that regulate cellular metabolism, repair and rejuvenation. These studies are leading the way in a long human quest to find ways to extend both the length and the quality of life.

Of primary focus is a group of genes called sirt genes that regulate cellular metabolism to produce proteins called sirtuins. These proteins seem to monitor energy levels in the cells of the body. If the energy stores become low, the proteins trigger a series of enzymes that help to protect the cell from damage.

This discovery led researchers to identify a number of chemical compounds that can mimic this process or even trigger it. Resveratrol (<http://www.biotivia.co.uk/resveratrol.html>), a natural plant-based compound found in many plants including raspberries, certain pines and Japanese Knotweed has been shown to trigger these sirtuin proteins and research is ongoing into Resveratrol-derived drugs to test its ability to treat age-related diseases such as diabetes, heart disease and breast cancer.

Human trials are now starting and are an important contribution to what scientists already know about the health-giving effects of Resveratrol. Many of the world's most important medicines have been derived from plant-based compounds, and scientists believe that Resveratrol may be an important clue into a wide range of health issues, particularly in the fight against cellular ageing. The result could be that Resveratrol has a key role to play in life extension as well as many other medical treatments.

## Stopping age-associated problems before they begin

The problems associated with ageing appear to be due to damage at a cellular level. As the cells age and reproduce, their genetic ability to prevent damage or recover from damage slows or stops altogether. Once pathology sets in, the cells continue to age until whole systems collapse. 70 year old research into diet in mammals showed that mice on a calorie-restricted diet lived up to 50% longer than their normal counterparts, and enjoyed fewer age-related health issues like diabetes and cancer.

The research into sirtuins and Resveratrol's (<http://www.biotivia.co.uk/resveratrol.html>) effect on them is looking at how these processes trigger the cellular protection and repair mechanisms. The theory being tested is that by treating patients with these drugs and compounds, the ageing process can be slowed, possibly indefinitely.

Scientists believe that they are getting closer to a point where they understand more about the process of ageing. The tests on Resveratrol are multi-disciplinary and involve chemists, pharmacologists and even nutritional experts, as the goal of providing a longer, healthier life span draws a little closer. Their combined research shows that Resveratrol may play a part in slowing down or even stopping the ageing process. Whatever the outcome, scientists believe that their research will give more insights into longevity.

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<http://naturalhealthwellbeing.blogspot.com>

The Northumbria Study: <http://www.biotivia.com/company/news/Bioforte-Increased-Cerebral-Blood-flow-in-New-Human-Clinical-Trial.html>