What worms and fruit flies can tell us about living past 100

To figure out how to slow (or even stop) ageing, we need to know why our bodies do it in the first place. But biologist Cathy Slack from Aston University, says scientists just aren't sure yet. "From a purely theoretical perspective, there's no beneficial reason to age," she says.

Although studies of exceptionally old people are vital for helping us understand how to reverse ageing in humans, we're also learning a lot about longevity from seemingly unrelated organisms such as worms and insects. "I often get an incredulous look when I say I work with fruit flies," says Slack. "But what we recognize now is that animals across very diverse species actually age in quite similar ways."

Slack's research focuses specifically on insulin signalling and how it contributes to ageing. "What we know is this signalling pathway allows the animal to grow bigger and to reproduce when they're young," says Slack. But she's found that if you inhibit this pathway, the laboratory creatures live far longer than they're supposed to. Slack says she can extend the life of a fruit fly by up to 20 percent with no ill effects, other than the organism no longer being able to reproduce.

This is an excerpt. Read the original post here.