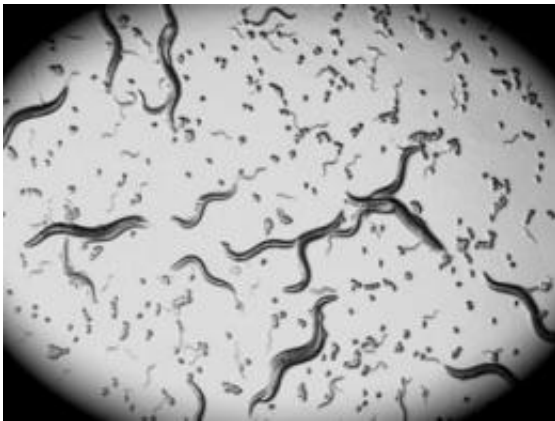


Cholesterol-lowering medicines may be effective against cancer

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This is *C. elegans*, the nematode that Marc Pilon and his colleagues used in the study. Credit: Marc Pilon

Millions of people around the world use medicines based on statins to lower their blood cholesterol, but new research from the University of Gothenburg, published in the prestigious journal *PNAS*, shows that statins may also be effective in the treatment of cancer.

Statins lower [cholesterol](#) by blocking certain enzymes involved in our metabolism. However, they have also been shown to affect other important lipids in the body, such as the lipids that help proteins to attach to the cell membrane (known as [lipid](#) modification). Because many of the proteins that are lipid-modified cause [cancer](#), there are now hopes that it will be possible to use statins in the treatment of cancer.

It is, however, very difficult to study the side-effects of statins in mammals. As a first step, Marc Pilon, researcher at the Department of Cell and Molecular Biology at the University of Gothenburg, has teamed up with Swedish and international colleagues to carry out studies on the nematode *C. elegans*. This nematode, which is made up of just a thousand or so cells, does not produce cholesterol and is therefore an ideal test subject.

The Gothenburg researchers' studies show that statins can have a dramatic inhibitory effect on growth and development. As the researchers managed to identify the enzyme involved, they can also explain how the effect arises at molecular level.

"Our results support the idea that statins can be used in more ways than just to lower cholesterol," says Pilon. "Not least that they can prevent the growth of cancer cells caused by lipid-modified proteins, but also that they can be effective in the treatment of [diabetes](#) and neurological disorders such as Parkinson's."

Source: University of Gothenburg ([news](#) : [web](#))

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