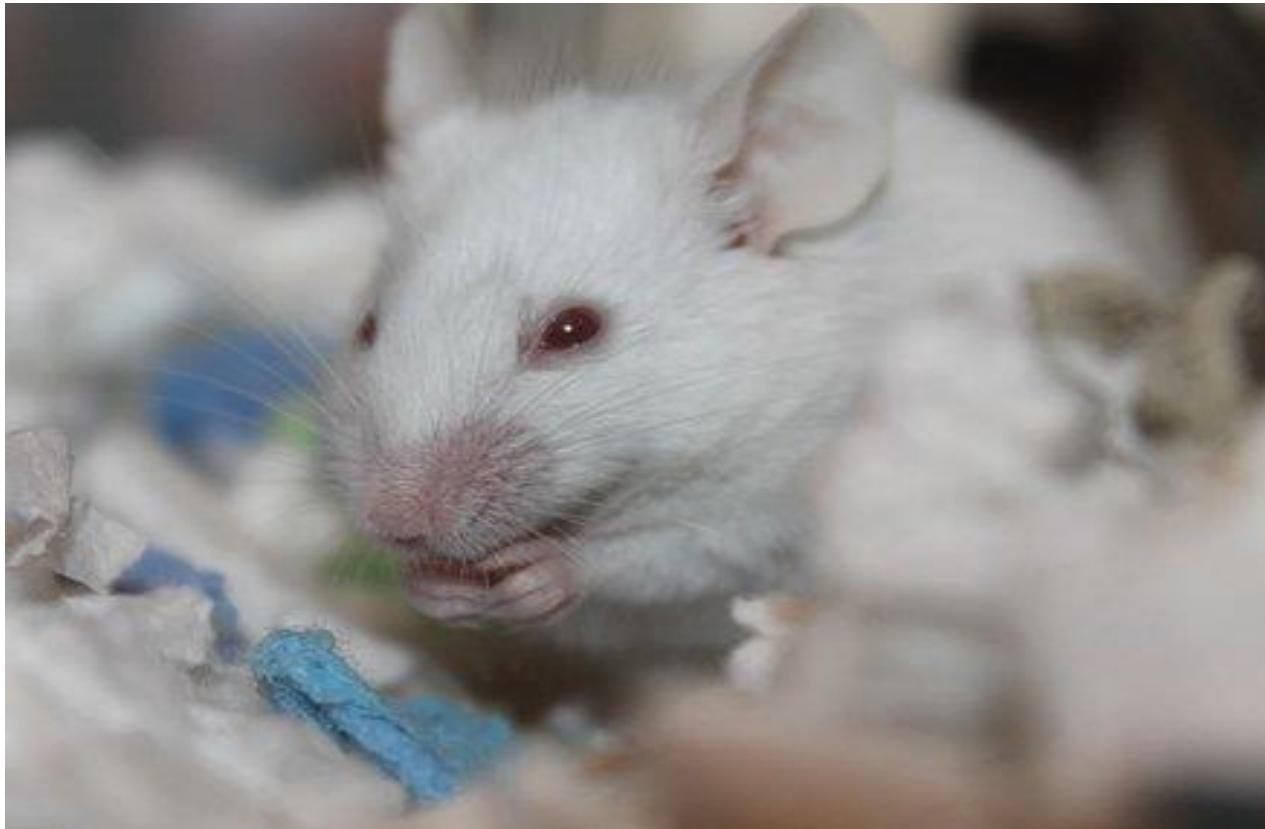


Blowing hot and cold: how does temperature affect tumours in mice?

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Should lab mice be kept in warmer temperatures to reduce the growth of tumours?
Image from pixabay

One of the stages of **clinical** trials in medical research involves testing on animals. One of the most common animals used in these tests are mice, because they are small and can reproduce quickly. Normally, mice in clinical laboratories are kept at room temperature (between 20 and 25 °C), and like humans, they can keep their body temperature constant.

Scientists at the Roswell Park Cancer Institute in Buffalo, New York have done research that may suggest this is not the **ideal** temperature, because cancerous tumours seem to grow faster when it is cooler.

The researchers kept two groups of mice in rooms of different temperatures: one at 22.5 °C and the other at 30.5 °C. The lead researcher, Elizabeth Repasky, presented the results that showed the mice kept in the warmer room did not develop as many tumours. The tumours that did develop also grew more slowly and were less likely to metastasise (spread) around the body.



The researchers suggested that the results were caused by the lower temperature affecting the immune systems of the mice. The immune system and its white blood cells are responsible for detecting harmful or damaged cells and destroying them. Blood tests on the mice showed that the mice kept in the cooler room had fewer of these white blood cells around their tumours, which allowed them to grow and spread more.

So could these results mean anything for cancer treatment or **prevention** in humans? They can certainly provide clues for how humans may respond to different things, but mice and humans still have many differences. The bigger problem is that cancer treatments that have already been tested on mice at colder temperatures may work more or less effectively than first thought. As always with scientific experiments, more results are needed to either support or **refute** the hypothesis that keeping organisms warmer may reduce the likelihood of cancerous tumours growing or spreading.

Answer the following questions in full sentences:

1. What is this news story about?

2. What was the independent variable in this investigation?

3. What evidence did the researchers find that suggested warmer conditions are better for cancer treatment?

4. What effect could these findings have on other cancer treatment research projects?

5. Write down the meanings of any words **in bold** in the article.
