

Map reveals cancer hotspots

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(Medical Xpress) -- A new technique is helping researchers to pinpoint genetic information that contributes to cancer development.

A research team, led by Professor Thomas Preiss from the John Curtin School of Medical Research at The Australian National University, has used a new [mapping technique](#) to reveal tell-tale “sign posts” in DNA’s lesser-known relative, RNA – ribonucleic acid.

“RNA acts as a messenger, carrying [genetic information](#) to the parts of the cell in which proteins are made. Enzymes in the cell can modify RNA, leaving ‘sign posts’, known as m5C sites,” Professor Preiss said.

“The enzymes that modify RNA have proven connections to cancer and stem cell biology. Understanding the patterns of these modifications will help cancer researchers focus their attention on the contribution that RNA makes to [cancer](#).”

In the study, researchers comprehensively mapped these modifications in RNA for the first time, identifying over ten thousand new sites. They found that the sites were much more prevalent than previously thought and were systematic, rather than random, occurring near genetic landmarks.

The research team comprised members from the John Curtin School of Medical Research (JCSMR) at The Australian National University and the Victor Chang Cardiac Research Institute in Sydney. The research is published this month in the journal *Nucleic Acids Research*.

Provided by Australian National University

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