

[illegible]

The molecular details of how these viruses self-assemble protective protein containers around their cognate genomes in a specific and

efficient manner have been revealed and illustrate multiple contacts between coat proteins and dispersed packaging signals in the viral genome.

Professor Peter Stockley, who led the Biotechnology and Biological Sciences Research Council (BBSRC) funded investigation at the Astbury Centre for Structural Molecular Biology, University of Leeds said: "If you think of this as molecular warfare, these are the encrypted signals that allow a virus to deploy itself effectively. Now, for this whole class of viruses, we have found the 'Enigma machine' - the coding system that was hiding these signals from us. We have shown that not only can we read these messages but we can jam them and stop the virus' deployment."

The next step will be to widen the study into animal [viruses](#). The researchers believe that their combination of single-molecule fluorescence spectroscopy detection and their computational models offers a novel route for drug discovery.

Further funding to explore these aspects has been secured from the BBSRC in a new three-year investigation entitled "Testing novel anti-viral strategies in plants".

More information: N. Patel et al. 'Revealing the density of encoded functions in a viral RNA' is published online at *Proceedings of the National Academy of Sciences (PNAS)*

www.pnas.org/content/112/7/2227.abstract

Provided by University of Hertfordshire

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