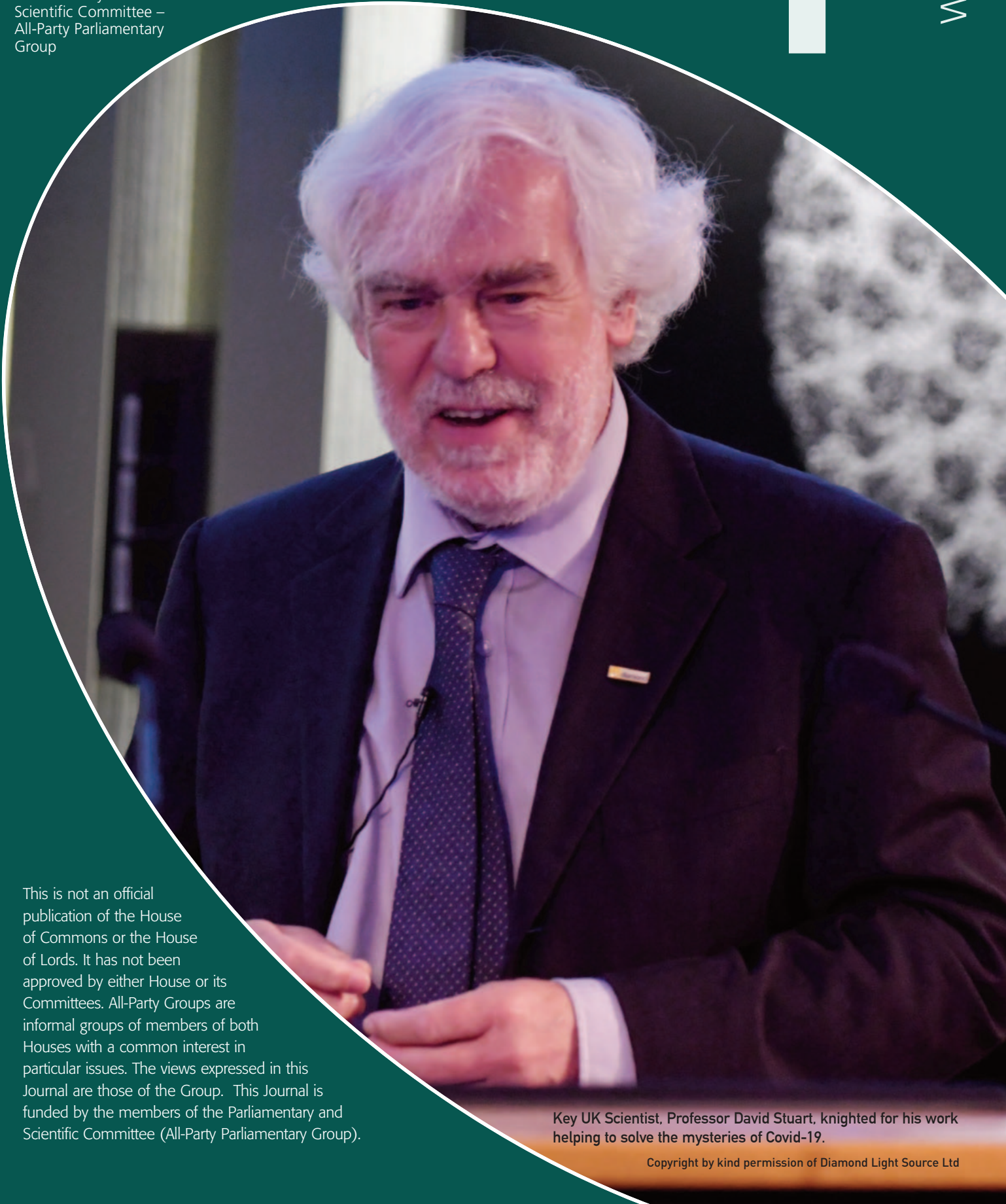




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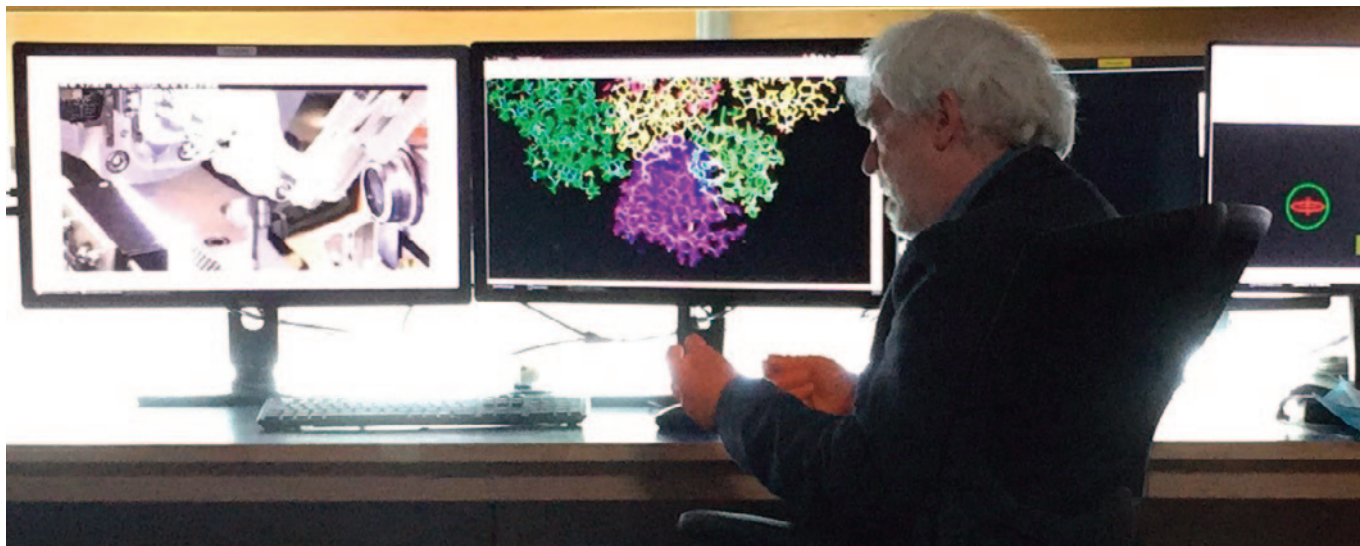
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Key UK Scientist, Professor David Stuart, knighted for his work helping to solve the mysteries of Covid-19.

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# KNIGHTHOOD FOR DIAMOND LIGHT SOURCE'S PROFESSOR DAVID STUART IN THE 2021 NEW YEAR'S HONOURS

The Award acknowledges David Stuart's work as one of the key responders to Covid-19 and his pivotal role is helping to map its inner workings.



Prof Sir David Stuart analysing Covid-19 structures on Diamond Light Source's 103 Beamline

Professor David Stuart FRS is MRC Professor of Structural Biology at the University of Oxford, and Head of the Division of Structural Biology at the Department of Clinical Medicine. He has also been Director of Life Sciences at Diamond since 2008.

He is a world leader in structural biology, distinguished by contributions to viral crystallography. Since his 1989 Foot-and-Mouth Disease Virus structure he has extended the complexity of known structures with several milestone determinations; notably of bluetongue virus core and PRD1 (the first structure of an enveloped virus), providing the bedrock for advances in understanding viral assembly, replication and infection. He is also an active research scientist at Oxford University (Joint head of Structural Biology) and he and his team were behind a lot of the breakthrough Ebola work and the FMDV and polio work. Professor Stuart's group have studied the structure of the Ebola virus and the effect of two drugs, toremifene and ibuprofen on the virus. The study was the first to solve the unligated structure of the Ebola virus glycoprotein and the results were published in Nature.

He has received many accolades and awards for his work over the years – until his Knighthood, the most recent was the prestigious Royal Society Gabor Medal in August 2020. This was awarded for his seminal contributions to understanding viruses (FMDV, Polio and Covid), their structure and application to vaccine design, driving the application of engineering and physical science to the life sciences, and driving interdisciplinary science.

His principal research interests are particularly focused on virus-receptor interactions, basic puzzles of virus assembly and studying virus evolution. His team are studying several viral proteins and enzymes which are potential drug targets and/or illuminate how viruses modulate host responses. For example, the immune modulators of pox viruses. Currently, Dave has been leading the scientific efforts and collaborative relationship between Diamond Light Source and the University of Oxford to develop methods for the production of viral proteins for drug screening and structural analysis, which can provide an atomic level of detail in understanding how anti-viral drugs can work against the SARS-CoV-2. This research helps to realise the potential to identify existing drugs that could be repurposed in the fight against COVID-19. Through Professor Stuart's leadership, Diamond has fostered a joint initiative with Exscientia, a leading AI driven drug discovery company, to accelerate the search for therapies.

On being awarded his knighthood, Sir David said *"I am deeply honoured by this recognition. I have worked to understand the structure and function of pathogenic viruses for many years. This past year has been challenging for many all over the world, and I am amongst the large number of scientists who are trying to apply their knowledge and expertise to help fight this pandemic. I am grateful to all those around me, especially in Oxford University and Diamond Light Source, who have worked together tirelessly to understand, in particular, our antibody responses to SARS-CoV-2".*