



The Royal College of Pathologists

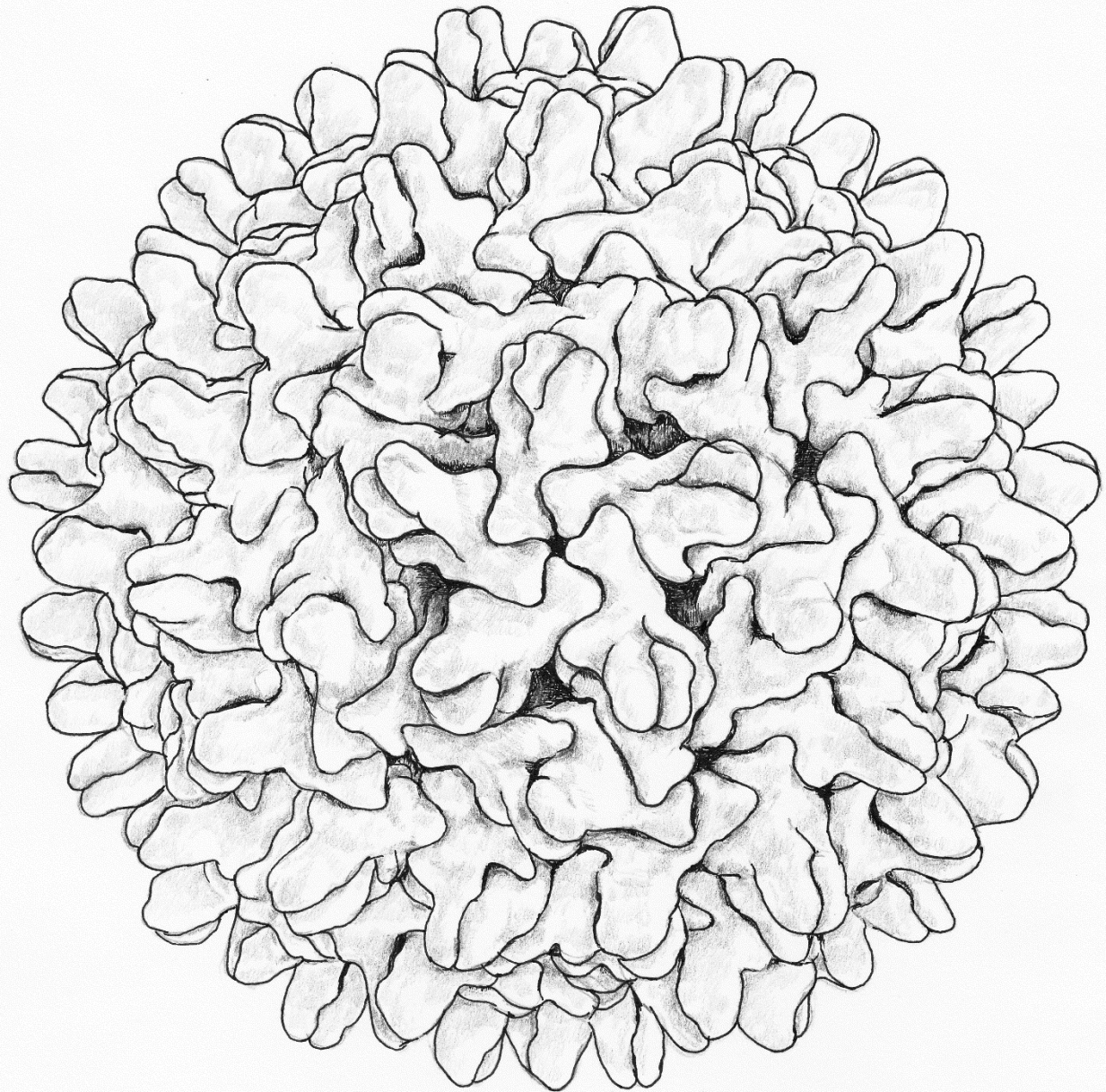
Pathology: the science behind the cure

Viral Art: Hepatitis B

We have all become profoundly aware of viruses; these tiny particles are surprisingly beautiful. Most viruses are harmless, but some can make us unwell. Through their outside spikes they can latch onto the surface of a cell, and enter their genetic information (DNA or RNA). This information contains instructions to make viruses to infect more cells. Normally our body can detect the take-over and send in white blood cells (T-cells) to destroy infected cells to get us back to health. Sometimes our body is unable to bring the infection under control and we need help. The best way to prevent a virus is through a vaccine which prepares our body through showing it a fragment of the virus, so if ever we caught the virus, our immune system (white blood cells) would be prepared.

This drawing depicts the outside surface of Hepatitis B which affects the liver. In terms of scale, over 2,000 Hepatitis B viruses would fit across the width of a human hair. This drawing is based on a computer model showing the outside (capsid) proteins which resembles a piece of modular Origami. *Add colour and reveal the patterns.*

Understanding viruses helps with developing vaccines and medicines against them. Pathologists study disease and help diagnose and suggest the best treatments. Read more about pathology: www.rcpath.org/discover-pathology



Drawings and writing: science-based artist ©Dr Lizzie Burns 2017
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