Understanding the virus

A virus is a bundle of RNA or DNA that very closely resembles another organisms RNA or DNA strands, Wrapped up in a sheath of protein to keep it together, and sometimes the sheath may be coated in lipids to protect it while outside the hosts body. This make-up tells us one thing, the a virus has no ribosomes which mean that it cannot produce proteins of its own, and it needs a host cell to produce the proteins needed to replicate itself. This is the very definition of a parasite, and that is the truth a virus is that it is a parasite that uses a hosts cells to replicate its-self.

Good news for viruses, bad news for anything non-virus as viruses can infect not only animal based organisms but anything that has cells that can reproduce, so bacteria, fungi, plants, and animals, are all susceptible to a viruses invasion.

Ok, so now we understand why a virus needs another organism… but now we need to know how it does it… Why do we get sick? Remember how I said a virus is a bundle of RNA or DNA… well it is kinda like code, or a recipe on how-to-make-another-virus. The virus punctures the cell wall of the first cell it encounters, once punctured it regurgitated all of its genetic material 'code' into the inside of the cell, which is close enough to the cells code that the cell starts to read this code rather than the cells existing code. Think of it like this, your in the kitchen making peach pie for your boss and then your kid swaps your peach pie recipe for banana bread recipe, and you not knowing this followed the directions and bam an hour later you have made what you think is peach pie… but it is really banana bread….. now replace peach pie with more healthy human cells and replace the banana bread with virus cells… and now you have a infected system full of virus cells that your body is now making instead of healthy cells! Talk about stealth mode!

New discoveries are advancing in the field of visual studies in understanding how these viruses are read by our ribosomes. This has everything to do with the 3D twisted shape of virus RNA or DNA forming pseudoknots in the strand. As this psuedoknot moves along the ribosome to be read the ribosomes gets stuck at the knot, and slips backward along the strand, effectually reading the 'code' backwards, this backward read code, is the actual false directions that instruct the cell to produce more viral cells rather than more health original cells. Also, the tighter the puesdoknot is the more times the ribosomes with 'slip' and read the code which etc time generates another viral cell, so the viruses with the digest puesdoknots are the viruses that are the quickest reproducing and this makes them the more virulent stands. This breakthrough in the structure of the virus has been a key finding, as understanding the Why and the How of the thing that is causing a problem, will often lead you to see ways around your problem. For instance if we could find a way to iron out, or even loosen the puesdoknots there would be no or at least less slipping and therefor no, or at least less backward read code, effecting weakening or even completely disarming the virus.

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By : Ann Simpson

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