

Coronaviruses are a group of related viruses that cause diseases in mammals and birds. In humans, coronaviruses cause respiratory tract infections that can range from mild to lethal.

Mild illnesses include some cases of the common cold (which has other possible causes, predominantly rhinoviruses), while more lethal varieties can cause SARS, MERS, and COVID-19.

Symptoms in other species vary in chickens, they cause an upper respiratory tract disease, while in cows and pigs they cause diarrhea. There are yet to be vaccines or antiviral drugs to prevent or treat human coronavirus infections.

Coronaviruses constitute the subfamily Orthocoronavirinae, in the family Coronaviridae, order Nidovirales, and realm Riboviria.

They are enveloped viruses with a positive-sense single-stranded RNA genome and a nucleocapsid of helical symmetry.

The genome size of coronaviruses ranges from approximately 26 to 32 kilobases, one of the largest among RNA viruses.

They have characteristic club-shaped spikes that project from their surface, which in electron micrographs create an image reminiscent of the solar corona from which their name derives.