

Hundreds of novel coronaviruses likely lurking in animal species around the world

[New research] identifies hundreds of animal species that may become infected with known coronaviruses, although many of these infections haven't been observed in the wild yet.

Coronaviruses make up a large family of viruses that can infect both birds and mammals; SARS-CoV-2, the virus that causes COVID-19, is just one member of the coronavirus family. [For the research](#), the team drew the genetic sequences of 411 coronaviruses from GenBank, a National Institutes of Health database, and screened these sequences using a computer algorithm.

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Animals that can serve as hosts for many coronaviruses present the biggest threat; when several coronavirus strains invade the same cell, their genes can be mixed and matched as they replicate, thus generating new, patchwork [viruses](#).

This [genetic](#) card shuffle, known as "recombination," could be especially dangerous if SARS-CoV-2 swapped genes with another coronavirus, the authors wrote. That's because the resulting virus could potentially be as infectious to humans as SARS-CoV-2 but could perhaps invade additional tissues or cause more severe disease.

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[T]he "most prominent result for a SARS-CoV-2 recombination host is the domestic [pig](#) (*Sus scrofa*)," predicted to harbor 121 coronaviruses in addition to SARS-CoV-2, the authors wrote. "Given the large number of coronaviruses our framework predicts the pig can be infected with, we would suggest monitoring of pigs in 'high-risk' [living conditions]."

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