Study discovers how bacteria, viruses and fungi cause lung infection

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NTU Lee Kong Chian School of Medicine's (LKCMedicine) Asst Prof Sanjay Chotirmall. - Photo courtesy of NTU Singapore.

PETALING JAYA: A study by the Nanyang Technological University (NTU) of Singapore has shown that bacteria, viruses and fungi work as a network in causing lung infection.

Traditionally, an infection is thought to happen when microbes – bacteria, fungi, or viruses – enter and multiply in the body, and its severity is associated with how prevalent the microbes are in the body.

However, an international research team led by NTU has proposed a new way of understanding infections.

Their study of close to 400 respiratory samples from patients with bronchiectasis (a chronic lung condition) has shown that microbes in the body exist as a network, and that an infection's severity could be a result of "negative interactions" between these microbes – when the microbes compete rather than cooperate with one another.

These findings, published in one of the world's leading scientific journals Nature Medicine in April, bring the scientists one step closer to developing a new way of tackling infections, by targeting microbial interactions rather than the specific microbes.

While the study looked at patients with lung infections, the researchers believe that this holistic view of how infections occur applies to all forms of infection, and could pave the way for fresh ways to treat these infections.