# Exploring the Role of Indoor Microbiome in Promoting Human Health



Researchers and experts are exploring the concept of a healthy indoor microbiome as a means to enhance human health, analogous to the human body's microbiome. Sarah Haines, an assistant professor in the department of civil & mineral engineering at Toronto University, has contributed to research suggesting that a balanced microbiome in buildings could improve wellbeing. Her interest in how built environments affect health originated from her grandmother’s respiratory issues.

The idea is not only theoretical but also practical, with initiatives like using probiotic-infused materials in building construction and probiotic-based cleaning products in hospitals. These innovations aim to establish a beneficial microbial environment that can combat harmful pathogens and potentially reduce the risk of infections.

For instance, during a study at a children's hospital in Italy, researchers replaced chemical disinfectants with a probiotic-based sanitizer. The result was a significant reduction in pathogens on surfaces and a decrease in hospital-acquired infections.

However, concerns arise regarding the potential risks of widespread probiotic use, especially for immune-compromised individuals, as noted by Jean-Yves Maillard, a professor of pharmaceutical microbiology at Cardiff University.

In terms of practical home management, Dr. Haines advises against certain conventional practices like using carpeting and potting soil for indoor plants, which may harbor harmful fungi and bacteria. Instead, she supports alternate methods such as water-based plant cultivation to minimize health risks from mold.

This research area continues to develop, with ongoing studies and experiments aiming to further understand and optimize the indoor microbiome for better health outcomes.