Edible Confections to Reduce Cough- or Sneeze-Induced Pathogen Transmission

Consequently, the innovative UCF composition provides a way to control transmission directly from the source: saliva. When consumed as part of confections (such as lozenges, cough drops and candy) and medicine, the composition can alter the fluid properties in a person's saliva to mitigate droplet breakup. The change results in larger droplets that travel shorter distances before falling to the ground. Thus, the formulated confections disrupt the airborne transmission of pathogens by reducing the aerosols formed during human respiratory functions.

Technical Details

The UCF invention is a composition of edible ingredients that can be used in the formulation of products such as lozenges, cough drops, gum, candy or medicines. The composition changes the fluid properties (viscosity, density, surface tension) of a person's saliva to reduce the formation of aerosol droplets in human respiratory functions and to decrease the flow speed and transmission of airborne pathogens.

Abstract

Researchers at the University of Central Florida have developed a composition of edible ingredients that may reduce the transmissibility of airborne pathogens from person to person. Airborne-transmitted pathogens often spread through close contact between humans via respiratory functions. This includes sneezing, coughing, talking and breathing. For example, coughing causes a person to expel pathogen-laden, fine-scale saliva droplets (aerosols) into the air. People near the person may then inhale the droplets suspended in the air. Though cloth face masks and social distancing are helping to reduce the spread of pathogens such as SARS-CoV-2 (which causes the COVID-19 disease), fine respiratory particles may still linger in the air and infect another person nearby.

Partnering Opportunity

The research team is looking for partners to develop the technology further for commercialization.
Benefits

• Reduces the transmission of airborne pathogens
• Edible and non-toxic

Applications

• Confections (such as lozenges, gum and candy)
• Medicine

Technology #34433

• US Patent Pending

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