Novel face mask technologies can help control Covid-19's viral transmission

Leading scientific experts from the Massachusetts Institute of Technology and MilliporeSigma are helping to spread the word on data-driven facts about the effectiveness of face masks amid the Covid-19 pandemic.

"The idea that we're all going to be able get through this together, that we can work together as a community and really protect each other is a really valuable message," said David Sun Kong, director of the Community Biotechnology Initiative at MIT Media Lab.

Three experts held a virtual conversation that covered the various types of face masks, proper decontamination methods for re-use, and how to improve face mask testing for both healthcare and public use.

"One of the things [scientists] believe is necessary for the next generation of masks are those that are specifically designed with the ability to test against virus," said David Beattie, head of bioprocessing R&D at MilliporeSigma.

Beattie discussed novel technologies, like copper coatings and light-activated dyes, that can increase effectiveness and help deliver more masks with technology comparable to an N95 mask.

As the world gets back to work and school, the question has been how face masks provide protection and at what level. A recent study from WHO reinforces what pandemic experts around the world have already said: surgical face masks could prevent transmission of seasonal coronaviruses and influenza viruses in symptomatic individuals. Another study from the University of Cambridge found that homemade masks made from mixed materials could be as effective as N95 respirators and surgical masks.

"These studies show that, without a doubt, masks reduce viral transmission to the wearer," said Jill Crittenden, research scientist at MIT. She added that wearing a mask "doesn't only protect you from breathing virus out . . . but reduces the number of particles that you breathe in, as well."

To accelerate further data-driven insights and innovative solutions, the group is launching the Pandemic Response CoLab, a new initiative for which MilliporeSigma is a founding partner of the platform operated by MIT's Center for Collective Intelligence and MIT Media Lab's Community Biotechnology Initiative.

This open science, crowd-sourcing effort aims to provide stronger knowledge-sharing and multi-discipline collaboration on the technical challenges associated with the Covid-19 and to help prepare global infrastructure for future pandemics. The global

scientific community is encouraged to join the conversation at www.PandemicResponseCoLab.org.

B-roll and soundbites:
https://link.videoplatform.limelight.com/media/?mediaId=ac0f9a42194d48a4ac8d6c1a56789813&width=540&height=321&playerForm=LVPPlayer&embedMode=html&htmlPlayerFilename=limelightjs-player.js

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