COVID-19 has changed all of our lives, and presented new diagnostic needs and opportunities. Social distancing, sheltering in place, face coverings, and universal concerns over contracting COVID-19, have meant that previous diagnostic test modalities may no longer be optimal. There is an increasing need, and also a concomitant array of new opportunities, for simple and rapid testing for COVID-19. In the near future, simplifying and increasing access to COVID-19 testing could become the new medical imperative and would also lay a foundation for addressing testing needs in future pandemics.

Breath analysis (volutolomics) may provide a viable technology for rapid COVID-19 testing. As part of our current awareness initiative, the WG on Volatolomics, has assembled the recent breath analysis literature (up to 8/2020) that is focused on COVID testing or testing for COVID-related diseases. Breath analysis methods being evaluated include proton transfer reaction mass spectrometer-based detection, gas chromatography-ion mobility spectrometry, and PCR.

Clinical trials


Diagnostic methods


