

The pandemic response superMind Fact Sheet

What is the Pandemic Response Supermind?

Stemming from a collaboration between MilliporeSigma, MIT's Center for Collective Intelligence (CCI) and MIT Media Lab's Community Biotechnology Initiative (CBI), the Pandemic Response Supermind's body of work represents six months of global collaboration and expert synthesis, applying an accelerated methodology to identify solutions amid the urgency of a pandemic.

- **The Activation:** During an invite-only curation exercise that ran from May 18 to June 5 of 2020, 180 global thought leaders convened using MIT CCI's software platform and methodology to address a central challenge question aimed at problem solving the Covid-19 pandemic.
- **The Report:** Synthesizing the results of this exercise, a comprehensive report of data-driven insights and outlined solutions for pandemic response was published in installments from June to November of 2020.

What question did the Pandemic Response Supermind set out to answer?

How can we develop pandemic resilience – the ability for society to recover quickly from global disease outbreaks – both in resolving the current COVID-19 pandemic and in building the public health and other infrastructure to prepare for future pandemics?

Key findings:

- **Viral Transmission Control:** The Supermind emphasized the need to implement a deep knowledge of viral spread into the development of effective countermeasures. Novel designs for face masks could increase efficacy and practicality by coating masks with gels or other materials with anti-viral properties or incorporating biosensors into designs.
- **Diagnostics and Monitoring:** One tactic playing out in the COVID-19 response is leveraging wastewater epidemiology to detect and prevent viral spread in communities (like college campuses). To advance this, the Supermind proposes a sewage monitoring program that could establish a baseline against which novel pandemic zoonosis could be detected.
- **Therapies and Vaccines:** The Supermind suggests accelerating clinical trial processes by implementing real-world trials and Bayesian Statistics in parallel with the traditional Randomized Clinical Trial approach. This combination could enable broad data collection and ensure adequate representation from minority communities.

- **Validating, Sharing and Communicating Scientific Insights:** The Supermind highlights incentivizing rapid reproduction of critical research during a pandemic, noting that open science plays an important role in enabling data-sharing across institutions and removing competitive barriers to accelerate development processes.
- **Pandemic Preparedness:** The Supermind repeatedly emphasizes building equity considerations into all pandemic research funding and implementation to include, protect and empower marginalized and vulnerable communities. Community mobilization and education should be participatory at the grass-roots level and engage with trusted local leaders to effectively implement policies, programs and resources.

Statistics at-a-glance:

- **Total participants:** 180
- **Total contributions:** 243
- **Participants by sector:**
 - 39% academia (biology/health/epidemiology/virology)
 - 27% biotech/pharma
 - 18% business/tech
 - 8% academia (non-health related)
 - 6% others
 - 2% health professional
- **Most impactful and feasible contribution groups for the present pandemic (by expert vote):**
 - 80+ votes: strategies for rapidly testing vaccine safety and efficacy
 - 70+ votes: creating resilient supply chains
 - 50+ votes: COVID-19 scientific literacy for the public
 - 50+ votes: our digital lives: the next frontier for data collection and contact tracing
 - 40+ votes: battle pandemic with diagnostics and monitoring data

For more information:

The Pandemic Response Supermind Activation and Report demonstrates the power of collective intelligence in identifying the most feasible, impactful solutions to fight COVID-19 and better prepare public health infrastructure for future pandemics. This body of work now informs public exercises on the Pandemic Response CoLab, an open platform from MIT CCI and CBI. MilliporeSigma is a founding member of the online community, which taps into the broader community to actively bring solutions forward, faster. The winning ideas for transmission control have already been announced, and more innovative proposals are underway at www.PandemicResponseCoLab.org.