

Biobot Analytics files protest against CDC issuing wastewater surveillance contract to Verily

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27 October 2023

On Friday, Biobot Analytics resumed publishing data on levels of SARS-CoV-2 in US wastewater. In mid-September, the Centers for Disease Control and Prevention (CDC) abruptly ended their long-standing contract with the Massachusetts-based company, which had been instrumental in transforming the national public health agency's national wastewater surveillance program during the COVID-19 pandemic.

The contract bid went to Verily, a life sciences research company owned by Alphabet, also the parent company of Google. Verily utilizes the Stanford University-based WastewaterSCAN in partnership with Emory University, whose national expansion was funded by the Sergey Brin Family Foundation and Bloomberg philanthropies. Multi-billionaire Sergey Brin is a co-founder of Google and has a significant financial interest in seeing his company flourish.

According to *Politico*, Verily's bid for the contract was accepted outright by the CDC, which will pay the company \$38 million over five years. Biobot's most recent contract with the CDC was for \$31 million over less than 18 months, or nearly three-fold higher. The funding provided through various foundations means Verily could easily underbid any other contract proposition. An epidemiologist familiar with these proceedings who asked not to be named remarked, "The CDC must be dumping something for a bid that low."

Although CDC Director Mandy Cohen has declined to comment on why the bid went to Verily, given the potential financialization of wastewater data, it is clear that Verily was more than eager to obtain the contract and has the monetary resources to weather a deficit. The science of wastewater monitoring has advanced considerably during the pandemic, and wastewater can now be used to track not just infectious viral agents in real time, but almost any molecule flushed into the sewers across the country.

The most important issue at play is the financialization of public health in the US through these private-public enterprises, whereby critical information disease outbreak,

the opioid crisis, and the population's general health indices can be accumulated and monopolized by giant conglomerates like Alphabet. This has significant implications for insurance companies, federal agencies, surveillance of the population, and more.

What has clearly emerged from handing the keys to Verily is the sudden deleterious impact in being able to track SARS-CoV-2, the virus that causes COVID-19. With contact tracing and data reporting essentially abandoned by the CDC and home-self testing on decline, the data which were being published by Biobot provided the only clear perspective on the state of the pandemic over the past summer. Since the beginning of October, the country was suddenly flying blind as to the real situation.

David Larsen, chair of the public health department at Syracuse University and wastewater researcher, told the *World Socialist Web Site* that there are potential ethical issues at play if Verily has unlimited and unsupervised access to wastewater data and tests they decide to run. Clearly, the large underbidding begs the question, what is Verily getting in turn? However, the terms of the contract have not been disclosed.

Larsen also explained that wastewater data from Biobot have been well correlated to clinical rates of COVID-19 infection in the US. Shifting to using WastewaterSCAN data also means "loss of historical comparability." The implication here is that case estimates will be harder to discern if the historic data is not folded into Verily's analysis. Over time, these will stabilize but as the country enters the winter wave of infections, this could be problematic in providing the public with a clear assessment. In a statement to *Politico*, Larsen noted, "It's not ideal to change methods."

However, Biobot has filed a protest stalling the transition for the management of the national wastewater surveillance by Verily. Neither they nor the CDC has issued a statement on the ongoing legal proceedings, but as another

epidemiologist told *Politico*, “The existing gap in wastewater data will continue for possibly several months as we head into flu season and another COVID surge.”

What emerges from the resumption of Biobot’s analysis on Friday is that the decline in the most recent COVID wave that began in late-June has stalled across every region of the country at high levels of viral transmission. In early October, scientist Mike Hoerger, the founding director of Louisiana’s HealthPsych, estimated that by the end of October transmission rates would be upwards of 745,000 cases per day.

In conjunction with these estimates of viral transmission, COVID-19 hospitalization rates in the US have also stalled at more than 16,000 admissions per week for the week ending October 21. Infectious disease modelers and experts have been forecasting that cases will begin turning upwards in November in conjunction with colder weather and the holiday travel season.

COVID-19 deaths, a lagging indicator, reached 1,339 for the week ending September 30. In other words, around 190 people are dying each day from COVID-19, predominately the elderly and immunocompromised, a trend that will likely hold throughout October once data begin to be compiled and published.

Experts are concerned about the upcoming fall-winter surge, driven by new variants that continue to evolve at a rapid clip.

Currently, the Omicron HV.1 subvariant accounts for more than 25 percent of the various Omicron progenies circulating across the US. It is a mutation of the EG.5 (Eris) lineage of the XBB.1.5 family. However, another subvariant called JN.1, whose phylogenetic parent is BA.2.86 (Pirola), has caught the attention of variant trackers. It was first identified in Luxembourg in late August and then in England, France and the US.

Compared to the XBB.1.5 and HV.1 strains, JN.1 contains 41 additional unique mutations, and most are located on its spike protein. This will likely give it higher infectivity and immune evasion. Investigators believe that it is possibly a recombinant of BA.2 and later XBB lineages, according to scientist William A. Haseltine writing for *Forbes*.

Haseltine notes, “What catches my attention about JN.1 is not the reemerging mutations from earlier variants but the novelty of select mutations in the spike protein. Several of these mutations have only been sequenced a few thousand times from a database of over 16 million samples throughout the pandemic. None, however, as unique to JN.1.”

Alarming, Haseltine also notes there are several mutations outside of the virus’ spike region that can significantly affect its “pathogenicity and spread.” In particular, he underscores six mutations to NSP3, an active

protein in the virus involved in RNA binding and other processes. Though the exact nature of the mutation needs to be discerned, he believes these may enhance efficiency mechanisms that are leading to a “more functional and pathogenetic virus.”

Haseltine concludes:

There are several explanations for the mutations within and particularly outside of the spike protein. The first is adaptation to more aggressive infectivity. The second is to escape from neutralizing antibodies. The third is adaptation to more efficient post-infection pathogenesis, including replication aided by mutations in the N protein. The fourth is immune evasion from T cell recognition.

As winter begins across the Northern hemisphere, federal officials have reported only about 7 percent of US adults and 2 percent of children have received the latest iteration of the COVID booster shots. These have much to do with the commercialization of the life-saving treatments and persistent attempts by government officials to downplay the ongoing threat posed by COVID-19.

It is precisely now, as the country heads into winter, that the ability to track the virus in real-time is most critical. Only through a concerted effort to provide information on the spread of the virus will it be possible to implement measures to stop this spread, but American and world capitalism have proven to be totally indifferent to this ongoing public health imperative.



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