

Leading Brazilian neuroscientist Dr. Miguel Nicolelis denounces school reopenings, advocating global strategy to eradicate COVID-19

Our reporters
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The World Socialist Web Site interviewed Brazilian physician and neuroscientist Dr. Miguel Nicolelis on Monday, September 27. Dr. Nicolelis was until earlier this year a full professor in the Department of Neurobiology at Duke University and is world-renowned for his pioneering research on the brain.

At the beginning of the COVID-19 pandemic, Dr. Nicolelis volunteered to coordinate the Scientific Committee advising the Northeast Consortium, composed of nine Brazilian state governments ruled by the Workers Party (PT) and its allies. He abandoned this post in February of this year, after his insistent warnings of the imminence of a second catastrophic wave of COVID-19 were ignored by these so-called “progressive” governors. In line with Brazil’s fascist President Jair Bolsonaro, they insisted on a criminal policy of reopening economic activities that resulted in massive death.

Over the past months, Dr. Nicolelis has given numerous interviews to the Brazilian and international press striving to raise popular awareness of the grave threats posed by the uncontrolled spread of the coronavirus. For doing so, Dr. Nicolelis is facing harassment and threats, he told the WSWS.

WSWS: We would like to thank you for accepting our invitation. We are teachers, part of the Rank-and-File Committee for Safe Education in Brazil (CBES-BR), which is an initiative of the *World Socialist Web Site*. We are striving to establish a network of rank-and-file committees around the world for the global eradication of the COVID-19 pandemic.

What has happened to the global strategy to combat the pandemic? How did it go from something so obvious to scientists, doctors and public health officials, to a “utopia?” Is it acceptable to advocate that we must live with such an infectious and lethal virus?

Miguel Nicolelis: I have been saying, since the beginning of the pandemic, that trying to fight a collective organism like a virus—whose survival as a species depends on collective action, not on one viral particle, but on the coordination of an explosive number of particles—trying to fight a collective organism through individual attitudes has not the slightest chance of working out.

I coined this phrase when I started working at the Northeast Scientific Committee, when I was still naive enough to think that there were politicians who would believe in science and do what must be done. This naivety of mine lasted a year. In February of this year, I quit after realizing I was working 20 hours a day voluntarily and nobody wanted to hear about the pandemic. Even though we had known since November, when we gave our first big warning, that the second wave in Brazil would be explosive, because these same politicians refused to postpone the elections [for mayors, held in October 2020]. The electoral campaigns and

the reopenings after the first wave resulted in a potential effect, a viral potential energy, that exploded in February and was the greatest tragedy in Brazilian history.

When politics clashes with biology, biology always wins by a landslide. In the few places, like New Zealand, where the government from the beginning decreed that it would eradicate the virus, it succeeded. When a community policy was adopted, victory came. Because science today is much better prepared than it was, for example, during the influenza pandemic, when people didn’t even know it was a virus and there wasn’t enough technology to develop vaccines as quickly as there is now.

In the countries that tried to clash with the pandemic, even big countries like the United States and Britain, it was a catastrophe. The UK bet on the insanity of Prime Minister Boris Johnson and two scientists—two madmen in fact—who were convinced that this “herd immunity” was possible. It is not. And people have died in Britain at an unbelievable rate per capita, if you consider that their health care system is one of the best in the world. Or it was, not anymore.

In the United States, it was the same thing. And, now we can say, it happens whether it’s the Republicans or the Democrats. Joe Biden went and decreed “victory.” The CDC lifted mask mandates, a decision that was perhaps the biggest catastrophe in the CDC’s history. And it has turned out like this: more people have died in the United States than in the 1918 pandemic.

In Brazil it was a case of every man for himself. In the first wave, despite the great loss, we managed to flatten the curve with social isolation and some regional lockdowns, especially in the Northeast where, at that moment, the governors were so terrified that they listened to us. But after their electoral agenda was resolved, and that’s what apparently they were interested in, they stopped doing so. Because in the second wave they did nothing.

In March and April of this year we lost 190,000 people monthly in Brazil from all causes. Before the pandemic, the monthly average of deaths in the country was 90,000 to 100,000. That is, we basically doubled the number of deaths per month in the second wave of the pandemic. The second wave itself—those 60 to 90 days, from the beginning of March to the end of May—will go down as the greatest catastrophe in Brazilian history.

The number of deaths in Brazil started to drop in June, but it went to 165,000 and stayed there in July. It dropped to 145,000 in August and only now, in September, are we having a respite. Why is this? When you have a mega peak, as we had in March and April, still with the Gamma variant, the variant runs out of susceptible people. But by the end of May, the Delta variant arrived in Brazil. In the United States, which is

comparable to Brazil in terms of territory, Delta took three months to explode. And that is exactly what is happening in Brazil. We had a peak of Gamma; Gamma had nowhere to run, because it infected a lot of people; infections fell, but now this trend is reversing itself.

The under-reporting in Brazil has started to reach absurd levels. We recently had 150,000 infections in a single day, out of the blue. The next day, we had a negative number of minus 2,000 infections, which doesn't make any sense. International organizations released a note saying that they don't trust what's happening with data here. Something that very few people are paying attention to is the number of deaths. Cases started to drop in Brazil, but the number of deaths is still between 600 and 800. Therefore, much less testing is occurring. Data is being repressed.

Only yesterday, Brazil reached 40 percent of people vaccinated with the two shots. And 40 percent is just not enough. As the UK has shown: if you have 66 percent of the population vaccinated, you will have 40,000 infections a day, but 200 deaths, and hospitalizations decreased. The US has shown that with 55 percent of people vaccinated, you will have, as they had last week, 250,000 cases and 3,000 deaths once more.

My biggest fear is that we allow Delta to explode, and it may not be as serious as the second wave was, but we are going to create a new Brazilian variant, a Gamma Plus, or a Delta Plus Brazil. Because we are going to have between 100,000 and 200,000 infections a day. These 34,000 infections that we are seeing, in my opinion, are three to four times underreported. The deaths are at least 30 percent underreported. We have probably reached 800,000 deaths in Brazil since the beginning of the pandemic.

But suddenly everybody has embarked on this fantasy that the pandemic is over, or it is under control. It is not under control. Fiocruz's [the Brazilian public health institution] reports are themselves kind of terrifying, because they say that "everything is getting better," but then they show the map and the transmission rate in the whole country is, with very rare exceptions, epidemic. So, to answer your question, there seems to be a mutual interest of the public administrators, the institutions that rule the world economy—especially here, where we are the third tier of the world financial system—and even the media in saying that the pandemic is under control or is ending.

But there are variants occurring around the world because we have abandoned a global strategy. The United States has become a hotbed of variants. Any country that has more than 100,000 infections a day is a breeding ground for mutations. We are helping the virus to preserve itself by not having a global proposal along the lines of New Zealand's. And what is behind this, obviously, are economic interests and administrators who are not prepared for the 21st century.

In Brazil, I am known as progressive, left-wing figure, and I must say that everyone failed the pandemic test. All Brazilian political tendencies behaved below the level of mediocrity. Nobody said: "The pandemic is the priority, keeping people fed and alive is our priority, forget about the rest." And when scientists, like me, from below tried to tell these people, "Look, we have an idea of what to do," they responded, "Oh, no. We can't have a lockdown in Brazil, the effects are too bad, the governors don't want it."

WSWS: Could you speak about the study you recently published in *Nature Scientific Reports*?

MN: It was a study done with some colleagues who were volunteering to help the Northeast Scientific Committee. But it was not done within the Committee. We didn't receive any support to produce science. The British scientific committee ran on a budget of one million pounds a day. It is the largest scientific committee in the world at the moment, the SAGE (Scientific Advisory Group for Emergencies). We were running on zero! Think about that. You are advising nine states which together are like the United Kingdom in population and area.

But in this study, our work was to track the spread of the virus, how it

spread. And we were shocked. When the virus arrived here last year, São Paulo was the biggest super-spreader city in Brazil, and maybe in the world. In the first three weeks of March 2020, it spread 85 percent of the cases. São Paulo has the biggest international airport in Brazil, and it was carnival; a lot of people arrived, and it has the biggest road hub in the country. We mapped out what we called the "highways of death" in Brazil. And we have isolated 21 federal highways that were responsible for 30 percent of the cases. It is an incredible statistic.

And then we researched why the distribution of deaths throughout Brazil was not homogeneous, but completely biased towards the Brazilian coast. We found an explosive correlation with the distribution of ICU beds, which is totally centralized in the big cities in Brazil. The distribution of deaths and ICU beds coincide in a correlation above 90 percent, showing that, despite everything, the inequality of high complexity medical resources throughout the country killed a lot of people. Because many of them arrived in the capital already dying, or about to die.

WSWS: Is it possible to make an analogy between what happened to São Paulo, as the spreading center of the pandemic in Brazil, with the schools? The schools as being spreaders, vectors?

MN: It would be very interesting to do another study using schools from different states, the same analysis we did for airports and road hubs. Because I'm pretty sure we're going to find super-spreader schools or state school systems.

I used the following argument at the beginning of the Northeast Scientific Committee, which helped a lot. In South Korea, which was the country that best tracked cases in the world, they showed that an elementary school excursion, with about 50 students, was the biggest super-spreader event in the country in that period. They went to the beach, spent eight hours there, and two hours in a closed bus with an asymptomatic child transmitting. Teachers, staff, families—they had to shut everything down.

The southern United States is now having record pediatric ICU admissions. The US has never seen anything like it. Texas, Florida, Alabama, Louisiana, Mississippi, Missouri, all are having pediatric ICUs at full capacity. And more than that, they are detecting cases of chronic COVID in children. Which shows that, as I said before, this is a virus you don't want to catch.

The fact that 90 percent of the people will be asymptomatic with their first infection doesn't mean that it is okay to catch this virus. No, because 20 to 30 percent of those who don't even know they have COVID, because they have no symptoms, will have chronic [long] COVID. And chronic COVID attacks any organ in the body: nervous system, heart, lung, intestine, glands. We are seeing cases of diabetes from chronic COVID. It is a scary thing. It attacks the cells of the pancreas.

So, when you talk about schools reopening with teachers who are not yet vaccinated, with children who are not even close to getting the first dose of the vaccine, it is the Colosseum method all over again. You throw them in the Colosseum and see who the lions eat and who they miss.

WSWS: Some of the chronic COVID symptoms are neurological. There are studies, for example, that say there is a significant loss of IQ and gray matter in people who have had COVID-19. Can you talk about that as a neuroscientist?

MN: I saw this very early on because, obviously, neurology is my field. My colleagues in the United States said, "we threw the coronavirus into neuron culture and it was devastating." And not only that, the blood vessels of the brain, brain capillaries are attacked in the same way as the capillaries of the heart or the lung. Because it is a vascular disease, it is not a typical respiratory virus. It is really a biological bomb.

People talk about loss of taste, smell. But you have also hearing damage, visual damage, and lots of strokes. And we began to see psychiatric disorders, people going into delirium, which shows a significant degree of neurological damage. At the beginning of the first wave, there were

several people who committed suicide by jumping out of hospital windows. In Bahia, in Salvador, there were at least three cases of patients who woke up in a delirium and simply jumped out the window. So, the neurological issue is very serious. And even more so when we talk about teenagers and children, who are still in a phase of neurological development.

WSWS: Would it be conceivable to bet on these damage not being permanent and let children become infected?

MN: You can't bet on it. Because you have people, for example, who had COVID last year and still haven't recovered their sense of taste and smell. The reports on strokes are really scary; there are widespread vascular lesions. It is the same thing that happens to the lungs—where we first discovered it—but now it is known to happen in every organ in the body.

Without knowing what this chronic COVID is, because we will have to wait years to see the consequences, you can't open schools. And we had some pediatricians coming to our committee last year saying, "but the kids are having cognitive distress." My argument was that of course they are, socialization is critical in childhood cognitive development. But between that and dying of COVID or having a disorder for the rest of your life, I would leave all my kids at home. I have three, they are all grown up, but if they were children, they would not go to school at all.

The cognitive disorder at this age is recoverable, there is time. The brain plasticity allows you to recover, because they have a lot of brain plasticity at this age. Assuming that the child already speaks—the critical period of speech is earlier, but this happens mainly in the family—it is possible to recover. So, saying that schools must be opened because children need to socialize ... If the price to be paid is to have children with a cognitive disorder, a neurological disorder, an intelligence disorder for the rest of his or her life, no. It is not an acceptable price to pay. And there has never been this debate here in Brazil.

WSWS: What you said about policymakers is of course not limited to them. Unions, like the National Confederation of Education Workers (CNTE) in Brazil, signed a document saying that in some cases "the harmful consequences of pandemic control measures (including school closures) outweigh the direct risks arising from coronavirus." In founding our rank-and-file committee, we argued that a development of the workers' movement depends on its connection to science and on its coordination at a global level.

MN: I have a very peculiar political view. The world has lost the notion that the problems faced by our species are global; it is our planet that is in crisis. This parochial view of defending the political agendas of nation states; if you project yourself into the future, the only path this leads to is our extinction and probably that of the planet. We have problems that can no longer be dealt with on a regional or national level. China changing the distribution of coal-fired power plants affects Uruguay. A virus appearing in Africa affects the world.

I thought that Brazil needed to be refounded from a political-institutional point of view. But in reality, it is not Brazil that needs to be refounded, it is the planet. This pandemic has shown that we have no global governance capable of combating our serious existential problems. If we continue with Brazil having one policy, the United States another, and England another, in relation to global warming, vaccines, etc., we are hopeless.

From the political point of view, the world needs a completely different discussion. And this campaign, this grassroots movement for education in England that I saw on Twitter [the October 1 parents' strike] is one of the examples of what must be done. We have to simply bypass these people and create global planetary communication mechanisms through which we demand that certain things are done, because without global coordination nobody will be left here.

Until recently, this situation was bearable, but not any more. Brazil,

which has the largest underground fresh water aquifer reserve on the planet, is running out of water. China is running out of water; California is running out of water. The limit is being reached. And when you have higher temperatures, less water, and all the problems we are discussing, you have viruses. We won't have just one pandemic, but multiple pandemics in parallel. Because by raising the temperature by 1°C, you increase the chance of a virus jumping from an intermediate host to us.

And only from the bottom up will we change this situation. Because mothers will understand that their children cannot die or have sequelae for the rest of their lives because some jerk wants to open the schools. This new global policy will come from the bottom up because people will see that we are not leaving anything to our children and grandchildren.



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