

COVID-19 lab leak theory highlights glaring lack of global biosecurity regulation

June 10 2021, by Alexander Gillespie



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The [revived debate](#) over whether COVID-19 could be the result of an accidental release from the Wuhan Institute of Virology may never be adequately resolved. Either way, we risk not seeing the wood for the

trees.

While the World Health Organization (WHO) [reported](#) in February such a leak was "extremely unlikely," it later [advised](#) more work was needed to rule it out.

But the real problem is not what might have happened in China—it's that there is no meaningful international legal oversight in the first place.

The United Nations' [Convention on Biological Diversity](#) puts the onus on [individual countries](#) to regulate their own biotech industries. While there are protocols for the safe handling and transfer of living modified organisms, there are still [no agreed international standards](#) governing laboratory safety, monitoring and information sharing.

This is concerning, given the [long history](#) of disease breaches at both civilian and military research establishments.

Laboratory escapes have included smallpox (1966, 1972 and 1978), H1N1 "swine flu" (1977 but probably a 1950s-era sample), [Venezuelan Equine Encephalitis](#) (1995) and at least six outbreaks of SARS (with [two distinct events](#) at the same Beijing laboratory in 2004).

In 2014, it was thought up to 75 workers might have been exposed to anthrax after an [accident](#) at the US Centers for Disease Control and Prevention in Atlanta, raising real concerns about pathogen safety. The same year, five researchers died while working on [West African Ebola](#) in Sierra Leone.

COVID's origins remain mysterious. Nature asked scientists about speculative arguments that it was created in a Chinese lab, or escaped from one. By reporters [@amymaxmen](#) and [@SmritiMallapaty](#) <https://t.co/E4CiKgGy7y>

— nature (@Nature) [June 8, 2021](#)

Accidents will happen

Rapid advances in biotechnology and the decentralization of research industries have only [increased](#) the potential risks. Without greater control, it's feared a new or revived disease could be [inadvertently released](#).

Already, [researchers](#) have accidentally created a lethal mouse-pox virus, intentionally developed a synthetic strain of the polio virus, resurrected the virus that caused the 1918 influenza, and recreated an infectious horse-pox virus by ordering DNA fragments online.

The potential risk from hostile state or terrorist acts in this area is clear, which makes the lack of global oversight all the more alarming.

This is true for even the highest risk "[biosafety level 4](#)" laboratories, such as the one in Wuhan. Analysis suggests these facilities [can be operated safely](#), but individual countries and regions such as [Europe](#) are setting their own [standards](#). There is also a [preparedness gap](#) between wealthy and poor countries.

The risk of bioterrorism

Beyond the WHO's [guidelines](#), however, there is no universal law, regulation or international oversight mandating even basic requirements, such as external independent inspections. We don't even know how many level 4 laboratories exist. Officially there are 54, but some probably remain undisclosed for national security reasons.

The exclusion of military establishments from independent oversight

compounds the problem. An [international convention](#) prohibits the creation, stockpiling and use of bioweapons, but there are only [soft commitments](#) to compliance and monitoring. Attempts to create a binding verification protocol have so far failed.

The UN Security Council, which monitors this regime, has noted [a disturbing trend](#) of countries not participating in its voluntary mechanisms and a lack of effective controls.

In any case, many countries lack the capacity to adequately detect disease outbreaks. Those that do have the capacity are often uncoordinated and ineffective.

The general failure of effective oversight makes the [risk of bioterrorism](#) higher than it should be.

Global agreement urgently needed

Whether or not the conclusive truth about Wuhan ever emerges, if the international community is serious about minimizing the risk of biotech accidents it could look to the [Convention on Nuclear Safety](#) as a model.

This would mean a system for enforcing global standards, independent inspections and support for best scientific practice.

It would need to cover any location or establishment where there is a significant risk from human activity that could intentionally, accidentally or recklessly cause an outbreak.

All countries would have to become more transparent to accept such a rules-based international order. And while it's possible, even probable, that China needs to improve its own systems, it is certainly far from alone in that.

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