

Biosecurity and Biosafety: A Major International Concern Regarding the Ongoing Covid-19 Pandemic

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Introduction

Biological catastrophes These biological catastrophes can be natural as pandemics or epidemics as of existing, emerging, or re-emerging diseases or as a laboratory designed for the deliberate use of disease-causing agents in biological warfare or bio-terrorism incidents. The National Guidelines for Disaster Management define the "scenario for large scale infections and disability and mortality among people, plants, and animals as a result of poisons, virus diseases, living organisms, or their products." primary and secondary disasters The term "primary disaster" refers to a major catastrophe that may be caused, for instance, by the widespread spread of certain kinds of living organisms, like viruses or bacteria, which can result in epidemics or pandemics. Secondary catastrophes can occur as a result of natural or man-made hazards, just like primary catastrophes; for instance, following a variety of natural disasters, including floods, tsunamis, and earthquakes, numerous outbreaks of disease (such as; Mucormycosis following a tornado in the United States, an acute respiratory infection following an earthquake in Iran, etc.) and biological catastrophe caused by humans as a result of inadequate biosafety and biosecurity measures in clinical and research labs (for instance; bio-terrorist attacks on various pathogens (such as Anthrax in the United States and Botulinum in Japan between 1990 and 1995) and the accidental release of Anthrax spores from a secret military facility in the Soviet research center in 1979, which resulted in the deaths of numerous workers.

Description

According to a previous report, the medical and social contexts of the 17th and 18th centuries utilized the terms pandemic and epidemic. The Greek word "epidemic" refers to the "rapid spread of any disease to a large number of people in a given population within a short span of time and which kills many and is usually arbitrary in the way it does, not deciding whether the victims are old or young, fit or not." The term "epidemic" is derived from the Greek word "epidemic." The WHO defines a pandemic as the global spread of a disease; However, seasonal epidemics that spread internationally and affect a large number of people do not fall under the category of pandemics. The technologies, principles, and practices of containment measures used to prevent or accidentally release unintended exposures to biological agents or toxins are referred to as biosafety, according to the European Committee for Standardization. Biosecurity, on the other hand, is the protection, control, and accountability for the preservation, theft, misuse, disposal, and

intentional unauthorized release of biological agents and toxins as well as non-authorized access to them. Biosafety and biosecurity measures can be used to reduce risks from the natural, deliberate, and accidental introduction of diseases, as well as the misuse of life science research. Over the past few centuries, the world has already experienced numerous pandemics and epidemics that have killed millions of people. Numerous studies based on evidence show how pandemic and epidemic pathogens affect animals, the environment, and millions of people worldwide. The well-known pandemic outbreaks have been deemed significant threats to human health, the environment, the flora and fauna, and the economy, as well as to the local, regional, and international levels. Multiple outbreaks in the past have been documented; For instance, swine flu, which was discovered in 2009 and killed more than 200,000 people, and HIV, which led to AIDS and was first identified in 1981 in the United States, has killed more than 38 million people worldwide to this day). Another example of a pandemic that was declared in 1918 is the Spanish flu, which is regarded as one of the worst due to its widespread impact and high death toll, with an estimated 50 million deaths worldwide. In addition, well-known pandemics such as cholera, smallpox, leprosy, measles, polio, and yellow fever have been widely considered to impose an economic, physical, psychological, and social burden on every individual worldwide. Typically, there is a correlation between the reemergence of pathogenic strains and the progression of the pathogens, particularly at the genomic level, which results in subsequent outbreaks; for instance, the majority of cholera outbreaks that occur worldwide [1-5].

Conclusion

Numerous cholera outbreaks were reported following the initial outbreak in Haiti, Kenya, Tanzania, and India, highlighting the pathogen's severity). Additionally, a new strain of the same family, SARS-CoV-2, emerged at the end of 2019 and is comparatively more contagious in 2020. In 2002, the Severe Acute Respiratory Syndrome Corona Virus (SARS CoV) first appeared in China. Like SARS-CoV-2, COVID-19 is a severe acute coronavirus syndrome2 virus. On March 11, 2020, the WHO declared this outbreak a pandemic. Millions of people have been affected by SARS-CoV-2 to this point; hundreds of thousands of people into the well of death; insisted on altering their way of life, and most importantly, the majority of people worldwide are unable to bear the financial, social, and psychological strain

References

1. Braithwaite, Richard W., W. M. Lonsdale, and J. A. Estbergs. "Alien vegetation and native biota in tropical Australia: the impact of *Mimosa pigra*." *Biol Conserv* 48 (1989): 189-210.
2. Breen, Alexis J., Clémence C. Bonneaud, Susan D. Healy and Lauren M. Guillelte. "Social learning about construction behaviour via an artefact." *Biosci* 22 (2019): 305-315.
3. Brochet, Anne-Laure, Matthieu Guillemain, Hervé Fritz and Michel Gauthier-Clerc, et al. "The role of migratory ducks in the long-distance dispersal of native plants and the spread of exotic plants in Europe." *Ecography* 32 (2009): 919-928.
4. Brooks, Matthew L., Carla M. D'antonio, David M. Richardson and James B.

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Received: 02 November 2022, Manuscript No. jbabm-23-87236; Editor assigned: 04 November 2022, PreQC No. P-87236; Reviewed: 16 November 2022, QC No. Q-87236; Revised: 21 November 2022, Manuscript No. R-87236; Published: 28 November 2022, DOI: 10.37421/2168-9768.2022.14.355

- Grace, et al. "Effects of invasive alien plants on fire regimes." *Biosci* 54 (2004): 677-688.
5. Nagendran, Monica and Daniel Riordan. "Automated cell-type classification in intact tissues by single-cell molecular profiling." *Elife* 7 (2018).

How to cite this article: Khan, Nabi. "Biosecurity and Biosafety: A Major International Concern Regarding the Ongoing Covid-19 Pandemic." *J Bioanal Biomed* 14 (2022): 355.