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Editorial

Reanimation of Zombie Virus : Facts and Fiction

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The ancient amoeba virus unearthed by researchers and scientists have revived from the melted ice is ominously being called a"Zombie Virus".

The term "Zombie Virus" refers to viruses that have remained dormant for extended periods, raising concerns among scientists about their potential to cause severe diseases. The recent discovery of a "Zombie Virus in Russian ice" might seem like a plot from a horror movie, but the context of a post-pandemic world makes it less surprising. Researchers have successfully revived viruses that have been inactive for tens of millions of years, found in the Siberian permafrost.[1]

Facts and Fiction of Zombie Virus

Name of the Virus	: Zombie apocalypse
Country	: Russia, France and Germany
Origin	: Frozen lake in Russia
Scientific Name	: Pandoravirus yedoma
Type	: Parasite Zombie
Type of Species	: Walkers, Zed, Zs, Biters, Geeks, Stiffs, Roamers, Zeke, Ghouls,R, Zoms and Runners
Taste	: Lime & Blueberry
Old	: 48,500 years
Global warming	: Revival of the Zombie Virus.

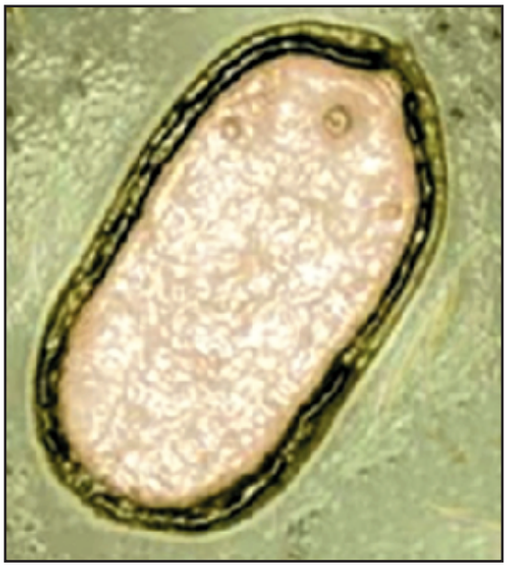

Image : Zombie Virus

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This concept of an invisible pathogen represents the enigmatic nature of infectious diseases in fiction, existing nearby but beyond our immediate perception. In this allegorical context, the host becomes the carrier of the disease, with symptoms manifesting later. Metaphorically, this phenomenon can be compared to the concept of zombies, ghosts, the undead or strange creatures, which have historically served as metaphors for the exploration of the mysterious. The emergence of zombie hordes is used to externalize internal host damage and reveal patterns of contagion within communities, providing a means to understand how viruses spread.[2]

In essence, the zombie serves as an "Allegory of communicable disease," standing in for the sick or the infectious, much like an infection itself. This analogy aids in the teaching of infection patterns and measures for containment.

The transmission of the zombie virus occurs through biting into contaminated tissue, particularly through broken skin and its potential similarities with known viruses like rabies, Creutzfeldt-Jakob disease, CMV, herpes virus and HIV are noted. Researchers have identified thirteen new pathogens, referred to as "Zombie Viruses," which have remained infectious even after millennia of being frozen. These viruses have reemerged as a consequence of permafrost thawing, with Pandoravirus yedoma, dating back 48,500 years, being the oldest virus to become infectious. This discovery surpasses the 30,000-year-old virus found in Siberia in 2013.[3,4]

The duration of infectivity of these viruses in external environments and their potential to find a host remain uncertain. The risks are expected to increase as permafrost thaws, coinciding with increased human migration to the Arctic due to industrialization. A quarter of the Northern Hemisphere consists of permafrost, which releases ancient organic material, leading to the breakdown of ice into carbon dioxide and methane, contributing to the greenhouse effect. The revival of prokaryotes, unicellular eukaryotes, and ancient viruses from the depths of time exemplifies the complexity of this organic matter. The research has shown that all "Zombie Viruses" may propagate and pose a significant health threat as long-dormant viruses, like the microbial Captain America, are awakened by melting permafrost, potentially leading to more frequent pandemics. There are concerns that "Resurgent" viruses and other microorganisms released when permafrost melts could pose a significant risk to humanity, as emphasized by Greenpeace.

These discoveries are reminiscent of the concept in the 1993 blockbuster "Jurassic Park," where DNA from insects encased in amber was used to clone dinosaurs. The ongoing thawing of permafrost, covering approximately a quarter of the Northern Hemisphere, is a direct result of climate warming. Other research institutions are also focusing on diseases linked to microorganisms and larger organisms. Recent findings include the discovery of 15,000-year-old viruses beneath a Tibetan ice cap and microscopic nematode worms retrieved from frozen Siberian soil samples dating back 42,000 years.

It is vital to note that the unfrozen animals that showed activity after being housed at 20°C in nutrient-rich Petri dishes were not contaminated samples. Birgitta Evengard, associated with Sweden's Umea University, has expressed concerns regarding permafrost-related illnesses. She played a role in organizing a 2019 meeting on global health security threats posed by Arctic microorganisms. She emphasizes the unpredictability of whether microorganisms from thawing permafrost may harm humans, describing it as a "Pandora's box" that could potentially lead to human infections and environmental consequences.[4]

Moreover, three rivers in Siberia discharge permafrost material into the Bering Sea, causing disruptive ocean currents that impact ecosystems worldwide. Professor Evengard's concerns are compounded by the fact that the Arctic has warmed four times faster than the rest of the world since 1979, making it a focal point for global environmental change.

In light of these concerns, there's a growing consensus that scientists must conduct extensive research in Siberia to understand the ongoing developments. The thawing permafrost not only poses a risk to climate change but also introduces the potential for viruses to infiltrate ecosystems. As permafrost thaws, these microbes consume organic matter in the soil, releasing carbon dioxide and methane, further contributing to environmental challenges.

Zombie viruses are known to remain dormant in ice for extended periods before reawakening when the ice melts. Researchers have successfully revived a latent amoeba virus that has evolved into a zombie virus after an astonishing 48,500 years. Glaciers and permafrost are melting at an alarming rate due to global warming, freeing microorganisms that have been frozen for millennia. The melting ice has reawakened zombie viruses that had long been dormant, trapped in the frozen landscape. These ancient viruses, once revived, can potentially pose a significant threat to public health, as they have the potential to infect humans, resulting in fatal infections. Notably, researchers discovered the zombie virus alongside wolf organs and mammoth wool.

It's essential to recognize that a quarter of the Northern Hemisphere's landmass consists of permafrost, which serves as a reservoir for ancient viruses and bacteria preserved in frozen conditions. The ongoing thawing of permafrost, accelerated by climate change, releases this frozen biological material, leading to the decomposition of organic matter and the release of methane and carbon dioxide into the atmosphere.[5]

The symptoms and epidemiology of emerging infectious "Zombies" draw parallels with real diseases, marking a phenomenon referred to as "Growing infectious types of literature," which shares similarities with the concept of "Emerging infectious diseases." Some of the most recent works of literature in this genre are both horrifying and futuristic, often resembling science fiction or thrillers. The transmission and pathogenicity rates of influenza have been used to construct post-apocalyptic scenarios.

Furthermore, research on live cultures has led specialists to conclude that all "Zombie Viruses" are communicable and, as such, present a significant health risk. These findings underscore the critical need for continued investigation into the potential threats posed by these ancient viruses, especially in the context of an ever-changing climate and global environment.

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