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PLAGUE

F E A R S



Original Photograph: Tokyo Shinbun/Sygma, Original Ebola image: CDC/Austral

THE WORLD'S NEXT PANDEMIC MAY ALREADY BE SPREADING WITHOUT OUR KNOWLEDGE. A FORMERLY SMUG SCIENTIFIC COMMUNITY IS IN A BATTLE TO PROTECT HUMANITY FROM NEWLY VIRULENT AND RESISTANT STRAINS OF OLD DISEASES.

ANXIOUS SCIENTISTS IN SPACE HELMETS AND 'BUBBLE SUITS.' Troops blockading cities while panicked citizens try to break through quarantine lines. A doomsday virus spreading rapidly, its victims bleeding through the eyes while their organs turn to mush. No cure, no antidote, no vaccine. And no idea where this mystery killer came from.

If only this was science fiction. But these scenes have already flashed across television screens this year – during the outbreak of Ebola virus in Zaïre where the deadly pathogen killed hundreds. And it will kill again. Only next time, the world may not be so lucky: the spread may not be contained.

Speak to scientists and they will tell you that we may have to become more accustomed to such scenes in the decades ahead. Because Ebola, like a host of 'emerging viruses,' has the voracious capacity to spread. And conditions have never been better for such emerging diseases.

"The conditions of the modern world are uniquely favorable to the rapid global spread of infectious diseases," says Professor Jonathan Mann of Harvard University, a former head of the World Health Organization's AIDS program.

"A person harboring a life-threatening microbe can easily board a jet plane and be on another continent when the symptoms of illness strike," he says. "Few habitats on the globe remain truly isolated or untouched, as tourists and other travelers penetrate into the most remote and previously inaccessible areas in their search for new vistas, business or recreational. AIDS has demonstrated how swiftly remote or seemingly obscure health events elsewhere can become tomorrow's health crisis."

A leading authority on infectious diseases, Mann and a number of other leading medical researchers have been urging governments to set up a global disease-monitoring system capable of reacting to emerging microbial crises. He says that the world's next pandemic may well be circulating now, spreading and growing – as AIDS did – without our knowledge: plotting the history of HIV suggests that the pandemic could easily have escaped detection for another five years or more, he says.

More and more scientists, fearful of the rise of new infectious diseases, are urging a determined and sustained global response. They have good reason for being worried. The world at the end of the 20th century is a paradise for infectious diseases. Microbes thrive on large numbers of people living close together, and there's never been more of that than in the 1990s. Less than a century ago, only 15 per cent of the world's population lived in cities. Two decades from now, more than half of humanity will live in urban centers, most of them in the 'megacities' of the Third World. By then, some 24 metropolises are expected to have populations exceeding 10 million, mostly in countries that can ill afford the civil and health infrastructures that reduce health risks.

They could be the ideal factories for the incubation and eventual propagation of deadly outbreaks.

Then there's international air travel. More than one billion passengers fly on airlines every year, and more than 300 million of these take trips across national borders. Air travel continues to rise, having grown 17-fold since the 1950s. Add urban expansion into ecological niches such as rainforests rarely visited by humans, the burgeoning but untraceable trade in sex tourism, and the widespread use of unsterilized hypodermic needles – both in the under-equipped hospitals of poor nations and among drug users in both industrialized and underdeveloped countries – and you have the perfect setting for an apocalypse. It is a bomb waiting to explode. The only question is when. And which of the emerging diseases is going to detonate first.

As Nobel laureate Dr Joshua Lederberg has said: "The microbe that felled one child in a distant continent yesterday can reach yours today, and seed a global pandemic tomorrow."



Progressive infection: The decimation of forests is a factor in the re-emergence of infectious diseases.

AT FIRST, EBOLA TRIGGERS NAUSEA AND DISCOMFORT. WITHIN hours, this is followed by high fever, then bleeding gums and a vomiting of blood. Lots of blood. Inside the body, the tissue walls of organs begin to break down, hemorrhaging profusely. Victims bleed from every orifice and continue to vomit blood and tissue even while unconscious. There is an occasional sound of tearing as organs rupture and intestinal linings are coughed up. Between three and five agonizing days later, the victim is dead, their insides liquefied, their organs disintegrated.

This is Ebola, the most frightening of the new diseases to appear this century. If there was ever a doomsday plague, Ebola certainly qualifies. It is known to have caused major outbreaks in humans only twice since it was first identified in 1976. Were it to spread widely, it could kill hundreds of millions around the world, researchers say. But there are other deadly new pathogens, as well as the re-emergence of diseases once thought vanquished and which, in the 1980s and 1990s, have shown a remarkable resistance to the pharmaceutical arsenal of the medical world.

Last year, scientists in Australia came across the world's newest emerging virus: Equine morbillivirus, a previously unknown organism that appeared without warning, killed 14 horses in southern Queensland within days, and hospitalized two men, one of whom died a ghastly, wheezing death.

We may be able to split the atom and send space probes beyond the solar system, but we may never have mastery over the germ world.

Photos: Left: R. Azoury/Austral; Right: Uniphoto/Austral

