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Cambridge Working Group Consensus Statement on the Creation of Potential Pandemic Pathogens (PPPs)

Recent incidents involving smallpox, anthrax and bird flu in some of the top US laboratories remind us of the fallibility of even the most secure laboratories, reinforcing the urgent need for a thorough reassessment of biosafety. Such incidents have been accelerating and have been occurring on average over twice a week with regulated pathogens in academic and government labs across the country. An accidental infection with any pathogen is concerning. But accident risks with newly created "potential pandemic pathogens" raises grave new concerns. Laboratory creation of highly transmissible, novel strains of dangerous viruses, especially but not limited to influenza, poses substantially increased risks. An accidental infection in such a setting could trigger outbreaks that would be difficult or impossible to control. Historically, new strains of influenza, once they establish transmission in the human population, have infected a quarter or more of the world's population within two years.

For any experiment, the expected net benefits should outweigh the risks. Experiments involving the creation of potential pandemic pathogens should be curtailed until there has been a quantitative, objective and credible assessment of the risks, potential benefits, and opportunities for risk mitigation, as well as comparison against safer experimental approaches. A modern version of the Asilomar process, which engaged scientists in proposing rules to manage research on recombinant DNA, could be a starting point to identify the best approaches to achieve the global public health goals of defeating pandemic disease and assuring the highest level of safety. Whenever possible, safer approaches should be pursued in preference to any approach that risks an accidental pandemic.

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