

NIAID scientists consider 200 years of infectious diseases

February 2 2012

Unpredictable, ever-changing and with potentially far-reaching effects on the fates of nations, infectious diseases are compelling actors in the drama of human history, note scientists from the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health. In an essay marking 200 years of publication of the *New England Journal of Medicine*, NIAID Director Anthony S. Fauci, M.D., and coauthor David M. Morens, M.D., trace key advances in understanding and combatting infectious diseases and outline ways in which the contest between microbes and man might play out in decades to come.

The authors look back to the 1799 death, likely from bacterial epiglottitis, of President George Washington and note that "no one alive then could have imagined the astonishing breakthroughs that lay ahead." Among these was the idea that identifiable microbes lead to specific illnesses, an insight that opened the way to more accurate diagnoses, a host of [antibacterial](#) and [antiviral drugs](#) and a tool—vaccination—to prevent many infections altogether. Combined, these interventions have saved hundreds of millions of lives and lessened the burden of human suffering, the authors note.

Laudable successes—such as the elimination of smallpox—are, however, balanced against the inevitable emergence of newer pathogens, such as HIV, that can sweep the globe and devastate societies, observe the authors. This tug-of-war between constantly evolving microbes and the human ingenuity required to address newly emerging illnesses makes for

the perpetual challenge of [infectious diseases](#). Efforts to address this challenge, they write, "are driven by the necessity of expecting the unexpected and being prepared to respond when the unexpected occurs."

More information: AS Fauci and DM Morens. The perpetual challenge of infectious diseases. *New England Journal of Medicine* [DOI:10.1056/NEJMr1108296](https://doi.org/10.1056/NEJMr1108296) (2012).

Provided by National Institutes of Health

Citation: NIAID scientists consider 200 years of infectious diseases (2012, February 2) retrieved 13 March 2024 from

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