

Vaccines as Technology: IP Considerations During COVID-19

12th Intellectual Property Conference

31 July 2020

Hong Kong (remotely)

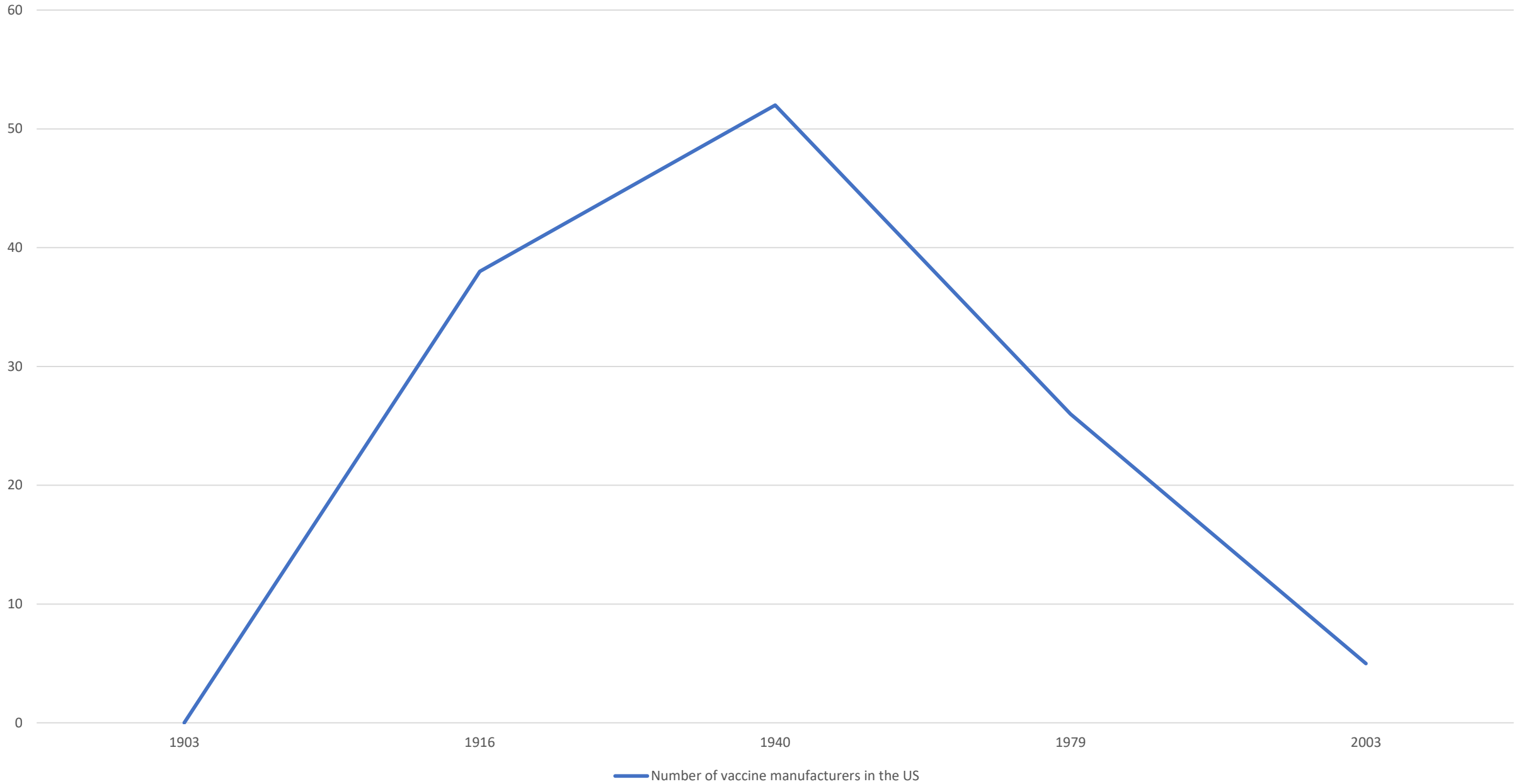
Dr. Ana Santos Rutschman

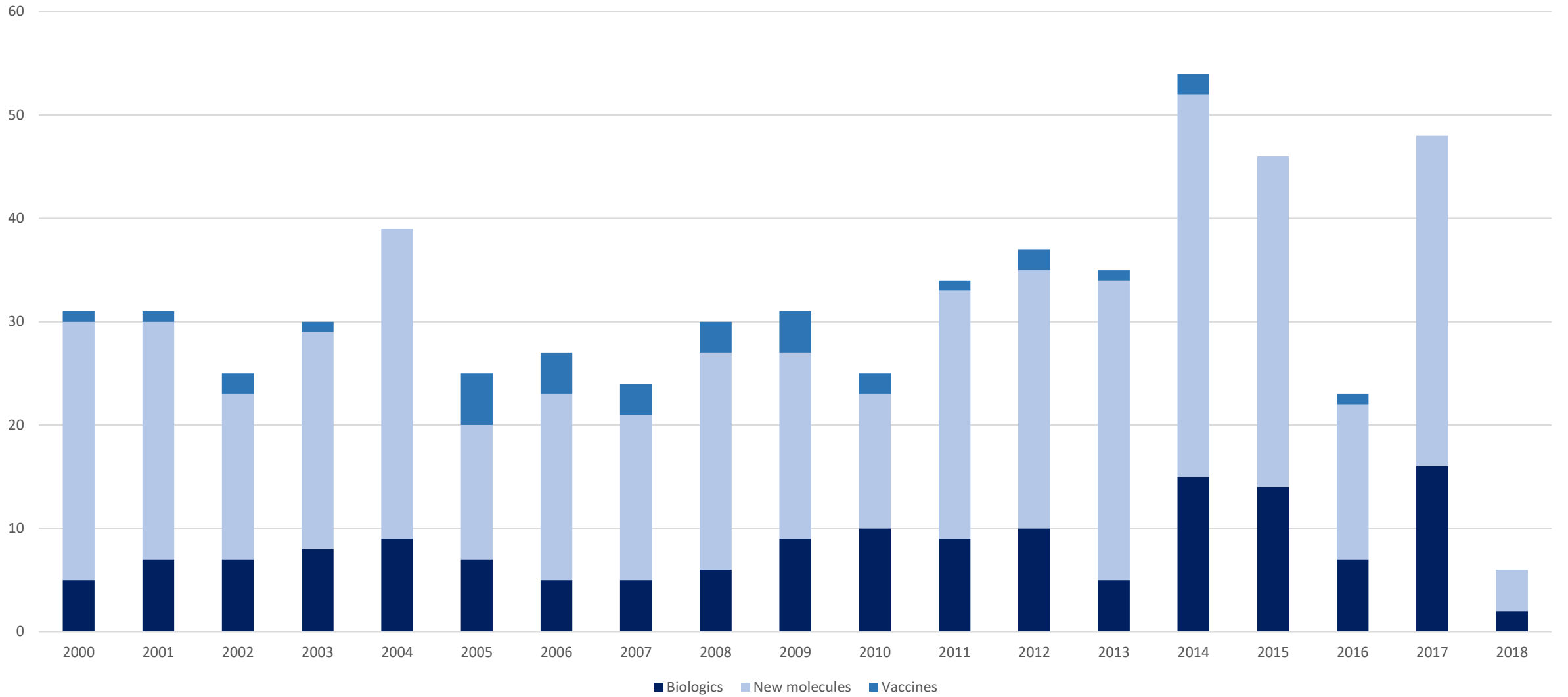


Background Information

- Market is too small
- Often one dose is enough
- Undervaluation of economic impact of vaccines
- Undervaluation of public health impact of vaccines
 - Fear factor

Number of vaccine manufacturers in the US





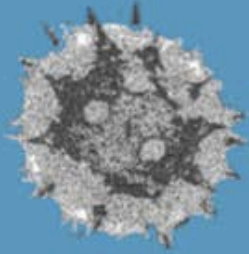
FDA Drug Approvals 2000-2018

1. IP as Incentives

2. Transactional IP

1. IP as Incentives

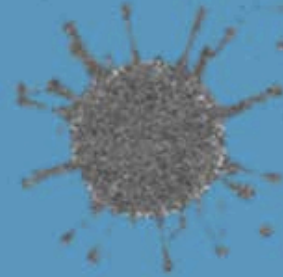
“Emerging pathogens likely to cause severe outbreaks in the near future”



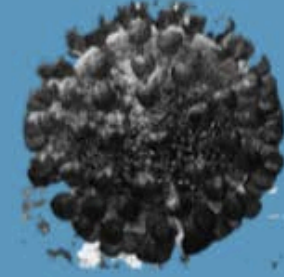
Crimean-congo
Hemorrhagic fever
virus



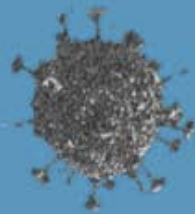
Filovirus diseases
(i.e. EVD & Marburg)



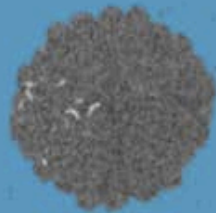
Highly pathogenic
emerging
coronaviruses
relevant to humans
(MERS Co-V & SARS)



Lassa fever virus



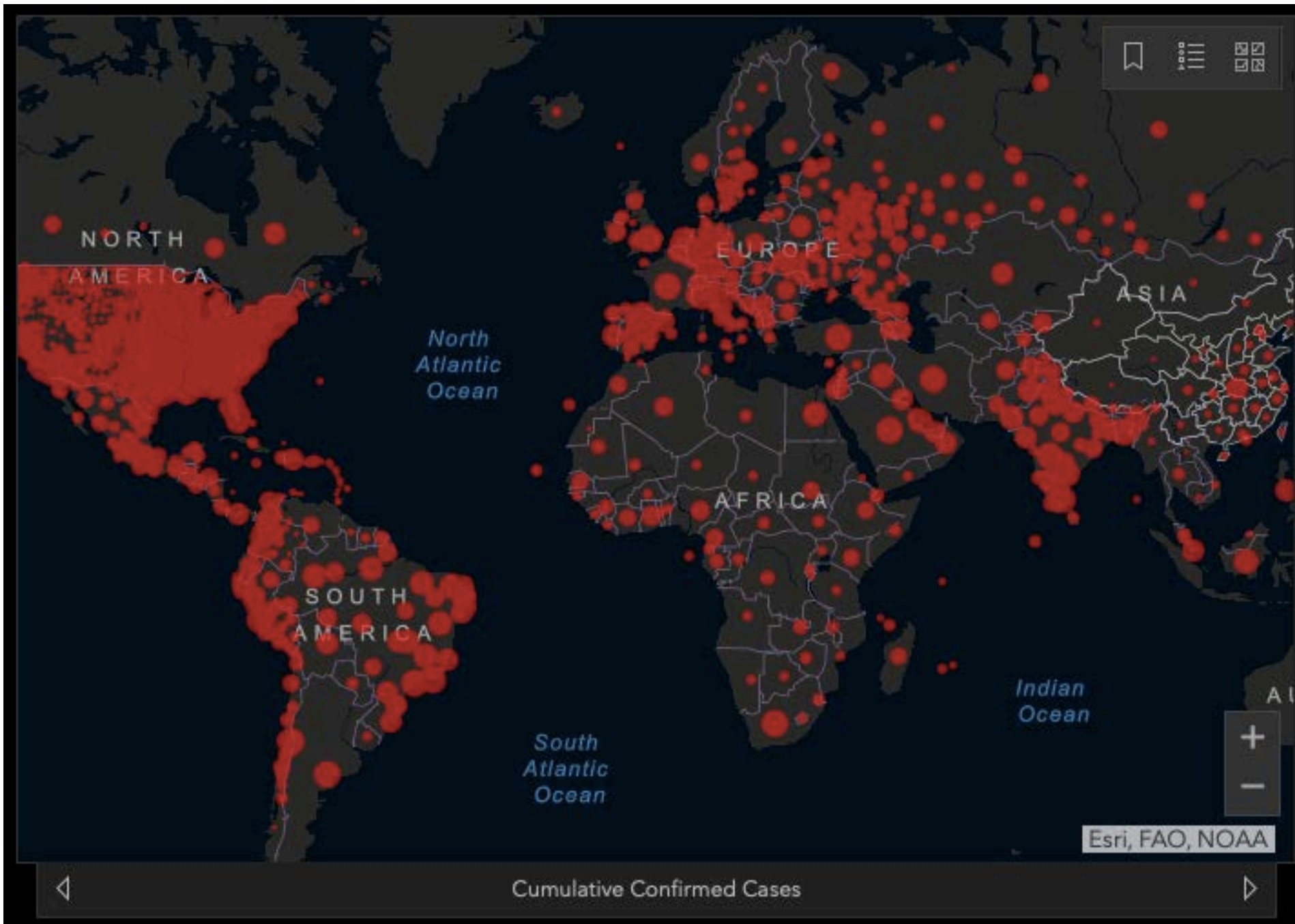
Nipah virus



Rift Valley fever virus

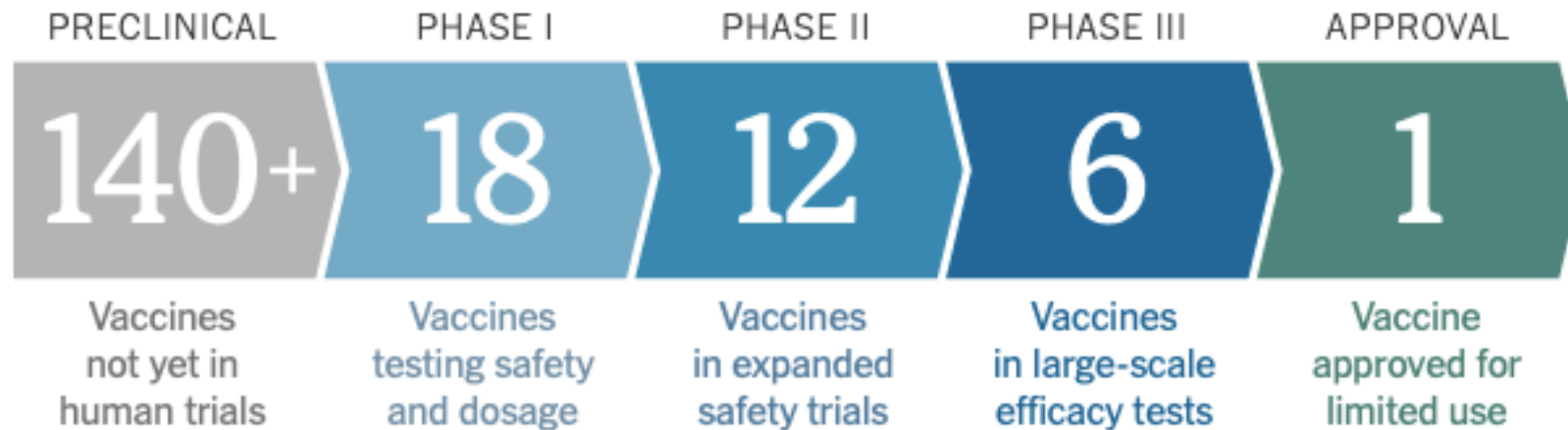
Novel Agent

a new severe
infectious disease



Coronavirus Vaccine Tracker

By Jonathan Corum, Denise Grady, Sui-Lee Wee and Carl Zimmer Updated July 27, 2020

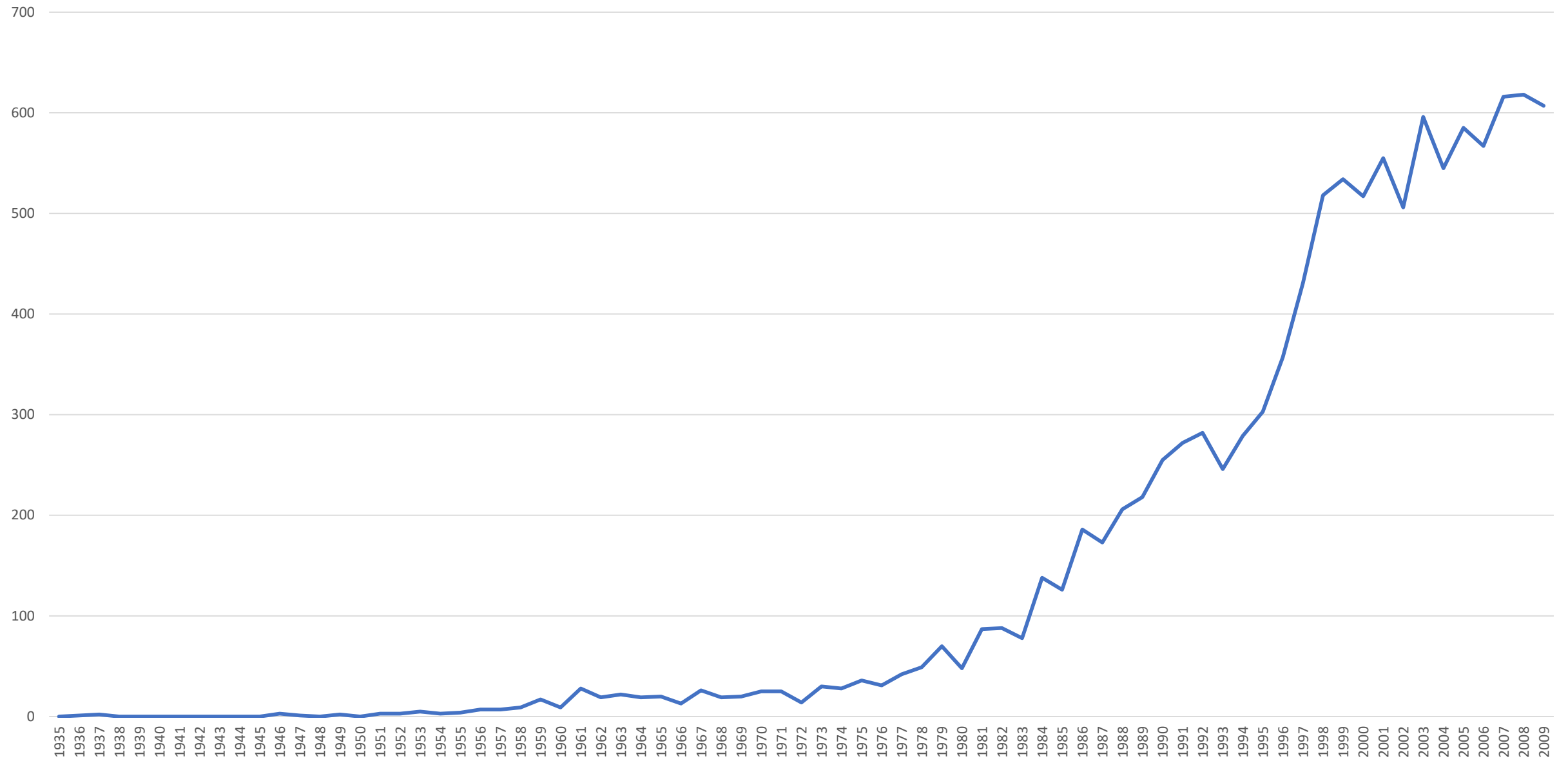


Researchers around the world are developing [more than 165 vaccines](#) against the coronavirus, and **27 vaccines** are in human trials. Vaccines typically require years of research and testing before reaching the clinic, but scientists are racing to produce a [safe and effective vaccine](#) by next year.

2. Transactional IP

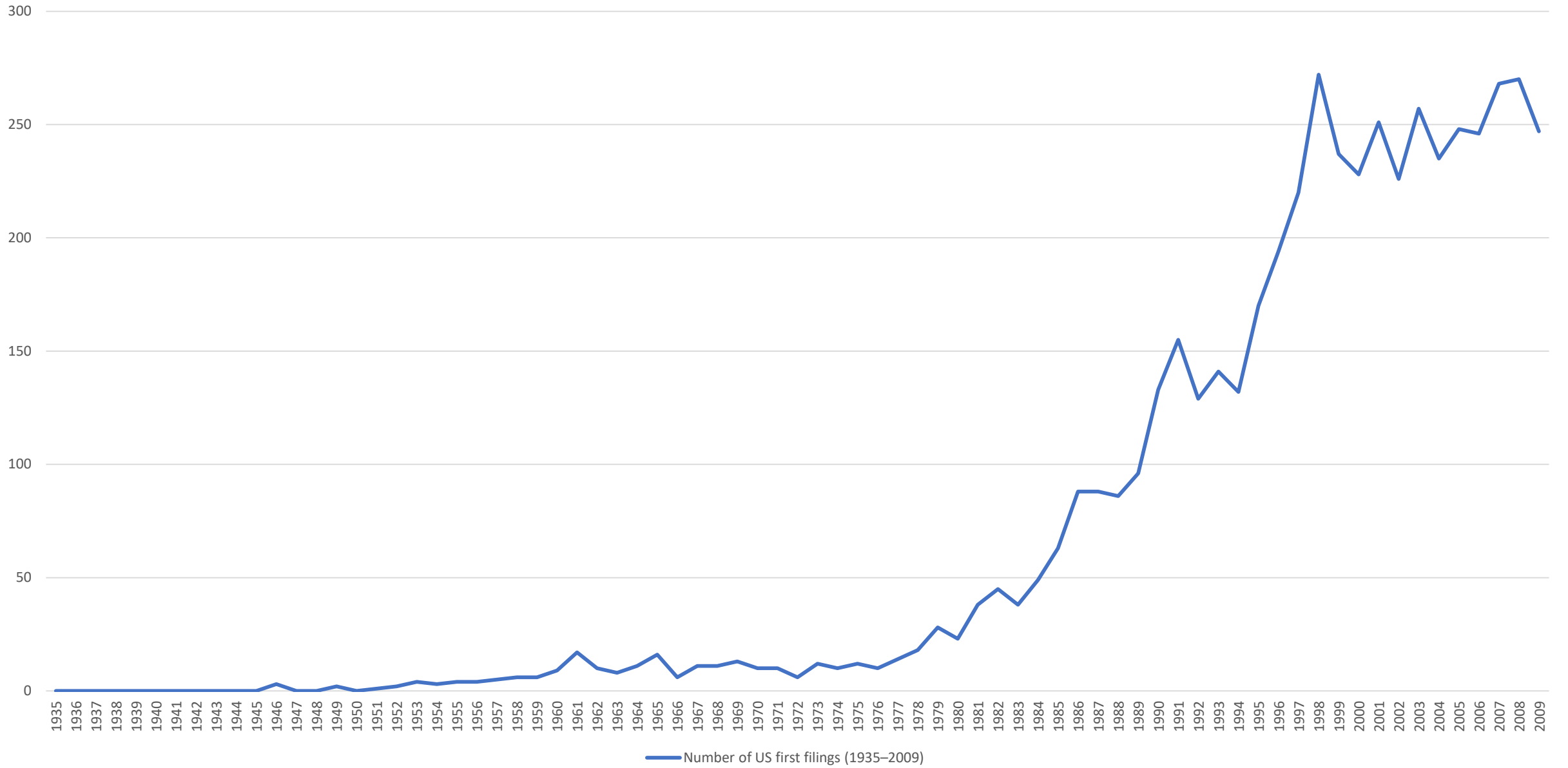
Patent Culture

Number of worldwide first filings (1935–2009)

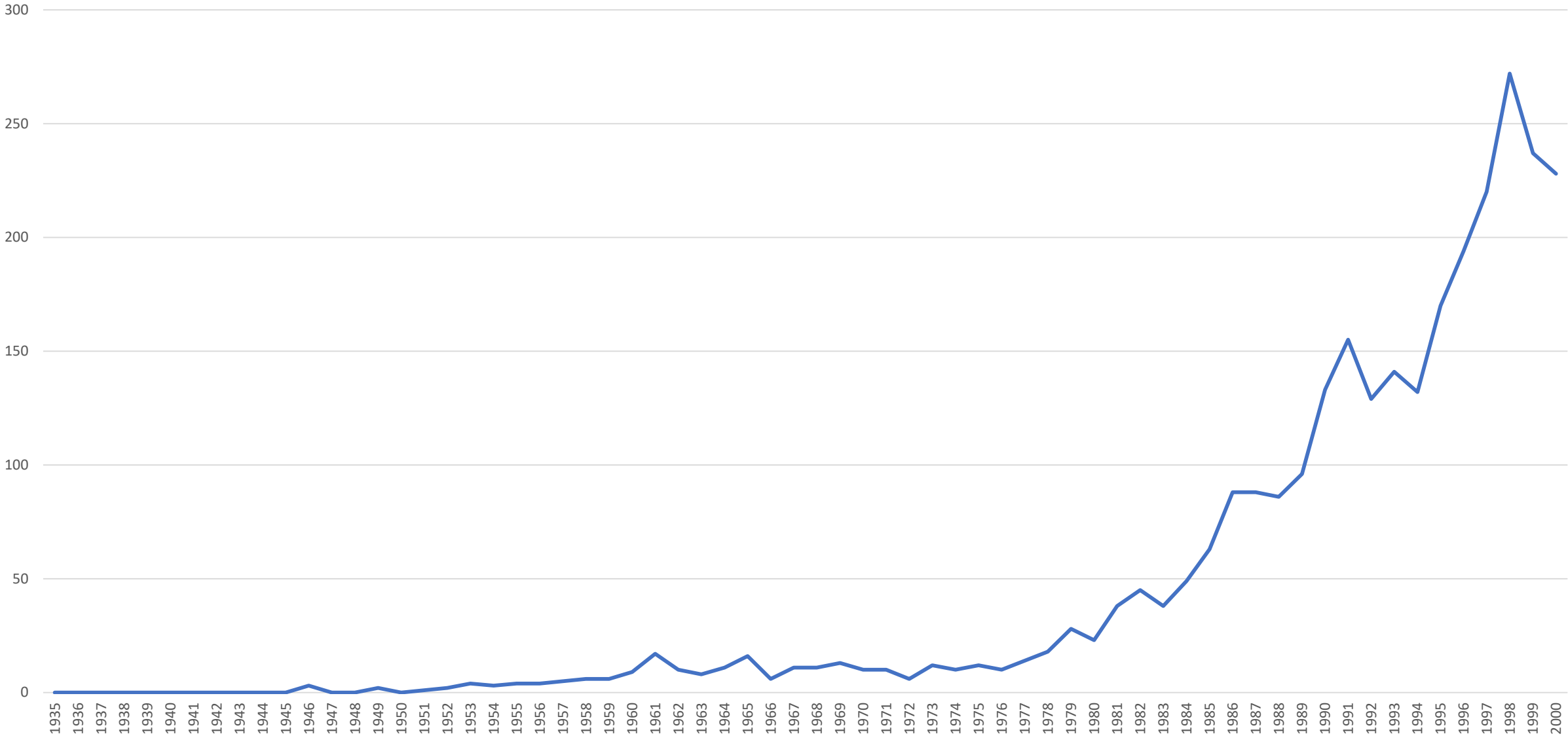


Number of worldwide first filings (1935–2009)

Number of US first filings (1935–2009)



Number of vaccine patents granted by the USPTO
(1935–2000)



Number of vaccine patents granted by the USPTO (1935–2000)

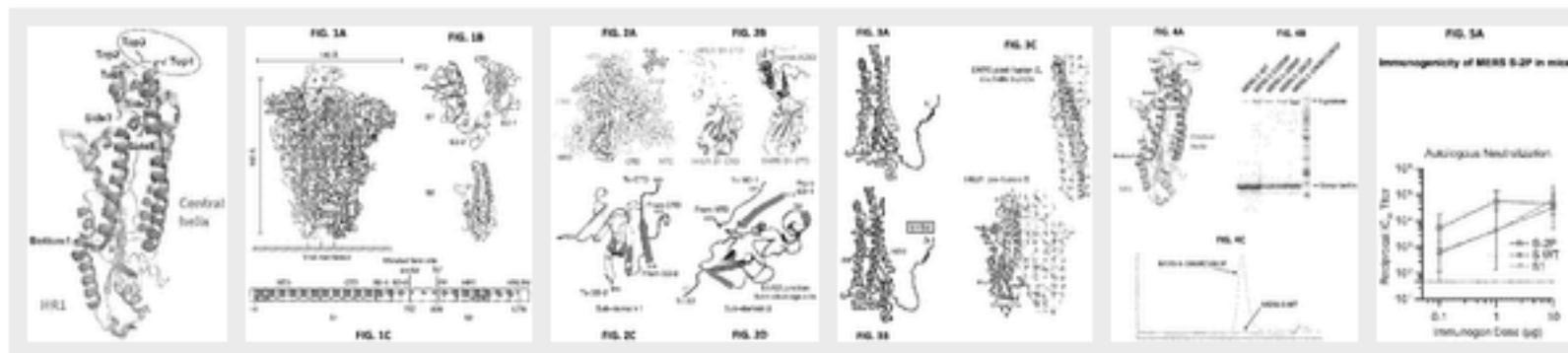
Emerging Problems

Prefusion coronavirus spike proteins and their use

Abstract

Coronavirus S ectodomain trimers stabilized in a prefusion conformation, nucleic acid molecules and vectors encoding these proteins, and methods of their use and production are disclosed. In several embodiments, the coronavirus S ectodomain trimers and/or nucleic acid molecules can be used to generate an immune response to coronavirus in a subject. In additional embodiments, the therapeutically effective amount of the coronavirus S ectodomain trimers and/or nucleic acid molecules can be administered to a subject in a method of treating or preventing coronavirus infection.

Images (24)



Classifications

- [A61K39/215](#) Coronaviridae, e.g. avian infectious bronchitis virus

There's no guarantee that a coronavirus vaccine will be affordable

Published: March 2, 2020 at 10:32 a.m. ET

By [Elisabeth Buchwald](#)

Private sector involvement could accelerate vaccine discovery, but that could come with a hefty price tag, experts say

41

Emerging Fixes

Incentives

Coalition for
Epidemic
Preparedness
Innovations



CEPI

Non-IP Schemes: Large-scale Procurement



Non-Assertion of IP Rights



Comments?

Questions?

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