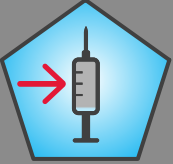


# Moderna's latent & other vaccines: Nipah vaccine (mRNA-1215)

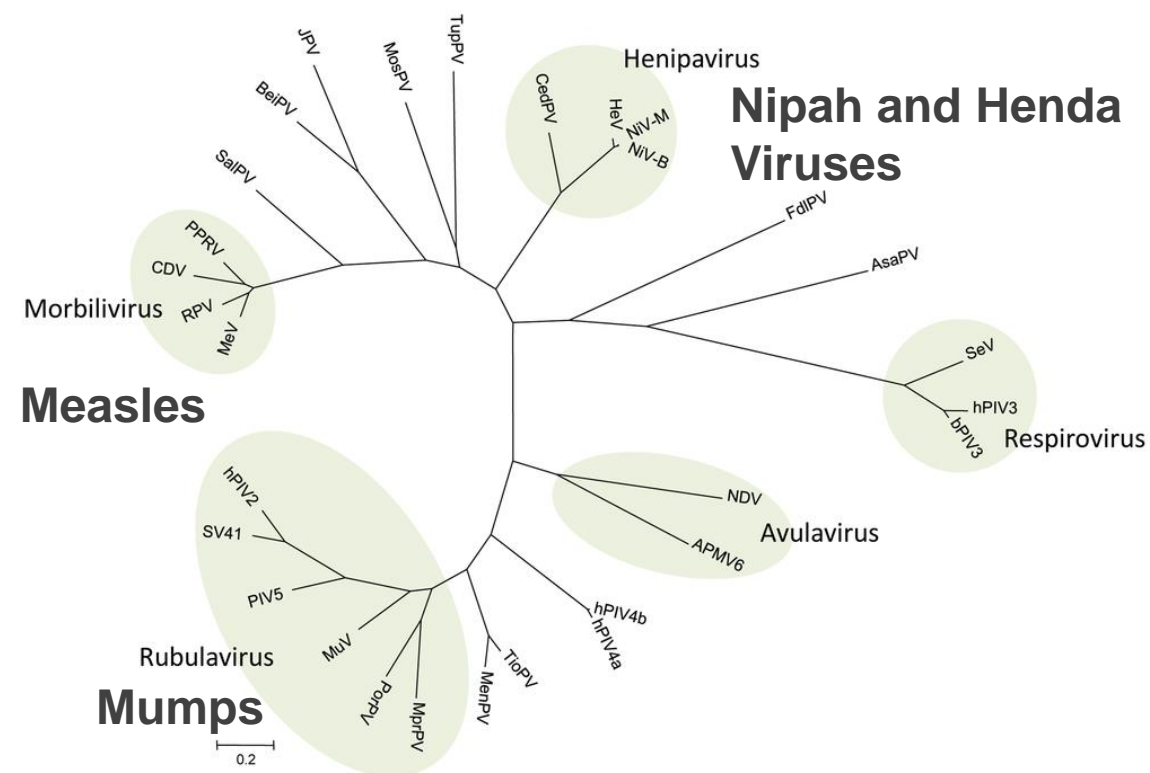
Last program update: November 4, 2021

Modality	Program	ID #	Preclinical development	Phase 1	Phase 2	Phase 3	Commercial	Moderna rights
 <b>Prophylactic vaccines</b>	CMV vaccine	mRNA-1647						Worldwide
	EBV prophylactic vaccine	mRNA-1189						Worldwide
	EBV therapeutic vaccine	mRNA-1195						Worldwide
	Zika vaccine	mRNA-1893						Worldwide <i>BARDA funded</i>
	HIV vaccine	mRNA-1644						Worldwide <i>IAVI/others funded</i>
		mRNA-1574						Worldwide <i>BMGF/NIAID/others funded</i>
	Nipah vaccine	mRNA-1215						Worldwide <i>NIH funded</i>

# Nipah vaccine (mRNA-1215) Phase 1 testing is for pandemic preparedness

- Aim to define **general solution for vaccine antigen design** and to develop approaches for platform manufacturing
- Clinical testing can help determine whether having **successful antigen designs for viruses within a given family** might facilitate rapid development of vaccines against similar viruses
- NIH to sponsor Phase 1 study

*Nipah virus is closely related to some of the most common human pathogens*



# Nipah (NiV) virus overview

- NiV, a zoonotic virus transmitted to humans from animals, contaminated food, or through direct human-to-human transmission, causes a range of illnesses including fatal encephalitis
- **Disease burden:**
  - “The worst disease no one has ever heard of”<sup>1</sup>
  - Identified as the cause of isolated outbreaks since 2000 in India, Bangladesh, Malaysia, and Singapore and is considered a significant pandemic threat<sup>2,3</sup>
  - Case fatality rate among infected is estimated at 40-75%<sup>2,3</sup>
  - Severe respiratory and neurologic complications have no treatment other than intensive supportive care<sup>1,2</sup>
  - NiV outbreaks cause significant economic burden to impacted regions due to loss of human life and interventions to prevent further spread, e.g. slaughter of infected animals<sup>4</sup>
- **Target population:** Pandemic preparedness
- **Unmet need:** No approved vaccine or treatment

## Spectrum of Nipah symptoms<sup>2</sup>

<b>Mild</b>	Fever Headaches Myalgia Vomiting Sore throat
<b>Severe</b>	Severe respiratory distress Pneumonia Seizures Altered consciousness Encephalitis Coma Death

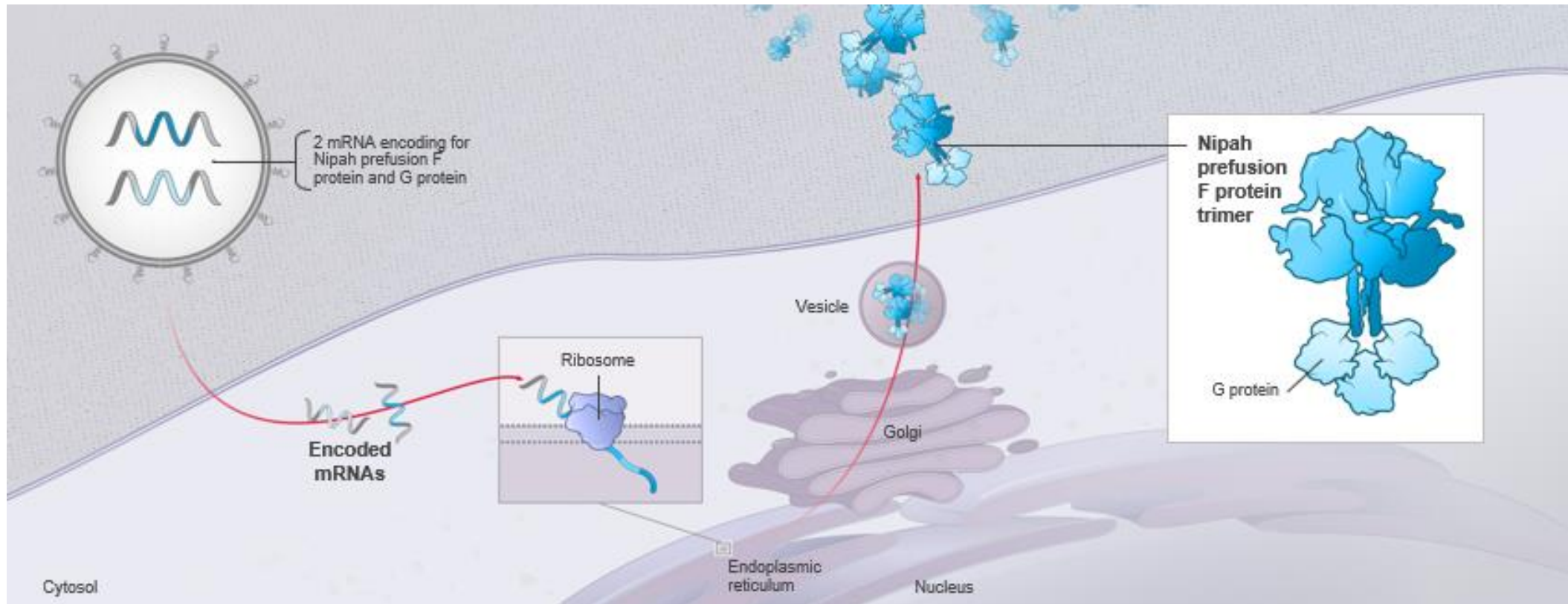
<sup>1</sup>Nipah Virus. Eco Health Alliance. <https://www.ecohealthalliance.org/2018/05/nipah-virus>. Accessed 18Dec2020. <sup>2</sup>Nipah virus infection. WHO. [https://www.who.int/health-topics/nipah-virus-infection#tab=tab\\_1](https://www.who.int/health-topics/nipah-virus-infection#tab=tab_1). Accessed 18Dec2020. <sup>3</sup>Wan L and Anderson D. Viruses in bats and potential spillover to animals and humans. Current Opinion in Virology 2019;34:79-89. <sup>4</sup>Ochani R, et al. Nipah virus – the rising epidemic: a review. Le Infezioni in Medicina 2019; 2:117-129.

Slide 3

# Nipah vaccine (mRNA-1215) overview

## Moderna/NIH collaboration

- Nomination of mRNA-1215 to test a Nipah vaccine candidate in humans
- mRNA vaccine co-developed by Moderna/NIH-VRC
- Phase 1 clinical testing for pandemic preparedness



# Forward-looking statements

---

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended including, but not limited to, statements concerning potential development candidate applications, development candidate activities, preclinical and clinical studies, regulatory submissions and approvals, risk management and estimates and forward-looking projections with respect to Moderna or its anticipated future performance or events. In some cases, forward-looking statements can be identified by terminology such as “may,” “should,” “expects,” “intends,” “plans,” “aims,” “anticipates,” “believes,” “estimates,” “predicts,” “potential,” “continue,” or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words. The forward-looking statements in this presentation are neither promises nor guarantees, and you should not place undue reliance on these forward-looking statements because they involve known and unknown risks, uncertainties and other factors, many of which are beyond Moderna’s control and which could cause actual results to differ materially from those expressed or implied by these forward-looking statements. These risks, uncertainties and other factors include, among others: preclinical and clinical development is lengthy and uncertain, especially for a new category of medicines such as mRNA, and therefore Moderna’s preclinical programs or development candidates may be delayed, terminated, or may never advance to or in the clinic; no mRNA drug has been approved in this new potential category of medicines, and may never be approved; mRNA drug development has substantial clinical development and regulatory risks due to the novel and unprecedented nature of this new category of medicines; and those described in Moderna’s most recent Annual Report on Form 10-K filed with the U.S. Securities and Exchange Commission (SEC) and in subsequent filings made by Moderna with SEC, which are available on the SEC’s website at [www.sec.gov](http://www.sec.gov). Except as required by law, Moderna disclaims any intention or responsibility for updating or revising any forward-looking statements in this presentation in the event of new information, future developments or otherwise. These forward-looking statements are based on Moderna’s current expectations and speak only as of the date hereof.