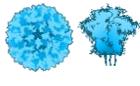


HIV vaccine program (mRNA-1644 & mRNA-1547)

Last program update: January 11, 2021

Modality	ID #	Program		Preclinical development	Phase 1	Phase 2	Phase 3	Commercial	Moderna rights
 Prophylactic vaccines	mRNA-1273	COVID-19 vaccine							Worldwide BARDA funded
	mRNA-1647	Cytomegalovirus (CMV) vaccine							Worldwide
	mRNA-1653	hMPV/PIV3 vaccine							Worldwide
	mRNA-1893	Zika vaccine							Worldwide BARDA funded
	mRNA-1345	Respiratory syncytial virus (RSV) vaccine							Worldwide
	mRNA-1189	Epstein-Barr virus (EBV) vaccine							Worldwide
	mRNA-1010	Flu vaccine							Worldwide
	mRNA-1020								
	mRNA-1030								
	mRNA-1215	Nipah vaccine							Worldwide NIH funded
	mRNA-1644 mRNA-1574	HIV vaccine							Worldwide IAVI/BMGF/NIH funded
mRNA-1851	Influenza H7N9 vaccine							Worldwide Advancing subject to funding	

Human immunodeficiency virus (HIV) overview

- HIV is the virus responsible for acquired immunodeficiency syndrome (AIDS), a lifelong, progressive illness with no effective cure
- **Disease burden:**
 - 38 million worldwide are currently living with HIV²; 1.2 million in the U.S.³
 - Approximately 2 million new infections are acquired worldwide each year, and ~690,000 people die²
 - Primary routes of transmission are sexual intercourse and IV drug use, putting young adults at highest risk of infection³
 - From 2010 to 2015, a total of \$562.6 billion was spent globally on care, treatment, and prevention of HIV⁴, representing significant economic burden
- **Target population:** Young adults with focus on high-risk populations
- **Unmet need:** No approved HIV vaccine and no effective cure

HIV & AIDS disease progression^{1,2}

Acute HIV infection <i>Highly contagious</i>	Fever, chills Rash Sore throat Fatigue, muscle aches Mouth ulcers
Chronic HIV infection <i>Clinical latent but still able to infect others</i>	Frequently asymptomatic
AIDS <i>CD4 count <200 cells/mm</i>	Rapid weight loss Fever, night sweats Extreme fatigue Opportunistic infections (e.g. candidiasis, Kaposi's sarcoma) Death

¹HIV. Centers for Disease Control and Prevention. <https://www.cdc.gov/hiv/basics/whatishiv.html>. Accessed 17Dec2020. ²HIV Global Statistics. <https://www.hiv.gov/hiv-basics/overview/data-and-trends/global-statistics>. Accessed 16Dec2020. ³Centers for Disease Control and Prevention. HIV Surveillance Report, 2018 (Updated); vol.31. <http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html>. Published May 2020. Accessed 18Dec2020. ⁴Global Burden of Disease Health Financing Collaborator Network. Spending on health and HIV/AIDS: domestic spending and development assistance in 188 countries, 1995-2015. *Lancet* 2018;391:1799-829.

HIV vaccine program overview

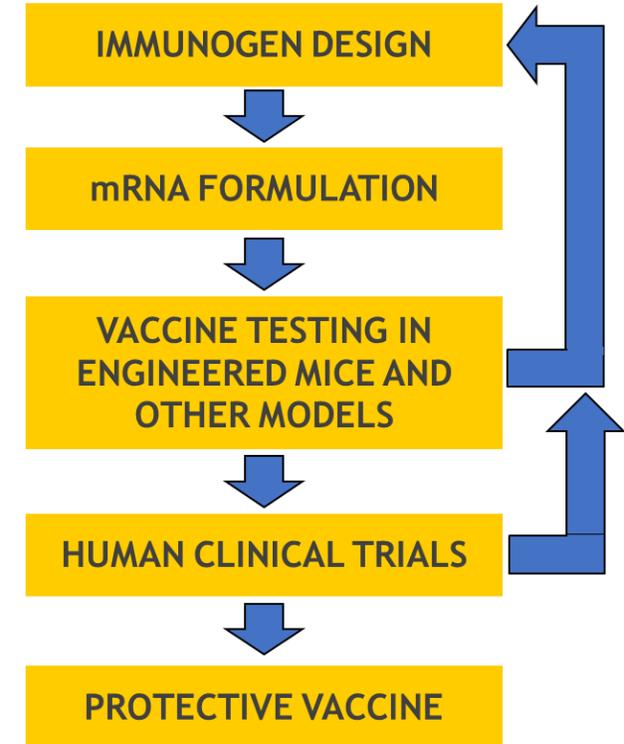
Moderna/IAVI/BMGF HIV Vaccine Collaboration (mRNA-1644)

- Nomination of mRNA-1644 to test a novel HIV vaccine strategy in humans for eliciting broadly Neutralizing HIV-1 Antibodies (bnAbs)
- Validation of novel approaches/antigens thru iterative human testing
- Multiple novel antigens for Germline targeting/immuno-focusing

Moderna/NIH (VRC)/IAVI HIV Vaccine Collaboration (mRNA-1574)

- Nomination of mRNA-1574 to test novel HIV trimer designs in humans
- Multiple native-like HIV trimer antigens

Iterative Vaccine Design/Test Cycle



**Phase 1 Innovation needed to accelerate human validation of novel strategies
Programs will inform future of HIV vaccine field with a potential of identifying a protective HIV vaccine**

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. 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.