HIV Investor Event

Merck & Co., Inc., Rahway, N.J., USA

July 17, 2025

Forward-looking statement of Merck & Co., Inc., Rahway, N.J., USA

This presentation of Merck & Co., Inc., Rahway, N.J., USA (the “company”) includes “forward-looking statements” within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. These statements are based upon the current beliefs and expectations of the company’s management and are subject to significant risks and uncertainties. There can be no guarantees with respect to pipeline candidates that the candidates will receive the necessary regulatory approvals or that they will prove to be commercially successful. If underlying assumptions prove inaccurate or risks or uncertainties materialize, actual results may differ materially from those set forth in the forward-looking statements.

Risks and uncertainties include but are not limited to, general industry conditions and competition; general economic factors, including interest rate and currency exchange rate fluctuations; the impact of pharmaceutical industry regulation and health care legislation in the United States and internationally; global trends toward health care cost containment; technological advances, new products and patents attained by competitors; challenges inherent in new product development, including obtaining regulatory approval; the company’s ability to accurately predict future market conditions; manufacturing difficulties or delays; financial instability of international economies and sovereign risk; dependence on the effectiveness of the company’s patents and other protections for innovative products; and the exposure to litigation, including patent litigation, and/or regulatory actions.

The company undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise. Additional factors that could cause results to differ materially from those described in the forward-looking statements can be found in the company’s Annual Report on Form 10-K for the year ended December 31, 2024 and the company’s other filings with the Securities and Exchange Commission (SEC) available at the SEC’s Internet site (www.sec.gov).

Agenda

Strategy Overview | Dr. Eliav Barr

Research Update | Dr. Liz Rhee

Commercial Opportunity | Chirfi Guindo

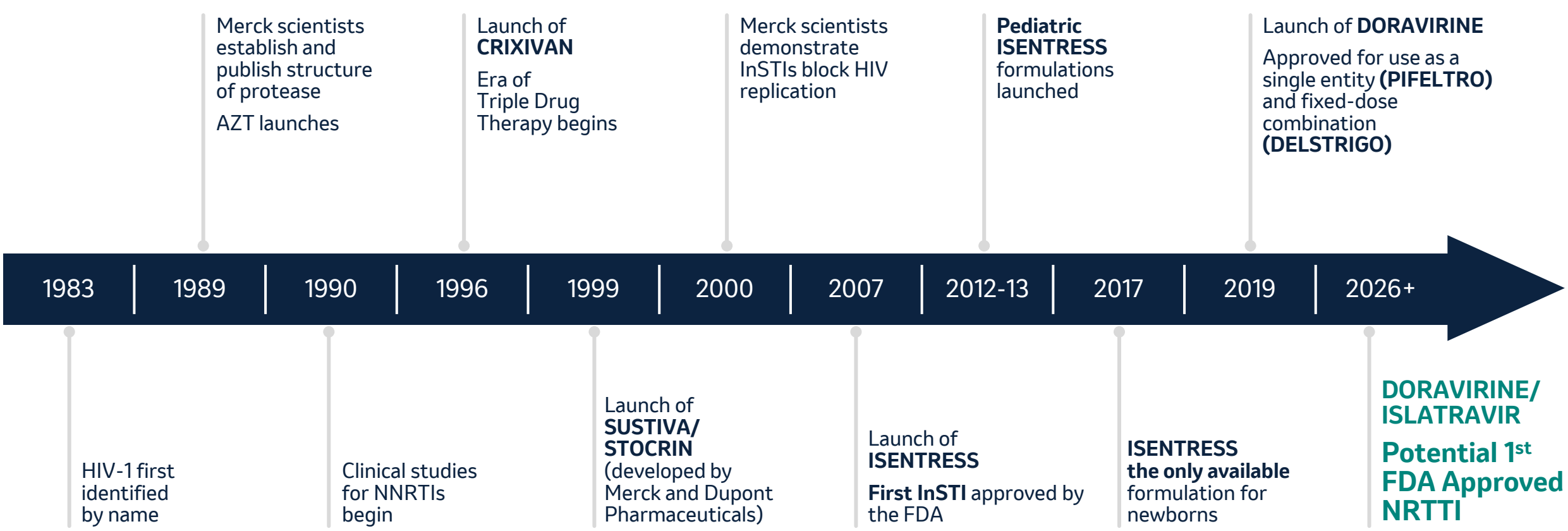
Closing Remarks | Dr. Eliav Barr

Q&A | All

Strategy Overview

Dr. Eliav Barr
Senior Vice President, Head of Global Clinical Development & Chief Medical Officer

Merck has been at the forefront of anchor medicine development in HIV



All dates represent first approval by FDA

NNRTI = Non-nucleoside reverse transcriptase inhibitor; InSTI = Integrase strand transfer inhibitors; NRTTI = Nucleoside reverse transcriptase translocator inhibitor

Substantial global unmet need remains in HIV

Current State[1]

40M
People living with HIV

Only 77% of people living with HIV are treated

1.3M
Annual new HIV infections

~3,500 new HIV infections daily

~66% aged 20-40, requiring decades of treatment to survive

>47%

of adults have discriminatory attitudes towards people living with HIV

UNAIDS 2030 Goals

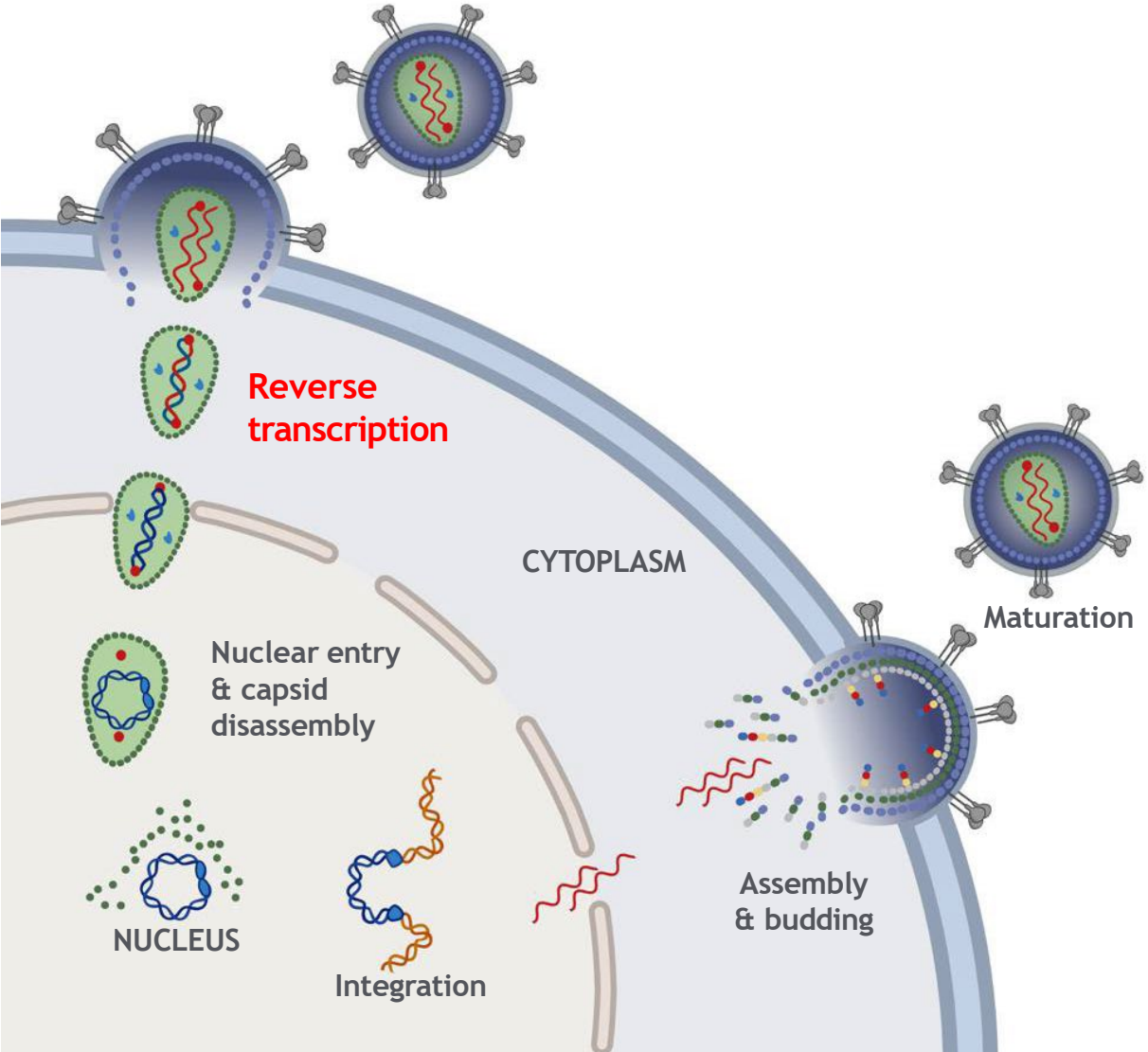
95% **Diagnosed** with HIV • **95%** People living with HIV **treated** • **95%** People living with HIV **suppressed**

200,000
new adult HIV infections per year

ZERO
discrimination

1. 2024 Global AIDS Update

Our ambition is to deliver first and best-in-class NRTTIs for HIV-1 treatment and PrEP



Key prospective attributes:

- High barrier to resistance
- High potency with the potential for low dose regimens
- Long half-life supporting long-acting options
- Favorable efficacy, safety and drug-drug interaction (DDI) profile

Efforts across our portfolio and pipeline in treatment and PrEP

Now

In-line portfolio:

- ISENTRESS
- PIFELTRO
- DELSTRIGO

Near

DOR + ISL

Two-Drug Regimen, Daily Oral Treatment
Filed in U.S. – PDUFA April 28, 2026

ISL + LEN[1]

Two-Drug Regimen, Weekly Oral Treatment
Phase 3 ongoing

ISL + ULO

Two-Drug Regimen, Weekly Oral Treatment
Phase 2 ongoing

MK-8527

Monthly Oral PrEP
Phase 3 ready

Next

Additional ongoing efforts in research and early development for HIV-1 **treatment**, **PrEP** and **cure**

Doravirine/islatravir (DOR/ISL), islatravir/lenacapavir (ISL/LEN) and islatravir/ulonivirine (ISL/ULO) are fixed-dose combinations
1. Combination of islatravir and lenacapavir in collaboration with Gilead

Additional ongoing efforts in research and early development for HIV treatment, PrEP and cure

Next

Efforts ongoing to bring forward **longer acting options in HIV treatment and PrEP**, with the ultimate ambition of finding a cure

- Collaboration with Gilead on islatravir prodrug injectable MK-8239 (GS-1614) for treatment in combination with lenacapavir; currently in Phase 1 development

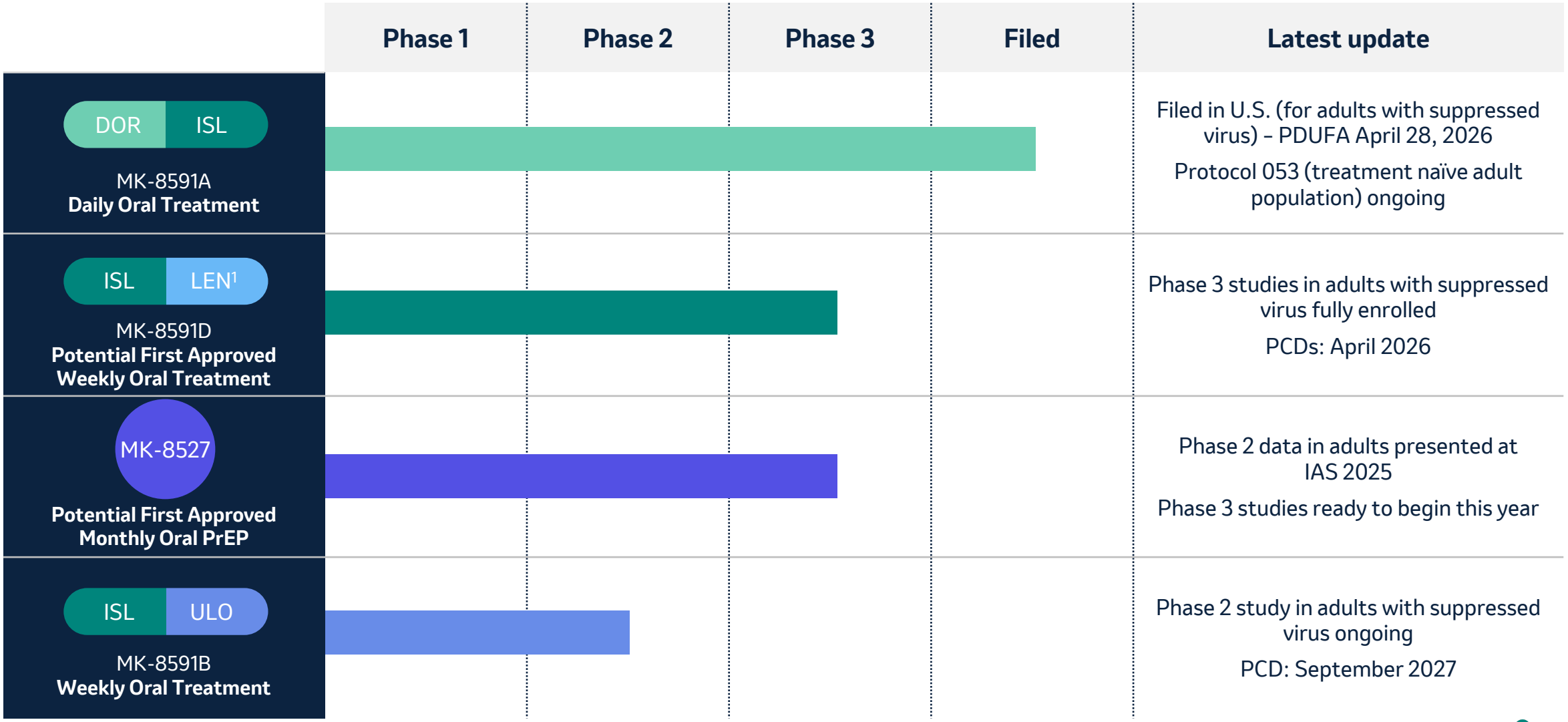
Path towards a **cure** is tied to **eliminating the latent viral reservoir**

- RT-TACK (Reverse Transcriptase - Targeted Activator of Cell Kill): NNRTIs with the added ability to selectively kill HIV infected cells
- Potential for a disruptive new treatment that can eliminate virus-producing cells, thereby decreasing residual viremia

Research Update

Dr. Liz Rhee
Vice President, Clinical Research,
Infectious Disease

Advancing our novel treatment and PrEP regimens



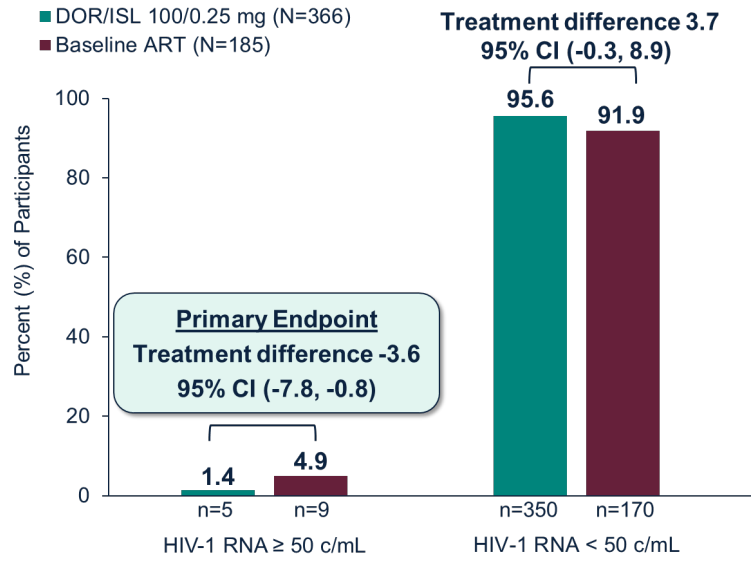
1. Combination of islatravir and lenacapavir in collaboration with Gilead

First two-drug regimen to demonstrate non-inferior efficacy to BIC/FTC/TAF in a Phase 3 pivotal study

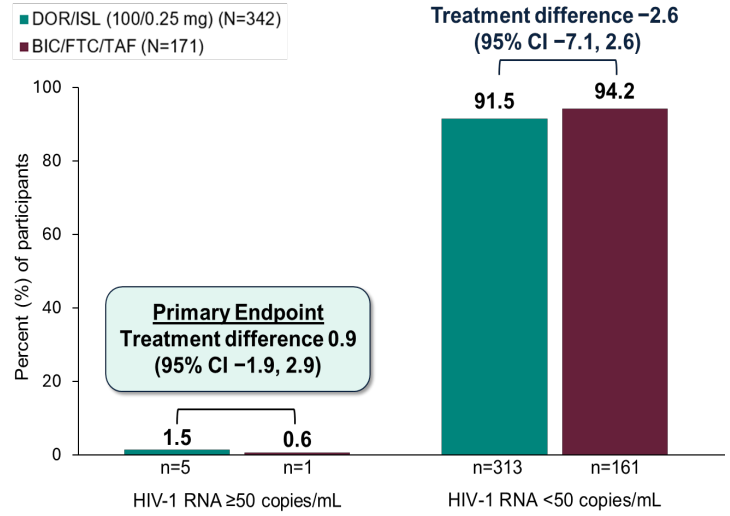
DOR ISL

Daily Oral Treatment

Protocol 051



Protocol 052



Protocol 051: Switching to DOR/ISL (100/0.25 mg) was non-inferior to continuing baseline ART in people living with HIV-1 infection that is virologically suppressed for ≥3 months

Protocol 052: Switching to DOR/ISL (100/0.25 mg) was non-inferior to continuing BIC/FTC/TAF in people living with HIV-1 infection that is virologically suppressed for ≥3 months

- No treatment-emergent resistance to DOR or ISL observed in either study
- Open-label switch to DOR/ISL was generally comparable to baseline ART with respect to tolerability and safety
- Mean percent change in total lymphocyte and CD4 counts were similar for DOR/ISL and comparator regimens

Protocol 053: Week 48 data in treatment naïve adult population planned to support initial EU application and U.S. label expansion (PCD: October 2025)

Data presented at CROI 2025

Evaluating two once weekly two-drug oral treatment regimens anchored by islatravir

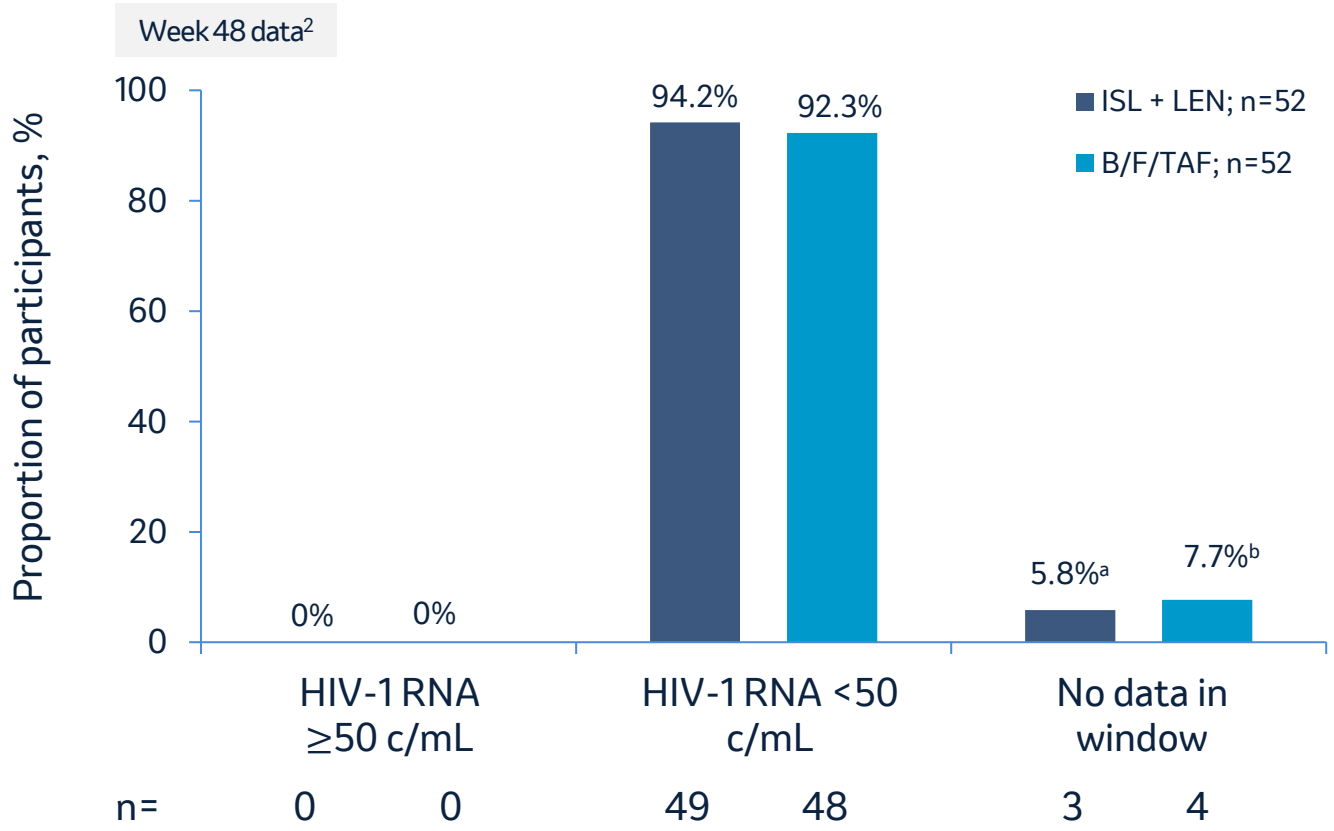
ISL + LEN[1]	ISL + ULO
NRTTI / Capsid Inhibitor	**NRTTI / NNRTI**
Currently in Phase 3 development for adults PCDs: April 2026	Currently in Phase 2b development for adults PCD: September 2027
PLWH with suppressed virus	PLWH with suppressed virus and treatment-naïve population
Loading dose → Single tablet ~1.5 g QW	No loading dose Single tablet ~1 g or less QW
Potential to be first weekly oral regimen to market	**Potential to be smallest pill approved, with favorable DDI profile[2]**

1. Combination of islatravir and lenacapavir in collaboration with Gilead 2. Based on preclinical and Phase 1 results

Positive Phase 2 islatravir + lenacapavir weekly oral data supported advancement to Phase 3

ISL LEN[1]

Weekly Oral Treatment



- Participants in both treatment groups maintained high rates of virologic suppression
- No significant differences in lymphocyte counts at Week 48 between arms
- No participants discontinued due to decrease in CD4+ T-cell or lymphocyte counts

Two-drug regimen with the potential to be the **first approved weekly oral regimen** for the treatment of adults living with HIV with suppressed virus

Data presented at IDWeek 2024 1. Combination of islatravir and lenacapavir in collaboration with Gilead

2. At Week 24 (primary endpoint), one participant (1.9%) in the ISL+LEN group and no participants in the B/F/TAF group had HIV-1 RNA ≥50 copies/mL

Phase 3 ISLEND program in adults completed recruitment ahead of schedule

ISL | LEN[1]

Weekly Oral Treatment

ISLEND-1

PLWH with suppressed virus[2]

ISL/LEN QW vs. BIC/FTC/TAF QD

Blinded, randomized, switch

Completed enrollment

PCD: April 2026

ISLEND-2

PLWH with suppressed virus[2]

ISL/LEN QW vs. baseline ART QD

Open-label, randomized, switch

Completed enrollment

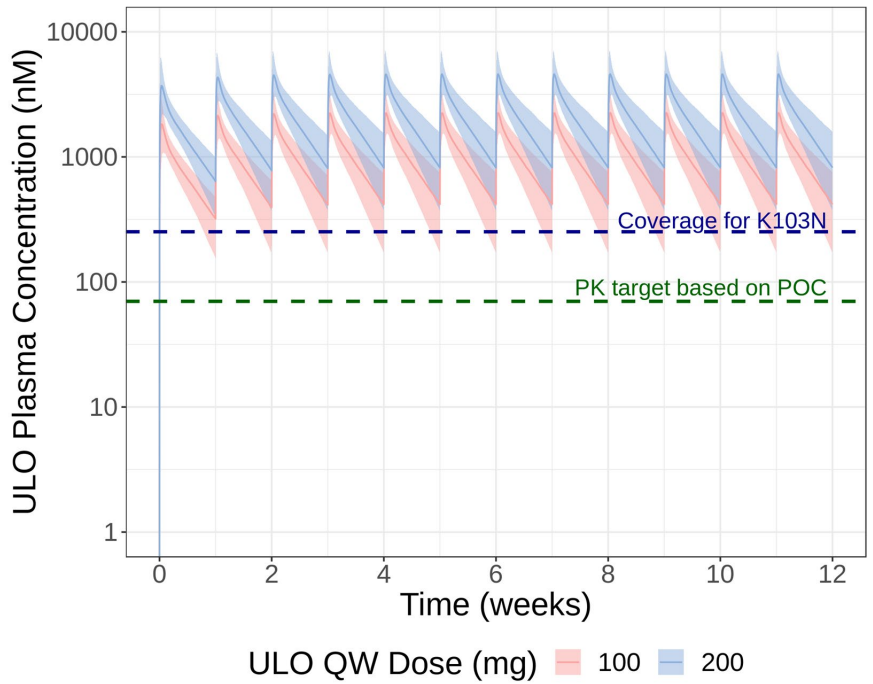
PCD: April 2026

1. Combination of islatravir and lenacapavir in collaboration with Gilead 2. Viral suppression is defined as having less than 50 copies of HIV per millimeter of blood

Ulonivirine: Novel NNRTI moving forward in clinical development in combination with islatravir as once weekly oral treatment

ISL ULO

Weekly Oral Treatment



- Phase 1b study demonstrated >1 log HIV-1 reduction at 1 week after a single dose
- Prior Phase 2b ULO dose-ranging study with a higher dose (20 mg) of ISL provides supporting evidence for the combination
- Predicted ULO exposures with 200mg QW met PK thresholds to cover WT and common NNRTI variants
- No clinical meaningful DDI observed between ISL and ULO
- Repeat dosing of ULO has no adverse effect on TLC and CD4 counts
- Phase 2b study currently enrolling with a once-weekly oral combination of ISL (2 mg) and ULO (200 mg)

Data presented at IAS 2025

Important opportunity to broaden options for PrEP

MK-8527

Monthly Oral PrEP

MK-8527 has the potential to provide:

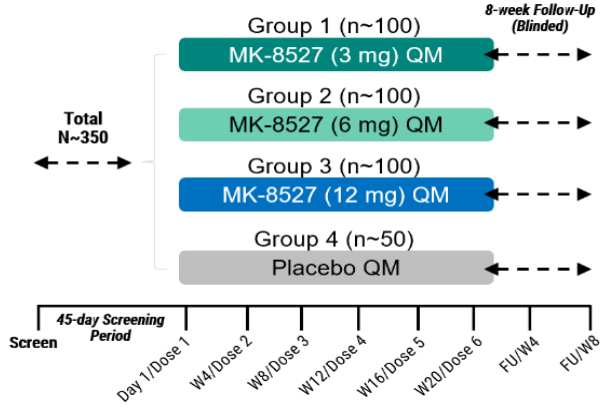
- ✓ Unique molecule developed only for PrEP
- ✓ Discreet monthly oral dosing
- ✓ Fast onset of protection within 1 hour for a month of protection from HIV[1]
- ✓ Small single tablet with no requirement for loading dose
- ✓ Favorable efficacy, safety and DDI profile
- ✓ Simplicity and ease of access

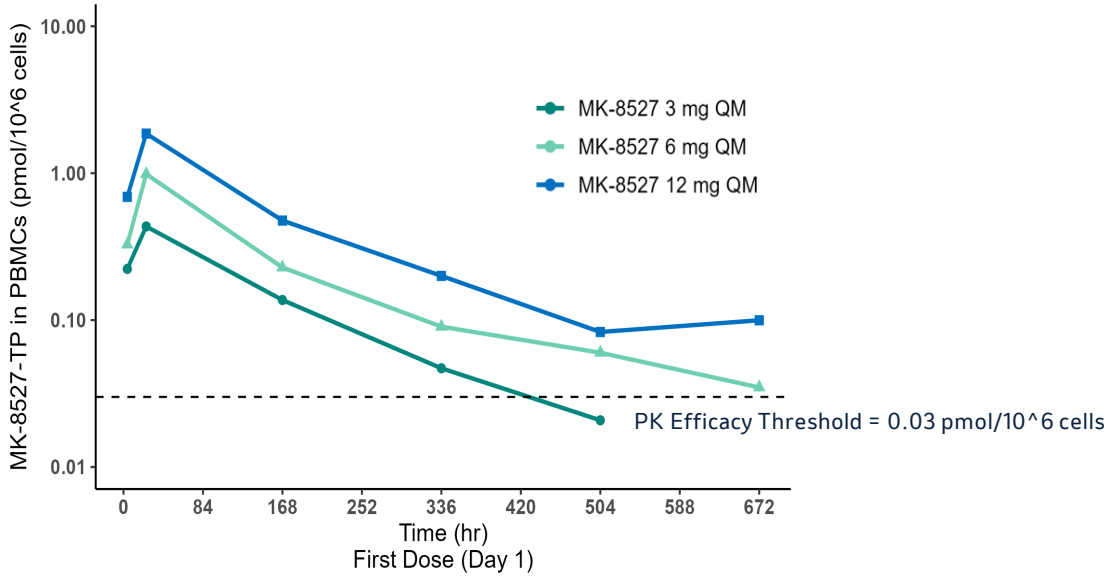
1. Based on Phase 1 and Phase 2 results

Phase 2 MK-8527 once monthly oral data support advancement to Phase 3

MK-8527

Monthly Oral PrEP





- Large Phase 2 dose-ranging study in participants with low likelihood of HIV-1 exposure presented at IAS 2025
  - Safety profile of MK-8527 doses evaluated was similar to placebo
  - Pharmacokinetics of MK-8527 and MK-8527-TP (intracellular active metabolite) support monthly dosing at the selected Phase 3 dose of 11 mg

Data presented at IAS 2025

Initiating the Phase 3 EXPrESSIVE program for once monthly MK-8527

MK-8527

Monthly Oral PrEP

EXPrESSIVE

EXPrESSIVE-10	EXPrESSIVE-11
Adolescent girls and young women at greater likelihood of HIV-1 exposure	People at greater likelihood of HIV-1 exposure
N ~4,580	N ~4,390
Kenya, South Africa and Uganda	Across 16 countries
Enrollment to begin in Fall 2025	Enrollment to begin in August 2025
Includes data generation in adolescents (from age 16) and pregnancy and lactation	Includes data generation in adolescents (from age 16)

Evaluating efficacy, safety and tolerability of monthly oral MK-8527 compared to daily FTC/TDF

Gates Foundation

Announced collaboration with the Gates Foundation on MK-8527

Commercial Opportunity

Chirfi Guindo
Chief Marketing Officer, Human Health

HIV market growth and transformation driven by global unmet need and fast-growing PrEP market

Global HIV Market Size

	Treatment	PrEP
Epidemiology	**~40M** people living with HIV globally **~1.3M** new infections annually globally	**~1.2M** people who could benefit from PrEP in the U.S. **~500K** people currently using PrEP in the U.S.
Geographic Revenue Split	~70% U.S. ~30% Ex-U.S.	~80% U.S. ~20% Ex-U.S.
Growth Trajectory	**~$25B** by the mid-2030s 2% CAGR	**~$9B** by the mid-2030s 14% CAGR
Market Dynamics	Up to **20% switch treatments annually** due to tolerability, resistance or desire for simpler regimens	Ability to support **multiple options**, including convenient, discreet and readily accessible monthly oral option

Changing landscape of HIV: unmet need and value drivers

Support people aging with HIV, of whom 1/3 have comorbidities

50% of PLWH in the U.S. are 50+ years old, growing to >70% by 2030

Growing use of two-drug regimens

Individuals looking to simplify regimen with improved tolerability

Additional treatment choice and optimization are needed

Adherence challenges remain

Reduce stigma and allow for discreet dosing

Approximately 1/3 would prefer long-acting orals across treatment and PrEP

Well positioned to meet evolving market needs and drive meaningful progress for people affected by HIV

DOR ISL

ISL LEN[1]

ISL ULO

MK-8527

Treatment

Our portfolio has the potential to:

- ✓ Address need for two-drug regimens
- ✓ Provide options with favorable safety and tolerability profile
- ✓ Offer choices for switch and treatment naïve populations
- ✓ Allow for less frequent dosing and reduced pill burden with weekly oral regimens (ISL/LEN[1] and ISL/ULO)

PrEP

MK-8527 has the potential to provide:

- ✓ Fast onset of protection within 1 hour for a month of protection from HIV[2]
- ✓ Discreet monthly oral dosing
- ✓ Small single tablet with no requirement for loading dose
- ✓ Favorable efficacy, safety and DDI profile
- ✓ Unique molecule developed only for PrEP
- ✓ Simplicity and ease of access

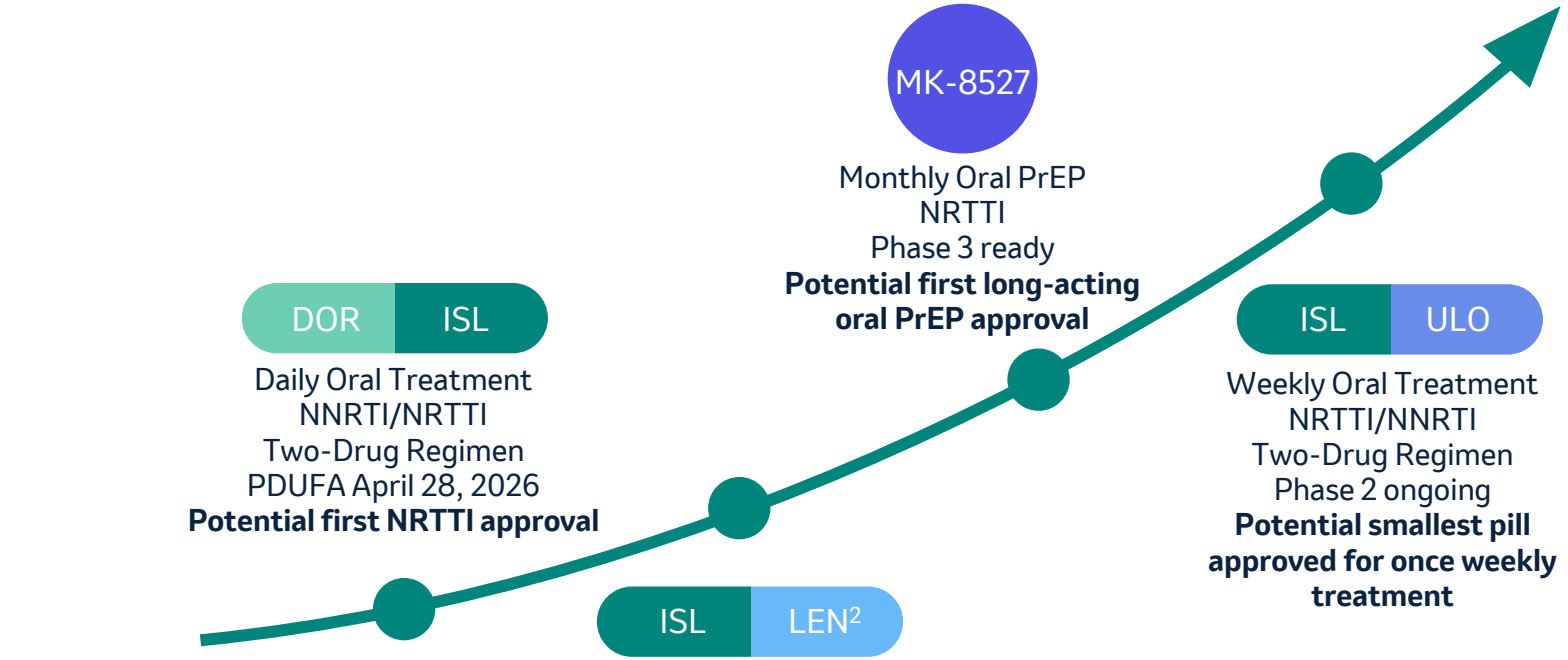
1. Combination of islatravir and lenacapavir in collaboration with Gilead
2. Based on Phase 1 and Phase 2 results

>$5B opportunity by the mid-2030s, with four impactful new product approvals anticipated over the near-term

>$5B

Pipeline opportunity by the mid-2030s[1]

Important global opportunities in daily treatment, weekly treatment and monthly PrEP



In-line portfolio:

- ISENTRESS
- PIFELTRO
- DELSTRIGO

1. Non-risk adjusted annual sales by the mid-2030s; reflects Merck's share of revenue from collaborations; does not include early-phase pipeline programs; does not include potential MFN actions.
2. Combination of islatravir and lenacapavir in collaboration with Gilead

Closing Remarks

Dr. Eliav Barr
Senior Vice President, Head of Global
Clinical Development & Chief Medical Officer

A new era in HIV treatment and prevention

Pioneering **novel innovations**

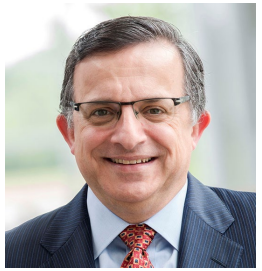
- NRTTI anchor acts via unique mechanism
- Potential to enable treatment with two-drug regimens & prevention with discreet monthly oral dosing

Focused on development of new options with **4 potential new approvals anticipated** in the near-term

Working with speed to deliver innovative therapies and **deepen our impact** where it matters most

Driven by goal to ensure people are **not defined by HIV**

Q&A



Dr. Eliav Barr
SVP, Head of Global Clinical Development & Chief Medical Officer

Dr. Liz Rhee
VP, Clinical Research, Infectious Disease

Chirfi Guindo
Chief Marketing Officer, Human Health

Kathryn Hayward
SVP, U.S. Pharma

Peter Dannenbaum
SVP, Investor Relations

Appendix

Acronyms & Abbreviations

ART = Antiretroviral therapy
AZT = azidothymidine
BIC = bictegravir
CI = Confidence interval
DDI = Drug-drug interaction
FTC = emtricitabine
HIV = Human Immunodeficiency Virus
InSTI = Integrase Strand Transfer Inhibitor
NRTTI = Nucleoside reverse transcriptase translocation inhibitor
NNRTI = Non-nucleoside reverse transcriptase inhibitor
PBMC = Peripheral blood mononuclear cells
PCD = Primary Completion Date
PDUFA = Prescription Drug User Fee Act
PK = Pharmacokinetics
PLWH = People living with HIV
PrEP = Pre-Exposure Prophylaxis
RT-TACK = Reverse Transcriptase - Targeted Activator of Cell Kill
QD = Once a day
QW = Once a week
TAF = tenofovir alafenamide
TDF = tenofovir disoproxil fumarate
TLC = Total Lymphocyte Count
WT = Wild type

Eliav Barr, MD

Senior Vice President, Head of Global Clinical Development, Chief Medical Officer

Dr. Eliav Barr is senior vice president and head of Global Clinical Development and Chief Medical Officer at Merck Research Laboratories. He leads all late-stage clinical development for Merck's human health portfolio and pipeline.

Prior to his current role, Eliav led MRL's Global Medical Affairs organization expanding Merck's scientific engagement and implementation efforts in oncology, vaccines and infectious diseases. Since joining Merck in 1995, Eliav has held positions of increasing responsibility including leadership roles in oncology and infectious diseases clinical development. He was also previously Therapeutic Area Head for Infectious Diseases and managed product development teams in Oncology and Infectious Disease.

Eliav is a cardiologist by training. He received his undergraduate degree from Penn State University and his medical degree from Thomas Jefferson University. He completed his Internal Medicine residency and Cardiology Fellowship at Johns Hopkins University, and subsequently pursued post-doctoral training at the University of Michigan. Prior to joining Merck, he held a faculty position at the University of Chicago.

Liz Rhee, MD

Vice President, Clinical Research, Infectious Disease

Dr. Elizabeth (Liz) Rhee is vice president and therapeutic area head of Infectious Disease Clinical Research in Global Clinical Development at Merck Research Laboratories.

She leads the late-stage development of infectious disease pipeline and portfolio products, including medicines for HIV, respiratory viruses, CMV, and bacterial infections. Since joining Merck in 2011, Liz has led and managed development teams across early, late, and post-licensure phases, stepping into her current role in 2022.

Liz is an infectious disease physician and prior to joining Merck had been on faculty at Brigham and Women's Hospital. She received her undergraduate degree from Harvard University and medical degree from SUNY Stony Brook. She completed her internal medicine residency at Brigham and Women's Hospital, infectious disease fellowship at Massachusetts General Hospital and post-doctoral training at Beth Israel Deaconess Medical Center.

Chirfi Guindo

Chief Marketing Officer, Human Health

Chirfi Guindo is chief marketing officer for Merck. He is responsible for leading the development and implementation of the company's long-term strategy for the human health portfolio spanning oncology, vaccines, pharmaceutical and pipeline products.

Prior to this role, Chirfi was executive vice president and head of global product strategy and commercialization at Biogen.

Before joining Biogen in 2017, Chirfi spent more than 25 years with Merck in positions of increasing responsibility in finance, sales, commercial and marketing. During his time with Merck, he led global marketing for Merck's HIV portfolio and also led the company's human health businesses in Canada, the Netherlands and South Africa. Chirfi has been recognized for developing strong talent and forging innovative public-private partnerships that expand access to Merck medicines, while elevating the profile of Merck as a patient-focused company.

Chirfi is a graduate of Ecole Centrale de Paris (France) with a degree in engineering and has a master's of Business Administration from New York University's Stern School of Business.

Kathryn Hayward
Senior Vice President, U.S. Pharma BU

Kathryn leads the Pharma Business Unit for the U.S market. She is responsible for the overall performance of the business unit's in-line portfolio and planning for pipeline products. These include products for infectious disease, cardiovascular and metabolic disease, immunology, and ophthalmology.

Prior to this role, Kathryn was vice president and head of the Chronic Care Business Unit where she oversaw launch planning for sotatercept. Kathryn also led our commercial operations organization where she was responsible for our digital transformation and the evolution of our commercial model and capabilities for the U.S. market.

Kathryn has over 30 years of experience at Merck in roles of increasing responsibility across marketing, sales, operations, and commercialization. She has broad therapeutic experience, spanning multiple sites of care.

Kathryn is a graduate of Princeton University with a degree in history.