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Merck Pipeline

Q2 2023 Reflecting Pipeline to May 3, 2023

Lead-in language

The chart below reflects the company's research pipeline as of **May 3, 2023**. Candidates shown in Phase 3 include specific products and the date such candidate entered into Phase 3 development. Candidates shown in Phase 2 include the most advanced compound with a specific mechanism or, if listed compounds have the same mechanism, they are each currently intended for commercialization in a given therapeutic area. Small molecules and biologics are given MK-number designations and vaccine candidates are given V-number designations. Except as otherwise noted, candidates in Phase 1, additional indications in the same therapeutic area (other than with respect to cancer and certain other indications) and additional claims, line extensions or formulations for in-line products are not shown.

1. Being developed in a collaboration.
2. Being developed in combination with Keytruda
3. Being developed as monotherapy and/or in combination with Keytruda

▶ Moved forward since last pipeline update.

Merck pipeline as of May 3, 2023

Phase 2	Phase 2	Phase 2	Phase 2	Phase 2
Cancer NSCLC **MK-0482**[2]	Hypercholesterolemia **MK-0616**	Cancer NSCLC quavonlimab **MK-1308**[2]	Cancer CRC Hepatocellular Melanoma SCLC quavonlimab + pembrolizumab **MK-1308A**	Treatment Resistant Depression **MK-1942**
Thrombosis **MK-2060**	Cancer Bladder Breast Gastric Heme NSCLC Ovarian Pancreas zilovertamab vedotin **MK-2140**	Cancer Neoplasm Malignant **MK-2870**[1, 3]	Cancer Advanced solid tumors Prostate KEYTRUDA® **MK-3475**	Cancer Myeloproliferative Disorders bomedemstat **MK-3543**
Cancer NSCLC favezelimab **MK-4280**[2]	Cancer Bladder Esophageal Melanoma RCC SCLC favezelimab + pembrolizumab **MK-4280A**	Cancer CRC Esophageal Melanoma NSCLC Ovarian RCC SCLC **MK-4830**[2]	Pulmonary Arterial Hypertension **MK-5475**	Cancer Prostate **MK-5684**[1]

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Merck pipeline as of May 3, 2023

1. Being developed in a collaboration.
2. Being developed in combination with Keytruda
3. Being developed as monotherapy and/or in combination with Keytruda
4. On FDA clinical hold
5. On partial clinical hold for higher doses than those used in current clinical trials
6. Phase 2b development costs are being co-funded

▶ Moved forward since last pipeline update.

Phase 2	Phase 2	Phase 2	Phase 2	Phase 2
Cancer NSCLC SCLC boserolimab **MK-5890**[2]	NASH efinopegdutide **MK-6024**	Cancer Breast Esophageal Gastric HNSCC Melanoma NSCLC Prostate SCLC ladiratuzumab vedotin **MK-6440** [1, 3]	Cancer Biliary CRC Endometrial Esophageal HCC Pancreatic Rare cancers Certain VHL tumors (EU) **WELIREG™** **MK-6482** [3]	Cancer Advanced Solid Tumors Biliary Bladder Cervical Endometrial Gastric NSCLC **TUKYSA®** **MK-7119** [1]
Cancer Advanced solid tumors **LYNPARZA®** **MK-7339** [1,3]	Cancer Biliary Bladder Breast Cervical CRC Endometrial Esophageal Gastric Heme HNSCC HCC Ovarian Prostate vibostolimab + pembrolizumab **MK-7684A**	Cancer Biliary Melanoma Pancreas Prostate SCLC **LENVIMA®** **MK-7902** [1, 2]	Pulmonary Hypertension due to Left Heart Disease sotatercept **MK-7962**	Schizophrenia **MK-8189**[6]
HIV-1 Infection islatravir+MK-8507 **MK-8591B**[4]	HIV-1 Infection islatravir+lenacapavir **MK-8591D** [1,5]	Dengue fever virus Vaccine **V181**	Cancer Melanoma **V940** [1, 2]	

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Merck pipeline as of May 3, 2023

1. Being developed in a collaboration.
2. Being developed in combination with Keytruda
3. Being developed as monotherapy and/or in combination with Keytruda
4. On FDA clinical hold
5. On partial clinical hold for higher doses than those used in current clinical trials
6. Available in the U.S. under Emergency Use Authorization

▶ Moved forward since last pipeline update.

Phase 3	Phase 3	Phase 3	Phase 3
▶ Cancer Heme nemtabrutinib **MK-1026**	Cancer RCC quavonlimab + pembrolizumab **MK-1308A**	Respiratory syncytial virus clesrovimab **MK-1654**	Cancer NSCLC pembrolizumab subcutaneous **MK-3475**
Cancer Biliary tract Cutaneous Squamous Cell Carcinoma (EU) Hepatocellular (EU) Mesothelioma Ovarian SCLC **KEYTRUDA®** **MK-3475**	Cancer NSCLC pembrolizumab + hyaluronidase subcutaneous **MK-3475A**	Cancer CRC Heme favezelimab + pembrolizumab **MK-4280A**	Anti-Viral COVID-19 molnupiravir **MK-4482** [1, 6] **(US)**
Cancer RCC **WELIREG™** **MK-6482** [3]	Cancer Breast CRC **TUKYSA®** **MK-7119** [1]	Cancer NSCLC SCLC **LYNPARZA®** **MK-7339** [1, 2]	Cancer Melanoma NSCLC SCLC vibostolimab + pembrolizumab **MK-7684A**
Cancer Esophageal Gastric HNSCC NSCLC **LENVIMA®** **MK-7902** [1, 2]	Pulmonary Arterial Hypertension sotatercept **MK-7962**	HIV-1 infection doravirine + islatravir **MK-8591A** [5]	Pneumococcal Vaccine Adult **V116**

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Merck pipeline as of May 3, 2023

1. Approvals obtained within the last 3 months.
2. Being developed in a collaboration
3. In response to the CRL received Jan 2022, Merck is performing additional analyses and anticipates submitting this information to the FDA in the first half of 2023.
4. Requested re-examination of EU MAA following CHMP major objection of data to support market authorization

▶ Moved forward since last pipeline update.

New Molecular Entities Under Review	**Certain Supplemental Filings** Under Review	**Certain Supplemental Filings** Under Review	**Certain Supplemental Filings** Under Review
Anti-Viral COVID-19 molnupiravir **MK-4482**[2,4] **(EU)**	Relapsed or refractory Primary Mediastinal B-Cell Lymphoma (KN170/KNA33) **KEYTRUDA® MK-3475 (JPN)**	2L hepatocellular cancer (KN394) **KEYTRUDA® MK-3475 (US)**	Locally Advanced or Metastic Merkel Cell Carcinoma (KN913) **KEYTRUDA® MK-3475 (US)**
Cough gefapixant **MK-7264** **(US**[3]**, EU)**	▶ 1L HER2 negative Locally Advanced Unresectable or Metastatic Gastric Cancer (KN859) **KEYTRUDA® MK-3475 (US, EU)**	Adjuvant NSCLC (KN091) **KEYTRUDA® MK-3475 (EU)**	▶ Resectable Stage II, IIIA or IIIB NSCLC (KN671) **KEYTRUDA® MK-3475 (US, EU)**
	Metastatic 1L prostate cancer (PROpel) **LYNPARZA® MK-7339**[2] **(US, JPN)**	Prophylaxis of CMW in kidney transplant patients **PREVYMIS™ MK-8228 (US)**	Pneumococcal Infection for pediatric use **VAXNEUVANCE™ V114 (JPN)**

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Merck pipeline as of May 3, 2023

Certain Supplemental Approvals[1]
▶ 1L Locally Advanced or Metastatic Urothelial Cancer (KN869) **KEYTRUDA® MK-3475 (US)**
▶ HPV Vaccine 2-dose Girls (9-14yrs.) **GARDASIL9® V503 (JPN)**

Forward-looking statement

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 the global outbreak of novel coronavirus disease (COVID-19); 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, 2022 and the company's other filings with the Securities and Exchange Commission (SEC) available at the SEC's Internet site (www.sec.gov).

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No duty to update

The information contained in the presentation set forth below was current as of May 3, 2023. While this presentation remains on the company's website the company assumes no duty to update the information to reflect subsequent developments. Consequently, the company will not update the information contained in the presentation and investors should not rely upon the information as current or accurate after May 3, 2023.

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Candidates shown in Phase 3 include specific products. Candidates shown in Phase 2 include the most advanced compound with a specific mechanism in a given therapeutic area. Phase 1 candidates are not shown.