Merck Pipeline

August 1, 2017

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Merck Pipeline as of August 1, 2017

Phase 2	Phase 2	Phase 3	Phase 3	Phase 3
Asthma **MK-1029**	Hepatitis C **grazoprevir/ruzasvir** **uprifosbuvir** **MK-3682B** Hepatitis C **ruzasvir/** **uprifosbuvir** **MK-3682C**	Alzheimer's disease **verubecestat** **MK-8931**	Cancer **Breast** **Colorectal** **Esophageal** **Gastric (EU)** **Hepatocellular** **Head and neck (EU)** **Renal** **Small Cell Lung** **KEYTRUDA®** **MK-3475**	HABP/VABP[3] bacterial pneumonia **SIVEXTRO®** **MK-1986**
Cancer **PMBCL[2]** **Advanced solid tumors** **Nasopharyngeal** **Ovarian** **Prostate** **KEYTRUDA®** **MK-3475**	Pneumoconjugate vaccine **V114**	Atherosclerosis **anacetrapib** **MK-0859**	Ebola vaccine **V920**	HIV **doravirine** **MK-1439** HIV **doravirine/lamivudine/** **tenofovir disoproxil fumarate** **MK-1439A**
Cough, including cough w/ IPF[4] **MK-7264**	Schizophrenia **MK-8189**	Bacterial infection **relebactam+imipenem/** **cilastatin** **MK-7655A**	Herpes zoster **inactivated VZV vaccine** **V212**	
Diabetes mellitus **MK-8521**		Heart failure **vericiguat** **MK-1242**[1]	HABP/VABP[3] bacterial pneumonia **ZERBAXA®** **MK-7625A**	

1. Being developed in a collaboration.
2. Primary Mediastinal Large B-Cell Lymphoma
3. HABP - Hospital-acquired bacterial pneumonia/ VABP - ventilator-associated bacterial pneumonia Idiopathic Pulmonary Fibrosis

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New Molecular Entities Under Review	New Molecular Entities Under Review	New Molecular Entities Approvals[1]	New Molecular Entities Approvals[1]
V419 Pediatric hexavalent combination vaccine **(US)[2]**	**MK-8835** **ertugliflozin** Diabetes mellitus **(EU/US)[4]**	**BRIDION®** **MK-8616** Neuromuscular blockade reversal **(US)**	**VAXELIS™** **V419** Pediatric hexavalent combination vaccine **(EU)[2]**
▶ **MK-0431J[4]** Diabetes mellitus sitagliptin+ipragliflozin **(Japan)**	**MK-8835A** **ertugliflozin+sitagliptin** Diabetes mellitus **(EU/US)[4]**	**LUSDUNA®** **MK-1293** Diabetes mellitus **(EU/US)[3,4]**	**ZEPATIER®** **MK-5172A** Hepatitis C **(US/EU)**
▶ **MK-8228** CMV prophylaxis in transplant patients letermovir **(US/EU)**	**MK-8835B** **ertugliflozin+metformin** Diabetes mellitus **(EU/US)[4]**	**MARIZEV®** **MK-3102** Diabetes mellitus **(Japan)**	**ZINPLAVA™** **MK-6072** *Clostridium difficile* infection recurrence **(US/EU)**

▶ Moved forward since last pipeline update.

1. Approvals obtained within the last 24 months.
2. V419 is an investigational pediatric hexavalent combination vaccine, DTaP5-IPV-Hib-HepB, that is being developed and, if approved, will be commercialized through a partnership between Merck and Sanofi. In November 2015, the FDA issued a CRL with respect to V419. Both companies are reviewing the CRL and plan to have further communication with the FDA.
3. Received tentative approval from the FDA in July 2017. Final approval remains subject to automatic 30-month stay that began in September 2016.
4. Being developed in a collaboration

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Certain Supplemental Filings Under Review	Certain Supplemental Filings Under Review
KEYTRUDA® **MK-3475** 3rd line gastric cancer **(US)**	**KEYTRUDA®** **MK-3475** 2nd line metastatic bladder cancer **(EU)**
KEYTRUDA® **MK-3475** 1st line cisplatin-ineligible bladder cancer **(EU)**	**KEYTRUDA®** **MK-3475** Combination with carboplatin and pemetrexed in 1st line non-squamous non-small cell lung cancer **(EU)**

Moved forward since last pipeline update.

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Certain Supplemental Approvals[1]	Certain Supplemental Approvals[1]	Certain Supplemental Approvals[1]	Certain Supplemental Approvals[1]	Certain Supplemental Approvals[1]
▶ **KEYTRUDA®** **MK-3475** Previously treated microsatellite instability-high cancer **(US)**	▶ **KEYTRUDA®** **MK-3475** 2nd line metastatic bladder cancer **(US)**	**KEYTRUDA®** **MK-3475** 2nd line non-small cell lung cancer **(US/EU)**	**EMEND®** **MK-0517** CINV[2] in adults receiving moderately emetogenic chemotherapy (MEC) **(US)**	**GARDASIL® 9** **V503** 2-dose vaccination regimen for use in girls and boys 9-14 years of age **(US)**
▶ **KEYTRUDA®** **MK-3475** 1st line cisplatin-ineligible bladder cancer **(US)**	▶ **KEYTRUDA®** **MK-3475** Combination with carboplatin and pemetrexed in 1st Line non-squamous non-small cell lung cancer **(US)**	**GARDASIL® 9** **V503** Expanded age indication for males for prevention of anal cancers and genital warts caused by nine HPV types **(US)**	**KEYTRUDA®** **MK-3475** 3rd line head and neck cancer **(US)**	**KEYTRUDA®** **MK-3475** Relapsed or refractory classical Hodgkin lymphoma **(US/EU)**
▶ **ISENTRESS®** Once-daily dosing option in combination with other antiretroviral agents for HIV-1 infection **(ISENTRESS HD®)** **(US/EU)**	**EMEND®** **MK-0869** Pediatric indication for CINV[2] **(US/EU)**	**KEYTRUDA®** **MK-3475** 1st line melanoma **(US)**	**KEYTRUDA®** **MK-3475** 1st line non-small cell lung cancer **(US/EU)**	

▶ Moved forward since last pipeline update.

1. Approvals obtained within the last 24 months.
2. Chemotherapy-induced nausea and vomiting

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This presentation includes “forward-looking statements” within the meaning of the safe harbor provisions of the United States Private Securities Litigation Reform Act of 1995. These statements are based upon the current beliefs and expectations of Merck’s management and are subject to significant risks and uncertainties. There can be no guarantees with respect to pipeline products that the products 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; Merck’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 Merck’s patents and other protections for innovative products; and the exposure to litigation, including patent litigation, and/or regulatory actions.

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The information contained in the presentation set forth below was current as of August 1, 2017. 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 August 1, 2017.

The chart reflects the Merck research pipeline as of August 1, 2017.

Candidates shown in Phase III include specific products. Candidates shown in Phase II include the most advanced compound with a specific mechanism in a given therapeutic area. Phase I candidates are not shown.

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