Merck Pipeline

Final – Feb. 24, 2017

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Merck Pipeline as of February 24, 2017

Phase 2	Phase 2	Phase 3	Phase 3	Phase 3	Phase 3
Asthma **MK-1029**	Diabetes mellitus **MK-8521**	Alzheimer's disease **verubecestat** **MK-8931**	Cancer **Bladder (EU)** **Breast** **Colorectal** **Esophageal** **Gastric** **Hepatocellular** **Head and neck (EU)** **Hodgkin lymphoma (EU)** **Multiple myeloma** **Renal** **KEYTRUDA®** **MK-3475**	Diabetes mellitus **ertugliflozin** **MK-8835** **(US)**[1] **ertugliflozin+sitagliptin** **MK-8835A** **(US)**[1] **ertugliflozin+metformin** **MK-8835B** **(US)**[1]	HIV **doravirine** **MK-1439**
Cancer **PMBCL**[2] **Advanced solid tumors** **Nasopharyngeal** **Ovarian** **Prostate** **KEYTRUDA®** **MK-3475**	Hepatitis C **grazoprevir/ruzasvir** **uprifosbuvir** **MK-3682B**	Atherosclerosis **anacetrapib** **MK-0859**	CMV prophylaxis in transplant patients **letermovir** **MK-8228**	Ebola vaccine **V920**	HABP/VABP[3] bacterial pneumonia **ZERBAXA™** **MK-7625A**
Cancer **MK-2206**	Pneumoconjugate vaccine **V114**	Bacterial infection **relebactam+imipenem/ cilastatin** **MK-7655A**	Diabetes mellitus **sitagliptin+ipragliflozin** **MK-0431J** [1] **(Japan)**	Herpes zoster **inactivated VZV vaccine** **V212**	HABP/VABP[3] bacterial pneumonia **SIVEXTRO®** **MK-1986**
Cough, including cough w/ IPF[4] **MK-7264**		Heart failure **Vericiguat** **MK-1242**[1]			

Moved forward since last pipeline update.

1. Being developed in a collaboration.
2. Primary Mediastinal Large B-Cell Lymphoma
3. HABP - Hospital-acquired bacterial pneumonia/ VABP - ventilator-associated bacterial pneumonia
4. 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]	New Molecular Entities Approvals[1]
MK-8237 Allergy, House Dust Mite **(US)**[2]	▶ **MK-8835** **ertugliflozin** Diabetes mellitus **(EU)**[4]	**BRIDION®** **MK-8616** Neuromuscular blockade reversal **(US)**	**ZEPATIER®** **MK-5172A** Hepatitis C **(US/EU)**	**KEYTRUDA®** **MK-3475** Melanoma **(EU)**
MK-1293 Diabetes mellitus **(US)**[4]	▶ **MK-8835A** **ertugliflozin+sitagliptin** Diabetes mellitus **(EU)**[4]	**MARIZEV®** **MK-3102** Diabetes mellitus **(Japan)**	**GARDASIL®9** **V503** HPV vaccine for cancer prevention **(EU)**	**ZINPLAVA™** **MK-6072** *Clostridium difficile* infection recurrence **(US/EU)**
V419 Pediatric hexavalent combination vaccine **(US)**[3]	▶ **MK-8835B** **ertugliflozin+metformin** Diabetes mellitus **(EU)**[4]	**ZERBAXA®** **MK-7625A** Complicated intra-abdominal infections (cIAI) & complicated urinary tract infections (cUTI) **(EU)**	▶ **VAXELIS™** **V419** Pediatric hexavalent combination vaccine **(EU)**[3]	**LUSDUNA®** **MK-1293** Diabetes mellitus **(EU)**[4]

▶ Moved forward since last pipeline update.

1. Approvals obtained within the last 24 months.
2. MK-8237 was being developed as part of a North America partnership with ALK-Abelló (ALK). Merck has given ALK six months' notice that it is terminating the agreement and therefore this compound will be returned to ALK.
3. V419, the investigational pediatric hexavalent combination vaccine, DTaP5-IPV-Hib-HepB, is being developed in partnership with Sanofi Pasteur and if approved in the US, will be commercialized through that partnership. On November 2, 2015, the FDA issued a CRL with respect to V419. The companies are reviewing the CRL and plan to have further discussions with the FDA.
4. Being developed in a collaboration

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Certain Supplemental Filings Under Review	Certain Supplemental Filings Under Review	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)**	**EMEND®** **MK-0517** Pediatric indication for CINV[2] **(US/EU)**	**EMEND®** **MK-0517** CINV[2] in adults receiving moderately emetogenic chemotherapy (MEC) **(US)**
▶ **KEYTRUDA®** **MK-3475** Relapsed or refractory classical Hodgkin lymphoma **(US)**	▶ **KEYTRUDA®** **MK-3475** Combination with chemotherapy in 1st Line non-squamous non-small cell lung cancer **(US)**	**KEYTRUDA®** **MK-3475** 2nd line non-small cell lung cancer **(US/EU)**	**KEYTRUDA®** **MK-3475** 3rd line head and neck cancer **(US)**
▶ **KEYTRUDA®** **MK-3475** 1st Line cisplatin-ineligible bladder 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** 1st line non-small cell lung cancer **(US/EU)**
		KEYTRUDA® **MK-3475** 1st line melanoma **(US/EU)**	**GARDASIL® 9** **V503** 2-dose vaccination regimen for use in girls and boys 9-14 years of age **(US)**

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

▶ Moved forward since last pipeline update.

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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 February 24, 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 February 24, 2017.

The chart reflects the Merck research pipeline as of February 24, 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.