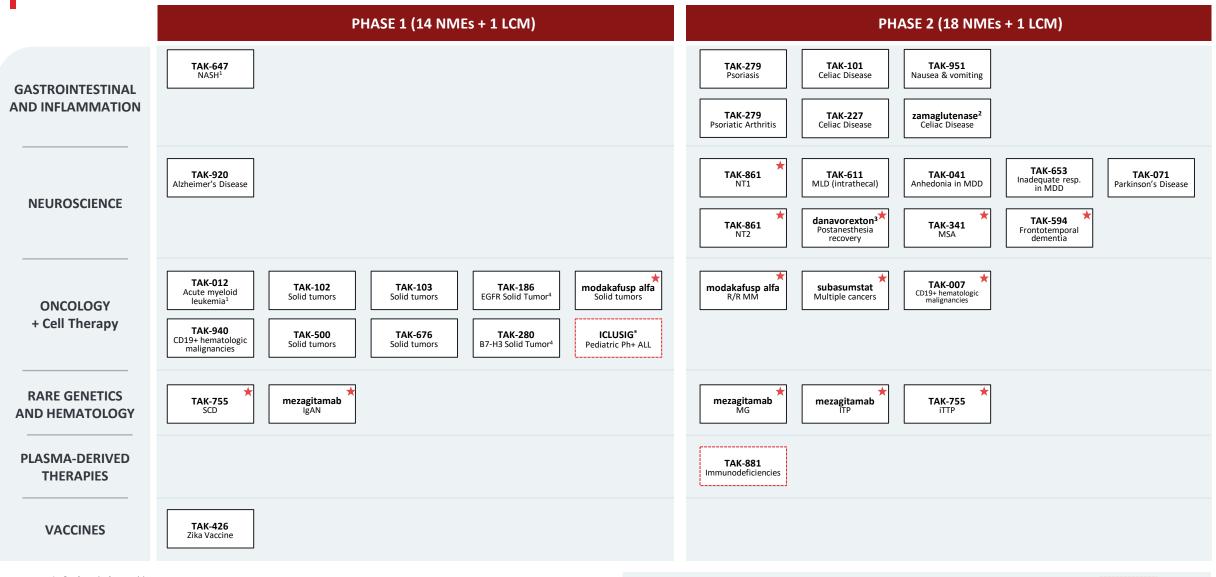
Consolidated Development Pipeline by Phase

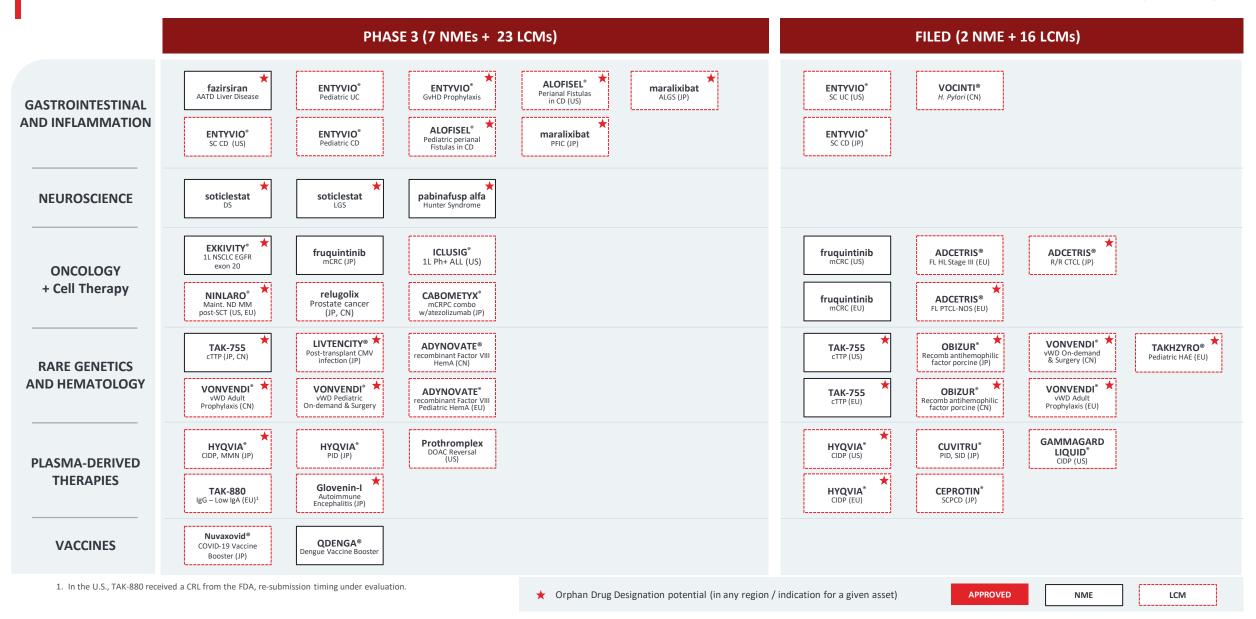




- Study actively recruiting
- 2. Zamaglutenase is the INN for TAK-062
- 3. Danavorexton is the INN for TAK-925
- 4. Currently in phase 1 of a phase 1/2 trial

Consolidated Development Pipeline by Phase





Glossary of Abbreviations



Regional Abbreviations:

CN: China; EU: Europe; JP: Japan; UK: United Kingdom; U.S.: United States of America

United State	s of America
AAD	American Academy of Dermatology
AATD	α1-antitrypsin deficiency
AATD LD	α1-antitrypsin deficiency associated liver disease
ADAMTS13	a disintegrin-like and metalloproteinase with a thrombospondin type 1 motifs 13
ADHD	attention deficit hyperactivity disorder
ALGS	Alagille syndrome
ALK	anaplastic lymphoma kinase
ALL	acute lymphocytic leukemia
AVA	Advanced Vial Access
BLA	biologics license application
BTD	breakthrough therapy designation
CAR NK	chimeric antigen receptor natural killer cell
CD	Crohn's disease
СНМР	Committee for Medicinal Products for Human Use
CIDP	chronic inflammatory demyelinating polyradiculoneuropathy
CML	chronic myeloid leukemia
CMV	cytomegalovirus
CPF	complex perianal fistulas
CRC	colorectal cancer
CRL	complete response letter
CRPC	castrate-resistant prostate cancer
CTCL	cutaneous T-cell lymphoma
сТТР	congenital thrombotic thrombocytopenic purpura
DOAC	direct oral anti-coagulation
DS	Dravet syndrome
EASL	European Association for the Study of the Liver
EGFR	epidermal growth factor receptor

EMA	European Medicines Agency
ESS	Epworth Sleepiness Scale
FDA	U.S. Food & Drug Administration
FL	front line
FSI	first subject in
FY	fiscal year
GI	gastrointestinal
GvHD	graft versus host disease
H2H	head-to-head
HAE	hereditary angioedema
HemA	hemophilia A
HL	Hodgkin lymphoma
IARS	International Anesthesia Research Society
IBD	inflammatory bowel disease
IgA	immunoglobulin A
IgAN	immunoglobulin A nephropathy
IgG	immunoglobulin G
IND	investigational new drug
INN	international non-proprietary name
IRR	incidence rate ratio
ISTH	International Society on Thrombosis and Haemostasis
IT	intrathecal
ITP	Immune thrombocytopenic purpura
iTTP	immune thrombotic thrombocytopenic purpura
IV	intravenous
JAK	Janus kinase
JPNS	Journal of the Peripheral Nervous System
LCM	lifecycle management
LGS	Lennox-Gastaut syndrome

mCRC	metastatic colorectal cancer
mCRPC	metastatic castrate-resistant prostate cancer
MDD	major depressive disorder
MG	myasthenia gravis
MLD	metachromatic leukodystrophy
MM	multiple myeloma
MMN	multifocal motor neuropathy
MSA	multiple system atrophy
MWT	maintenance of wakefulness test
NASH	non-alcoholic steatohepatitis
ND	newly diagnosed
NDA	new drug application
NEJM	New England Journal of Medicine
NK	natural killer
NME	new molecular entity
NMPA	(China's) National Medical Products Administration
NSCLC	non-small cell lung cancer
NT1 or 2	narcolepsy type 1 or 2
PASI	psoriasis area and severity index
PFIC	progressive familial intrahepatic cholestasis
Ph+ ALL	Philadelphia chromosome-positive acute lymphoblastic leukemia
PID	primary immunodeficiency
PK	pharmacokinetics
PMDA	Japan's Pharmaceuticals and Medical Devices Agency
POC	proof of concept
PRIME	Priority medicines scheme by EMA
PTCL-NOS	peripheral T-cell lymphoma not otherwise specified
QD	quaque die, every day

R/R	relapsed/refractory
RTU	ready to use
sc	subcutaneous formulation
SCD	sickle cell disease
SCPCD	severe congenital protein C deficiency
SCT	stem cell transplant
SID	secondary immunodeficiency
SLE	systemic lupus erythematosus
soc	standard of care
TEAE	treatment emergent adverse event
	treatment emergent daverse event
TKI	tyrosine kinase inhibitor
TKI TTP	
	tyrosine kinase inhibitor
TTP	tyrosine kinase inhibitor thrombotic thrombocytopenic purpura
TTP TYK2	tyrosine kinase inhibitor thrombotic thrombocytopenic purpura tyrosine kinase 2
TTP TYK2 UC	tyrosine kinase inhibitor thrombotic thrombocytopenic purpura tyrosine kinase 2 ulcerative colitis
TTP TYK2 UC VEGFR	tyrosine kinase inhibitor thrombotic thrombocytopenic purpura tyrosine kinase 2 ulcerative colitis vascular endothelial growth factor receptors
TTP TYK2 UC VEGFR vWD	tyrosine kinase inhibitor thrombotic thrombocytopenic purpura tyrosine kinase 2 ulcerative colitis vascular endothelial growth factor receptors von Willebrand disease

1. Pipeline

Clinical Development Activities

- The following table lists the pipeline assets that we are clinically developing as of July 27, 2023 (the date of our annual earnings release), unless otherwise specifically noted. The assets in our pipeline are in various stages of development, and the contents of the pipeline may change as therapeutic candidates currently under development drop out and new therapeutic candidates are introduced. Whether the therapeutic candidates listed below are ever successfully released as products depends on various factors, including the results of pre-clinical and clinical trials, market conditions for various drugs and regulatory approvals.
- This table primarily shows the indications for which we are actively pursuing regulatory approval and those regulatory approvals granted during fiscal year 2023. We are also conducting additional studies of certain assets to examine their potential for use in further indications and in additional formulations.
- The listings in this table are limited to the U.S., EU and Japan and China, but we are also actively conducting development activities in other regions, including in Emerging Markets. Country/region column denotes where a pivotal clinical study is ongoing or a filing has been made with our specific intention to pursue approval in any of the U.S., EU, Japan or China. 'Global' refers to U.S., EU, Japan and China.
- Brand name and country/region indicate the brand name and country in which the specific asset has already been approved for any indication in any of the U.S., EU,
 Japan or China and Takeda has commercialization rights for such asset.
- Stage-ups are recognized in the table upon achievement of First Subject In, unless otherwise specified.
- Modality of our pipeline assets in the following table is classified into either of the following categories: 'small molecule', 'peptide/oligonucleotide', 'cell and gene therapy' or 'biologic and other.'

Gastrointestinal and Inflammation Pipeline

Development code <generic name=""> Brand name (country/region)</generic>	Type of Drug (administration route)	Modality	Indications / additional formulations	Country/ Region	Stage
			Ulcerative colitis (subcutaneous formulation)	U.S.	Filed (Apr 2023)
MLN0002 <vedolizumab> ENTYVIO</vedolizumab>	Humanized monoclonal antibody against α4β7	Biologic and other	Crohn's disease (subcutaneous formulation)	Japan U.S.	Filed (Oct 2022) P-III
(Global)	integrin (injection)		Graft-versus-Host Disease prophylaxis in patients undergoing allogeneic hematopoietic stem cell transplantation (intravenous formulation)	EU Japan	P-III P-III
			Pediatrics Study (intravenous formulation for ulcerative colitis, Crohn's disease)	Global	P-III
TAK-438 <vonoprazan> TAKECAB (Japan) VOCINTI (China)</vonoprazan>	Potassium-competitive acid blocker (oral)	Small molecule	Acid related diseases (adjunct to Helicobacter pylori eradication)	China	Filed (Aug 2022)
Cx601 <darvadstrocel></darvadstrocel>	A suspension of allogeneic	logeneic kpanded adipose-erived stem cells Biologic and other	Refractory complex perianal fistulas in patients with Crohn's disease	U.S.	P-III
ALOFISEL (EU, Japan)	derived stem cells (injection)		Pediatric indication for refractory complex perianal fistulas in patients with Crohn's disease	EU Japan	P-III P-III
TAK-999¹ <fazirsiran></fazirsiran>	GalNAc based RNA interference (RNAi) (injection)	Peptide/ Oligo- nucleotide	Alpha-1 antitrypsin-deficiency associated liver disease	U.S. EU	P-III P-III
TAK-625 ² <maralixibat></maralixibat>		Small molecule	Alagille Syndrome	Japan	P-III
			Progressive Familial Intrahepatic Cholestasis	Japan	P-III
TAK-227/ZED1227 ³	Transglutaminase 2 inhibitor (oral)	Small molecule	Celiac disease	-	P-II (b)

TAK-279	TYK2 inhibitor	Small	Psoriasis	-	P-II (b)
1111 27 y	(oral)	molecule	Psoriatic Arthritis	-	P-II (b)
TAK-062 <zamaglutenase></zamaglutenase>	Glutenase (oral)	Biologic and other	Celiac disease	-	P-II
TAK-101 ⁴	Tolerizing Immune Modifying nanoParticle (TIMP) (injection)	Biologic and other	Celiac disease	-	P-II
TAK-951	Peptide agonist (subcutaneous infusion)	Peptide/ Oligo- nucleotide	Nausea and vomiting	-	P-II
TAK-647 ⁵	Anti MAdCAM-1 antibody (injection)	Biologic and other	Nonalcoholic Steatohepatitis (NASH)	-	P-I ⁶

- 1. Partnership with Arrowhead Pharmaceuticals, Inc.
- 2. Partnership with Mirum Pharmaceuticals.
- 3. Partnership with Zedira and Dr. Falk Pharma.
- 4. Acquired development and commercialization license for TAK-101 from COUR Pharmaceuticals.
- 5. Partnership with Pfizer.
- 6. Study actively recruiting

Additions since FY2022 Q4: None

Removals since FY2022 Q4: TAK-105 for Nausea and vomiting (P-I, discontinued)

Neuroscience Pipeline

Development code <generic name=""> Brand name (country/region)</generic>	Type of Drug (administration route)	Modality	Indications / additional formulations	Country/ Region	Stage
TAK-935	CH24H inhibitor (oral)	Small	Dravet syndrome	Global	P-III
<soticlestat></soticlestat>	C112411 miniotion (Gran)	molecule	Lennox-Gastaut syndrome	Global	P-III
TAK-141/JR-141 ¹ <pabinafusp alfa=""></pabinafusp>	Fusion protein of an antibody against the human transferrin receptor and iduronate-2-sulfatase [recombinant] (injection)	Biologic	Hunter syndrome (CNS and somatic symptoms)	EU	P-III
TAK-861	Orexin 2R agonist (oral)	Small	Narcolepsy type 1	-	P-II (b)
MHC 001	Grown 21 agomst (Grai)	molecule	Narcolepsy type 2	-	P-II (b)
TAK-071	M1 positive allosteric modulator (M1PAM) (oral)	Small molecule	Parkinson's disease	-	P-II
TAK-041/NBI-846 ²	GPR139 agonist (oral)	Small molecule	Anhedonia in major depressive disorder (MDD)	-	P-II
TAK-653/NBI-845 ²	AMPA receptor potentiator (oral)	Small molecule	Inadequate response to treatment in major depressive disorder (MDD)	-	P-II
TAK-341/MEDI1341 ³	Alpha-synuclein antibody (injection)	Biologic and other	Multiple systems atrophy (MSA)	-	P-II
TAK-611	Human arylsulfatase A for intrathecal administration [recombinant] (injection)	Biologic and other	Metachromatic leukodystrophy	-	P-II ⁴
TAK-594/DNL593 ⁵	Brain-penetrant progranulin fusion protein (injection)	Biologic and other	Frontotemporal dementia	-	P-II
TAK-925	Orexin 2R agonist	Small	Postanesthesia Recovery	-	P-II
<danavorexton></danavorexton>	(injection)	molecule	Narcolepsy	-	P-I
TAK-920/DNL919 ⁵	Brain-penetrant TREM2 agonist monoclonal antibody (injection)	Biologic and other	Alzheimer's disease	-	P-I

^{1.} Partnership with JCR Pharma. JCR leads development.

 $^{2.\} Partnership\ with\ Neurocrine\ Biosciences.\ Neurocrine\ leads\ development.$

^{3.} Partnership with AstraZeneca. P-I Parkinson's disease study is completed.

^{4.} Phase 2 trial topline results did not meet primary and secondary endpoints.

^{5.} Partnership with Denali Therapeutics. Denali leads P-I development.

Oncology Pipeline

Development code <generic name=""> Brand name (country/region)</generic>	Type of Drug (administration route)	Modality	Indications / additional formulations	Country/ Region	Stage
TAK-113¹ <fruquintinib></fruquintinib>	VEGFR inhibitor (oral)	Small molecule	Previously treated metastatic Colorectal Cancer (mCRC)	U.S. EU Japan	Filed (Mar 2023) Filed (Jun 2023) P-III
SGN-35 ²			Relapsed or refractory cutaneous T-cell lymphoma	Japan	Filed (Feb 2023)
<pre> <</br></br></br></br></br></br></br></br></pre>	CD30 monoclonal antibody-drug conjugate (injection)	Biologic and other	Front line Hodgkin's lymphoma – Stage III	EU	Filed (Mar 2023)
(EU, Japan, China)			Front line Peripheral T-cell lymphoma-Not Otherwise Specified (PTCL-NOS)	EU	Filed (Jul 2023)*
TAK-788 <mobocertinib></mobocertinib>	EGFR/HER2 exon 20	Small	Previously treated Non-Small Cell Lung Cancer with EGFR exon 20 insertion	EU ³ Japan	Filing withdrawn (Jul 2022) P-III
EXKIVITY (U.S., China)	inhibitor (oral)	molecule	Treatment Naïve Non-Small Cell Lung Cancer with EGFR exon 20 insertion	Global	P-III ⁴
MLN9708 <ixazomib> NINLARO (Global)</ixazomib>	Proteasome inhibitor (oral)	Small molecule	Maintenance therapy in patients with newly diagnosed Multiple Myeloma following autologous stem cell transplant (TOURMALINE-MM3)	U.S. EU	P-III P-III
<cabozantinib>5 CABOMETYX (Japan)</cabozantinib>	Multi-targeted kinase inhibitor (oral)	Small molecule	Metastatic Castration-Resistant Prostate Cancer in combination with atezolizumab ⁶	Japan	P-III
<ponatinib></ponatinib>	BCR-ABL inhibitor (oral)	Small molecule	Front line Philadelphia chromosome-positive Acute Lymphoblastic Leukemia	U.S.	P-III
ICLUSIG (U.S.)	(Pediatric indication for Philadelphia chromosome- positive Acute Lymphoblastic Leukemia	-	P-I
TAK-385 <relugolix></relugolix>	LH-RH antagonist (oral)	Small molecule	Prostate cancer	Japan China	P-III P-III
TAK-981 <subasumstat></subasumstat>	SUMO inhibitor (injection)	Small molecule	Multiple cancers	-	P-II
TAK-573 ⁷	Anti-CD38-targeted IgG4 genetically fused	Biologic	Relapsed/refractory Multiple Myeloma	-	P-II
<modakafusp alfa=""></modakafusp>	with an attenuated IFNα (injection)	and other	Solid tumors	-	P-I
TAK-007 ⁸	CD19 CAR-NK (injection)	Cell and gene therapy	Relapsed/refractory B cell malignancies	-	P-II
TAK-1029	GPC3 CAR-T (injection)	Cell and gene therapy	Solid tumors	-	P-I
TAK-1039	Mesothelin CAR-T (injection)	Cell and gene therapy	Solid tumors	-	P-I

TAK-676	STING agonist (injection)	Small molecule	Solid tumors	-	P-I
TAK-500	STING agonist antibody drug conjugate (injection)	Biologic and other	Solid tumors	-	P-I
TAK-940 ¹⁰	CD19 1XX CAR-T (injection)	Cell and gene therapy	Relapsed/refractory B cell malignancies	-	P-I
TAK-186	T Cell Engager (injection)	Biologic and other	EGFR expressing solid tumors	-	P-I
TAK-280	T Cell Engager (injection)	Biologic and other	B7-H3 expressing solid tumors	-	P-I
TAK-012	Variable delta 1 (Vδ1) gamma delta (γδ) T cells (injection)	Cell and gene therapy	Relapsed/refractory Acute Myeloid Leukemia	-	P-I ¹¹

- 1. Partnership with HUTCHMED
- 2. Partnership with Seagen, Inc.
- 3. Following discussions with the EMA, Takeda decided to withdraw the marketing authorization application (MAA).
- 4. Phase 3 EXCLAIM-2 trial stopped for futility; discussions with global regulatory authorities ongoing
- 5. Partnership with Exelixis, Inc.
- 6. Partnership with Chugai Pharmaceutical. Takeda operates P-III development
- 7. Partnership with Teva Pharmaceutical Industries Ltd.
- 8. Partnership with The University of Texas MD Anderson Cancer Center
- 9. Partnership with Noile-Immune Biotech, Inc.
- 10. Partnership with Memorial Sloan Kettering Cancer Center
- 11. Study actively recruiting

Additions since FY2022 Q4:

SGN-35 for Front line Peripheral T-cell lymphoma-Not Otherwise Specified (PTCL-NOS) (Filed, EU)

TAK-012 for Relapsed/refractory Acute Myeloid Leukemia (P-I)

Removals since FY2022 Q4: None

^{*} Event occurred after the end of the Q1 reporting period: Update after July 1, 2023

Rare Genetics and Hematology Pipeline

Development code <generic name=""> Brand name (country/region)</generic>	Type of Drug (administration route)	Modality	Indications / additional formulations	Country/ Region	Stage
TAK-620¹ <maribavir></maribavir>	Benzimidazole riboside	Small	Post-transplant cytomegalovirus (CMV) infection/disease resistant/refractory to (val) ganciclovir, cidofovir or foscarnet	China	Filed (Dec 2022)
(U.S., EU)	inhibitor (oral)	molecule	Treatment of CMV Infection/disease Post Transplantation (Including HSCT)	Japan	P-III
TAK-743 <lanadelumab> TAKHZYRO (Global)</lanadelumab>	Plasma kallikrein inhibitor (injection)	Biologic and other	Pediatric Hereditary Angioedema	EU	Filed (Dec 2022)
TAK-672 ² OBIZUR (U.S., EU)	Porcine Coagulation Factor VIII [recombinant] (injection)	Biologic and other	Acquired hemophilia A (AHA)	China Japan	Filed (Jun 2022) Filed (Jun 2023)
TAK-577	von Willebrand factor [recombinant] (injection)	Biologic and other	Adult on-demand and surgery treatment of von Willebrand disease	China	Filed (Jan 2023)
VONVENDI (U.S., Japan)			Adult prophylactic treatment of von Willebrand disease	EU China	Filed (Mar 2023) P-III
VEYVONDI (EU)			Pediatric on-demand and surgery treatment of von Willebrand disease	Global	P-III
TAK-755 ³	Replacement of the	Biologic and other	Congenital Thrombotic Thrombocytopenic Purpura	U.S. EU Japan China	Filed (May 2023) Filed (May 2023) P-III P-III
<apadamtase <br="" alfa="">cinaxadamtase alfa></apadamtase>	deficientADAMTS13 enzyme (injection)		Immune Thrombotic Thrombocytopenic Purpura	U.S. EU	P-II P-II
			Sickle cell disease	U.S.	P-I
TAK-660 ADYNOVATE	Antihemophilic factor [recombinant],	Biologic	Pediatric Hemophilia A	EU	P-III
(U.S., Japan) ADYNOVI (EU)	PEGylated (injection)	and other	Hemophilia A	China	P-III
			Myasthenia gravis	-	P-II
TAK-079 ⁴	Anti-CD38 monoclonal	Biologic	Immune thrombocytopenic purpura	-	P-II
<mezagitamab></mezagitamab>	antibody (injection)	and other	Systemic lupus erythematosus	-	P-I/II
			Immunoglobulin A nephropathy	-	P-I

^{1.} Partnership with GSK

Additions since FY2022 Q4: TAK-660 for Hemophilia A (China, P-III)

Removals since FY2022 Q4: None

^{2.} Partnership with Ipsen

^{3.} Partnership with KM Biologics.

^{4.} Relapsed/refractory Multiple Myeloma will continue until trial completion.

Plasma-Derived Therapies Pipeline

Development code <generic name=""> Brand name (country/region)</generic>	Type of Drug (administration route)	Modality	Indications / additional formulations	Country/ Region	Stage
			Pediatric indication for primary immunodeficiency	U.S.	Approved (Apr 2023)
TAK-771 ¹ <ig 10%<br="" infusion="">(Human) w/</ig>	Immunoglobulin (IgG) + recombinant hyaluronidase	Biologic	Chronic inflammatory demyelinating polyradiculoneuropathy	U.S. EU	Filed (Feb 2023) Filed (Mar 2023)
Recombinant Human Hyaluronidase> HYQVIA (U.S., EU)	replacement therapy (subcutaneous infusion)	and other	Chronic inflammatory demyelinating polyradiculoneuropathy and Multifocal Motor Neuropathy	Japan	P-III
			Primary Immunodeficiencies	Japan	P-III
TAK-662 CEPROTIN (U.S., EU)	Protein C concentrate [human] (injection)	Biologic and other	Severe congenital protein C deficiency	Japan	Filed (Apr 2023)
TAK-664 <ig 20%<br="" infusion="">(Human)> CUVITRU (U.S., EU)</ig>	Immunoglobulin 20% [human] (subcutaneous infusion)	Biologic and other	Primary Immunodeficiencies and Secondary Immunodeficiencies	Japan	Filed (Oct 2022)
TAK-339 <ig (human)="" 10%="" infusion=""> GAMMAGUARD LIQUID (U.S.) KIOVIG (EU)</ig>	Immunoglobulin 10% [human] (intravenous and subcutaneous infusion)	Biologic and other	Chronic inflammatory demyelinating polyradiculoneuropathy	U.S.	Filed (May 2023)
TAK-880 <10% IVIG (Low IgA)>	Immunoglobulin (10%) [human] (injection) (Low IgA)	Biologic and other	Primary Immunodeficiencies and Multifocal Motor Neuropathy	U.S.	Complete Response Letter (CRL) received (May 2023) ² Filing in preparation ³
TAK-330 PROTHROMPLEX TOTAL (EU)	Four-factor prothrombin complex concentrate [human] (injection)	Biologic and other	Coagulation Disorder, Direct Oral Anticoagulants (DOAC) reversal in surgical situations	U.S.	P-III
TAK-961 <5% IVIG> GLOVENIN-I (Japan)	Immunoglobulin (5%) [human] (injection)	Biologic and other	Autoimmune Encephalitis (AE)	Japan	P-III
TAK-881 <facilitated 20%<br="">SCIG></facilitated>	Immunoglobulin (20%) [human] + recombinant hyaluronidase replacement therapy (injection)	Biologic and other	Immunodeficiencies	U.S. E.U.	P-I/II

^{1.} Partnership with Halozyme

 $^{2.\} TAK-880\ received\ a\ CRL\ from\ the\ FDA;\ re-submission\ timing\ is\ under\ evaluation.$

^{3.} Non-interventional study to collect data is in progress

Vaccines Pipeline

Development code Brand name (country/region)	Type of vaccine (administration route)	Modality	Indications / additional formulations	Country/ Region	Stage
TAK-003 ¹	Tetravalent dengue	Biologic	For the prevention of dengue fever of any severity, due to any serotype, in individuals aged 4 and older	U.S.	Filing withdrawn (Jul 2023)*
QDENGA (EU) ² vaccine (injection)	and other	For the prevention of dengue fever of any severity, due to any serotype, in individuals aged 4 and older (booster extension)	-	P-III	
TAK-019/ NVX-CoV2373³ NUVAXOVIDIntramusc ular Injection (Japan)	SARS-CoV-2 vaccine (injection)	Biologic and other	Active immunization for the prevention of COVID-19 (heterologous booster)	Japan	P-III
TAK-426 ⁴	Zika vaccine (injection)	Biologic and other	Active immunization for the prevention of disease caused by Zika virus	-	P-I

^{1.} Takeda participated in the European Medicines Agency's (EMA) parallel assessment of a medicinal product for use in EU, and through the EU-M4all procedure for countries outside of the EU. In October 2022, the Committee for Medicinal Products for Human Use (CHMP) of the EMA recommended the approval of TAK-003 in Europe and in dengue-endemic countries participating in the parallel EU-M4all procedure.

- 2. QDENGA (TAK-003) is also approved in Indonesia, Brazil, the U.K., Argentina, and Thailand.
- 3. Partnership with Novavax, Inc.
- 4. Partnership with The Biomedical Advanced Research and Development Authority (BARDA) of the U.S. Government

Additions since FY2022 Q4: None Removals since FY2022 Q4: None

^{*} Event occurred after the end of the Q1 reporting period: Update after July 1, 2023