6 State of New Product Development (As of Oct. 31, 2011)

1. Pipeline in Japan

(1) New Molecular Entities

Development code (Generic name)	Category (Indications)	Stage	Origin	Notes
MP-513 (Teneligliptin)	DPP4 Inhibitor (Type 2 Diabetes mellitus)	NDA filed (Aug. 2011)	In-house	
	(Type 2 Diabetes mellitus, Additional combination)	Phase3		
BK-4SP	Vaccine (Prophylaxis of pertussis, diphtheria, tetanus, and poliomyelitis)	Phase 3	The Research Foundation for Microbial Diseases of Osaka University	Co-development -The Research Foundation for Microbial Diseases of Osaka University
TA-7284 (Canagliflozin)	SGLT2 inhibitor (Type 2 Diabetes mellitus)	Phase 3	In-house	
MP-214 (Cariprazine)	D3/D2 receptor antagonist (Schizophrenia)	Phase 2	Hungary: Gedeon-Richter	
MP-435	C5a receptor antagonist (Rheumatoid arthritis)	Phase 2	In-house	
MT-4666	α7nAChR agonist (Alzheimer's disease)	Phase 1	US: EnVivo Pharmaceuticals	

(2) Additional Indications

Development code/Product name (Generic name)	Category (Indications)	Stage	Origin	Notes
Venoglobulin IH (Polyethylene glycol treated human normal immunogloblin)	Human immunoglobulin G (IgG2 deficiency)	sNDA filed (Dec. 1997)	In-house	
	(Systemic scleroderma)	Phase 3		
Modiodal (Modafinil)	Psychoneurotic agent (Obstructive sleep apnea syndrome)	sNDA filed (May 2010)	US: Cephalon	Co-development -Alfresa Pharma
Radicut (Edaravone)	Free radical scavenger (Amyotrophic lateral sclerosis*)	Phase 3	In-house	
Maintate (Bisoprolol)	Selective β 1 blocker (Chronic atrial fibrillation)	Phase 3	In-house	
Talion (Bepotastine)	Selective histamine H1 receptor antagonist・anti-allergic agent (Pediatric allergic rhinitis)	Phase 3	Japan: Ube Industries	
Cholebine (Colestimide(JAN))	Bile acid signal regulation (Type 2 diabetes mellitus)	Phase 2	In-house	
	Non-absorbed phosphate binder (Hyperphosphatemia)	Phase 1		

*: Orphan drug designated

2. Pipeline Overseas

(1) New Molecular Entities

Development code (Generic name)	Category (Indications)	Region	Stage	Origin	Notes
LIVALO (Pitavastatin)	HMG-CoA reductase inhibitor (Primary hyperlipidemia, mixed dyslipidemia)	Indonesia	NDA filed (Jun. 2010)	Japan: Kowa	Filed by Tanabe Indonesia
MCI-196 (Colestilan(INN))	Non-absorbed phosphate binder (Hyperphosphatemia)	Europe	MAA filed (Aug. 2011)	In-house	
MP-146	Uremic toxin adsorbent (Chronic kidney disease)	US, Europe	Phase 3	Japan:Kureha	
MT-2832 (Lunacalcipol)	Vitamin D analog (Secondary hyperparathyroidism)	US, Canada	Phase 2	Canada: Cytochroma	
MCI-186 (Edaravone)	Free radical scavenger (Acute ischemic stroke)	Europe	Phase 2	In-house	
MP-513 (Teneligliptin)	DPP4 inhibitor (Type 2 diabetes mellitus)	Europe	Phase 2	In-house	
		US	Phase 1		
GB-1057 (Human serum albumin[recombinant])	Recombinant human serum albumin (Stabilizing agent)	US	Phase 1	In-house	
TA-8995	CETP inhibitor (Dyslipidemia)	Europe	Phase 1	In-house	
MP-124	PARP inhibitor (Acute ischemic stroke)	US, Canada	Phase 1	In-house	
MP-136	PPAR alpha agonist (Dyslipidemia)	Europe	Phase 1	In-house	
MT-3995	Selective mineralocorticoid receptor antagonist (Hypertention)	Europe	Phase 1	In-house	
MP-157	Angiotensin Type2 Receptor agonist (Hypertention)	Europe	Phase 1	In-house	
MT-1303	Sphingosine-1-phosphate receptor functiona antagonist (Multiple sclerosis)	Europe	Phase 1	In-house	
MT-7716	NOP receptor agonist (Alcohol-use disorder)	US	Phase 1	In-house	

3. Licensing-out

Development code (Generic name)	Category (Indications)	Region	Stage	Licensee
TA-1790 (Avanafil)	PDE5 inhibitor (Erectile dysfunction)	US	NDA Filed (June, 2011)	US: Vivus
TA-7284 (Canagliflozin)	SGLT2 inhibitor (Type2 Diabetes mellitus)	US, Europe	Phase 3	US: Johnson & Johnson Pharmaceutical Research & Development, L.L.C.
	(Obesity)	US, Europe	Phase 2	
T-0047 (Firategrast)	Cell adhesion inhibitor [α4β7/α4β1 inhibitor] (Multiple sclerosis)	Europe	Phase 2	UK:GlaxoSmithKline
MKC-242	5-HT1A receptor agonist (Insomnia)	US	Phase 2	US:MediciNova
MKC-231	Neurogenesis enhancer (Depression/anxiety)	US	Phase 2	US:BrainCells
Y-39983	ROCK (rho-kinase) inhibitor (Glaucoma)	Japan	Phase 2	Japan: Senju Pharmaceutical
MT-210	5-HT2A/ Sigma 2 receptor antagonist (Schizophrenia)	Europe	Phase 2	France: Cyrenaic
MKC-733	5-HT3 receptor agonist (Gastroesophageal reflux disease)	US	Phase 2	US: Edusa Pharmaceuticals
sTU-199 (Tenatoprazole)	Proton pump inhibitor (Gastroesophageal reflux disease)	Europe	Phase1	France:Negma (Sidem)
TT-138	β3 receptor agonist (Pollakiuria, urinary incontinence)	US	Phase 1	US:MediciNova
TA-7906	PDE4 inhibitor (Atopic dermatitis)	Japan	Phase1	Japan: Maruho

4. Changes Since Previous Announcement on July 29, 2011

(1) In-house Development

Development code/Product name (Generic name)	Category (Indications)	Region	As of Jul 29, 2011	As of Oct 31, 2011
FTY720 (Fingolimod)	Sphingosine-1-phosphate receptor functional antagonist (Multiple sclerosis*)	Japan	NDA filed (Dec. 2010)	Approved (Sep. 2011)
MP-424 (Telaprevir)	NS3-4A protease inhibitor (Chronic hepatitis C)	Japan	NDA filed (Jan. 2011)	Approved (Sep. 2011)
Venoglobulin IH (Polyethylene glycol treated human normal immunogloblin)	Human immunoglobulin G (Generalized myasthenia gravis*)	Japan	sNDA filed (Dec. 2010)	Approved (Sep. 2011)
Remicade (Infliximab[recombinant])	Anti-TNFα monoclonal antibody (Crohn's disease*: dose escalation)	Japan	sNDA filed (Dec. 2010)	Approved (Aug. 2011)
MCI-196 (Colestilan(INN))	Non-absorbed phosphate binder (Hyperphosphatemia)	Europe	Phase 3	MAA filed (Aug. 2011)
		US	Phase 3	Discontinued
MP-513 (Teneligliptin)	DPP4 Inhibitor (Type 2 Diabetes mellitus)	Japan	Phase 3	NDA filed (Aug. 2011)
Maintate (Bisoprolol)	Selective β 1 blocker (Chronic atrial fibrillation)	Japan	-	Phase 3
Talion (Bepotastine)	Selective histamine H1 receptor antagonist・ anti-allergic agent (Pediatric allergic rhinitis)	Japan	-	Phase 3
MT-7716	NOP receptor agonist (Alcohol-use disorder)	US	-	Phase 1

*: Orphan drug designated

(2) Licensing-out

Development code (Generic name)	Category (Indications)		As of Jul 29, 2011	As of Oct 31, 2011
TA-1790 (Avanafil)	PDE5 inhibitor (Erectile dysfunction)	Korea	Filed (Jan. 2011)	Approved (Aug. 2011)

5. Additional Information for State of New Product Development

(1) New Molecular Entities in Japan

Development code (Generic name)	Information
MP-513 (Teneligliptin)	MP-513 is developed for the treatment of type-2 diabetes mellitus. It selectively inhibits dipeptidyl peptidase 4 (DPP4), thus accelerates the insulin secretion after meal intake. NDA was filed in August 2011. Additional combination trials are on going.
BK-4SP	Diphtheria toxoid- t etanus toxoid- b ordetella pertussis antigen-inactivated poliovirus combined vaccine. Co-development with the Research Foundation for Microbial Diseases of Osaka University. Clinical stage is Phase 3.
MP-214 (Cariprazine)	MP-214 is a dopamine D3/D2 receptor antagonist, licensed from Gedeon-Richter (Hungary). Clinical stage is Phase 2 for schizophrenia.
TA-7284 (Canagliflozin)	As a selective SGLT2 inhibitor, TA-7284 decreases blood glucose levels by inhibiting reabsportion of glucose in the kidney. Clinical stage is Phase 3 for type2 diabetes mellitus.
MP-435	MP-435 is a C5a (complement factor) receptor antagonist which modulates the immune system. Clinical stage is Phase 2 for Rheumatoid arthritis.
MT-4666	MT-4666 is an α7 nACh receptor agonist, licensed from EnVivo pharmaceuticals Inc. (US). Clinical stage is Phase 1 for Alzheimer's disease.

(2) Additional Indications in Japan

Development code/Product name (Generic name)	Information
Venoglobulin IH (Polyethylene glycol treated human normal immunogloblin)	(IgG2 deficiency) sNDA has been filed.
	(Diffuse systemic scleroderma) Clinical research in Japan demonstrated IV-IG was effective in improvement of skin manifestation, a main factor of systemic scleroderma. Efficacy of IV-IG was also reported in overseas studies. Clinical stage is Phase 3.
Modiodal (Modafinil)	(Obstructive sleep apnea) sNDA was filed by Alfresa Pharma Corp. in May 2008. As a result of the consultation with PMDA, additional data were required. The additional data were submited in May 2010.
Radicut (Edaravone)	(Amyotrophic lateral sclerosis [Orphan drug designated in June, 2005]) Clinical stage is Phase 3. Additional clinical study is in preparation.
Maintate (Bisoprolol)	(Chronic atrial fibrillation) The development was requested by the academic society. Dose-finding trial is now conducted. Clinical stage is Phase 3.
Talion (Bepotastine)	(Pediatric allergic rhinitis) We lauched this drug as an anti-allergic agent for adult in 2000. Clinical stage is Phase 3 for pediatric allergic rhinitis.
Cholebine (Colestimide(JAN))	(Type 2 diabetes mellitus) Clinical stage is Phase 2.
	(Hyperphosphatemia) Clinical stage is Phase 1.

(3) New Molecular Entities Overseas

Development code/Product name (Generic name)	Information
LIVALO (Pitavastatin)	LIVALO is HMG-CoA reductase inhibitor, licensed from Kowa (Japan) in August 2009. NDA has been filed in Indonesia by Tanabe Indonesia. It has been marketed by Kowa in Japan under the brand name, LIVALO®.
MCI-196 (Colestilan(INN))	MCI-196 is anion-exchange resin, and has been developed for the treatment of hyperphosphatemia in patients on dialysis. MAA was filed in Europe in Aug. 2011. Filing is discontinued in the US. It has been marketed in Japan for the treatment of hypercholesterolemia, under the brand name of CHOLEBINE®.
MP-146	MP-146 is spherical carbon adsorbent, licensed from KUREHA CORPORATION (Japan) in November 2006. Clinical stage is Phase 3 for Chronic Kidney Disease patients in Europe, North America and Latin America. It had been marketed by Daiichi Sankyo Co. Ltd. in Japan from 1991 under the brand name, KREMEZIN®. In April 2011, Mitsubishi Tanabe Pharma Corporation has succeeded its marketing from Daiichi Sankyo.
MT-2832 (Lunacalcipol)	MT-2832 was licensed from Cytochroma (Canada) in July 2008. MT-2832 is a strong activator of the vitamin D signaling pathway and has a resistance characteristics to CYP24, intracellular enzyme responsible for catabolism of Vitamin D hormones. Clinical stage is Phase 2 for secondary hyperparathyroidism in patients with chronic kidney disease in Canada and the US.
MCI-186 (Edaravone)	MCI-186 is the world's first cerebral neuroprotectant (free radical scavenger). Clinical stage in Europe is Phase 2 for the acute ischemic stroke. It has been marketed in Japan under the brand name, Radicut®.
MP-513 (Teneligliptin)	MP-513 is developed for the treatment of type-2 diabetes mellitus. It selectively inhibits dipeptidyl peptidase 4 (DPP4), thus accelerates the insulin secretion after meal intake. Clinical stages in the US and Europe are Phase1 and Phase 2, respectively.
GB-1057 (Human serum albumin [recombinant])	GB-1057 is a recombinant human serum albumin. Clinical stage is Phase 1 as a stabilizing agent in the US.
TA-8995	TA-8995 is a CETP inhibitor that has HDL-C raising and LDL-C lowering effects. Clinical stage is Phase 1 in Europe.
MP-124	MP-124 is a PARP inhibitor that has neuroprotective effect. Clinical stage in the US and Canada are Phase 1 for acute ischemic stroke.
MP-136	MP-136 is a PPAR alpha agonist. Clinical stage is Phase 1 in Europe for dyslipidemia.
MT-3995	MT-3995 is a selective mineralocorticoid receptor antagonist. Clinical stage is Phase 1 in Europe for hypertension.
MP-157	MP-157 is a angiotensin type2 receptor agonist. Clinical stage is Phase 1 in Europe for hypertention.
MT-1303	MT-1303 is a sphingosine-1-phosphate receptor functional antagonist. Clinical stage is Phase1 in Europe for multiple sclerosis as a succesor of Imusera..
MT-7716	MT-7716 is a NOP receptor agonist. Clinical stage is Phase1 in the US for Alcohol-use disorder (abuse and alcoholism).

(4) Licensing-out

Development code (Generic name)	Information
TA-1790 (Avanafil)	TA-1790 is created for the treatment of erectile dysfunction by Mitsubishi Tanabe Pharma, which is expected to have a quick onset and fewer side effects. NDA was filed by Vivus in the US in June 2011. JW Pharmaceutical obtained its approval in Korea in August 2011.
TA-7284 (Canagliflozin)	As a selective SGLT2 inhibitor, TA-7284 decreases blood glucose levels by inhibiting reabsorption of glucose in the kidney. Phase 3 clinical trials in type2 diabetes mellitus in Europe and the US are underway by Johnson & Johnson Pharmaceutical Reseach & Development. Phase 2 clinical trials in obesity in Europe and the US are completed.
T-0047 (Firategrast)	T-0047 inhibits the cell adhesion and cell migration processes of white blood cells in inflammatory region. Phase 2 trial is conducted by GSK in Europe etc.
MKC-242	MKC-242 is a serotonin 1A receptor agonist, used to treat psychiatric disorders such as anxiety and depression. This compound is expected to reveal rapid onset with low possibility of dependency. Medici Nova (US) is conducting Phase 2 clinical trial for insomnia.
MKC-231	MKC-231 is a neurogenesis enhancer. Phase 2 study in major depression is underway by BrainCells(US).
Y-39983	Y-39983 is a ROCK (Rho-kinase) inhibitor, which relaxes vascular smooth muscle. Clinical trial stage in Japan is Phase 2 by Senju Pharmaceutical.
MT-210	MP-210 is a 5-HT2A/ Sigma 2 receptor antagonist. Clinical trial stage is Phase 2 in Europe by Cyrenaic (France).
MKC-733	MKC-733 modulates gastrointestinal motility by agonising serotonin 5-HT3 receptors. In the US, Edusa Pharmaceuticals is conducting a phase 2 clinical trial in patients with gastroesophageal reflux disease at night.
sTU-199 (Tenatoprazole)	sTU-199 is an isomer of TU-199, developed in Japan, and licensed to Negma (France). Pharmacokinetic/pharmacodynamic results from Phase 1 clinical trials in Europe and the US demonstrated that sTU-199 controlled gastric acid secretion at nighttime in patients receiving this compound once-daily, with the long half-life. It is expected that this compound could reveal rapid improvement for non-erosive reflux disease. Sidem Pharma, a subsidiary of Negma, is conducting phase 1 trial for gastroesophageal reflux dsease in Europe.
TT-138	TT-138 is a β3 receptor agonist used to treat pollakiuria and urinary incontinence. Phase 1 study is conducted by Medici Nova in the US.
TA-7906	TA-7906 is a PDE4 inhibitor. Clinical trial stage is Phase1 for the treatment of atopic dermatitis in Japan by Maruho.

Reference

Major Ethical Drugs

Remicade (Infliximab)	Launch: May 2002	Category	Anti-TNF α monoclonal antibody (Treatment of rheumatoid arthritis (RA), active Crohn's disease(CD), Behcet's disease with refractory uveoretinitis, psoriasis and ankylosing spondylitis, moderate to severe ulcerative colitis)
Remicade is an anti-TNFα antibody, which targets TNFα, an important inflammatory cytokine. It is very fast-acting and its efficacy is sustained for eight weeks with a single administration. It has indications for the treatment of RA, CD, Behcet's disease with refractory uveoretinitis, psoriasis, ankylosing spondylitis, and ulcerative colitis. In addtion, in 2009 and August 2011, changes in usage/dosage were approved for RA, and CD, respectively. Origin: Jannsen Biotech			
Radicut (Edaravone)	Launch: Jun. 2001	Category	Free radical scavenger (Cerebral neuroprotectant)
Radicut is the world's first brain protecting agent (free radical scavemger) shown to improve neurological symptoms, interference with activities of daily living, and disability (at hospital discharge) in patients at acute stage of cerebral infarction. Specific indications include the treatment of various types of infarction (cerebral lacunar, atherothrombotic and cardiogenic infarction) It is initiated administration within 24 hours after onset, and is not administrated for more than 14 days. An additional formulation, Radicut bag for I.V. Infusion, was approved in January and launched in May 2010.			
Ceredist (Taltirelin)	Launch: Sep. 2000	Category	Agent for treatment of spinocerebellar degeneration
Thyrotropin releasing hormone (TRH) was known to be effective against ataxia caused by spinocerebellar degeneration, but it was previously administered only through injection. Ceredist, developed by Tanabe, is the world's first oral TRH derivative drug. An additional formulation, orally disintegrating tablets, was approved in June and launched in October 2009.			
Anplag (Sarpogrelate)	Launch: Oct. 1993	Category	5-HT2 blocker (Anti-platelet agent)
Anplag, an oral anti-platelet, is used to patients with arteriosclerosis obliterans (ASO) to improve ischemic symptoms like as ulcer, pain and coldness of limbs associated with chronic arterial occlusion. Anplag especially improves the bloodstream of collateral circulation and inhibits platelet aggregation, vascular contraction and growth of vascular smooth muscle cell by antagonistic action to serotonin receptor in platelets and vessels. The downsized tablet which is convenient for elderly patients was approved in August 2007.			
Talion (Bepotastine)	Launch: Oct. 2000	Category	Agent for treatment of allergic disorders
Talion has rapid onset of anti-histamine(H1) effects and has been demonstrated to be effective for allergic rhinitis, urticaria, and pruritus accompanying dermatitis. It has minimal incidence of sedation. An additional formulation, orally disintegrating tablets, was approved in March and launched in July 2007. Origin: Ube Industries			
Urso (Ursodeoxycholic Acid)	Launch: July 1962	Category	Agent for improving hepatic, biliary and digestive functions
Ursodeoxycholic acid (UDCA), principal ingredient of Urso, had been extracted from blackbear's gallbladder in the past and has been used in the treatment of various digestive diseases. It is one of the bile acids existing in human body. Urso has effects of hapatic protection and indications of improvement of liver function in chronic liver disease and hepatitis C, and dissolution of gallstones.			
Maintate (Bisoprolol)	Launch: Nov. 1990	Category	Selective β1 antagonist (Treatment of hypertension, angina pectoris, and arrhythmias)
Maintate is a representative β -blocker used in more than 85 countries around the world. It exhibits high selectivity for β 1 receptor and excellent phamacokinetics profiles. It has high efficacy and safety, and there is evidence for its cardioprotective action. Origin: Merck KGaA			
Kremezin	Launch: Apr. 2011	Category	Agent for treatment of Chronic renal failure
Kremezin is an oral absorptive charcoal consisting of porous spherical activated carbon of high purity. It absorbs and excretes uremic toxins out of the body. Keremezin was introduced to the Japanese market in December 1991 as the first pharmaceuticals drug in the world for proactive treatment of chronic renal failure (progressive). In April, 2011, the marketing rights were transferred from Daiichi Sankyo to MTPC. Origin, Manufacturer and distributor: Kureha			
Depas (Etizolam)	Launch: Mar. 1984	Category	Antianxiety agent
Depas is the most widely used anxiolytic agent in Japan. Due to its broad pharmacological properties, Depas shows reasonable effectiveness for psychosomatic disease, neurosis, low back pain, neck pain and muscle-contraction headache, depression and sleep disorder.			

Venoglobulin IH (Human immunoglobulin)	Launch: Jan. 1992	Category	Plasma derivatives

Venoglobulin IH is intravenous human immunoglobulin derived from donated plasma in Japan. It shows high efficacy on serious infectious diseases in combined administration with anti-bacterial agent due to its opsonic, immuno-bacteriolytic and antibody-dependent cytotoxic effects and neutralizing effects on toxics and viruses. In October 2010 and September 2011, the indications for improvement of muscle weakness associated with polymyositis or dermatomyositis and generalized myasthenia gravis (only in case of insufficient response to steroids or immunosuppressants) were added, respectively. It is expected to be a new treatment option for the diseases that contribute better QOL for patients.

Herbesser (Diltiazem)	Launch: Feb. 1974	Category	Calcium antagonist (Treatment of angina pectoris and hypertension)

Herbesser is a representative calcium antagonist that is used in more than 110 countries around the world. In addition to a blood pressure lowering effect, it has a cardioprotective action in patients with hypertension or angina pectoris by reducing the cardiac load through a heart rate lowering effect and by increasing the oxygen supply through a coronary vasodilating effect.

Tanatril (Imidapril)	Launch: Dec. 1993	Category	ACE Inhibitor (Treatment of hypertension)

Tanatril shows excellent blood pressure control with effective organ protection as well as minimal incidence of dry cough, a common side effect of ACE inhibitors. With the approval of an additional indication in 2002, it became the first drug in Japan approved for diabetic nephropathy with type I diabetes mellitus.

Liple (Arprostadil)	Launch: Nov. 1988	Category	Agent for treatment for Chronic arterial occlusion / Circulatory disturbance (PGE1)

Liple, the world's first DDS (Drug Delivery System) agent of intravenous PGE1, improves the peripheral circulatory disturbance and skin ulcer in chronic arterial occlusive disease and diabetes by its direct vasodilating effects. DDS maximizes the therapeutic effects and simutaneously minimizes the adverse effects of PGE1.

Sermion (Nicergoline)	Launch: Jun. 1988	Category	Cerebral circulation and metabolism ameliorator

Sermion ameliorates blood flow and metabolism in the brain. It is used to treat sequela of cerebral infarction. In 1998, its effectiveness was confirmed in a reevaluation by the Ministry of Health and Welfare in Japan. In "the treatment guidelines for strokes in 2009," Sermion was recommended as a treatment drug for chronic cerebral infarction.
Origin: Pfizer

Neuart (Anti-thrombin III)	Launch: Jun. 1987	Category	Plasma derivatives (Anticoagulant agent)

Neuart is highly purified human anti-thrombin III derived from donated plasma in Japan. It shows strong anticoagulant effects in the treatment of DIC patients by inhibiting various kinds of activated serine protease including thrombin.

Omeprazon (Omeprazole)	Launch: Apr. 1991	Category	Proton pump inhibitor (Antiulcerogenic agent)

Omeprazon is the world's first proton pump inhibitor that suppresses gastric acid secretion. It strongly and sustainably blocks the final step in gastric acid production results in reducing gastric acidity. Omeprazon has excellent efficacy for gastric ulcer, duodenal ulcer and reflux esophagitis. Additional indications for non-erosive reflux disease (NERD) and secondary eradication of Hellicobacter pylori were approved in May and August 2007, respectively.
Origin: AstraZeneca

Mearubik (Live Attenuated Measles and Rubella Vaccine)	Launch: Dec. 2005	Category	Prevention of measles and rubella

Mearubik is the combination vaccine for measles and rubella, and children are able to receive both measles and rubella shot at a time with Mearubik. It is expected to contribute enhancement of immunization rate for measles and rubella in Japan.
Origin, Manufacturer and distributor: BIKEN (The Research Foundation for Microbial Diseases of Osaka University)

JEBIK V (Cell Culture-derived Japanese Encephalitis Vaccine)	Launch: Jan. 2009	Category	Prevention of Japanese encephalitis

JEBIK V is a freeze-dried preparation containing inactivated Japanese encephalitis virus derived from Vero cells which were used in the manufacturing process as a host to increase the virus. A freeze-dried prepared vaccine is available in routine vaccination. Accordingly, it is expected to increase in number of vaccinated persons.
Origin, Manufacturer and distributor: BIKEN (The Research Foundation for Microbial Diseases of Osaka University)