

Intelligence on Japanese pharmaceutical companies 2009¹

(July 2009)

Below includes a list of potential Japanese pharmaceutical companies for Canadian companies interested in creating a partnership in developing their products. For further details, please contact the Embassy of Canada in Tokyo or the Canadian Consulate Office in Nagoya.

- 1. Daiichi Sankyo Co., Ltd.,**
- 2. Astellas Pharma**
- 3. Meiji Seika Kaisha Ltd.,**
- 4. Kaken Pharmaceutical Co., Ltd**
- 5. Mochida Pharmaceutical**
- 6. Ono Pharmaceutical**
- 7. Mitsubishi Tanabe Pharma**
- 8. Shionogi & Co., Ltd.**
- 9. Rohto Pharmaceuticals**
- 10. Takeda Pharmaceutical Company Limited**
- 11. Senju Pharmaceutical Co., Ltd.**
- 12. Nippon Shinyaku**
- 13. Dainippon Sumitomo Pharma Co., Ltd.**

Daiichi Sankyo Co. Ltd.,

NOTES:

- Daiichi Sankyo is working towards expanding their consolidated sales to UD\$15 billion by 2015
- Being the third largest Japanese pharmaceutical company (based on FY2007 revenue sales), Daiichi Sankyo is aiming to make itself global. In May 2008, they acquired Europe's U3 Pharma for its oncology pipeline (estimated around Euro 150 million), and in September 2008 acquired 52% stake in the Indian giant generic drug maker Ranbaxy (estimated around US\$3.4-4.6 billion). Through series of M&As, Daiichi Sankyo has market presence in more than 56 countries and they are very active in adding to their existing pipeline.
- Daiichi Sankyo is focussing its effort in expanding their market share in US. Currently they have commercial and BD offices in Parsippany and Edison, NJ, which is in charge of Canadian market and collaboration as well. However, please note that any final decision on a R&D collaboration/alliance had to be discussed and approved through its Tokyo head quarter.

¹ The Embassy of Canada has prepared this report based on primary and secondary sources of information. Readers should take note that the Government of Canada does not guarantee the accuracy of any of the information contained in this report nor does it necessarily endorse the organizations listed herein.

- Daiichi Sankyo is not interested in out-licensing and only open to discuss in-licensing and R&D collaborations in their focus area
- The Embassy of Canada has a frequent correspondence with Daiichi Sankyo's licensing team in Tokyo

R&D Collaboration/Alliance interest:

- Thrombosis
- Diabetes
- Cancer
- Autoimmune disease/rheumatoid arthritis

Head Office: Chuo-ku, Tokyo, Japan

Year Est.: 2007

Note: Daiichi Sankyo was established from the merger between two pharmaceutical companies namely Daiichi (est. 1915) and Sankyo Co., Ltd (est. 1899)

Employees: 16,237 (consolidated as of Sept 2008)

Net Sales: JPY 842 Billion (US\$8.4 Billion- FY2008) for pharmaceutical business, in which 41% covers overseas sales ratio

Operating income: JPY 88 Billion (US\$880 Million- FY2008)

Franchise disease area: (currently in the market)

- Hypertension
- Bacterial infections
- Dyslipidemia /Atherosclerosis

Location:

- 99% of R&D done in Japan, with few projects in Germany (through U3 Pharma)
- Global business development network in Europe, US, Asia and South and Central America

Pipeline: (as of December 2008)

	Phase I	Phase 2	Phase 3	Application
Cardiovascular diseases (arteriosclerosis, cardiac, renal, etc)	CS-8080 DB-772 d	CS-866CMB (#)	Prasugrel(ACS-MM)* DU-176b * CS-8635 * CS-866DM (#) CS-866AZ (#)	Prasugrel (ACSPCI) Sevicartm in EU
Glucose Metabolic Diseases (diabetes, obesity, etc)	CS-1036 (#)		CS-011	
Infectious diseases (bacterial, fungal)			Levofloxacin inj (#) CS-8958	Levofloxacin High-dose (#)
Cancer	CS-7017 U3-1287	CS-1008 ARQ197 DE-766 (#)	AMG162 (bone metastasis) (#)	
Immunological /	CS-0777	SUN 13834		

allergic disorders (autoimmune & allergic disease)				
Bone/Joint Diseases (osteoporosis, RA, OA)			AMG162 (osteoporosis) (#) CS-600G (#)	
Others (hyperphenylalaninemia, Alzheimer's disease, stroke/acute phase, neuro-protection, Hepatitis C, etc)		SUN 11031	SUN Y7017 (#)	DL-8234(#) SUN 0588r

*) projects with highest priority
#) only developed in Japan

Astellas Pharma

NOTES:

*) The Embassy of Canada is in contact with the Business Development officer in Tokyo.

*) Astellas Business Development section is divided into different regional groups (i.e. America, EU, JPN/Asia), and the Transaction America Group looks after Canadian projects as well. Beside the regional groups, two main groups oversee the projects which are the Alliance Management Group and the Intelligence Management Group which acts as a gate keeper.

R&D Collaboration/Alliance/in-licensing interest:

*) Focus on establishing new core technology in synthesis (low molecule compounds), fermentation, and genome.

*) Urology

*) Immunology and Inflammatory

*) Diabetes

*) Central Nervous System (CNS) / Pain

*) Infectious diseases (virus)

*) Cancer

Head Office: Chu-ku, Tokyo, Japan

Year Est.: 2005

Employees: 13,966 (consolidated globally as of Sept 2008)

Net Sales: JPY 964 Billion (US\$9.6Billion- FY 2008) consolidated

Operating Income: JPY 235 Billion (US\$2.3 Billion – FY2008)

R&D Expenditure: JPY 159 Billion (US\$1.6 Billion – FY 2008)

Sales by region: Japan (50%)+Europe(20%)+North America (25.4%)+ Asia/Other

Business: Ethical drugs

Location:

*) Sales and marketing offices globally in EU/US/JPN/ Korea/ Taiwan/ China/ Philippines/ Thailand/ Indonesia/ Hong Kong/ etc

*) The North American market is looked after “Astellas Pharma Inc” with its headquarter in Illinois. Astellas does both sales & marketing, as well as research in US. In Canada, they operate under “Astellas Pharma Canada, Inc” , mainly focussing on sales & marketing and clinical development. In Canada, Astellas have 6 Immunology, 3 infectious disease and 25 urology/dermatology reps.

Major products in Japan:

Hyperlipidemia (Lipitor)
 Hypertension (Micardis)
 Gastric Ulcer (Gaster)
 BPH (Harnal)
 Transplantation (Prograf)
 Sleep Disorder (Myslee)
 Schizophrenia (Seroquel)
 Infections (vaccines)
 Bacterial Infections (Cefzon)
 Overactive Bladder (Vesicare)

Major products in North America:

Transplantation (Prograf)
 Stress Agent for Cardiac Imaging (Adenoscan/Lexiscan)
 Overactive bladder (VESicare)
 Atopic Dermatitis (Protopic)
 Fungal Infections (AmBiosome & Mycamin)
 Psoriasis (Amevive)

Astellas Strengths:

Urology
 Inflammatory Immune disorders (in Trans-plans, Dermatology, and Locomotrium)
 Cardiovascular/ diabetes
 Gastrointestinal Organs
 Infectious Disease
 Central Nervous System (CNS)

Pipeline: (as of January 2009)

Area	NDA	Phase I	Phase 2	Phase 3
Urology	YM617 (P3 in US)	YM311	YM178 (P3 in US)	

			YM533 ASP1585	
Immunology/ Inflammation/ Locomotorium			ASP0485 ASP9831	FK506 YM529 YM177
CNS			ASP8825	FL199B
Diabetes	BIBR277		YM543 ASP1941	
CV	BRIBR277HCT RSD1235		YM150	YM087 (US approved)
Infection			ASP2151	
Cancer		YM155 ASP0265 AGS-16M18 (w/ Agensys) AGS-8M4 (w/Agensys)	ASP3550	
GI			YM060	YM443
Alzheimer/ Schizophrenia		ASP2535 ASP2314 ASP2905		

*) In addition to these products, Astellas has a range of proactive in-licensed products from Theravance, Xenoport, Toyama, Ferring, IBL, Biogen Idec, Ilypsa, FibroGen, Kirin, Zeria, CoMetis and Maxygen in different development stages in their 3 main markets (i.e. JP, US and EU)

Meiji Seika Kaisha Ltd.,

NOTES:

- Meiji Seika recently closed down its New York office. However, North American market is still important for them and they like to focus on licensing-out efforts and R&D partnership in North America
- Production site in North America (US or Canada) is also an open option for them
- Meiji Seika already has numerous R&D partnerships with US based venture companies and Universities such as CEREXA, Neuro Research, Symphogen, etc
- The Embassy of Canada in Tokyo had a meeting with Meiji Seika Kaisha's R&D Planning and Management Director on 16 June 2009 and they are positively looking for a collaboration with a Canadian firm if it meets their interest area.

R&D Collaboration/Alliance/in-licensing interest:

- Infection
 - Respiratory virus
 - Hepatitis
 - Fungal infection
 - Injectable antibiotics
- CNS
 - Schizophrenia

- Symptomatic treatment accompanying a neurodegenerative disease
- Drugs marketed only abroad
- Others
 - Generic (more emphasis on this recently)
 - Paediatrics (including NICU)
 - Otolaryngology
 - Haematology
 - Respiratory and allergy

Head Office: Chu-ku, Tokyo, Japan

Year Est.: 1916

Note: “Meiji Seika Kaisha Co., Ltd” and “Meiji Dairies Corporation” established the joint holding company called “Meiji Holding Co., Ltd” as of 1 April 2009. The information provided here is only for Meiji Seika Kaisha, rather than for the whole Meiji Holding Co., Ltd.

Employees (in Japan): 1,888/3,840 in pharmaceutical division (as of March 2008)
267 (R&D Staff)

Net Sales: JPY 414 Billion (US\$4.14 Billion- FY 2008) consolidated
JPY 113 Billion (US\$1 Billion- FY 2008) pharmaceutical

Operating Income: JPY10.7 Billion (US\$107 Million – FY2007)

R&D Expenditure: JPY 12.5 Billion (US\$125 Million – FY 2008)

Business: Pharmaceutical (ethical (69%), agrochemical and animal health (20%)) (27% of sales, 66% of operating income) + Food & Healthcare (confectionery, food products, self-medication, functional food) (72% of sales, 28% of operating income)

Location:

- R&D facilities across Japan (186 employee) with no overseas facility
- Production sites in Ashigara, Gifu, Kitakami and Odawara Japan (approx 370)
- Marketing sites across Japan
- Overseas operation mainly focussing on business development (approx 1400 employees outside Japan) focus on China(340), Thailand(670) and Europe (320)

Analysis of Sales by therapeutic category:

- Anti-infective (48%)
- CNS (20%)
- Generic (17%)
- Anti-septic (6%)
- Allergy and Immunology (4%)

Pipeline: Mainly in infection and CNS

Stage	Product	Category	Indication
Approved	Orapenem	Oral Carabapenem	Pediatric Pbeynibua, Otitis Media or Sinustis Partnered with Wyeth , developed in Japan
Phase II	ME3738	Hepatoprotective	HCV Meiji Seika original compound, developed in Japan
Phase I	ME1071	MBLI	G(-) bacterial infection Meiji Seika original compound, developed in Japan
NDA	Reflex (miltazapine)	NaSSA (Noradrenergic and Specific Serotonergic Antidepressant)	Depression Partnered with Schering Plough, developed in Japan
Pre P2/3	ME2080 (Stiripentol)	Antiepileptic	SMEI (Dravet's Syndrome) Partnered with Biocodex, developed in Japan
Preclinical	AM-831	M1 agonism +SDA	Schizophrenia Developed outside Japan
Phase II (out-licensed)	ME3301	Anti-inflammatory	IBD, Allergic Rhinitis

Kaken Pharmaceutical Co., Ltd

Notes:

- Kaken pharmaceutical is more interested in collaborating on late stage product but open to any stage product at the moment if the product has a niche market potential
- Kaken is also looking into licensing out their products in Canada. They are actively doing this in Asia, with an exception of Korea in which they have licensed in a product. They are very conscious of the potential earning out of the North American market.
- The Embassy of Canada in Tokyo had a meeting with Kaken's licensing and business development members on 13 July 2009. They are currently in discussion with Canadian biotech companies and open to other potential companies in the following interest categories.

R&D Collaboration/Alliance interest:

- Orthopaedics (inflammation /pain) both drug & medical device
- Dermatology (atopic dermatitis / psoriasis)
- Mycology (topical/systemic)
- Others (niche area in biologics, etc)

Interest for marketing alliance:

- Orthopaedics
- Dermatology
- Ophthalmological
- Etc

Head Office: Bunkyo-ku, Tokyo, Japan
Year Est.: 1948 (original entity is linked to the Institute of Physical and Chemical Research (RIKEN) in 1917)
Employees: 1,713 (as of March 2009)
Net Sales: JPY 82.9 Billion (US\$829 Million – FY 2008 ended March 2009)
Business: Pharmaceutical (88.3%) + Agrochem & Animal Health Products (7%) + Other (5%)

Locations:

- Business Development Office in New York (overseeing North American market)
- R&D drug discovery lab in Kyoto, Japan (only)
- Safety lab in Shizuoka, Japan
- Manufacturing plant in Shizuoka, Japan (rarely manufacturing outside Japan unless they have a partnership with local company)

Analysis of Sales by therapeutic category:

- Anti-arthritic (40%)
- Anti-inflammatory (15%)-like to focus on non-steroid anti-inflammatory disease
- Cardiovascular (17%)
- Dermatology (7%)- like to focus more resources on this category for the near future

Pipeline: Mainly in orthopaedics, dermatology and (* partnering opportunity)

Stage	Product	Category	Indication
Launched (2007)	Berasus LA	Beraprost Sodium	Pulmonary Arterial Hypertension
Phase III	KCB-ID	Rh-bFGF	Periodontitis
Phase II	KCB-1B *	Rh-bFGF	Bone Fractures
Phase II	KP-102 LN *	GH Secretagogue	Short Stature
Phase II	TRK-100STP	Beraprost Sodium	Lumbar Spinal Stenosis
Phase II	KP-496NS *	LT/TX Dual Inhibitor	Allergic Rhinitis
Phase I	KP 103	Triazole Antifungal	Onychomycosis (Phase II in US by Dow Pharmaceutical Sciences Inc) (Licensed to DPSI)
Pre IND	KP-413	New Mechanism	Atopic Dermatitis (Special case since they are using partners in US and working with US based CRO at the moment)
Research	Anti-alpha 9 Integrin Antibodies		Autoimmune disease etc.

Mochida Pharmaceutical

R&D Collaboration/Alliance interest:

- Cardiovascular
- Obstetrics and gynaecology
- Dermatology

- Emergency medicine

Head Office: Shinjuku-ku, Tokyo, Japan

Year Est.: 1913

Employees: 1,692 (consolidated for FY2008)

Net Sales: JPY 74.5Billion (US\$ 745Million – FY 2008 ended March 2009)

Net Income: JPY 8.3 Billion (US\$ 83 Million-FY2008)

Business: Ethical drugs + Diagnostic reagents+ Health products + Health Food+ Medical Electronics and Equipments

Locations:

- R&D drug discovery lab in Shizuoka, Japan
- Subsidiaries: Mochida Healthcare Co., Ltd, Modchida Pharmaceutical Plant Co., Ltd, Mochida International, Technonet Co., Ltd.
- Affiliated companies and organization: Mochida Siemens Medical Systems, Medical View, Mochida Memorial Foundation for Medical and Pharmaceutical Research

Current products within their ethical drug category:

- Cardiovascular agents (Arteriosclerosis obliterans, Hyperlipidemia, Angina pectoris, and Hypertension)
- Anti-infective (Mycosis, Herpes zoster, Herpes simplex, Herpes simplex encephalitis, SSPE, Antibiotic, Condyloma acuminatum)
- Neurological agents (Autonomic dystonia, Depression)
- Metabolic Agent (Acute circulatory failure, Acute pancreatitis)
- Hormone Preparations (HRT, Osteoporosis, Antiadrenal cortical hormone, Oral contraceptive, hcG, Endometriosis)
- Biological Preparations (Malignant melanoma, Glioblastoma, Hepatitis B, Hepatitis C, SSPE, Hemostatic, Acute myocardial infraction, Inflammation)

Pipeline: Mainly in cardiovascular agents, obstetrics and gynaecology, dermatology, and emergency medicine

Stage	Product	Category	Indication
Phase III	MLD-55	Escitalopram	Depression Licensed-in from Lunbeck (Denmark)
Phase II/III	MD-0701	Treprostinil	Pulmonary arterial hypertension Originator: United Therapeutics (USA)
Phase II	MND-21	Ethyl icosapentate	Alzheimer disease
Phase II	MR-20R	Ulinastation	Threatened Premature delivery Development suspended as of Feb 2009
Phase II	MTD-39	Imiquimod	Actinic keratosis Licensed-in from iNova Pharmaceuticals (Australia)
Phase I/II	JR-031	Human Mesenchymal Stem Cells	GVHD Cellular-based Drug Co-development with JCR
Preparation for Clinical Trials	MD-0901	Mesalazine	Ulcerative colitis Licensed-in from Shire Pharmaceuticals Group

Ono Pharmaceutical Co., Ltd.

NOTES:

- Ono is actively trying to build its pipeline through international collaborations (both academic and corporate)
- Current partnership on the licensing side with Kyorin, Astellas, Merck, Novartis, Nissan Chemical Industries, Sapphire, and Paion
- Current partnership on drug discovery with GSK, MEDREX, ARRAY, Locus, and Evotec.

R&D Collaboration/Alliance interest:

- Prostaglandins (bioactive lipids)
- Neuroscience (ion-channel)
- Genomics (biologics)
- Intracellular signalling (Kinase, x-ray crystallography, computational modeling drug design, etc)
- Enzyme Inhibitor (protease)

Head Office: Osaka, Japan

Year Est.: 1717

Employees: 2,511 (as of April 2008)

Net Sales: JPY 145.9 Billion (US\$ 1.45 Billion – FY 2007)

Net Income: JPY 35 Billion (US\$ 350 Million-FY2007)

R&D Expenditure: JPY 38 Billion (US\$ 389 Million- FY2007)

Business: Ethical drugs

Locations:

- Research centers in Minase, Fukui and Tsukuba, Japan (no overseas R&D center)
- 14 marketing branches, 63 sales offices and 2 manufacturing plants in Japan
- International offices in UK (18 staff), Korea (2 staff), and US (in Princeton NJ with 45 staff)

Ono Current main products:

- Thromboangiitis Obliterans, Spinal Canal Stenosis (Limaprost)
- Bronchial Asthma, Allergic Rhinitis (Pranlukast)
- Diabetic Peripheral Neuropathy (Eplrestat)
- Pediatric Bronchial Asthma (Pranlukast)
- Acute Lung Injury Associated with SIR (Sivelestat)
- Intraoperative Tachyarrhythmia, Postoperative Tachyarrhythmia (Landiolol)
- Overactive Bladder (Imidafencin)

Pipeline (as of fall 2008)

Stage	Product	Category	Indication
NDA	YM-529	Bisphosphonate	Osteoporosis
NDA in JPN (launched in US)	EMEND	NK1 Antagonist	Chemotherapy Induced Nausea & vomiting
NDA in JPN (launched in US)	JANUVIA	DPP-IV Inhibitor	Type 2 diabetes
Phase III(JPN), PII (US)	MK-0724	Astrocyte Modulator	Acute Stroke
PIII (JPN), Launched (US)	EXELON	AChE	Alzheimer Disease
Phase I (JPN), US-launched	EMEND/IVEMEND	NK1 Antagonist	Chemotherapy Induced Nausea & vomiting
PI (JPN), PII (US)	CEREACT	Astrocyte Modulator	Amyotrophic Lateral Sclerosis
PI (JPN), PII (US)	RC-1291	Ghrelin Agonist	Cancer
PI (JPN), PII (US)	ONO-5334	Cathepsin K Inhibitor	Osteoporosis
PI (JPN & US)	ONO-8539	EP1 Antagonist	Overactive Bladder
PI (US)	ONO-4641	S1P Agonist	Multiple Sclerosis
PI (US)	ONO-4538	Fully Human & Anti-PD1 Antibody	Cancer Hepatitis C
PI (US)	ONO-2745	GABA Agonist	Anaesthetic and Sedative
Pre-clinical (JPN&US)	ONO-7746	Thrombopoietin Agonist	Thrombocytopenia

Mitsubishi Tanabe Pharma (MTP)

Notes:

- Mitsubishi Tanabe Pharma Corporation was established through a merger between Tanabe Seiyaku and Mitsubishi Pharma in 2007. Tanabe Seiyaku was established originally in 1678, the 2nd oldest pharma company in the world.
- MTP's goal is to build up their marketing network in the US in order achieve overseas sales of more than US\$1 billion.
- MTP has developed a rich R&D pipe line with the overall objective to launch at least one product every two years. These products will focus on metabolic and cardiovascular diseases.
- MTP is looking outside of their drug development pipeline for products in the area of renal diseases.
- Officials from the Business Development & Licensing Dept. and Corporate Planning Dept. are planning to attend BioJapan 2009.
- MTP signed an agreement with Cytochroma(Ontario) in 2008 to develop and commercialize CTA018(MT-2832) in the US and Asia (including Japan).
- The Canadian consulate in Nagoya is in contact with MTP representatives in Osaka

R&D Collaboration/Alliance interest:

Currently they have partners for in/out licensing in areas of CV & metabolics, CNS, hepatic, immunology, inflammation & respiratory.

Focused therapeutic areas are metabolic and cardiovascular in R&D(diabetes and stroke are high priority diseases)

They are looking for new products in the following areas:

- Stroke
- Renal disease (interested in development and research projects as well)
- Cardiovascular, inflammation and immunology
- Respiratory
- Diabetes (interested in early stages)

They indicated an interest in doing joint research in stem cells for treating Parkinson's disease and finding partners in biologics and biogenetics.

Head Office: Chuo-ku, Osaka, Japan

Year Est.: 2007

Employees: 16,237 (consolidated as of Sept 2008)

Net Sales: JPY 414.8 Billion (US\$4.1 Billion - FY2008)

Operating Income: JPN71.7Billion (US\$717 Million - FY2008)

Net Income: JPN26.5Billion (US\$265 Million - FY2008)

R&D Expenditures: JPY 73.1Billion (US\$731 Million - FY2008)

Employees: 5,715 (consolidated 10,030)

No. of MR: 2,400 (No.3 in the world) (April 2008)

Business: Manufacture and sales of pharmaceuticals with a focus on ethical pharmaceuticals

Global Locations:

- Sales and marketing offices in Germany, Belgium, U.S, Taiwan and China
- Factories in France and China
- Venture Capital division is located in U.S.

Major Products:

< Major Ethical Drugs >

Cardiovascular Drugs

Anplag (anti-platelet)

Tanatril (anti-hypertensive)

Herbesser (anti-anginal and anti-hypertensive)

Sermion (cerebral circulation and metabolism ameliorator)

Maintate (anti-hypertensive, anti-anginal, and anti-arrhythmic)

Liple (chronic arterial occlusion / circulatory disturbance)

Biological Products

Remicade (anti-rheumatoid arthritis, anti-active Crohns disease, and anti-refractory uveoretinitis by Bechets disease)

Venoglobulin-IH (intravenous human immunoglobulin)

Medway (Recombinant Human Serum Albumin Preparations)

CNS Drugs

Radicut (cerebral neuroprotectant)

Ceredist (anti-spinocerebellar degeneration)

Depas (anxiolytic agent)

Gastroenterology drugs

Urso (agent for improving hepatic, biliary, and digestive functions)

Omeprazon (proton pump inhibitor)

Gastrom (anti-gastritis and anti-gastric ulcer)

Allergy/Respiratory Drugs

Talion (anti-allergic disorders)

Theodur (bronchodilator)

< OTC Products >

Aspara (drinks, mini-drinks, vitamin preparations, and eyedrops)

Nan Pao (herbal medicine, mini-drink)

Smart-Eye (eyedrops)

Digestive medicine

Agents for treating skin conditions

Pipeline:

	Phase I	Phase II	Phase III	NDA filed
Cardiovascular/ Metabolics	MCI-186(Radicut) TA-8995 MP-124 MP-136 TA-7284	TA-6666 MP-513 MCC-135 MT-2382 Cholebine *	Maintate* MP-146 MCI-196	Ceredist* Novastan*
Inflammation, Immunology and Respiratory	TA-5493 MP-435	MCC-847 FTY720	Remicade* MCC-847 Venoglobulin-IL CNTO-148 APTA-2217	Remicade* Venoglobulin- IH*
CNS		MCC-257 MP-214	Modiodal	
Hepatic & others	GB-1057	TA-5538	Pazucross* Radicut* MP-424	Valixa* TA-8317

- Additional indicators, new formulation, or change in dosage
- Blue: Development in JP/EU/USA , Green: Development in EU/USA, Red: domestic development,:

Shionogi & Co., Ltd.

Notes:

- Shionogi specializes in three relatively broad product areas: cardiovascular and metabolic diseases, infectious diseases and immunological disorders, and cancer and related chronic pain.
- The Canadian consulate in Nagoya is in contact with Shionogi representatives in Osaka

R&D Collaboration/Alliance interest:

- Infectious diseases
- Metabolic Syndrome, Diabetes, Cardiovascular, Obesity, Hyperlipidemia
- Pain: Tumor pain, neuropathic pain
- Others: allergies, respiratory illnesses, cancer and central nervous system disorders.
- New cancer pain treatment

Head Office:	Chuo-ku, Osaka, Japan
Year Est.:	1878
Net Sales:	JPY 227.5 Billion (US\$2.2 Billion, FY2008)
R&D Expenditure:	JPY 52.8 Billion (US\$528 Million, FY2008)
Net Income:	JPY 15.6 Billion (US\$156 Million, FY2008)
Operating Income:	JPY 32 Billion (US\$320 Million, FY2008)
Employees:	4,262 (consolidated 6,010) as of March 2009
No. of MR:	1,450 (R&D 990) as of March 2009

Business:

- Manufacture and sales of pharmaceutical, diagnostic, and other related products
- Pharmaceutical sales: Anti-infection(35%), CV(Crestor, Longes etc) 17%, Respiratory & Allergy (16%), CNS & Pain (15%)

Locations:

- Currently have a sales office and a plant in Shanghai.
- Pharmaceutical development and clinical trials in North America are conducted at Shionogi USA Inc.. Pharmaceutical development and sales operations are handled by Sciele Pharma. Inc. (acquired in Oct. 2008)

Major Products:

Anti-Infection	CV	Respiratory & Allergy	CNS & Pain	Oncology
Flomox(Antibiotic,oral)	Crestor	Rinderon(dermatologic	OxyContin	Imunace

Flumarin(Antibiotic, inj.) Vancomycin(Antibiotic) Finibax(antibiotic, inj.) Avelox(antibiotic, oral)	(hyperlipidemia) Irbetan(hypertension)	al) Claritin(antiallergic) Differin(Acne vulgaris) Pirespa(Idiopathic pulmonary fibrosis)	(Analgesic)	(antitumor)
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Pipeline:

Therapeutic area	Phase I	Phase II	Phase III	NDA filed	Launched (2008-)
Infectious diseases	S-265744/ S-349572 /S-247303*	S-013420 (Modithromycin)	Doripenem (Pediatric) S-021812 (Peramivir)		
Metabolic Syndrome					Irbetan ®
Pain			Duloxetine(DNP) S-811717		
Allergy & Others	S-555739 S-555739(EU) S-888711 S-888711(US) S-0139(EU) S-222611(EU) S-444823	S-777469 S-777469(US) NS75B S-0139		Duloxetine (Depression)	Differin ® Pirespa ®

*Developed by Shionogi-GlaxoSmithKline

(as of May 2009)

In red: In-Licensed compound

In blue: Developed outside Japan

Rohto Pharmaceuticals

Notes:

- The Canadian consulate in Nagoya is in contact with Rohto representatives in Osaka
- Rohto concentrates on OTC drugs and their main product lines are in the areas of ophthalmic, gastrointestinal and dermal medications. They celebrated their 100th year in the eye drop business earlier this year.
- Rohto is an international company and currently sell Mentholatum Cream in Canada. They acquired Mentholatum's trademark rights from the Mentholatum Company (USA) in 1975 and expanded into the skin care market just after that. Their products are sold in Canada by the Mentholatum Company of Canada which is headquartered in New York.

- Although they enjoy the largest market share for eye care products in Japan, 54% of their consolidated sales are related to skin care products. Their sales in Asian market is growing rapidly particularly in the area of beauty related products.
- Rohto is actively engaged in forging business partnerships internationally with companies possessing strong technological capabilities such as Morishita Jintan Co., Ltd., MG Pharma Inc., CooperVision Inc., Obagi Medical Products Inc (USA) and Banner Pharmacap Inc.

R&D Collaboration/Alliance/in-licensing interest:

1) Ophthalmic medicines and relatives

- DDS eye drops with Alginic acid
- Eye drops for Dry eyes
- Switch OTC Products

2) Oral medicines

- Coating technique (masking of bitter taste etc)
- Switch OTC products

3) Skin Care Products

- Anti-aging
- Anti-wrinkle
- Whitening

4) Supplements

- Tokuho (Good for specified health use)

Head Office: Ikuno-ku, Osaka, Japan

Year Founded: 1899

Established: 1949

Employees: 1,195 (consolidated 4,341)

R&D Staff: 180

Net Sales: JPY 71 Billion (Consolidated JPY111 Billion which is about US\$1.1 Billion)

Sales by region:

Japan (68%) + Asia (16%) + North America (10%) + Europe (5%) +Other (1%)

Business:

Manufacturer and marketer of pharmaceutical products, cosmetics and functional foods

Location:

- Manufacturing plants and Sales offices in US, Canada, Taiwan, Thailand, Malaysia, Australia, Vietnam, EU(Scotland), South Africa etc.
- With 2 production sites in Japan and 6 overseas, Rohto adapts production to each country and region, customizing their products efficiently and flexibly at low cost.

Major products in Japan:

<Eye Care Products>

Multi-purpose Eye Drops (V-Rohto, Vita 40)

Value-added Eye drops (Eye-stretch , Dryaid)

Eye Drops for Contact lenses users (Moistcharge)

Eye Wash Products (iQ14)

Contact Lens

<Oral Medicines & Supplements>

Gastrointestinal (Panciron)

Arthritis (Flex power)

Constipation (Salaria)

Cold (Dristan)

Foods for Specified Health Uses (Tacty TG/ IS)

Cough/Throat (Respa)

<Other products>

Allergy

Test Kits

Denture Cleanser

Major products in North America:

<Eye Care> Rohto V

<Patches> Well patch

<Sun Screen> Sun Play

<Lip Care> Softlips

<Anti-inflammation> Deep Heat

Rohto Strengths:

- Tremendous technical “know-how” in the areas of eye care and dermal/skin care
- Highly recognized R&D capabilities based on evidence of efficacy and safety (evaluated as “A-Class at GLP Audit)
- No.1 market share in eye care products in Japan
- Own high capability manufacturing in Japan
 - Submitted FDA part 11 as the first among the Japanese drug companies
 - World’s best eye drop manufacturing (max. 160,000 units/line/shift)
 - Fully automatic eye drop operation from making to packaging

Takeda Pharmaceutical Company Limited

Notes:

- Largest Japanese pharmaceutical company by sales volume (2008)
- Takeda opened a sales office in Mississauga, Ontario recently (announcement on March 31, 2009)
- Takeda is taking a very aggressive strategy of acquisition in order to become Japan's first global pharmaceutical company.
- Takeda acquired a number of companies such as Millenium (Boston) and Cirix (San Diego) and have opened a research centre for anti-bodies in San Francisco.
- Their focus is to expand R&D capacity around the world and to develop or acquire new oncology drugs and anti-body targets.
- Takeda currently undertakes research activities all over the world with a team of more than 1,600 researchers based in Japan (60%) and overseas (30%)
- The new office in Ontario is a marketing office only with R&D being undertaken in Boston and San Francisco.
- Takeda does not often use the CRO approach but instead will identify potential research partners and enter into relationships with them as a strategy to move forward their own drug discovery objectives.
- The Canadian consulate in Nagoya is in close contact with Takeda representatives in Osaka

R&D Collaboration/Alliance interest:

- Lifestyle-related diseases
- Oncology (core focus area) and urological diseases
- Central nervous system disease
- Gastroenterological diseases

Head Office: Chuo-ku, Osaka, Japan

Year founded: 1781

Year established 1925

Employees: 6,368 (parent company) and 19,362 (consolidated)

Net Sales: JPY 1,538 billion (US\$15.5 Billion – FY2008)

Net income: JPY 234.4 billion (US\$2.3 Billion – FY2008)

Business: Manufacturing, developing and marketing pharmaceutical drugs

Location:

- R&D facilities in Osaka, Tsukuba (Japan), Palo Alto, San Diego, San Francisco, Deerfield (U.S.) , London, Cambridge (U.K.) , Singapore
- Production Facilities in Osaka, Hikari, Italy, Ireland, China, Indonesia

- Overseas Subsidiaries and affiliates in U.S., Canada, U.K., France, Italy, Germany, Austria, Switzerland, Spain, Portugal, Ireland, Netherlands, China, Taiwan, Philippines, Thailand, Indonesia, Singapore

Current main portfolios:

- Lansoprazole (peptic ulcers)
- Leuprolide acetate (prostate cancer and endometriosis)
- Pioglitazone hydrochloride (diabetes)
- Candesartan cilexetil (hypertension)

Ethical therapeutic categories:

- Allergy
- Cardiovascular
- Central Nervous System Diabetes
- Gastrointestinal
- Gout
- Infection
- Inflammation
- Interleukin
- Osteoporosis
- Urology
- Gynaecology
- Vaccine
- Vitamin

Pipeline: (as of 11 May 2009, refer to the following URL)

< http://www.takeda.com/pdf/usr/default/09_33371_2.pdf >

Senju Pharmaceutical Co., Ltd.

Notes:

- Takeda Pharmaceutical is one of Senju's stockholder(8.3%) and is in charge of sales of Senju's products overseas.
- Senju's business model is to develop ophthalmological products in new dosage forms
- Senju focus on increasing sales in US and China.

R&D Collaboration/Alliance interest:

-Interested in finding partners in Canada to license- in Senju's products

-Interested in finding partners above especially licensing out * SNJ-1945(Calpain inhibitor)

Head Office: Chuo-ku, Osaka, Japan

Year Est.: 1947
Employees: 754 (as of April, 2009)
MR: 202
Net Sales: JPY 21 Billion (US\$210 Million)
Business:

Manufacture and sales (only in Japan) of ophthalmological products

Global Locations:

Senju's subsidiary is in US and China, Representative offices in Netherlands and China. Research labs are 2 in Japan and US.

Major Products:

Prescription Drugs (market share in Japan: 10%)

NIFLAN® (inflammation)
BRONUCK® (inflammation)
GATIFLO® (Infection)
CATALIN® (Cataract)
TEARBALANCE® (protection of cornea)

OTC products:

Mytear® series(Lacrimal Type, reduce and prevent dryness)
Mytear®CL series(Reduce, prevent dryness and discomfort in wearing contact lenses)
Mytear®EYETECT®(Allergy, Containing Pranoprofen)
Mytear® Vido

Major products in USA

Istalol(ISTA) (Cataract)
Xibrom(ISTA) (inflammation)
Durezol(SIRION)

Pipeline:

Compound	Originator	Country/Company/Stage	Available territory
Glaucoma			
Bimatoprost	Allergan	JP/Senju/Approved	-
Brimonidine	Allergan/Kyorion	JP/Senju/P3	-
Y-39983	MTP	JP/Senju/P2	-
Iganidipine	Kyoto	US/ISTA/ire-IND	Worldwide(ex.US)
Timolol	Senju	US/ISTA/Launch(2004) China/Tenjin Central/IND Korea/Dream Phrama/Approval	JP, Asia(ex Korea and China) Middle East, EU, Oceania, South America, Africa
Allergy			
Bepotastine Besilate	MTP	JP/Senju/P2 US/ISTA/NDA	Middle East, EU, Oceania, South America, Africa

Tacrolimus	Astellas	JP/Senju/Launch(2008) China/Senju/pre-IND	Korea, Taiwan
Dry Eye			
Ecabet Sodium	MTP	JP/Senju/P2 US/ISTA/P2 Korea/Jeil/-	Middle East, EU, Oceania, South America, Africa
Inflammation			
Bromfenac Sodium	Wyeth	JP/Senju/Launch(2000) US/ISTA/Launch(2005) EU/Croma/pre-NDA China/Senju/NDA Korea/Taejoon/pre-NDA Middle East/Jamjoom/pre-IND India/Centaur/pre-IND	East Asia. Oceania, South America, Africa
Difluprednate	MTP	JP/Senju/P3 US/Sirion/Launch(2008) EU/Sirion/pre-IND China/Senju/pre-IND	Asia, India, Middle East, Russia
Retinopathy			
*SNJ-1945	Senju	JP/Senju/Pre-clinical US/Senju/pre-clinical	Worldwide

MTP: Mitsubishi Tanabe Pharma

Nippon Shinyaku

Note:

- Nippon Shinyaku's US subsidiary, NS Pharma is actively looking for opportunities in Canada

R&D Collaboration/Alliance interest:

- Haematology (hematologic malignancies)
- Urology
- Gynaecology

Head Office: Minami-ku, Kyoto, Japan

Year founded: 1919

Employees:

Net Sales: JPY 59.4 Billion (US\$ 594 Million – FY2008) consolidated

Net Income: JPY 4.03 Billion (US \$ 40 Million – FY2008)

Business: pharmaceutical (82%) + functional food (18%)

Location:

- R&D centres in Kyoto and Tsukuba Japan
- Manufacturing place in Odawara Japan
- Functional food plant and synthesis plant in Chitose Japan

- Overseas offices in Germany, and subsidiary “NS Pharma Inc” in NJ, USA which overseas Canadian cases

Analysis of Sales by therapeutic category:

- Urological diseases (19.7%)
- Inflammation and allergy (23.8%)
- Hematologic Malignancies (4.6%)
- Cardiovascular and metabolic diseases (8.3%)
- Gastrointestinal disorders (8%)

Pipeline: (as of May 2008)

Stage	Product	Category	Indication
Pre-registration	NS-126	Inflammation/ allergy	Allergic rhinitis
Preparation for application	NS-315	Inflammation/ allergy	Non-narcotic analgesic (cancer pain)
Phase II	NS-126	Inflammation/allergy	Bronchial asthma
Phase II	NS-11	Others	Alcohol dependence
Phase I/II	NS-17	Chemotherapeutics	Myelodysplastic syndrome
Phase I	NS-304	Cardiovascular	Pulmonary hypertension
Phase III	NM441	Chemotherapeutics	Bacterial infection
Phase I	NS-187	Chemotherapeutics	Chronic myelogenous leukemia

Dainippon Sumitomo Pharma Co., Ltd.

R&D Collaboration/Alliance interest:

Main Research Area:

- Diabetes & Cardiovascular
- Central Nervous System
- Inflammation & Allergy

Looking for new products in the following areas.

- Neurology & Psychiatry(High priority in all stages)
- Diabetes & Cardiovascular
 - Enough products in the pipelines but looking for partners in DSP-7238 and DSP-8658
 - not interested in cardiac insufficiency and Diabetes
- Immunology & Allergy
 - Interested in COPD
- Oncology & infection
 - Was not priority areas but very interested in new products

Head Office: Chuo-ku, Osaka, Japan

Year Est.: 2005

Note: Dainippon Sumitomo Pharma was established through a merger between Dainippon Pharmaceutical (est. 1897) and Sumitomo Pharmaceuticals (merger between Sumitomo Chemical (est. 1936) and Inabata & Co.(est. 1896)).

Employees: 4,646 (as of March 31, 2009)
 MR (Excluding managers): 1,420
 R&D : 1,130

Net Sales: JPY 264Billion (80% is from Pharmaceuticals)

Operating Income: JPN31 Billion (US\$310 Million)

Net Income: JPN20 Billion (US\$200 Million)

R&D Expenditures: JPY52.8 Billion (US\$528 Million)

Business:

Manufacture, sales of pharmaceuticals and others (animal health business, food& speciality products business)

Global Locations: Major overseas offices

- Development of pharmaceuticals(mainly clinical development) in US, UK, would like to operate for sales and marketing in the future
- Manufacturing, sales of ethical pharmaceuticals in China
- Business development in Japan

Major Products (including overseas sales):

AMLODIN® (Hypertension, angina pectoris)

GASMOTIN® (Gastroprokinetic)

PRORENAL® (Vasodilator)

MEROPEN® (Carbapenem antibiotic)

AVAPRO®(Therapeutic agent for hypertension)

LONASEN® (Antipsychotic)

Pipeline:

Category	Phase I	Phase II	Phase III	NDA filed
CNS			Iurasidone Iurasidone (US/EU/Others)	
Cardiovascular/ Diabetes	DSP-3235 DSP-7238(EU) DSP-8658(US)	DSP-8153 ranirestat	repaglinide ranirestat(US)	SMP-862
Inflammation/ Allergy	SMP-028(US) DSP-3025 DSP-3025(EU)			
Cancer/Infection		AG-7352(US) SMP-601(US)	amrubicin(Calsed) (China) amrubicin(Calsed) (US/EU)	miriplatin meropenem(Meropen) (line extention)
Others	SMP-986	SMP-986(US/EU) droxidopa (Dops) (US)	droxidopa(Dops) (US/EU)	

- In Red: Licensed out