

# FY December 2012 Interim Results Meeting

Kyowa Hakko Kirin Co., Ltd.

President and CEO Nobuo Hanai

July 27, 2012

This document contains certain forward-looking statements relating to such items as the company's (including its domestic and overseas subsidiaries) forecasts, targets and plans. These forward-looking statements are based upon information available to the company at the present time and upon reasonable assumptions made by the company in making its forecasts, but actual results in practice may differ substantially due to uncertain factors.

These uncertain factors include, but are not limited to, potential risks associated with the pharmaceutical industry's domestic and international operating environment, intellectual property risks, the risk of adverse reactions to pharmaceutical products, legal risks, risks arising from product manufacturing deficiencies, risks due to fluctuations in the market prices of raw materials, fuel and products, as well as exchange rate and financial market volatility.

This document contains information on pharmaceutical products (including products under development), but its contents should not be construed as promotion, advertising or as a medical recommendation.

### **KYOWA KIRIN**

### **Pharmaceuticals business**

- Drug prices cut in April, but revenues up year-on-year
- •Share of erythropoiesis stimulating agent (ESA) market up, centered on NESP®
- Launch of POTELIGIO<sup>®</sup> and POTELIGIO<sup>®</sup> TEST for adult T-cell leukemialymphoma (ATL)
- Price listing of Apokyn® for Parkinson's disease

### **Bio-Chemicals business**

- Affected by exchange rates, but sales maintained at last year's level on strong overseas demand for amino acids
- Structural reforms underway at Daiichi Fine Chemical



### **Overview of Results**

# Consolidated income statement

### **KYOWA KIRIN**

(V hillion)

					(¥ billion)
	Actual Results		Change from last	Forecast at start of term	Result relative to
	Jan-Jun 2011	Jan-Jun 2012	FY interim term	Jan-Jun 2012	forecast
Net Sales	186.3	166.2	-20.0	163.0	+2%
Operating income	29.9	25.5	-4.3	22.5	+14%
Recurring income	30.2	23.0	-7.1	19.5	+18%
Net income	17.7	11.5	-6.1	8.5	+36%

\*1 Chemicals segment was eliminated from April 2011. The disposal reduced sales by ¥33.5 billion and operating income by ¥2.1 billion versus the same period of last fiscal year.

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### **KYOWA KIRIN**

(¥ billion)

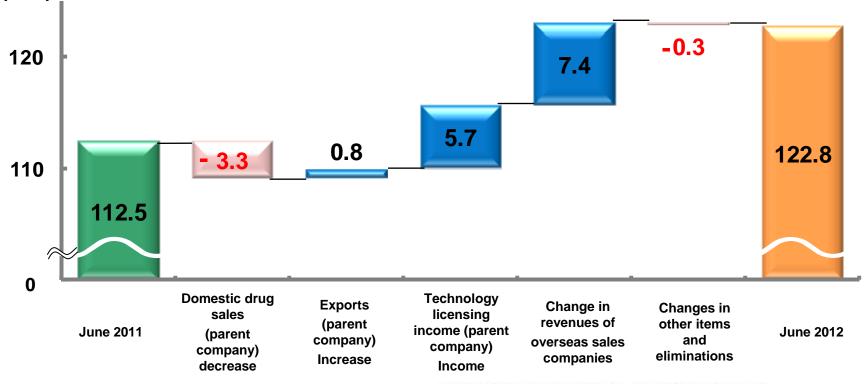
	Actual Results		Change from last FY interim	Forecast at start of term	Result relative to
	Jan-Jun 2011	Jan-Jun 2012	term	Jan-Jun 2012	forecast
Net Sales	112.5	122.8	+10.2	120.0	+2%
Operating income	25.1	23.3	-1.7	21.5	+9%
R&D expenses	20.4	20.5	+0.1	22.3	- 8%

### Pharmaceutical Business: Analysis of sales changes

(¥bn)

### **KYOWA KIRIN**

- Domestic drug sales (down ¥3.3 billion): Despite growth in sales of Nesp, Fentos, Regpara and other products, lower airborne pollen counts than in the previous year depressed sales of Allelock and Patanol. The largest negative impact was caused by the drug price cuts
- Exports (up ¥0.8 billion): Exports focused on Asia are steady
- Technology licensing income (up ¥5.7 billion): technology revenue recorded from FUJIFILM KYOWA KIRIN BIOLOGICS
- Overseas sales (up ¥7.4 billion): increase in revenues reflecting new consolidation of ProStraken



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### **Pharmaceutical Business:**

### Analysis of operating income changes

• Gross profit (up ¥7.9 billion): Decrease in gross profit from domestic drug sales offset by increase in FUJIFILM KYOWA KIRIN BIOLOGICS licensing income and new consolidation of ProStrakan (¥bn) • Increase in SG&A costs (up ¥9.6 billion) was a factor depressing profits. Increase in costs arising from the consolidation of ProStrakan and from the initial down-payment caused by the in-licensing of saxagliptin. 35 • R&D costs (up ¥0.1 billion): almost unchanged from previous year 7.9 -9.6 25 -0.1 25.1 23.3 0 SG&A cost increase R&D cost **Gross profit** June 2011 (excluding R&D) June 2012 increase Increase

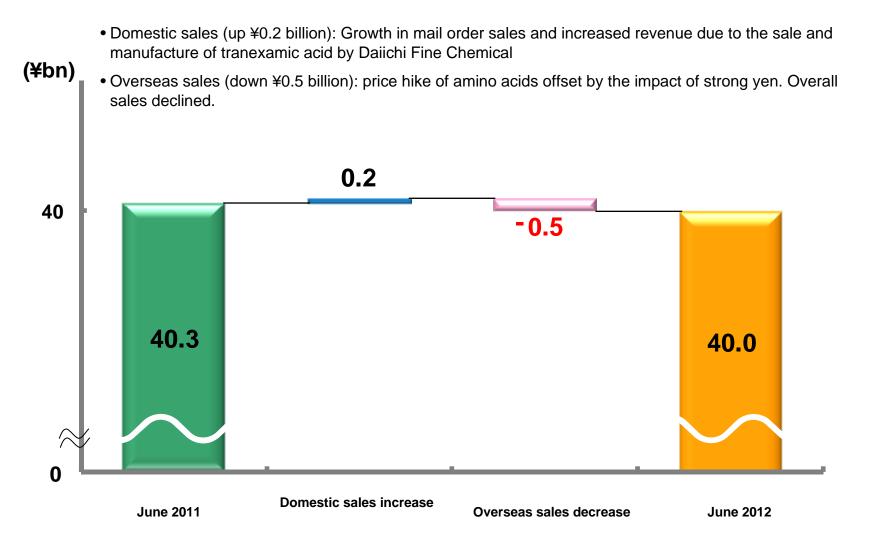
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	Actual Results		Change from last FY interim	Forecast at start of term	Result relative to
	Jan-Jun 2011	Jan-Jun 2012	term	Jan-Jun 2012	forecast
Net sales	40.3	40.0	-0.2	40.0	0%
Operating income	2.5	2.0	-0.4	0.8	+155.0%

### Bio-chemical business:

### Analysis of sales changes



**KYOWA KIRIN** 

### **Bio-chemical Business:**

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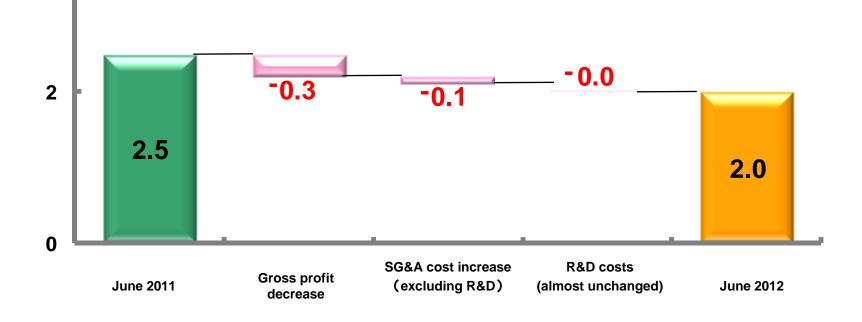
### Analysis of operating income changes

• R&D costs: almost unchanged from previous year

### KYOWA KIRIN

• Gross profit (down ¥0.3 billion): The negative profit impact of the strong yen more than offset the price hike for amino acid exports and the increase in mail order sales of Ornithine, which were boosted by improved brand recognition

#### (¥bn) • SG&A costs (up ¥0.1 billion): costs were almost unchanged from previous year





#### Exchange rate (average for accounting period)

	Jan-Jun2011	Jan-Jun 2012	Change from last FY interim term
US dollar	¥82	¥80	-¥2
Euro	¥115	¥103	-¥12
British pound	¥133	¥126	-¥7

#### Impact of exchange rates

	Jan-Jun 2012: impact on profits (vs. same period of last FY) Pharmaceuticals Bio-Chemicals Consolidated				
Net sales	-¥0.9 billion	-¥0.9 billion	-¥1.9 billion		
Operating income	-¥0.3 billion	-¥0.6 billion	-¥0.9 billion		



# Sales of major products

# Sales of major products (domestic)

**KYOWA KIRIN** 

(¥ billion)

	Actual	Results	Change from last	Forecast at start of term	Result relative to
	Jan-Jun 2011	Jan-Jun 2012	FY interim term	Jan-Jun 2012	forecast
Nesp	25.4	26.8	+5%	25.5	+5%
Espo	2.7	1.9	-29%	2.0	-5%
Regpara	5.3	6.2	+17%	6.3	-1%
Allelock	18.1	16.1	-11%	16.9	-5%
Patanol	8.6	6.9	-20%	8.1	-15%
Gran	6.7	6.4	-5%	6.3	+1%
Fentos	1.2	2.0	<b>+70%</b>	2.3	-14%
Asacol	1.1	1.8	+52%	1.9	-6%
Exports	4.8	5.7	+18%	4.9	+17%
Technology outlicensing income	6.5	12.2	+86%	11.3	+8%

(Million pounds)

	Actual	Results	Change from last	Forecast at start of term	Result relative
	Jan-Jun 2011	Jan-Jun 2012	FY interim term	Jan-Jun 2012	to forecast
Sancuso	4	5	+47%	7	-14%
Abstral	12	16	+29%	18	<b>-9%</b>
Tostran	2	2	+32%	2	+46%
Xomolix	4	4	-7%	4	+6%
Rectogesic	4	4	0%	5	-3%
Adcal D3	11	12	+7%	11	+14%
Others	8	14	+74%	10	+45%



# Full year forecasts

	Actual result (1)	Revised forecast (2)	Change (2) – (1)	Forecast at start of term (3)	Difference between
	Jan-Dec 2011	Jan-Dec 2012		Jan-Dec 2012	original and revised forecast (2) - (3)
Net Sales	343.7	333.0	-10.7	326.0	+7.0
Operating income	46.6	52.0	+5.4	48.0	+4.0
Recurring income	46.7	46.5	-0.3	42.5	+4.0
Net income	25.6	23.0	-2.6	20.0	+3.0

\*1 The Chemicals segment was eliminated from April 2011. The disposal reduced sales by ¥33.5 billion and operating income by ¥2.1 billion compared with the same period of last fiscal year.

\*2 ProStrakan results were consolidated from the second half of fiscal 2011.

	Actual results (1)	Revised forecast (2)	Change	Forecast at start of term (3)	Difference between original and	
	Jan-Dec 2011	Jan-Dec 2012	(2) – (1)	Jan-Dec 2012	revised forecast (2) - (3)	
Net sales	229.3	248.0	+18.7	242.0	+6.0	
Operating income	41.3	48.7	+7.4	45.7	+3.0	
R&D expense	44.5	41.0	-3.5	42.9	-1.9	

\*ProStrakan results were consolidated from the second half of fiscal 2011

	Fiscal 2011	Fiscal 2012 Revised forecasts	Change y/y	Fiscal 2012 Original forecast
Nesp	56.4	53.7	-5%	50.5
Espo	5.3	4.0	<b>-25%</b>	4.0
Regpara	11.5	13.0	+13%	13.1
Allelock	29.1	29.1	+0%	29.7
Patanol	11.4	10.1	-12%	11.3
Gran	14.8	13.4	-9%	13.3
Fentos	3.1	4.5	+45%	4.9
Asacol	2.8	3.8	+35%	4.1
Exports	9.2	9.2	-1%	8.3
Technology outlicensing income	13.0	25.6	<b>+96%</b>	25.0

### (GBP million)

	Fiscal 2011	Fiscal 2012 Revised forecast	Change y/y	Fiscal 2012 Original forecast
Sancuso	9	16	<b>+76%</b>	16
Abstral	27	36	+34%	38
Tostran	5	4	-10%	4
Xomolix	8	9	+6%	9
Rectogesic	9	9	+6%	10
Adcal D3	24	25	+3%	24
Others	20	37	+83%	38



	Actual Results (1)	Revised forecast (2)	Change	Forecast at start of term (3)	Difference between original and revised
	Jan-Dec 2011	Jan-Dec 2012	(2) - (1)	Jan-Dec 2012	forecast (2) – (3)
Net sales	77.5	79.0	+1.4	78.0	+1.0
Operating income	2.8	3.0	+0.1	2.0	+1.0

### (Exchange rate average for FY 2012)

	Actual Result (1)	Revised forecast (2)	Change (2) - (1)	Forecast at start of term (3)	Difference between original and revised forecast (2) – (3)
	Jan-Dec 2011	Jan-Dec 2012		Jan-Dec 2012	
USD	¥80	¥81	+ ¥1	¥77	+ ¥4
EUR	¥111	¥102	-¥9	¥98	+ ¥4
GBP	¥128	¥124	-¥4	¥119	+ ¥5

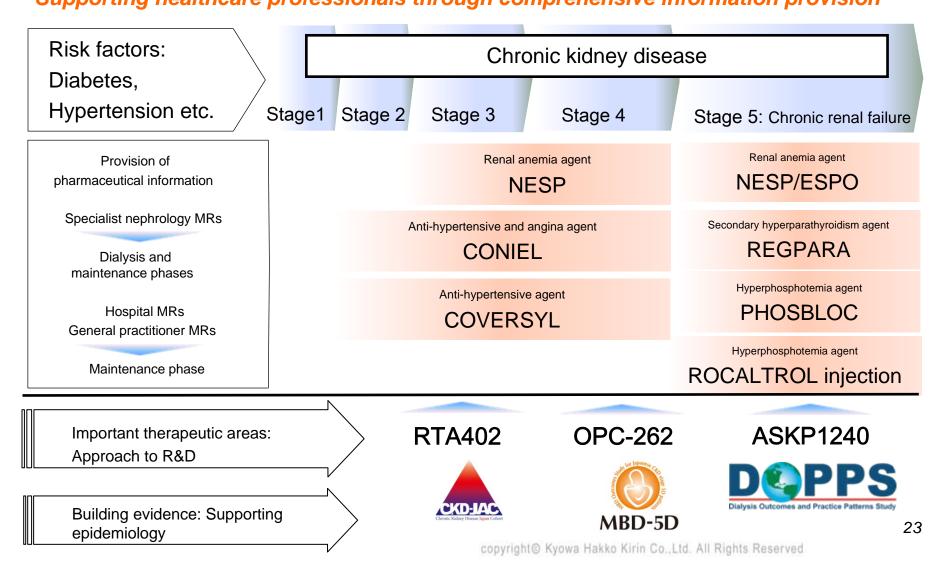


# Pharmaceuticals business highlights

### Established presence in nephrology

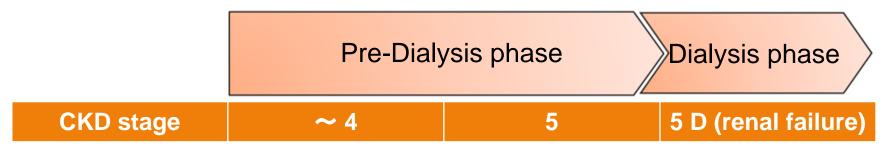
### KYOWA KIRIN

Multiple product offerings centered on chronic kidney disease (CKD) Supporting healthcare professionals through comprehensive information provision

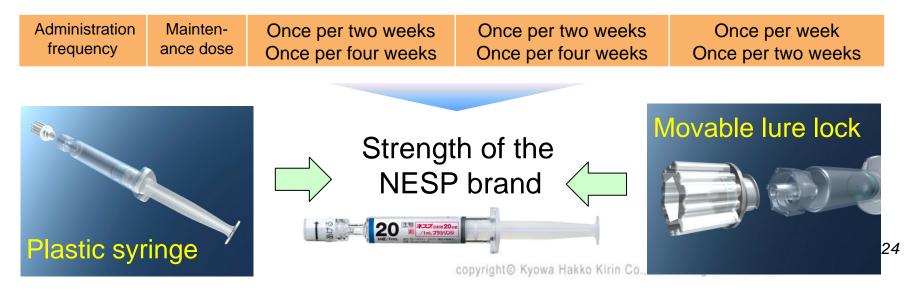


## Renal anemia agent: NESP

# **NESP**: Accumulated evidence from five years of clinical experience since launch



Varying the period between administration to take account of CKD disease progression and appropriately manage Hb



# Promote individualized medicine through launch of antibody pharmaceuticals and companion diagnostics

POTELIGEO <sup>®</sup> TEST
March 2012: Approved
May 2012: Launched
CCR4 positive diagnosis



Diagnostics development by Kyowa Medex POTELIGEO<sup>®</sup> Infusion >March 2012: Approved >May 2012: Launched >Indications: Relapsed or refractory CCR4-positive ATL<sup>\*</sup>



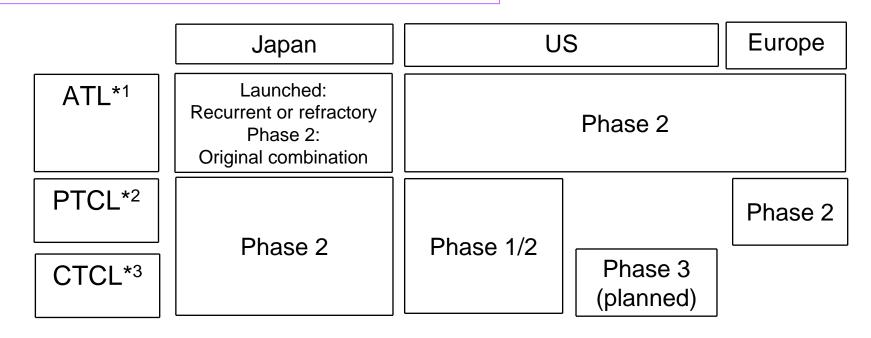
Therapeutic development by Kyowa Hakko Kirin

Development strategy leveraging group synergies

simultaneous launch

Accelerating development strategy to maximize KW-0761 value

### Clinical trials for T-cell Lymphoma



### Companion diagnostics

Exploring future development opportunities with Kyowa Medex

\*1 ATL: Adult T-cell leukemia-lymphoma \*2 PTCL: Peripheral T-cell lymphoma \*3 CTCL: Cutaneous T-cell lymphoma

Enhancing product line-up in kidney disease (core therapeutic area) and advancing drug development in oncology

### Aims of strategic alliance

Kyowa Hakko Kirin secures exclusive Japanese development and marketing rights to saxagliptin Pursue strategic alliance in Japan and Asia for Kyowa Hakko Kirin's oncology products

Most common underlying disease in renal failure is diabetic nephropathy. Renal disease product line-up enhanced by acquiring a diabetes treatment. Aim for efficient and fastest possible launch by reducing development costs and accelerating development speed of the oncology pipeline.



Japanese guidelines for clinical evaluation of oral hypoglycemic agents

The first DPP-4 inhibitor filed in Japan after implementation of the Japanese guidelines

US guidance for Industry. Diabetes Mellitus – Evaluating Cardiovascular Risk in New Antidiabetic Therapies to Treat Type 2 Diabetes.



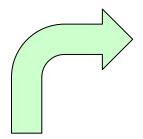
# Update on biosimilar business

### KYOWA KIRIN

FUJIFILM KYOWA KIRIN BIOLOGICS(FKB) is accelerating towards start of clinical trials in 2013

#### Business plan:

- One biosimilar agent per year into clinical trials from 2013
- First product Humira; 4 product launches planned
- Target markets are Europe, North America and Japan



High reliability and high quality

Regulatory demands

Quality equivalent to patented products

External environment:

- FDA:Draft guidance for industry on biosimilars.
- EMA: Guideline on similar biological medicinal products
- MHLW: Guidelines on approval applications for biosimilar medicines

### FKB's strength

Biopharmaceutical manufacturing technology





# **Development pipeline**

# **Development pipeline progress**

Pipeline progress over the three-month period since the Q1 results announcement

#### Domestic

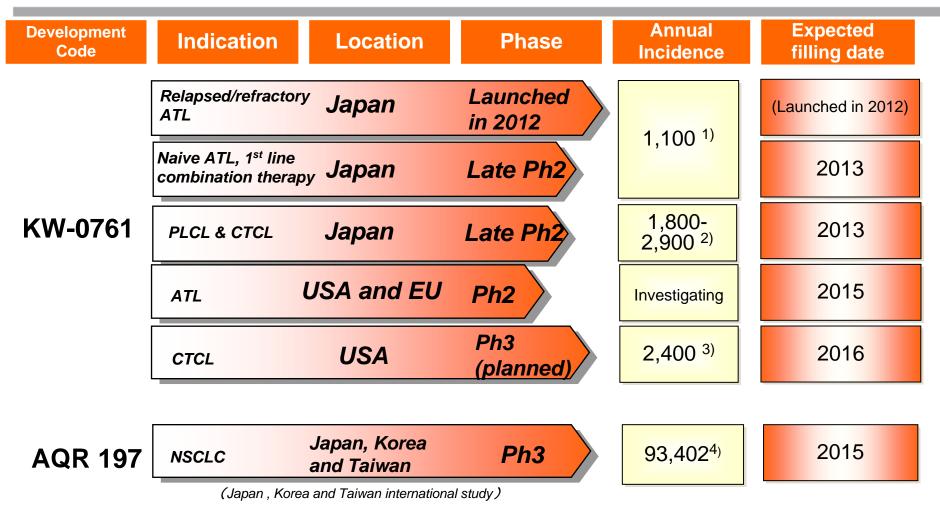
- ✓ May: Launched POTELIGEO<sup>®</sup> for adult T-cell leukemia-lymphoma
- ✓ May: Kyowa Medex launched *in vitro* diagnostic POTELIGEO<sup>®</sup> TEST
- ✓ May: Began phase II studies on KHK6188, a postherpetic analgesic agent

#### **Overseas**

- ✓ May: Pegfilgrastim (brand name Neulasta) approved in South Korea
- ✓ April: ProStrakan wins approval for Sancuso<sup>®</sup> in Europe

### Phase III product pipeline (1)

### **KYOWA KIRIN**



1) Survey of and countermeasures to HTLV-1 infection and related diseases in Japan (Reported by Kazunari Yamaguchi, 2009)

- 2) in-house
- 3) SEER Data (2001-2007)
- 4) Monitoring of cancer incidence in Japan, MCIJ 2007 by NCC-CIS, 2012

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### Phase III product pipeline (2)

### **KYOWA KIRIN**

Development Code	Indication	Location	Phase	Prevalence	Expected filling date
KRN125	Chemotherapy- induced febrile neutropenia	Japan	Ph3	664,398 <sup>1)</sup>	2013
KW-2246	Cancer pain	Japan	Ph3	115,000	2012
KW-3357	Disseminated Intrava Coagulation, Conger Antithrombin Deficie	nital Japan	Ph3	73,000 <sup>3)</sup>	2014

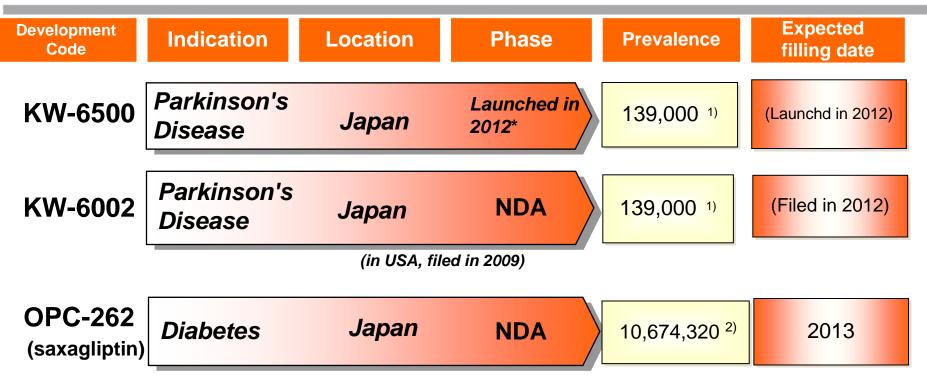
1) Monitoring of cancer incidence in Japan, MCIJ 2006 by NCC-CIS, 2011

2) Data Monitor, DMHC2245

3) Report of the MHLW's specific hematologic disease survey group, blood coagulation abnormality sub-team, 1998

### Phase III product pipeline (3)

### **KYOWA KIRIN**

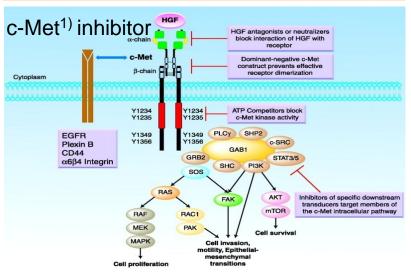


1) Number of patients survey by Ministry of Health, Labor and Welfare, 2008.

2) 5th Edition of the Diabetes Atlas released on World Diabetes Day (International Diabetes Federation), 2011.

### Next major project: ARQ 197

### KYOWA KIRIN



Clin. Cancer Res. 2009;15:2207-2214

#### Remarks

Origin: ArQule

**Development Area:** 

Structure / MoA

Japan, China, South Korea and Taiwan

Generic name : Tivantinib

**Potential Competitors:** 

Onartuzumab (MetMAb)/Genentech (Roche)

#### **Clinical Trial Status**

- Clinical Stage: Phase III (ATTENTION study)
- Region: Japan, South Korea and Taiwan
- Indication: Non-small cell lung cancer (NSCLC)
- Dosing Route: Oral
- Number of Patients: 460
- Primary Endpoint: Overall survival
- Study Start Date (FPI <sup>2</sup>): Aug. 2011
- Estimated Primary Completion Date: Dec. 2013

#### **Other information**

- ARQ 197 is being developed by Daiichi-Sankyo/ ArQule (DS/A) in U.S., Europe etc.
- Progression free survival (PFS) extended with ARQ 197/erlotinib vs. placebo/erlotinib in NSCLC Phase II study.
- Phase III study (MARQUEE) conducted by DS/A.

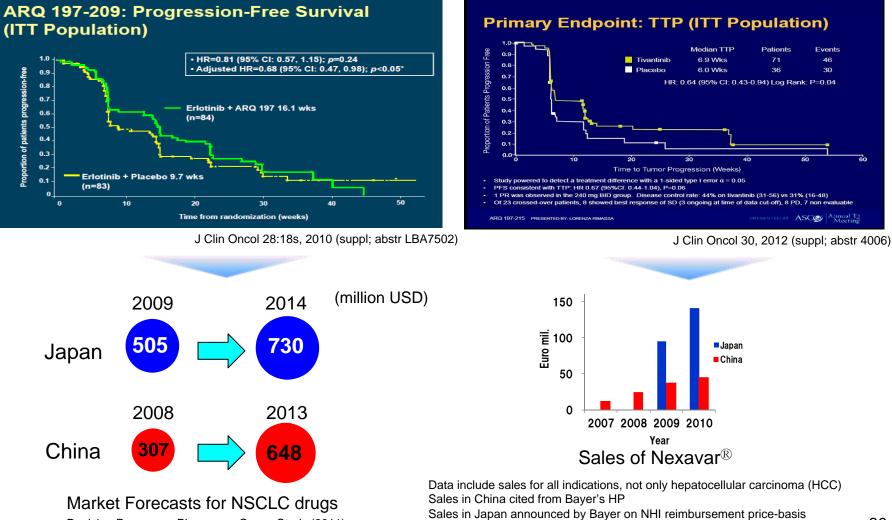
1) c-Met is a hepatocyte growth factor receptor highly expressed and active in many solid cancers. It is implicated in tumor cell migration, invasion, survival and proliferation.

2) First patient in

### ARQ 197: future prospects

#### **KYOWA KIRIN**

#### Non-small cell lung cancer



Decision Resources Pharmacor Oncos Study (2011), Emerging Market Study (2009)

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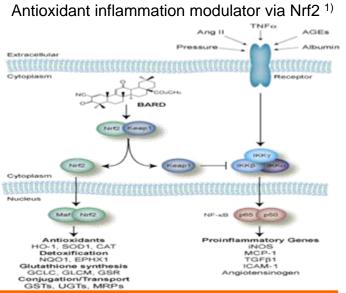
were incorporated into the figure using an exchange rate of 103 yen/euro.

Hepatocellular carcinoma

### Next major project: RTA 402

#### **KYOWA KIRIN**

#### **Structure / MoA**



#### **Clinical Trial Status**

- Clinical Stage: Phase II
- Region: Japan
- Indication: CKD in patients with type 2 diabetes
- Dosing Route: Oral
- Number of Patients: 40
- Primary Endpoint: Changes in eGFR from baseline
- Study Start Date (FPI): Feb. 2012
  - Estimated Completion Date: Dec. 2013

#### Remarks

Origin: Reata Pharmaceuticals.

**Development Area:** 

- Japan, China, South Korea and Taiwan
- Other Asian Countries except India
- Generic name: Bardoxolone Methyl
- Potential Competitors: None

#### **Other information**

- Under development by Reata and Abbott in the US and EU.
- Significant and sustained improvements in eGFR<sup>2)</sup> were observed in Phase II studies.
- Confirmatory Phase III study is ongoing in the US and EU.

1) Nrf2 is a transcription factor that promotes the production of many antioxidant and anti-inflammatory factors. Activating Nrf2 is thought to protect tissues from inflammation by increasing production of various antioxidant factors and inhibiting inflammatory signal pathways.

2) eGFR : estimated glomerular filtration rate

### RTA 402: overseas data

#### Phase llb results 46-40-100-Placebo 34-90-– 25 mg Mean Estimated GFR (ml/min/1.73 m<sup>2</sup>) 80-28-🗕 75 mg 70- $0^2$ 🗕 150 mg 60-50-40-30-20-10-Ò Week No. at Risk Placebo Bardoxolone methyl, 25 mg Bardoxolone methyl, 75 mg Bardoxolone methyl, 150 mg

Pergola, et al. NEJM, 365;4, 327-36. July, 2011

#### Improvement in eFGR\* sustained over 52 weeks

\* eGFR: estimated glomerular filtration rate

#### **Phase III results**

Study design: RTA402 (20mg) and placebo, 1:1 randomized, controlled study

Subjects: CKD stage 4 with accompanying type 2 diabetes

Patient numbers: 2,000

Primary endpoint : time to end-stage kidney failure (dialysis/transplantation) or vascular death

Secondary endpoints: (1) volume change in eGFGR,

(2) hospitalization or death due to heart disease

(3) composite evaluation of cardiovascular function

#### **Domestic**

- Launch Parkinson's disease agent Apokyn<sup>®</sup>
- □ File for approval of KW-2246 in development for cancer pain
- Begin phase I study on ARQ197 in hepatocellular carcinoma

#### **Overseas**

Begin US phase III studies on KW-0761 in CTLC



# **KYOWA KIRIN**

Enquiries regarding this document should be directed to: Kyowa Hakko Kirin

Corporate Communications Department: 81-3-3282-0009

#### Fiscal 2012 full year forecasts relative to medium-term plan

#### **KYOWA KIRIN**

FY2012 (¥bn)		Medium-term plan	Current forecast	Difference	
	Sales	225.0	248.0	+23.0	
Pharmaceuticals	OP	36.4	48.7	+12.3	
	R&D expense	40.0	41.0	+1.0	
Bio-Chemicals	Sales	88.0	79.0	-9.0	
BIO-Chemicais	OP	8.4	3.0	-5.4	
Chemicals	Sales	147.0	—	-147.0	
Chemicals	OP	7.0	—	-7.0	
Other /	Sales	-6.0	6.0	+12.0	
Eliminations	OP	0.0	0.3	+0.3	
Total	Sales	454.0	333.0	-121.0	
Total	OP	51.7	52.0	+0.3	

Pharmaceuticals: Negative factors include the effects of the National Health reimbursement prices while positive factors include the effects of FUJIFILM KYOWA KIRIN BIOLOGICS Co., Ltd. The acquisition of ProStrakan has a positive effect on sales and a negative effect on operating income due to the amortization of goodwill, etc.

Bio-Chemicals: Amino acid sales volumes are expected to be higher than forecast in the medium-term business plan, but revenues and profits are expected to be lower structural changes at Daiichi Fine Chemical and the effects of the strong yen (Exchange rates assumed: medium-term plan ¥91/\$, ¥133/€; FY2012 ¥77/\$, ¥98/€)

• Chemicals: The Chemicals segment has been eliminated



### **Reference** materials



### **Development pipeline details**

### Development pipeline (1)

#### **KYOWA KIRIN**

(On file/approved)

Denotes development progress since 18 April 2012 (region, development stage, filing, approval, launch etc)

	Development number Generic name Presentation/Formulation	Mechanism of action	Target disease	Development stage	In-house/licensed	Notes
<b>S</b>	Pegfilgrastim Injection	Long-acting granulocyte colony stimulation factor	Chemotherapy-induced febrile neutropenia	Approved S. Korea May 2012 Approved Vietnam June 2012	Kirin-Amgen	
*	Cinacalcet Hydrochloride Oral	Calcium receptor agonist	Secondary hyperparathyroidism	Filed in Asia	NPS	Philippines, Malaysia, Thailand, China
x	KW-6002 Istradefylline	Angiotensin A2a	Parkinson's disease	Filed in US	In-house	
X	Oral	receptor antagonist		Filed in Japan		
Ş	AMG531 Romiplostim Injection	Thrombopoietin receptor agonist	Chronic, idiopathic immune thrombocytopenic purpura	Filed in Taiwan	Kirin-Amgen	
×.	Granisetron Patch	$5HT_3$ serotonin receptor antagonist	Nausea and vomiting induced by emetic chemotherapy	Filed in Asia	(	Taiwan, Singapore Marketed in the US by ProStrakan as Sancuso

## Development pipeline (2)

(Phase II-III)

☆: New indication

	Development number Generic name Presentation/Formulation	Mechanism of action	Target disease	Development stage	In-house or licensed	Notes
×	KW-2246 Fentanyl citrate Sub-lingual	Opioid receptor agonist	Cancer pain	Japan Phase III	Orexo	Marketed by ProStrakan as Abstral
Ş	KRN125 Pegfilgrastim Injection	Long-acting granulocyte colony stimulation factor	Chemotherapy-induced febrile neutropenia	Japan Phase III	Kirin-Amgen	
×	ARQ 197 Tivantinib	c-Met inhibitor	Lung cancer	Japan, S. Korea, Taiwan Phase III	ArQule	
	Oral		Stomach cancer	Japan, S. Korea Phase II		
		Long-acting erythropoietic stimulation factor	☆Pediatric renal anemia	Japan Phase III		On the market in Japan for renal
S.	KRN321 Darbepoetin Alfa		Renal anemia (under dialysis)	China Phase II India Phase III	Kirin-Amgen	
	Injection		☆Anemia accompanied by myelodysplastic syndrome	Japan, S. Korea Phase II		anemia
×ŗ-	KRN1493 Cinacalcet Hydrochloride Oral	Calcium receptor agonist	☆Hypercalcemia accompanying parathyroid cancer and refractory, primary hyperparathroidism	Japan Phase III	NPS	On the market in Japan for secondary hyperparathyroidism
X	KW-6485 Topiramate Oral	Anti-epileptic	☆Pediatric epilepsy	Japan Phase III	Janssen Pharmaceutical K.K.	On the market in Japan for epilepsy

## Development pipeline (3)

Phase	e II-III)	Denotes development pro-	gress since 18 April 2012 (region, dev	velopment stage, filing,	approval, lau	nch etc) 🛧: New indica
	Development number Generic name Presentation/Formulation	Mechanism of action	Target disease	Development stage	In-house or licensed	Notes
Ś	KW-3357 Antithrombin Injection	Recombinant human antithrombin	Disseminated Intravascular Coagulation, Tendency to thrombosis due to congenital antithrombin deficiency	Japan phase III Europe Phase I	In-house	
			Peripheral T/NK cell lymphoma	Japan Phase II		
~ 4	KW-0761 Mogamulizumab	Anti-CCR4humanized	Adult T-cell leukemia-lymphoma combination therapy (treatment naïve)	Japan Phase II	In-house	Potelligent antibody
	Injection	antibody	Peripheral T-cell lymphoma and cutaneous T-cell lymphoma	US Phase I/II	in-nouse	r olenigent antibody
			Peripheral T-cell lymphoma	Europe Phase II		
X	KW-2478 Injection	HSP90 inhibitor	Multiple myeloma	UK, US, Philippines Phase I/II	In-house	
	ASKP1240 Injection	Anti-CD40 complete human antibody	Transplant rejection	Japan Phase I US Phase II	In-house	Joint development with Astellas KM mouse used
X	RTA 402 Bardoxolone Methyl Oral	Antioxidant Inflammation modulator	Chronic kidney disease accompanied by type 2 diabetes	Japan Phase II	Reata	
1	KHK4563 Benralizumab Injection	Anti-IL-5 receptor humanized antibody	Bronchial asthma	Japan, South Korea Phase II	In-house	Excluding Japan and Asia, under development by MedImmune as MEDI-563. Potelligent antibody
×	KHK6188 Oral	Cannabinoid receptor CB2 agonist	Neuropathic pain	Japan Phase II	In-house	
X-	Z-206 Mesalazine Oral dissolving	pH-dependent release modulator	☆Crohn's disease	Japan Phase II	Zeria Pharm.	Joint development with Zeria Pharm. On the marke for ulcerative colitis

### Development pipeline (4)

#### (Phase I)

☆: New indication

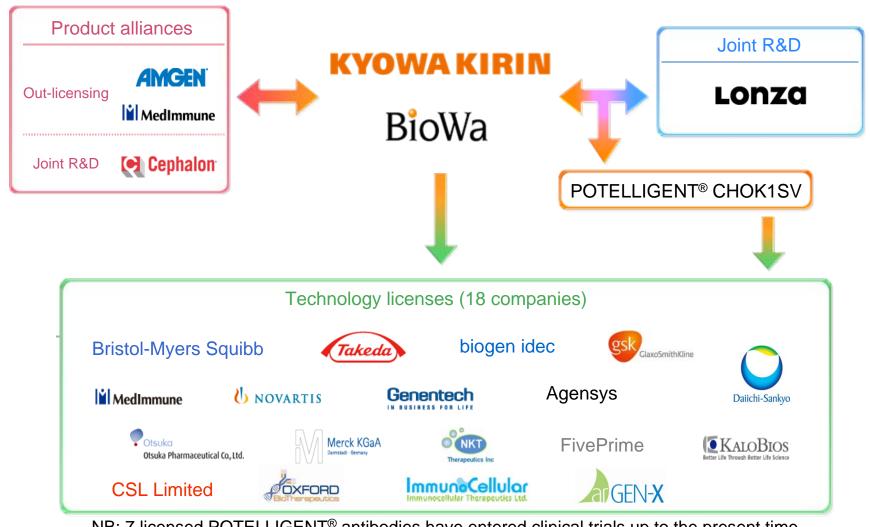
	Development code Generic name Presentation/formulation	Mechanism of action	Target disease	Development stage	In-house or Licensed	Notes
¥	KW-2450 Oral	IGF-1 receptor signal inhibitor	Malignant tumors	US Phase I/II	In-house	
Y	KRN330 Injection	Anti-A33complete human antibody	Malignant tumors	US Phase I/IIa	In-house	KM mouse used
≯	BIW-8962 Injection	Anti-GM2 humanized antibody	Malignant tumors	US Phase I/IIa	In-house	Potelligent antibody
X	KRN951 Tivozanib Oral	VEGF receptor tyrosine kinase inhibitor	Malignant tumors	Japan Phase I	In-house	
Y	KHK2866 Injection	Anti-HB-EGF humanized antibody	Malignant tumors	US Phase I	In-house	Potelligent antibody
X	LY252355 Litronesib Injection	Mitotic kinsen Eg5 inhibitor	Malignant tumors	Japan Phase I	In-house	
Y	CEP-37250/ KHK2804 Injection	Anti-cancer specific carbohydrate antigen humanized antibody	Malignant tumors	US Phase I	Cephalon	Joint development with Cephalon Potelligent antibody
Y	KHK2898 Injection	Anti-CD98 complete human antibody	Malignant tumors	Singapore Phase I	In-house	Potelligent antibody KM mouse used
<b>1</b>	KW-0761 Mogamulizumab Injection	Anti-CCR4 humanized antibody	☆Bronchial asthma	Japan Phase I	In-house	Potelligent antibody
Y	KHK4827 Injection	Anti-IL-17receptor complete human antibody	Psoriasis	Japan Phase I	Kirin-Amgen	
Y	KRN23 Injection	Anti-FGF23 complete human antibody	X-chromosome hereditary hypophosphatemic rickets (XLH)	US/Canada Phase I/II	In-house	KM mouse used

### Progress with out-licensing



Name	Partner(s)	Phase			Remarks
		I	Π	Ξ	
Tivozanib	AVEO				Malignant tumors
(KRN951)	Astellas				(VEGF receptor inhibitor)
KW-2871	Life Seience				Malignant tumors
(Low-fucose antibody)	Life Science				(Anti-GD3 antibody)
MEDI-563					Asthma
(KHK4563:POTELLIGENT®)	MedImmune				(Anti-IL-5R antibody)
KRN5500	DARA				Neuropathic pain
					Malignant tumors
LY2523355	Eli Lilly				(Mitotic kinesin Eg5 inhibitor)
AMG 761	A 100 01 0 10				Asthma
(KW-0761:POTELLIGENT®)	Amgen				(Anti-CCR4 antibody)
RGI2001	REGIMMUNE				Immunosuppressant

### POTELLIGENT<sup>®</sup> technology alliances **KYOWA KIRIN**

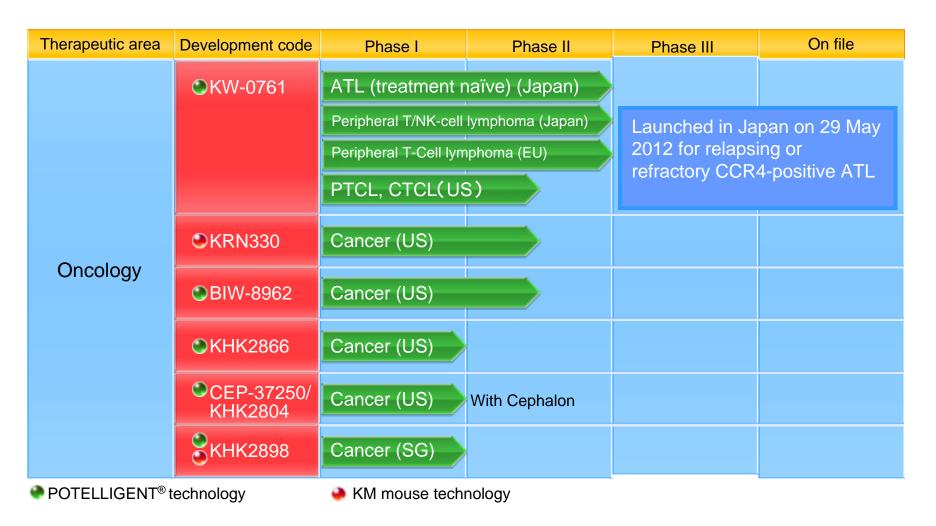


NB: 7 licensed POTELLIGENT<sup>®</sup> antibodies have entered clinical trials up to the present time, including agents licensed to Bristol Myers Squibb and Genentech

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### Antibody development pipeline (1) **KYOWA KIRIN**



### Antibody development pipeline (2) **KYOWA KIRIN**

Therapeutic area	Development code	Phase I	Phase II	Phase III	On file	
	ASKP1240	Prevention of transp As above (Japan)	plant rejection (US)	With Astellas		
Immunology/	●KHK4563	Bronchial asthma (J	apan, South Korea)			
Allergy	KHK4827	Psoriasis (Japan)	From Kirin-Amgen			
	●KW-0761	Bronchial asthma	Japan)			
Others	●KRN23	Hypophosphatemic	rickets (US, Canada	)		
POTELLIGENT <sup>®</sup> technology • KM mouse technology						

(As of 17 July 2012)