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sosei HEPTARES

Corporate Presentation

March 2024 | Sosei Group Corporation (TSE:4565)

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References to "FY" in this presentation for periods prior to 1 January 2018 are to the 12-month periods commencing in each case on April 1 of the year indicated and ending on March 31 of the following year, and the 9 month period from April 1 2017 to December 31 2017. From January 1 2018 the Company changed its fiscal year to the 12-month period commencing in each case on January 1. References to "FY" in this presentation should be construed accordingly.

Agenda

1. Business Summary
2. Latest Consolidated Financial Results
3. Our Pipeline
4. Our Drug Discovery Platform (StaR®/SBDD)
5. Products / Late-stage Development
6. FY2024 Strategic Goals
7. Appendix

Note: This material was created to explain the details of our company and is not intended to be used for investment decisions. In addition, the contents reflect the views of our company at the time of the creation of the material, and the accuracy of the information is not guaranteed. Investments should be made based on the independent views of investors

1

Business Summary

The vision for Sosei Group

World-Leading Science, Life-Changing Medicines

+ APAC (ex-China)

Development, medical affairs and commercial capabilities to deliver medicines to patients

WORLD-LEADING SCIENCE

LIFE-CHANGING MEDICINES

World-class scientific platform, to discover life-changing medicines

History of Sosei Group

Growth driven by acquisitions of specialist products for Japan, and global drug discovery platforms

JAPAN

GLOBAL

1990 Founded by Shinichi Tamura, former President of Genentech Limited

2004 Listed in Tokyo Stock Exchange Mothers (TSE:4565)

2005 Acquisition of Arakis
Drugs for COPD and asthma treatments developed at this time were launched and marketed by Novartis in 2012

2011 Norlevo (licensed from HRA) launched in Japan
Subsequently transferred rights to ASKA Pharmaceutical

2015 Acquisition of Heptares Therapeutics
Deployment of proprietary IT drug discovery platform (StaR®/SBDD) at R&D facility in Cambridge

2018 Oravi (in-licensed from BioAlliance) launched in Japan
Subsequently transferred rights to Hisamitsu Pharmaceutical

2023 Acquisition of Idorsia Japan/Korea

TSE Prime Listing
Uplifted from the Growth market

Our leadership team

BOARD OF DIRECTORS


Shinichi Tamura
Chairman
Genentech Fujisawa


Chris Cargill
CEO
KPMG J.P.Morgan


Tomohiro Toyama
Legal
TMI ASSOCIATES


Rolf Soderstrom
Finance
pwc BTG


David Roblin
Clin Dev
Pfizer BAYER


Kuniaki Kaga
Clin Dev
Mitsubishi Chemical Holdings


Eiko Tomita
Reg Affairs
AstraZeneca Eisai Bristol Myers Squibb


Noriaki Nagai
Compliance
NOMURA Doshisha University


Miwa Seki
Tech/ESG
m3 POWER Morgan Stanley

EXECUTIVE MANAGEMENT


Kieran Johnson
Chief Accounting Officer
KPMG GSK


Candelle Chong
Chief of Staff
J.P.Morgan

Group Operations
Tokyo / London
~45 people


Chris Cargill
Chief Executive Officer
KPMG J.P.Morgan


Hironoshin Nomura
Chief Financial Officer
Mitsubishi Research Institute MIZUHO


Toshihiro Maeda
Chief Operating Officer
MERCK Bristol Myers Squibb


Kazuhiko Yoshizumi
Chief Compliance Officer
NEC

UK Research & Development Operations


Matt Barnes
President of Heptares Therapeutics
Takeda CELLTECH

~180 people

Research & Early Development
Discovery / Preclinical / Phase I

~145 people

Development & Commercialization
Phase II / III / IV

Japan Development & Commercial Operations


Satoshi Tanaka
President of Idorsia Pharmaceuticals Japan
idorsia ACTELION

Sosei Group's structure

Now accelerating our mission and vision with 370 total employees

Sosei Group
TSE Prime Segment listed (4565-JP)
Group Operations | 46 people

Heptares Therapeutics
Cambridge | 177 staff

Research & Drug Discovery
- StaR®–SBDD Platform
- Drug Discovery
- Translational Medicine
- Early Clinical Development
- Business Development

Sosei Co.
Tokyo | 12 staff

IPJ
Tokyo | 130 staff

Drug Development & Commercial Operations
- Clinical Development
- Regulatory Affairs
- Marketing Authorisation Holder
- Commercial Sales (direct and via partners)

Japan businesses to be merged post-transaction within 12 months

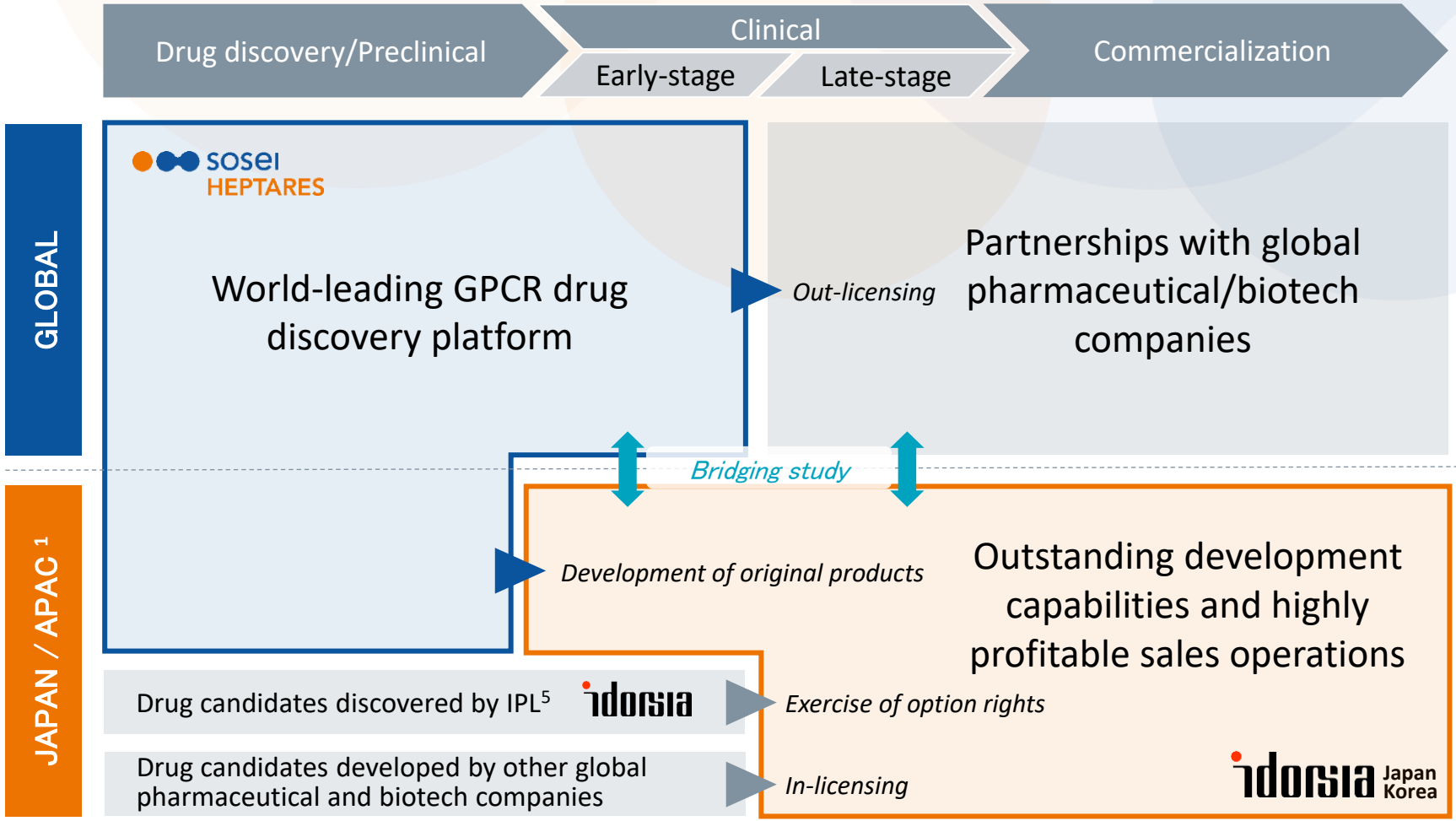
IPK
Seoul | 5 staff

Drug Development
- Clinical Development
- Regulatory Affairs
- Marketing Authorisation Holder
- Commercial Sales (via partners)

Note: Details as of 1 July 2023

Business model

Expand business globally on the strength of the platform, and commercialization in Japan



Our source of revenue

1. Upfront payment[2]
2. Milestone payment[3]
3. Royalty[4]
4. Product sales

[1]APAC (ex-China) territory includes South Korea, Australia, Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, New Zealand, Philippines, Singapore, Taiwan, Thailand and Vietnam
[2] Received upon signing of license agreement [3] Received upon the successful progression of the program – achieve pre-defined development milestones [4] Payment on future net sales
[5] IPL:Idorsia Pharmaceuticals Ltd.(Switzerland)

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Our drug discovery platform

World-leading science and platform enables efficient drug discovery against difficult targets

	Conventional drug discovery	Our drug discovery
Approach	Empirical design	Rational design (computer-based)
Method	High Throughput Screening (HTS[1])	Proprietary technology and drug discovery platform (StaR®/SBDD[2])
Period[3]	4.5 years on average	3.0 years on average
Costs[3]	$15 million	$5 million
Features [4]	Difficult to design drugs precisely – high development attrition rate	Execute more precise drug design – lower development attrition rate
Target [4]	Difficult for GPCRs with unstable structures	Best for GPCRs with unstable structures

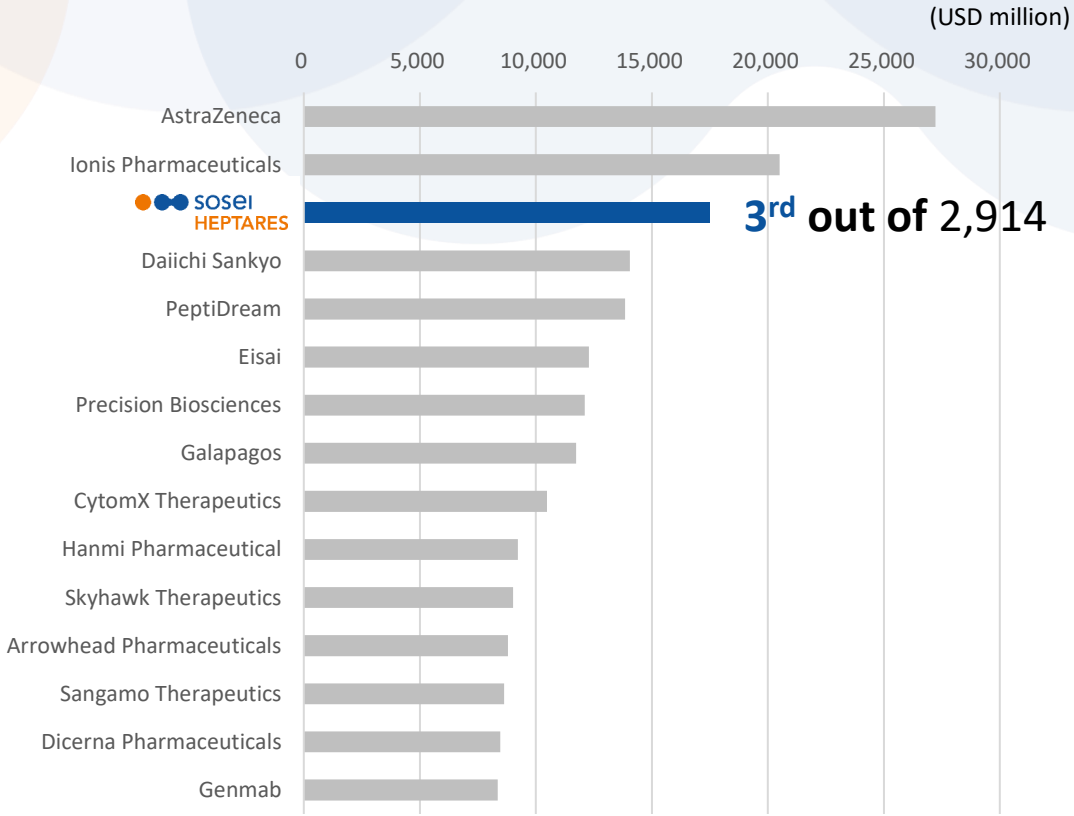
[1] HTS/High Throughput Screening is a method to find drug candidates by reacting tens of thousands to millions of compounds with drug targets using large machines and human hands.
[2] StaR®: Stabilized Receptor is a method for stabilizing drug targets with unstable structures, such as GPCRs, and using them for structural analysis. SBDD: Structure-Based Drug Design is a method to design and screen compounds on the computer based on structural information (ref: Appendix) [3] The period from target selection to preclinical testing. For conventional drug discovery, figures are taken from NATURE REVIEWS Drug Discovery (MARCH 2010). [4] Precise drug design make clear the binding site of target, make easier to improve compound, create backups and redo – potentially increase the success rate. GPCR is most popular drug target which account for 30% of current drug target.(The details are to be mentioned later)

Partners for drug discovery platform

Income from licensing provides a great source of non-dilutive financing to support our growth

Balance of potential milestone income from existing license agreements[1]

Top 15 pharmaceutical/biotech companies by license value[2] (cumulative total since 2015)



[1] Balance as of the end of the fiscal year of only those currently under contract. TEVA and Abbvie (formerly Allergan), for which compounds were returned, are excluded from the balances from FY2018 and FY2021, respectively. [2] The figures are based on 'Licensing' category on third party's (EvaluatePharma's) proprietary database and therefore do not completely match the amounts shown in the LHS chart.
Source: Company's data (LHS) and EvaluatePharma (as of 2023/2/6) (RHS)

GPCR targets are our core focus

GPCRs are the largest family of drug discovery targets – significant potential that we can address

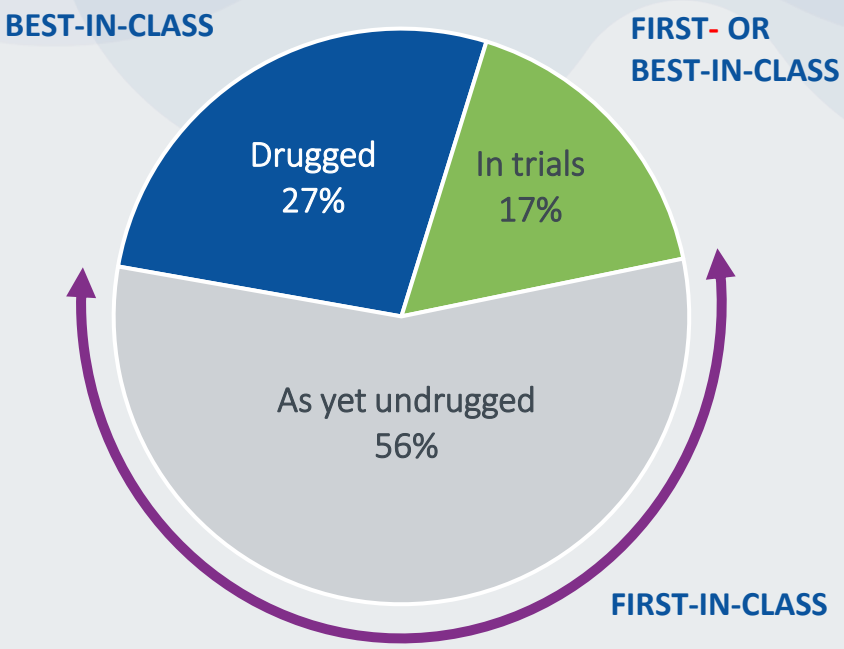
~400 **GPCR targets** active in diseases[2]

~34% **of FDA approvals** target GPCRs[1]

27% **of global sales** are GPCR drugs[1]

- NEUROLOGICAL DISORDERS
- GASTROINTESTINAL DISEASES
- IMMUNOLOGY/ONCOLOGY
- METABOLIC DISORDERS
- CARDIOVASCULAR
- RESPIRATORY

~400 GPCR targets in the body active in disease[2]



GPCRs are active in a wide range of disease areas, and offer broad therapeutic potential

Significant opportunity to target new first-in-class and/or improved best-in-class GPCR medicines

Sources: [1] "Unexplored opportunities in the druggable human genome", Nature Reviews, 2016 ; [2] "Trends in GPCR in Drug Discovery – new agents, targets and indications", Nature Reviews, 2017

List of GPCR targets

As of 2018, 398 GPCRs are potentially druggable and 325 of them are regarded undrugged

Drugged GPCR targets (73)

ADORA1	CHRM1	HCRTR2	PTGER2	ACKR1	ADGRF3	C5AR1	CHRM5	FPR2	GNRHR2	GPR151	GPR21	GPR6	GRM1	LGR4	MLNR	NPY5R	PRLHR	TAAR2	TAS2R30	TSHR
ADORA2A	CHRM2	HRH1	PTGER3	ACKR2	ADGRF4	C5AR2	CMKLR1	FPR3	GPBAR1	GPR152	GPR22	GPR61	GRM2	LGR5	MRGPRD	NPY6R	PROKR1	TAAR3P	TAS2R31	UTS2R
ADORA2B	CHRM3	HRH2	PTGER4	ACKR3	ADGRF5	CALCR	CNR2	FZD1	GPER1	GPR153	GPR25	GPR62	GRM3	LGR6	MRGPRE	NTSR1	PROKR2	TAAR4P	TAS2R38	VIPR1
ADORA3	CNR1	HTR1A	PTGFR	ACKR4	ADGRG1	CALCRL	CRHR1	FZD10	GPR1	GPR156	GPR26	GPR63	GRM4	LPAR1	MRGPRF	NTSR2	PTAFR	TAAR5	TAS2R39	VIPR2
ADRA1A	CXCR4	HTR1B	PTGIR	ADCYAP1R1	ADGRG2	CCKAR	CRHR2	FZD2	GPR101	GPR157	GPR27	GPR65	GRM5	LPAR2	MRGPRG	OPN3	PTGDR	TAAR6	TAS2R4	XCR1
ADRA1B	CYSLTR1	HTR1D	S1PR1	ADGRA1	ADGRG3	CCKBR	CX3CR1	FZD3	GPR107	GPR158	GPR3	GPR68	GRM6	LPAR3	MRGPRX1	OPN4	PTGDR2	TAAR8	TAS2R40	
ADRA1D	DRD1	HTR1F	S1PR5	ADGRA2	ADGRG4	CCR1	CXCR1	FZD4	GPR119	GPR160	GPR31	GPR75	GRM7	LPAR4	MRGPRX2	OPN5	PTH1R	TAAR9	TAS2R41	
ADRA2A	DRD2	HTR2A	SMO	ADGRA3	ADGRG5	CCR10	CXCR2	FZD5	GPR12	GPR161	GPR32	GPR78	GRM8	LPAR5	MRGPRX3	OPRL1	PTH2R	TACR2	TAS2R42	
ADRA2B	DRD3	HTR2B	SSTR1	ADGRB1	ADGRG6	CCR2	CXCR3	FZD6	GPR132	GPR162	GPR33	GPR79	GRPR	LPAR6	MRGPRX4	OR51E1	QRFPR	TACR3	TAS2R43	
ADRA2C	DRD4	HTR2C	SSTR2	ADGRB2	ADGRG7	CCR3	CXCR5	FZD7	GPR135	GPR17	GPR34	GPR82	HCAR1	LTB4R	NMBR	OXER1	RXFP1	TAS1R1	TAS2R45	
ADRB1	DRD5	HTR4	SSTR3	ADGRB3	ADGRL1	CCR4	CXCR6	FZD8	GPR137	GPR171	GPR35	GPR83	HCAR2	LTB4R2	NMUR1	OXGR1	RXFP2	TAS1R2	TAS2R46	
ADRB2	EDNRA	LHCGR	SSTR5	ADGRD1	ADGRL2	CCR6	CYSLTR2	FZD9	GPR139	GPR173	GPR37	GPR84	HCAR3	MAS1	NMUR2	P2RY1	RXFP3	TAS1R3	TAS2R5	
ADRB3	EDNRB	MTNR1A	TACR1	ADGRD2	ADGRL3	CCR7	F2RL1	GALR1	GPR141	GPR174	GPR37L1	GPR85	HRH3	MAS1L	NPBWR1	P2RY10	RXFP4	TAS2R1	TAS2R50	
AGTR1	F2R	MTNR1B		ADGRE1	ADGRL4	CCR8	F2RL2	GALR2	GPR142	GPR176	GPR39	GPR87	HRH4	MC1R	NPBWR2	P2RY11	S1PR2	TAS2R10	TAS2R60	
AVPR1A	FSHR	OPRD1		ADGRE2	ADGRV1	CCR9	F2RL3	GALR3	GPR143	GPR179	GPR4	GPR88	HTR1E	MC2R	NPFFR1	P2RY13	S1PR3	TAS2R13	TAS2R7	
AVPR1B	GABBR1	OPRK1		ADGRE3	AGTR2	CCRL2	FFAR1	GCGR	GPR146	GPR18	GPR42	GPRC5A	HTR5A	MC3R	NPFFR2	P2RY14	S1PR4	TAS2R14	TAS2R8	
AVPR2	GABBR2	OPRM1		ADGRE4P	APLNR	CELSR1	FFAR2	GHRHR	GPR148	GPR182	GPR45	GPRC5B	HTR5BP	MC4R	NPSR1	P2RY2	SCTR	TAS2R16	TAS2R9	
BDKRB2	GLP1R	OXTR		ADGRE5	BDKRB1	CELSR2	FFAR3	GHSR	GPR149	GPR183	GPR50	GPRC5C	HTR6	MC5R	NPY1R	P2RY4	SSTR4	TAS2R19	TBXA2R	
CASR	GNRHR	P2RY12		ADGRF1	BRS3	CELSR3	FFAR4	GIPR	GPR15	GPR19	GPR52	GPRC5D	HTR7	MCHR1	NPY2R	P2RY6	SUCNR1	TAS2R20	TPRA1	
CCR5	HCRTR1	PTGER1		ADGRF2	C3AR1	CHRM4	FPR1	GLP2R	GPR150	GPR20	GPR55	GPRC6A	KISS1R	MCHR2	NPY4R	P2RY8	TAAR1	TAS2R3	TRHR	

Undrugged GPCR targets (325)

GPCRs targeted by Sosei Heptares (Disclosed targets only. In addition, there are ~20 undisclosed targets.)

Sources: GPCRs as targets for approved drugs: How many targets and how many drugs? (2018)

Utilizing Japan's high quality clinical data in development and marketing

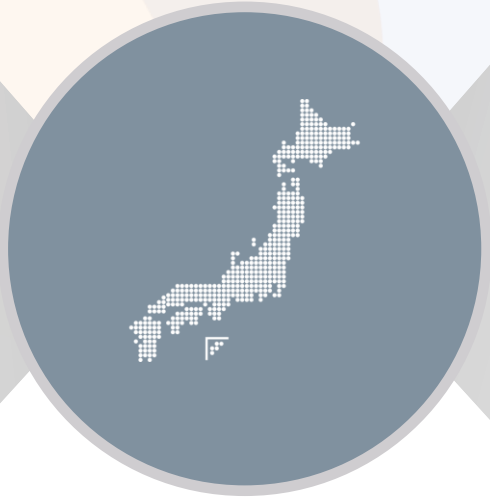
Expanding into APAC by leveraging clinical innovations based on Japan's high quality data

Quality Clinical Development

Deep understanding of disease and treatment by Doctors/HCPs

High quality data from clinical studies through to Post Marketing Surveillance

High penetration in of patient population during commercial phase



Quality excellent access to Doctors/HCPs who evaluate novel drugs

Achieve strong patient uptake

Contribute to reduce drug loss/lag for Japan patients

Quality Regulatory Environment

Reasonable NHI price for reimbursement supported by high quality clinical trial and PMS data

Prolongation of patents via extended clinical development

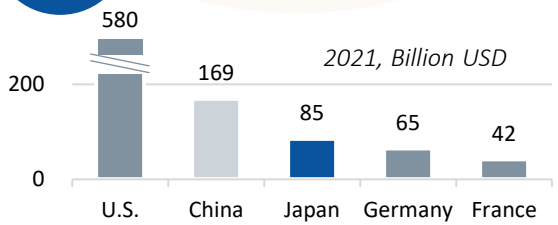
Regional optimization makes clinical trials cheaper and faster to execute

Japan will serve as our base to expand across APAC markets

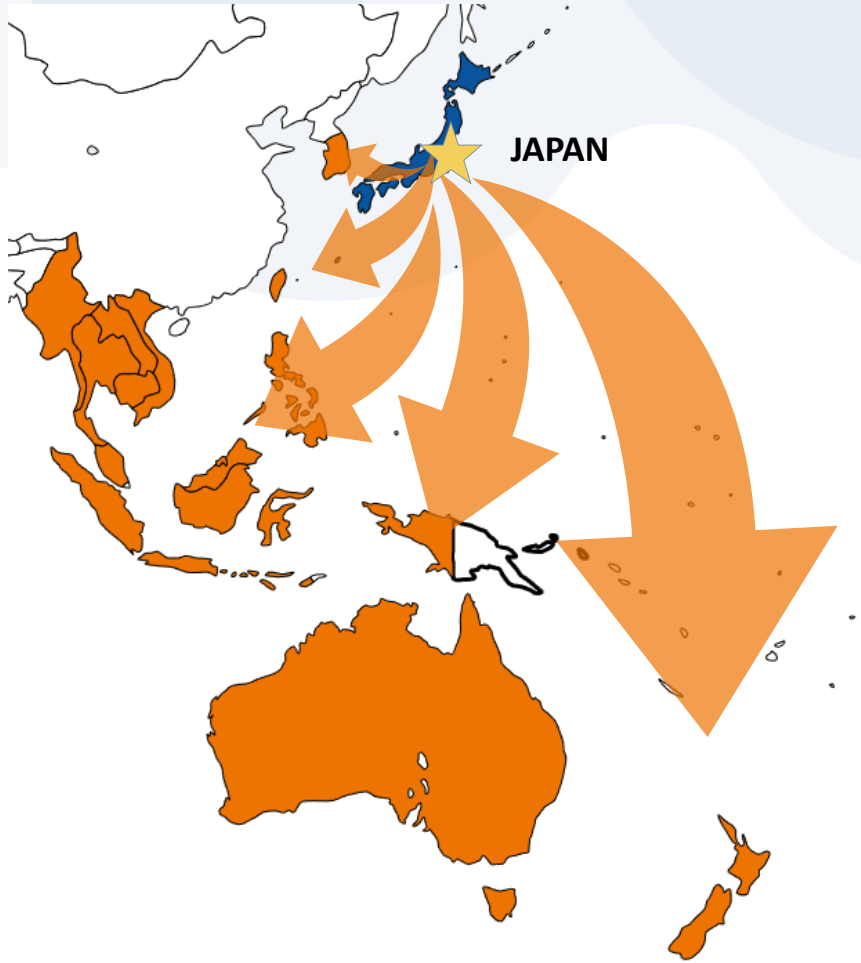
APAC is one of the most rapidly growing markets in the world

Established market with strong volumes

Second largest pharma market (excl. China)

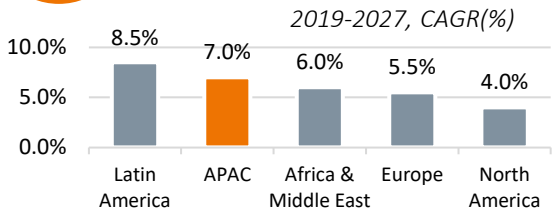


- Universal health care system
- Relatively weak incumbents
- Attractive market for newcomers
- Large, ageing population
- Stable, pro-innovation market



APAC* One of the fastest growing pharma regions globally

Second highest growth pharma market



- Significant population growth
- Developing GDP/economies
- Attractive market for newcomers
- Large, ageing population
- Accessible via other regulatory approvals

Source: IQVIA Market Prognosis, Sep 2022; IQVIA Institute, Nov 2022.
*APAC (ex-China) territory includes South Korea, Australia, Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, New Zealand, Philippines, Singapore, Taiwan, Thailand and Vietnam

2

Latest Consolidated Financial Results

Financial summary for FY2023

2023 results incorporate transformational acquisition of Idorsia's Japan/APAC business.

1. **Revenue of ¥12,766m ($91m)** vs. ¥15,569m ($119m) in the prior year.
Revenue lower due to lack of new business development out-licensing upfront payments.
This reduction partially offset by the inclusion of ¥ 6,109m ($43m) of PIVLAZ® sales in Japan.

2. **Core Operating Loss of ¥3,076m ($22m)** vs. Core Operating Profit ¥5,856m ($45m) in the prior year.
Decrease in profits due to decline in revenue and an increase in costs, including the planned increase in investment in Core R&D and the inclusion of additional core costs totaling ¥4,474m ($32m) from the newly acquired Idorsia business.

3. **Net Loss of ¥7,193m ($51m)** vs. Net Profit of **¥382m ($3m)** in the prior year.
Non-cash costs (incl. PIVLAZ® amortization) and non-recurring transaction related expenditures (professional fees). These were offset by a ¥3,487m / $25m tax credit and the absence of equity accounting costs in 2023.

4. **¥49bn ($348m) cash balance** as at December 31, 2023.
Strong cash balance maintained from the issuance of new shares (JPY2bn), a third-party allotment (JPY8bn) and partially funding the CHF399m / JPY 65bn Idorsia acquisition with a low interest rate bank loan with a 7-year term.

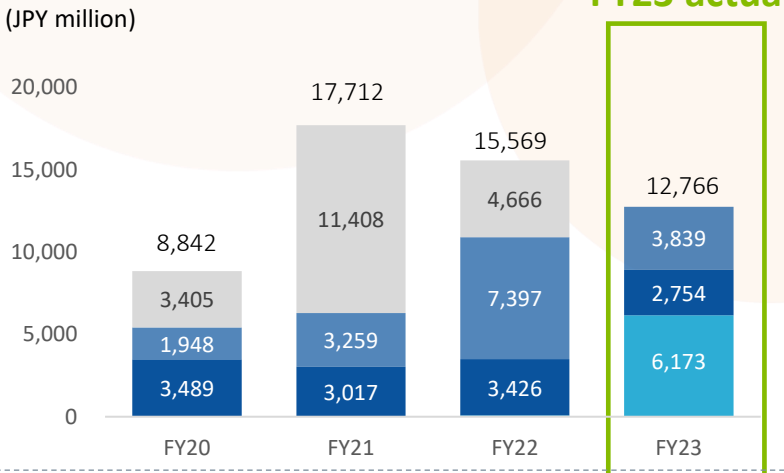
Note - *USD:JPY FX rates used:* Average rate YTD 2023 = 140.53; Average rate YTD 2022: 131.30; Spot rate Dec 31, 2023: 141.03

Key financial indicators

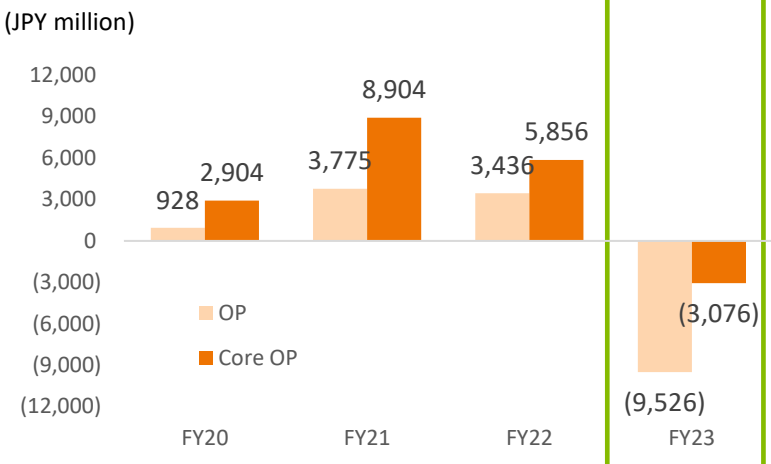
Product sales of PIVLAZ® made a significant contribution to total Revenue

FY23 actual

Revenue



Operating Profit / Loss



	Explanation
Upfront[1]	■ No new out-licensing transactions signed in FY2023 vs. two new deals / upfront fees in the prior year (AbbVie & Eli Lilly)
Milestone[2]	■ Four milestone events in 2023 (2 milestone events relate to IPJ business) vs. 5 milestone events in 2022 ■ Partially offset by increased deferred revenue releases (which relate to the active collaborations) as there were more active collaborations
Royalty / Other	■ Royalty from product sales decreased
Product Sales	■ PIVLAZ® sales from 20 July 2023 (approx. 5.4 months)
Cost of Sales	■ Inclusion of PIVLAZ® product supply costs ■ Additional CoS accounting charge only for current PIVLAZ® stock
R&D	■ Planned increase in investment in discovery activities ■ Inclusion of Idorsia related R&D costs
SG&A	■ Inclusion of Idorsia related SG&A costs ■ Amortization of intangible assets (PIVLAZ® and Daridorexant) ■ Inclusion of one-time cost relating to M&A

[1] Upfront fee revenue recognised at deal inception
[2] Milestone revenue recognised at milestone event + deferred revenue releases

Breakdown of FY2023 result

Impact of Non-cash/Non-recurring costs on full-year result is more significant in 2023 due to M&A

(JPY million)	Sosei Heptares* (12 months)	+ IPJ/IPK* (7/20-12/31:c.5.4month)	= Consolidated P&L (Core)	+ Non-cash cost	+ Non-recurring Costs	= Consolidated P&L (IFRS)
Revenue	5,157	7,609	12,766			12,766
Cost of Sales + SG&A	(3,791)	(3,697)	(7,488)	B (611) Amortization - Product IP D (1,893) Others	A (1,812) Current PIVLAZ® stock C (1,263) M&A-related fee	(13,067)
R&D	(8,426)	(778)	(9,204)	D (871)		(10,075)
Other income	844	6	850			850
OP/Core OP	(6,216)	3,140	Core OP (3,076)			OP (9,526)

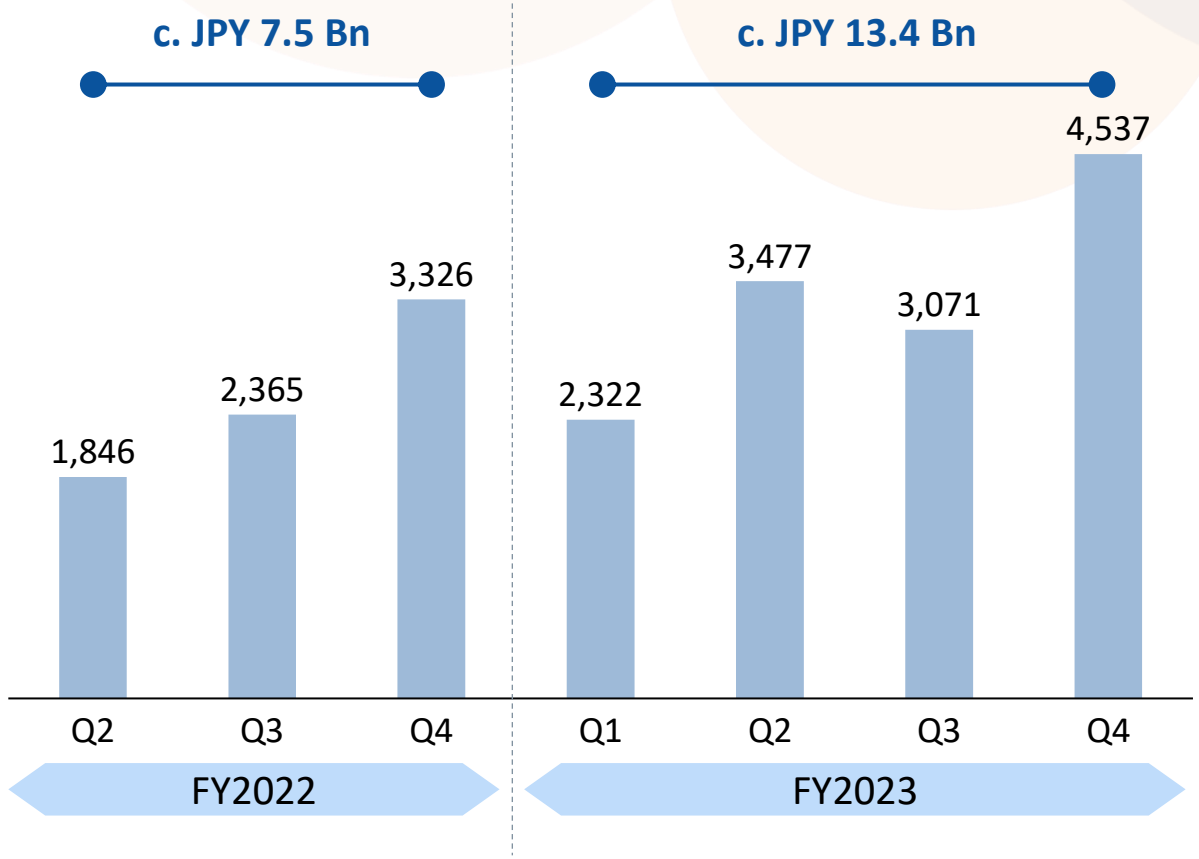
M&A related Adjustments (total. JPY 3,686 mil.)	A Additional CoS charge only for current PIVLAZ® stock. This impact will continue until around mid 2024.
	B Amortization of intangible assets (relating to PIVLAZ® and Daridorexant). Annual charge to increase to c. JPY 1,700m per year from 2025.
	C One time M&A related fee covering the IPJ/IPK transaction and evaluation of other potential opportunities was fully charged in Q3 2023
Others	D Amortization of other intangible assets (e.g. IP), depreciation (e.g. laboratory equipment) and share-based payments

* Sosei Group, Sosei Co. Ltd., Sosei K.K. and Heptares Therapeutics Ltd., IPJ: Idorsia Pharmaceuticals Japan, IPK: Idorsia Pharmaceuticals Korea

Full year product sales guidance

PIVLAZ® sales are projected to reach JPY 16+ billion* (c. 114+ million USD) in 2024

Actual Sales of PIVLAZ® (NHI base)



Target Sales in FY2024

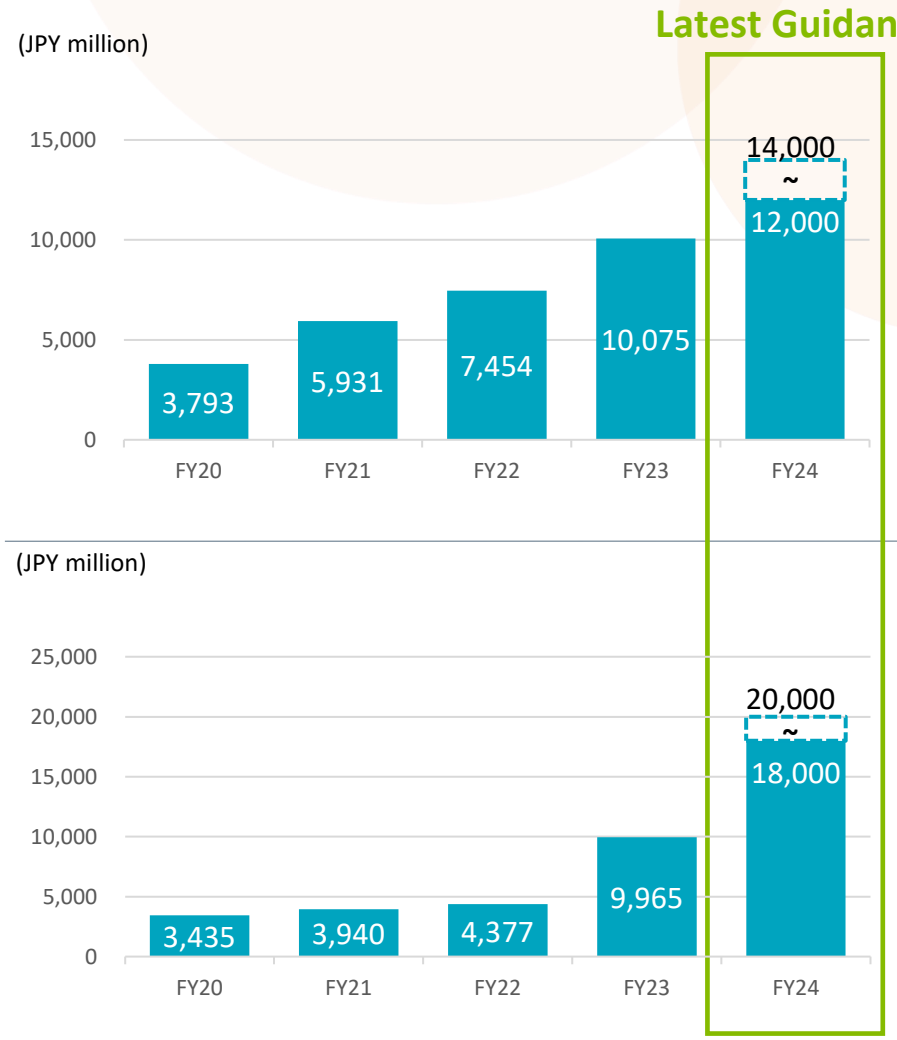
JPY 16.0 + Bn

Sales growth supported by higher level of evidence (included in 2023 Guideline Recommendation).

* NHI base sales
The assumed USD:JPY FX rate in 2024 is 140

Full year cost guidance

Incremental investment designed to deliver greater returns over the medium to long term



R&D expenses (IFRS basis)

¥12,000 to ¥14,000m

Inclusion of IPJ/IPK cost	■ Inclusion of IPJ/IPK R&D costs for a full year
Strengthening capability	■ Investment in discovery and translational medicine capabilities
Advancing priority programs	■ Maturity of several priority programs, incl. at least 1 clinical trial initiation ■ Advancing priority programs further in the clinic will deliver greater value through higher out-licensing revenues

S&M + G&A expenses (IFRS basis)

¥18,000 to ¥20,000m

Inclusion of IPJ/IPK cost	■ Inclusion of IPJ/IPK SG&A costs for a full year ■ Increase in amortization charge (c. JPY 700 mil.) ■ Increase in support for PIVLAZ® to drive growth, commercialization of Daridorexant in Japan and preparation for launch of PIVLAZ® in South Korea (c. JPY 2,000m)
Post-merger integration	■ Costs relating to the acquisition of IPJ/IPK (post-merger integration) are expected in 2024 (c. JPY 1,000m)

3

Our Pipeline

Partners and active pipeline overview

	Pre-Discovery / Discovery	Preclinical	Phase 1	Phase 2	Phase 3	Filed	Commercial
IN-HOUSE	10+ PROGRAMS	GPR35 ag. HTL'477 IBD M_1 ag. Neurology	EP4 ant. HTL'732 Advanced solid tumours (Cancer Research UK) EP4 ag. HTL'744 Inflammatory Bowel Disease GPR52 ag. HTL'149 Schizophrenia (Boehringer Ingelheim)		Cenerimod (APAC*) Systemic lupus erythematosus Lucerastat (APAC*) Fabry disease	Daridorexant (APAC*) Insomnia (Mochida)	PIVLAZ® (APAC*) Cerebral vasospasm Oravi® (Hisamitsu) Mouth candidiasis
PARTNERED	15+ PROGRAMS Previous and ongoing discovery collabs.: Pfizer Multiple; Genentech Multiple; Takeda GI; abbvie Neurology; Lilly Diabetes/Metabolic Ongoing technology collabs.: Pharmenable AI-driven; verily AI-driven; PeptiDream PAR2 peptide; KALLYOPE Gut-brain axis	CXCR4 mAb KY1051 Immuno-oncology (sanofi) OX2 ag. ORX750 Narcolepsy (Orexia, Centessa) M_1 pref. ag. NBI'567 Neurology (Neurocrine Biosciences)	M_1M_4 ag. NBI'570 Neurology (Neurocrine Biosciences) M_4 pref. ag. NBI'569 Neurology (Neurocrine Biosciences) CCR6 ant. PF'894 IBD (Pfizer) MC4 ant. PF'669 Malnutrition (Pfizer) GLP-1 ag. PF'522 Metabolic diseases (Pfizer) $mGlu_5$ NAM TMP-301 Substance abuse (Tempero Bio)	M_4 ag. NBI'568 Schizophrenia (Neurocrine Biosciences)			Ultibro® Breezhaler® COPD (Novartis) Seebri® Breezhaler® COPD (Novartis) Enerzair® Breezhaler® Asthma (Novartis)

: Exclusive license-out option

: Exclusive opt-in right

Note: Seebri®, Ultibro®, Enerzair® and Breezhaler® are registered trademarks of Novartis AG.
Pref. ag.: Preferring agonist

Major licensing transactions

New multi-target collaboration for diabetes and metabolic diseases with Eli Lilly signed

Partner	Execution	Program	Therapeutic Area(s)	Upfront and Initial Milestones	Potential Total Milestone[1]
Lilly	December 2022	Multi-target Collaboration	Diabetes and Metabolic	$37m	800m
abbvie	August 2022	Multi-target Collaboration	Neurological disorders	$80m	$1.2bn
NEUROCRINE BIOSCIENCES	December 2021	Collaboration and license agreement for M_4, M_1 and M_1/M_4 dual agonist	Neurological disorders	$100m	$2.6bn
GSK	December 2020	Collaboration and license agreement for GPR 35	Gastrointestinal, immunology	$44m	$480m
biohaven pharmaceuticals	December 2020	Collaboration and license agreement for CGRP portfolio	Neurology	$10m	$380m
abbvie	June 2020	Discovery Collaboration and Option to License[2]	Inflammatory and Autoimmune	$32m	$400m
Takeda	August 2019	Multi-target Collaboration	Multiple; Initial focus on Gastrointestinal	$26m	$1.2bn
Genentech A Member of the Roche Group	July 2019	Multi-target Collaboration	Multiple	$26m	$1bn
Pfizer	November 2015	Multi-target Collaboration	Multiple	-	$1.8bn
AstraZeneca	August 2015	Collaboration and license agreement for A_{2a} antagonist[3]	Immuno-oncology	$10m	$500m

[1]Potential option fees, development, regulatory and commercial milestone payments. Sosei Heptares is also eligible to receive tiered royalties ranging from high single digit to mid-teen percentage on future net sales of any products developed under the partnership. [2] AbbVie has the option to expand the collaboration by an additional three targets. [3] AstraZeneca have removed the A2a program from their clinical pipeline as at Q3 2021

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Clinical stage partnerships (Muscarinic Programs)

Developing novel muscarinic receptor agonists for schizophrenia and other neuropsychiatric disorders

Neurocrine Biosciences Advancing Muscarinic Portfolio

Clinical studies, include:

- **Initiated Phase 2 placebo-controlled study of NBI-1117568*, a selective M4 agonist, as a potential treatment for schizophrenia**
  - ✓ NBI-1117568 offers the potential for an improved safety profile:
    - ❑ Without the need of combination therapy to minimize side effects
    - ❑ Avoids the need of cooperativity with acetylcholine when compared to non-selective muscarinic agonists and positive allosteric modulators in development
- **Clinical Trial Application Accepted for NBI-1117570*, a dual M1 / M4 agonist**
  - ✓ Initiating Phase 1 study in Q3 2023
- **Anticipate advancing additional muscarinic compounds into clinic over time**

NEUROCRINE BIOSCIENCES

*In-licensed from Sosei Heptares. NBI-1117568 and NBI-1117570 are investigational and not approved in any country

33

Sosei Heptares received
$100m upfront, +$30m @ Ph 2

Sosei Heptares to receive **ongoing R&D funding** and **up to $2.6bn** in potential development, regulatory and commercial milestones, plus **tiered double digit percentage royalties** on net sales

Sosei Heptares **retains rights to develop all M1 agonists in Japan in all indications**, with NBIX receiving co-development and profit share options

NBI'568 (M4 agonist): Phase II initiated '22

NBI'570 (M1/M4 dual): Phase I to be initiated Q3 '23

Source: Neurocrine Biosciences Announces Conference Call and Webcast of Second Quarter 2023 Financial Results
https://www.neurocrine.com//assets/2023/08/Final-NBIX-Q2-2023-Earnings-Presentation_08.01.23.pdf

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Wholly-owned programs to begin clinical studies

Advancing priority programs into early clinical studies, including our collaboration with CRUK

	Immunosuppression in solid tumors	Schizophrenia and Psychosis	Inflammatory Bowel Disease
Indication and target	EP4 antagonist	GPR52 agonist	EP4 agonist
Target Product Profile	• Once daily oral small molecule • To be used in combo with checkpoint inhibitors • Collaboration with Cancer Research UK	• Once daily oral small molecule • 24hr target engagement	• Oral GI restricted • Good potency and selectivity • Minimal GI systemic exposure
Clinical start	Ph1 initiated: Aug 2023	Ph1 initiated: Jul 2023	Ph1 initiated: Mar 2024

4

Our Drug discovery platform (StaR®/SBDD)

Stabilized Receptor (StaR®) Platform

We are driving a new era of GPCR Structure-Based Drug Design

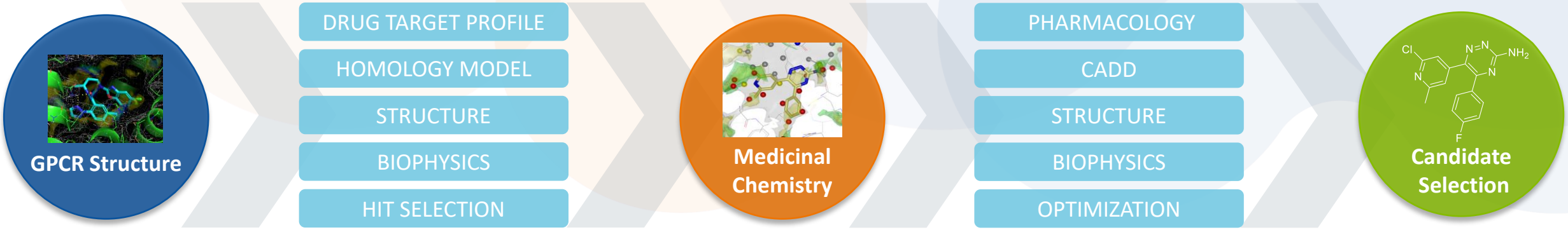
- **GPCR drug discovery remains challenging**
  - *Low expression levels* – often with complicated expression and secretion pathways
  - *Difficult purification* – lose structural integrity outside the membrane
  - *Heterogeneity* – inherently flexible; changing conformation depending on the bound ligand

- We introduce point mutations into a GPCR which leads to **increased thermostability**
- The receptor is trapped in a relevant conformation to match the drug product profile
- The **Stabilized Receptor (StaR®)** can be extracted from the membrane and purified with function retained

70+ Stabilized Receptors generated in agonist and/or antagonist conformations

Structure-Based Drug Design (SBDD) Platform

StaR® technology plus SBDD is a powerful tool for GPCR drug discovery



- **GPCR focused SBDD**
  - *Hit Identification* – Virtual Screening, Biochemical and Biophysical assays
  - *Structure Determination* – characterize binding modes
  - *Pharmacology* – understanding mode of action and signalling

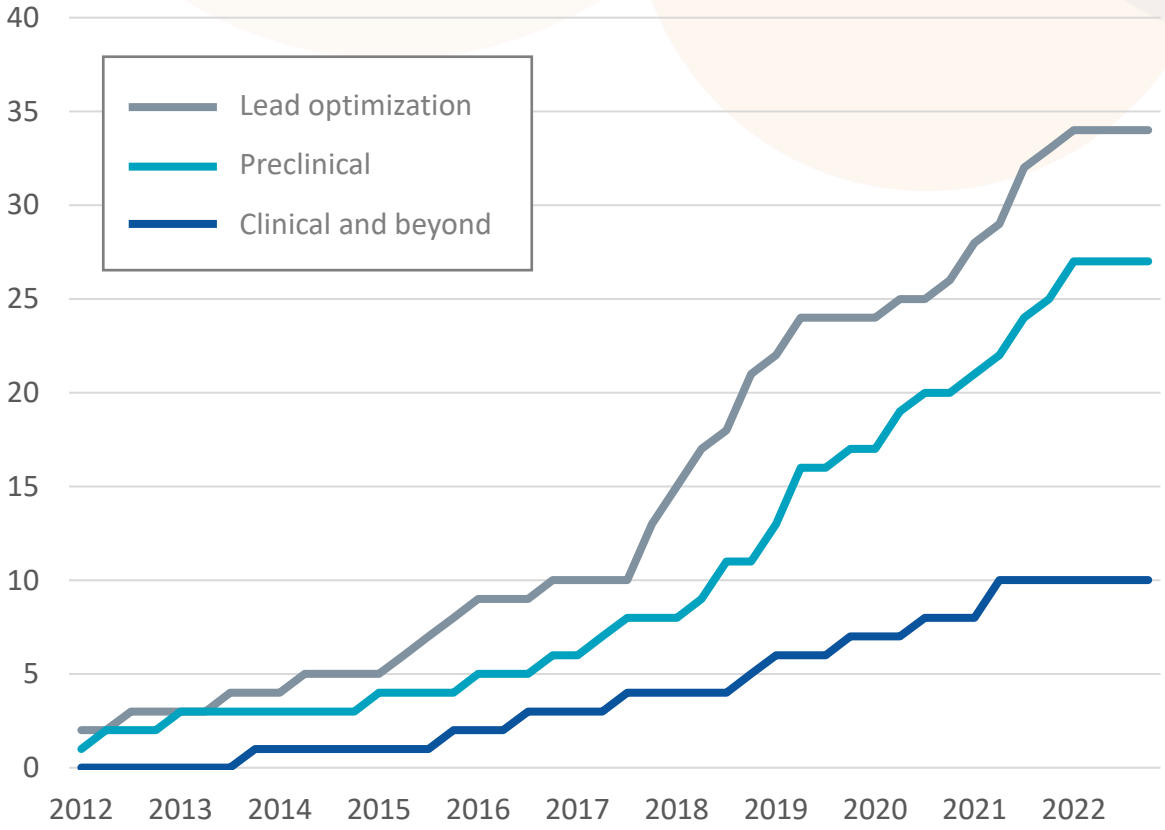
- Medicinal Chemistry working closely with Computer Aided Drug Design (CADD)
- Establish detailed Screening Cascade and progression criteria
- Typically 2 year process from starting the target screening to entering Candidate Selection phase

27+ Preclinical Candidates identified for in-house and collaboration pipeline

Our strong track record of drug discovery

StaR®/SBDD-based drug discovery platform is more productive than conventional approaches

Trends in the number of programs per stage (cumulative)*



Number of programs*

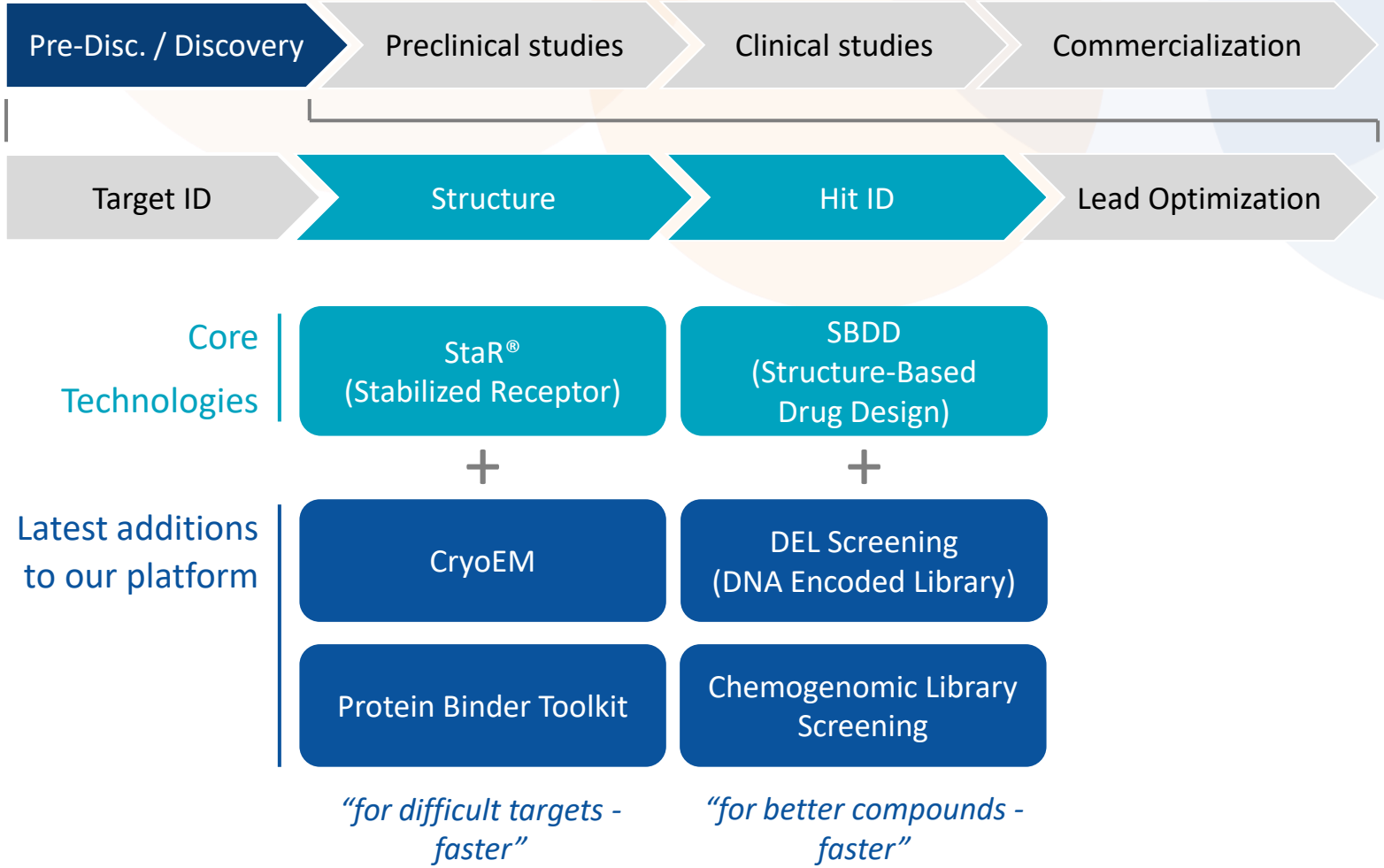
2021 vs 2022

	2021	2022
Drug discovery	10+	20+
Lead optimization	7	7
Preclinical	15	17
Clinical - Phase 1	9	7
Clinical – Phase 2	1	3
Clinical – Phase 3	0	0
Approval application	0	0
Approved	0	0

* The number of programs here represents the number of all drug candidates generated to date from our drug discovery platform (StaR®/SBDD) by stage, and includes programs that are not currently being actively developed by us or our partners due to lower priority.

Platform evolution and new targeted collaborations

World-leaders choose our platform to prosecute complex GPCRs



Multi-target Discovery Collaborations

	Total Potential Milestones[1]
Pfizer	$1.8bn
Genentech A Member of the Roche Group	$1.0bn
Takeda	$1.2bn
abbvie	$1.6bn
Lilly	$730m

[1]Potential option fees, development, regulatory and commercial milestone payments at time of signing. Sosei Heptares is also eligible to receive tiered royalties ranging from high single digit to mid-teen percentage on future net sales of any products developed under the partnerships

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Technology collaborations to identify new opportunities

Selecting the right target and the right molecule is crucial to success

Key opportunity/Target of Technology collaboration

Choosing
the right target

- Will modulating the target affect disease?
- Can a good modulator of the target be found?

Discovering
a therapeutic agent

- Identifying a modulator with the appropriate profile
- Differentiating from competitors (if any)

Conducting
the right patient studies

- Demonstrating the value of the agent in treating disease
- Utilizing biomarkers to support patient stratification

Technology collaboration landscape

Adding complementary approaches to increase discovery opportunities

Choosing the right target

verily

KALLYOPE

Our Core Technologies

- StaR®
- SBDD
- CryoEM
- DEL Screening
- Protein Binder Toolkit
- Chemogenomic Library Screening

Discovering a therapeutic agent

PHARMENABLE

metrion biosciences

PeptiDream

sanofi

sosei HEPTARES

Technology collaboration partners

Choosing the right target

2022～ verily

AI drug discovery (Target)

Research collaboration combining Verily's immune profiling capabilities and SH's GPCR SBDD to discover potential drug targets in immune-mediated diseases

2022～ KALLYOPE

Gut-brain axis platform (Target)

Research collaboration leveraging SH's capabilities with Kallyope's gut-brain axis platform

Discovering a therapeutic agent

2016～ kymab [1]

Antibody

Discovery collaboration for novel antibody therapeutics targeting a number of GPCRs with an initial focus on immuno-oncology - KY1051 is under development

2017～ PeptiDream

Peptide

Discovery collaboration for novel therapeutics targeting an undisclosed GPCR with an important role in inflammatory diseases - PAR2 peptide is under preparation for pre-clinical

2021～ PHARMENABLE

AI drug discovery (Compound)

Technology collaboration to drive novel drug discovery against a challenging peptidergic GPCR target associated with neurological diseases

[1] Now Part of Sanofi

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5

Products / Late-stage Development

Strong And Attractive Fundamentals

Robust product portfolio with innovative clinical development and commercial capabilities

1 Robust Product/ Pipeline

Top-Tier Portfolio of Medicines and Programs with Excellent Potential

PIVLAZ clazosentan

QUVIVIQ[1] (daridorexant) 25mg, 50mg tablets

Cenerimod
Lucerastat

+ 5 ROFR/ROFN programs

2 Strong Organization

Highly Skilled Team with a Proven Track Record of Excellence

- Experienced team created innovative local Phase 3 trials in Japan for PIVLAZ® to address clear unmet need and opportunity
- Leverage in-depth knowledge and expertise across the newly combined Sosei Heptares pipeline, supplemented by business development and in-licensing opportunities

3 Platform Synergy

Synergy with In-House Programs, plus a Lean Sales Model for Japan and APAC Expansion

- Creates in-house program synergies across the combined Sosei Heptares pipeline
- Enhances operational agility by bringing a lean sales model that can leverage scalable commercial infrastructure
- Established platform to expand into Asia-Pacific region (ex-China), as well as take on new in-licensing opportunities to be developed for the region

[1] Including rights to receive future milestones from Mochida

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PIVLAZ® – Japan Specific Registration Program

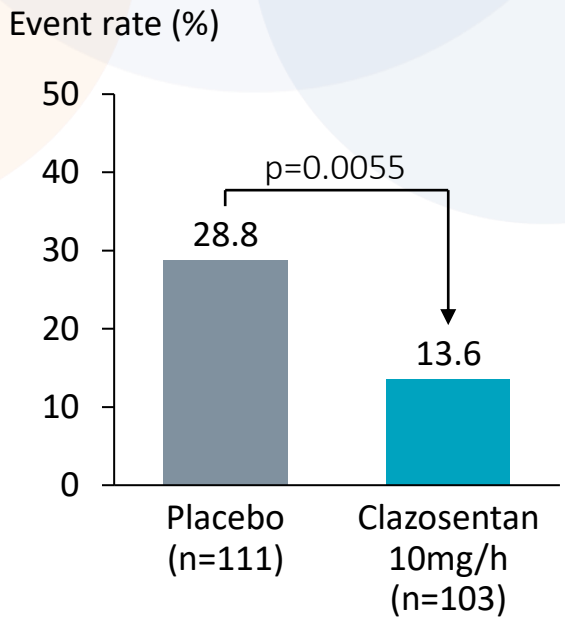
Positive top-line results

PIVLAZ clazosentan

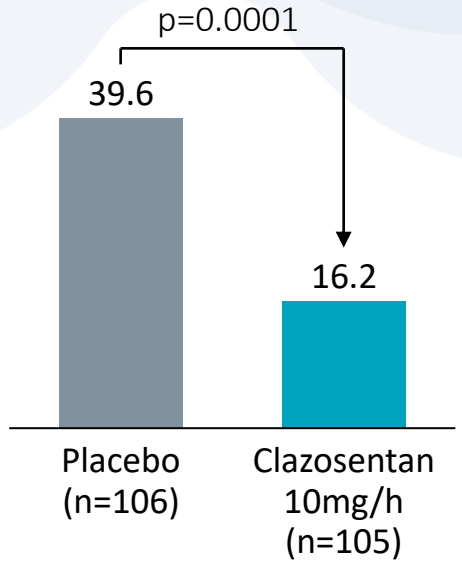
RESULTS OF TWO PIVOTAL PHASE 3 STUDIES IN JAPAN[1]

- PIVLAZ® (clazosentan) demonstrated **significant reduction of vasospasm-related morbidity and all-cause mortality** in patients following aSAH (primary endpoint)
- Clazosentan showed a numerical reduction of all-cause morbidity and mortality in both studies. **The effect of clazosentan on this endpoint was significant (p<0.05)** in a pre-planned pooled analysis
- Encouraging positive trends were observed on long-term measures of clinical outcome (GOSE and mRS) at week 12
- There were **no unexpected safety findings**
- Results published in the **Journal of Neurosurgery**: Endo H, et al. April 01, 2022; DOI: 10.3171/2022.2.JNS212914

COILING STUDY



CLIPPING STUDY



PIVLAZ® significantly reduced vasospasm-related morbidity and all-cause morbidity and mortality in domestic Phase 3 trials. It is a highly impactful medicine used to prevent death and disability after aSAH.

Note: [1] Two prospective, multicenter, double-blind, randomized, placebo-controlled, pivotal Phase 3 studies assessing the efficacy and safety of clazosentan in reducing vasospasm-related morbidity and all-cause mortality events in adult Japanese patients post-aSAH, were conducted in parallel in 57 neuro surgical centers in Japan. Patients were randomized 1:1 to receive continuous infusion of either 10 mg/hr of clazosentan or placebo within 48 hours of the onset of aSAH for up to a cumulative maximum of 15 days after aSAH. Protocols were identical, each study enrolling 221 patients, except for the securing intervention, which was either endovascular coiling (JapicCTI-163369; the "coiling study") or surgical clipping (JapicCTI-163368; the "clipping study")

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PIVLAZ® Our first commercially available medicine protecting Japanese lives every day

PIVLAZ clazosentan

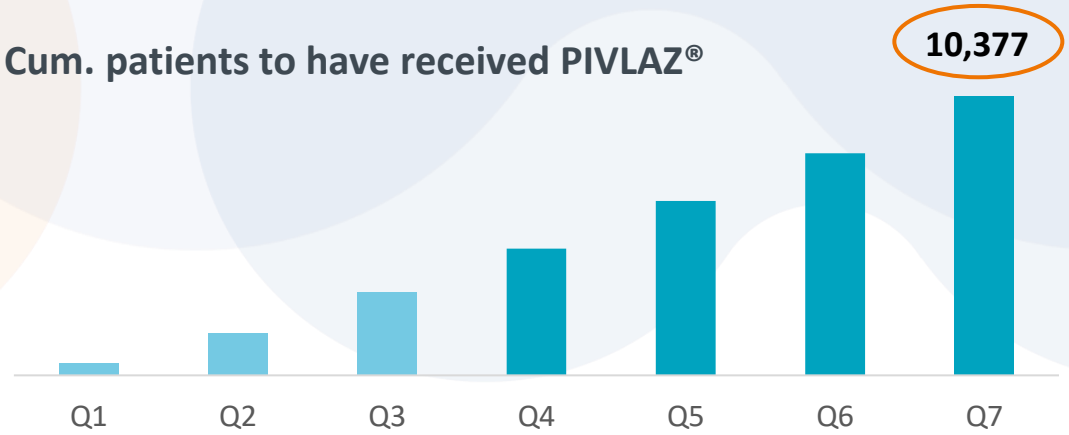
JP GUIDELINES INCLUSION FOR MANAGEMENT OF STROKE[1]

- Aug '23: Authorized and recommended by the **Japanese Stroke Society**
- Demonstrated the true endpoints of **Subarachnoid Hemorrhage (SAH)** with higher level of evidence
- Provides confidence to neurosurgeons to **prescribe PIVLAZ® as a new standard of care** for SAH based on strong evidence it can prevent delayed cerebral ischemia and poor outcomes

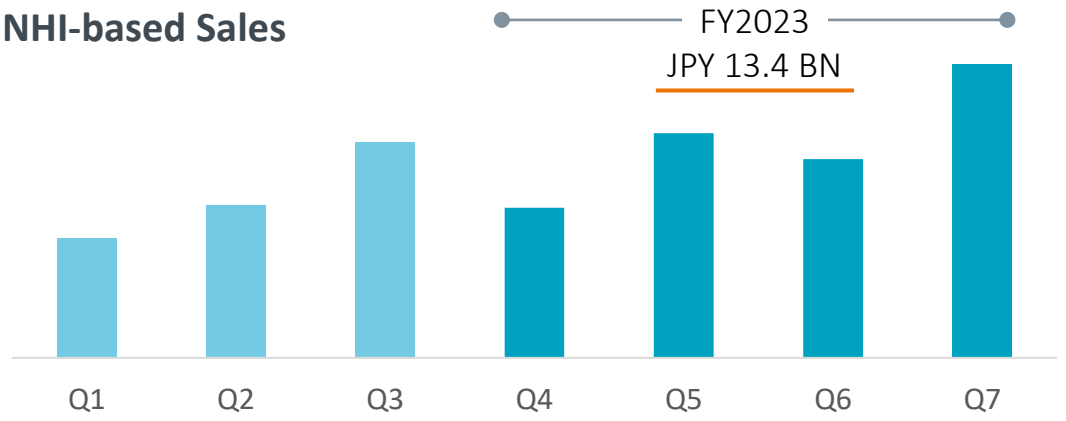
MARKETING APPROVAL FOR SOUTH KOREA

- Dec '23: Received Marketing Approval in South Korea
- Early 2025: Commercially available to patients

Cum. patients to have received PIVLAZ®



NHI-based Sales



PIVLAZ® RAPIDLY BUILDING REAL WORLD EVIDENCE MITIGATING THE RISK OF CEREBRAL VASOSPASM

[1] Japanese Stroke Society Guideline 2021 for the Management of Stroke (Revised Version 2023)

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Daridorexant – Best-In-Class Drug

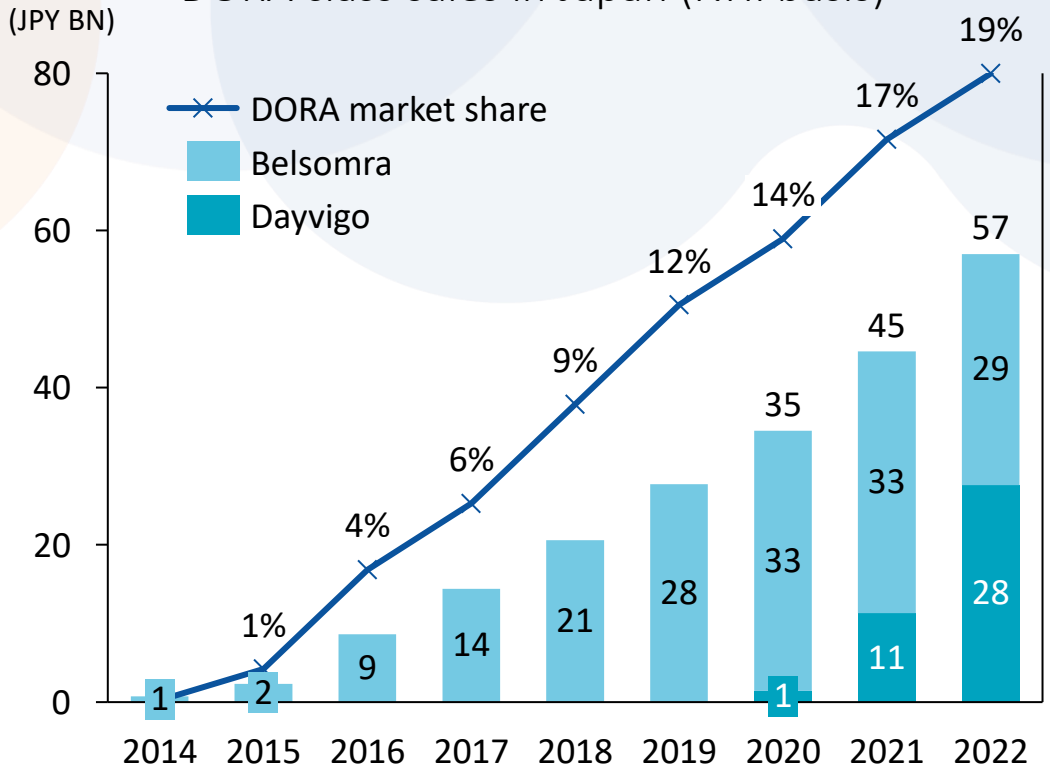
NDA submitted in Oct. 2023. Expected to launch 2H 2024

QUVIVIQ (daridorexant) 25mg,50mg tablets

Daridorexant is a dual orexin receptor antagonist (DORA) that selectively blocks the binding of the wake-promoting neuropeptides for the treatment of chronic insomnia

- Approved in the US, Europe, Canada (2022) – marketed as QUVIVIQ®; Positive results in Japan Phase 3 trial reported in Oct 2022, and NDA filing expected 2H 2023
- **Insomnia is highly prevalent in Japan and South Korea and most diagnosed patients are receiving pharmacological treatment**
- DORA class is growing rapidly as safer alternatives to benzodiazepines and the "Z-drugs" (e.g., zolpidem) are highly sought
- Market exclusivity until 2038 (Japan and South Korea)
- Co-Promotion with Mochida; all milestones after transaction from Mochida are payable to Sosei Heptares

DORA class sales in Japan (NHI basis)



Daridorexant is a best-in-class medicine for insomnia, and well positioned to meet the unmet needs of patients with sleep disorders in Japan and APAC (ex-China).

Source: Encise, IQVIA

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QUVIVIQ® – Global And Japan-Specific Program

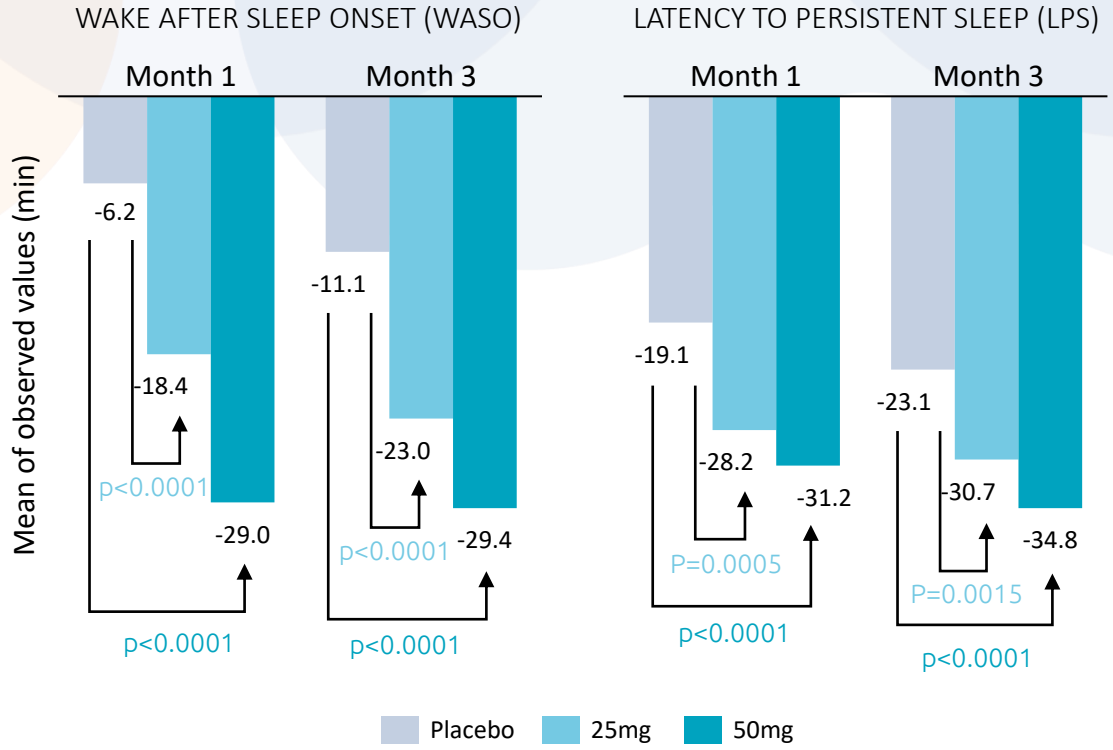
Positive Japanese Phase 3 study; in-line with US study as published in The Lancet[1]

QUVIVIQ (daridorexant) 25mg, 50mg tablets

RESULTS OF GLOBAL AND JAPANESE PIVOTAL TRIALS[1]

- A Japanese Phase 3 trial[1] in 490 adult and elderly patients **met both primary and secondary efficacy endpoints**, with similar results to the global study published in Lancet Neurology
- Daridorexant **significantly improved total sleep time** (sTST, p<0.001 for 50 mg dose) and **significantly improved latency to sleep onset** (sLSO, p<0.001 for 50 mg) v placebo at 28 days
- The rate of **adverse events was comparable between placebo and daridorexant**
- In the global trial, daridorexant also demonstrated **significant improvement in daytime sleepiness**, which means patients reported feeling less mentally and physically tired, less sleepy and more energetic during the day
- Submission to the PMDA based on the global and Japanese data is planned for 2H 2023

TWO PRIMARY ENDPOINTS FULLY MET IN GLOBAL PHASE 3 TRIAL



Daridorexant significantly improves wake after sleep onset, latency to persistent sleep, subjective total sleep time, and next-day sleepiness/daytime functioning (as measured by IDSIQ sleepiness domain) compared to placebo

Note: [1]The global study published in the Lancet Neurology is Mignot E, et al. *Lancet Neurol* 2022; 21: 125–39. The Japanese study (JRCT2031200452) was a randomized, double-blind, placebo-controlled, Phase 3 study to investigate the efficacy and safety of daridorexant. 490 randomized adult and elderly patients (30.1% ≥ 65 years) with insomnia disorder received receive 50 or 25 mg doses of daridorexant or placebo once daily for 28 days.

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Cenerimod and Lucerastat

Exclusive opt-in rights for two potentially exciting product opportunities

Cenerimod

Indication	Systemic Lupus Erythematosus (SLE)
MoA	Selective $S1P_1$ receptor modulator
Stage	Global Ph3 studies ongoing
Number of Patients	~120,000 in Japan
Major therapies* (Japan)	**Total Market Size : c.300 Oku JPY** • Benlysta (GSK, 50~100 Oku JPY est. peak sales) • Saphnelo (AZ, 50~100 Oku JPY est. peak sales) • Plaquenil (Sanofi, ~50 Oku JPY)
Value proposition	• Potential to be the **first oral, disease-modifying SLE therapy** that acts by reducing circulating T and B cells early in the immune cascade • $S1P_1$ modulation is a well-established mechanism in other diseases, such as MS (Gilenya, Zeposia) • Broadly-applicable mechanism means potential to expand to other autoimmune diseases

Lucerastat

Indication	Fabry Disease
MoA	Glucosylceramide synthase inhibitor
Stage	• Phase 3 (MODIFY) study primary endpoint (neuropathic pain) not met, however, renal function and echocardiography secondary endpoints were positive • Open Label Extension (OLE) study ongoing
Number of Patients	~1,000 in Japan
Major therapies* (Japan)	**Total Market Size : c.300 Oku JPY** • Replagal (ERT, Takeda, ~140 Oku JPY) • Fabrazyme (ERT, Sanofi, ~100 Oku JPY) • Galafold (PCT, Amicus, ~46 Oku JPY)
Value proposition	• Potential to provide a **broadly-applicable oral monotherapy** option as an alternative to IV enzyme replacement therapy (Galafold is currently the only available oral therapy, and applicable to patients with certain rare mutations)

Small opt-in fee to license each program, with Sosei responsible for all development plans and future costs in the territory. If successfully commercialized, Sosei is obligated to pay tiered single digit royalties to Idorsia for each product.

Source: *Estimate from Evaluate Pharma; JMDC; Datamonitor
ERT: Enzyme replacement therapy; PCT: Pharmacological chaperone therapy

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6

Objectives for FY2024

Objectives for FY2024

Positioning for long-term growth potential

1. **JPY 16 billion + NHI sales for PIVLAZ®**
2. **JNDA approval for daridorexant in Japan**
3. **Acquire/in-license at least one late-stage medicine for the Japan/APAC (ex-China) region**
4. **Execute at least one new major partnership, and initiate at least one new in-house Ph.1 study**
5. **PMI investment in new brand concept, plus systems and applications for efficiency and scalability**

BUILDING JAPAN'S NEXT GENERATION, TOP 15 PHARMA COMPANY

Several potential catalysts over the next 12 months (excluding new business development transactions)

PROGRAM	PARTNER	TIMING	EVENT
✓ EP4 Ag	SOSEI HEPTARES	Achieved (Mar. 2024)	Ph.1 start
✓ GPR35 Ag	GSK / SOSEI HEPTARES	Achieved (Mar. 2024)	Program reversion
Cenerimod	idorsia	1H 2024	Exclusive opt-in decision
Lucerastat	idorsia	1H 2024	Exclusive opt-in decision
Daridorexant (Sth Korea)	SOSEI HEPTARES	2H 2024	New Partnership & Ph.3 start
Daridorexant (Japan)	MOCHIDA PHARMACEUTICAL [1]	2H 2024	Potential NDA Approval
NBI-568 (M4 Ag)	NEUROCRINE BIOSCIENCES	2H 2024	Ph.2 completion
NBI-567 (M1 Ag)	NEUROCRINE BIOSCIENCES	2024	Ph.1 start
TMP-301 (mGlu5 NAM)	TEMPERO BIO	2024	Ph.2 start
ORX750 (Ox2 Ag)	CENTESSA	2024	Ph.1 start
PIVLAZ® (Sth Korea)	SOSEI HEPTARES	1H 2025	New Partnership & Launch

[1] Co-development and co-promotion agreement with Mochida

SOSEI HEPTARES

Beyond 2030 vision

Next-generation pharma company and top 15 in Japan by market capitalization

Focused on innovative specialty medicines

Tech-powered systems for decision-making speed and scalability

Development and commercialization partner of choice for Japan and APAC

AI and Machine Learning-enabled platforms for accelerated drug discovery

WORLD LEADING SCIENCE, LIFE CHANGING MEDICINES

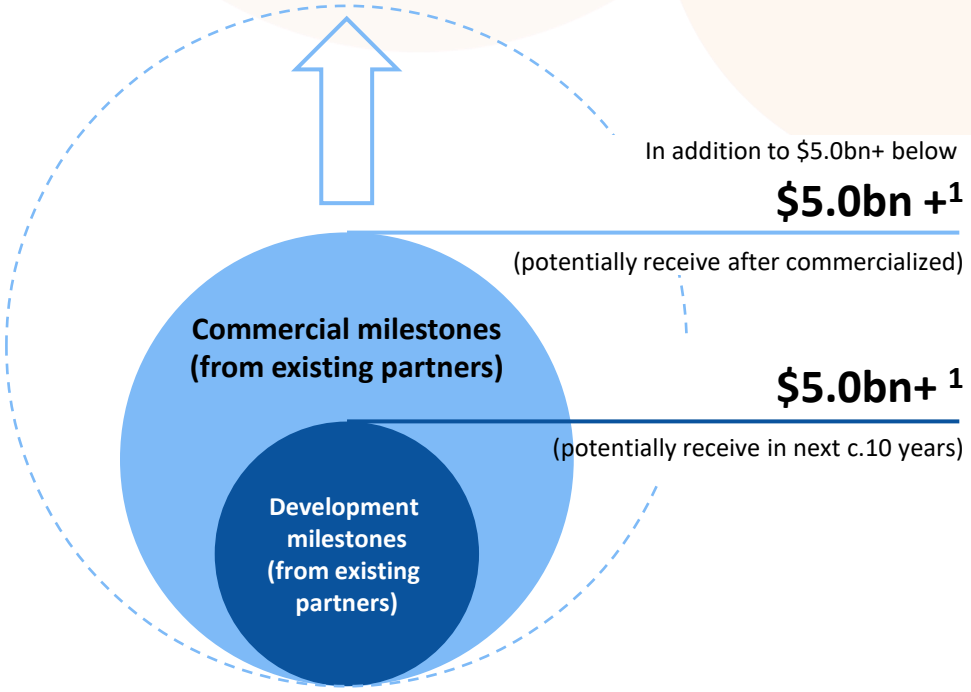
7

Appendix

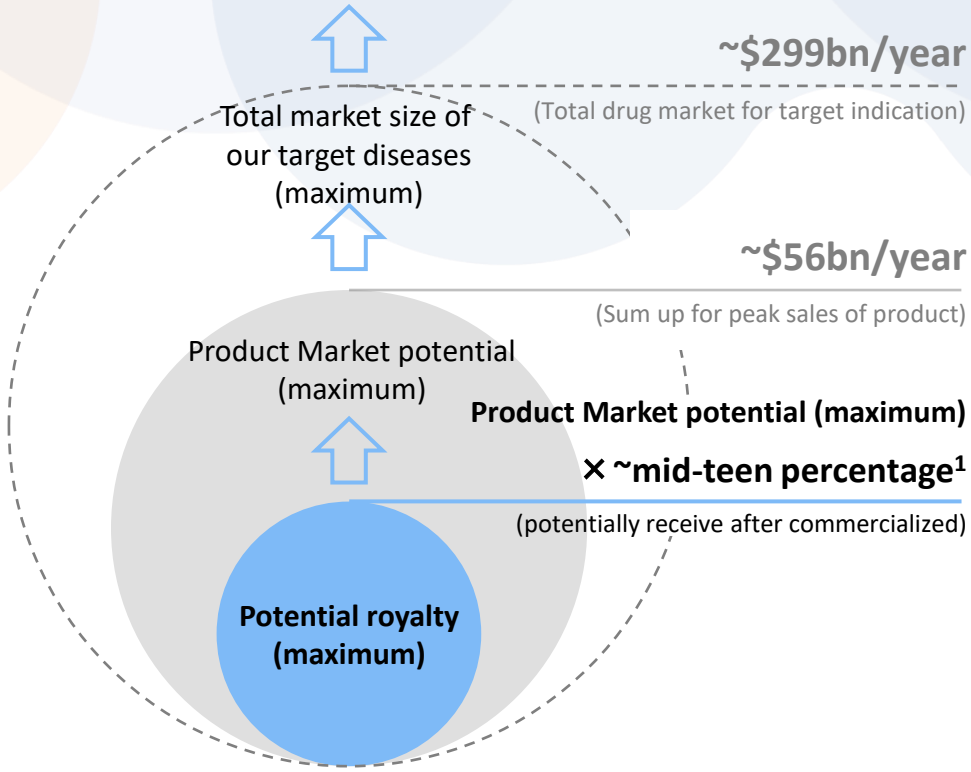
Potential revenues from existing partnerships

Securing stable revenues in the short to medium term from existing partnerships

Potential milestones from existing partners



Potential royalties from existing partners



Short to medium term revenue potentially received in next 10 years	Mid to long term revenue potentially received after commercialization	Expand by executing new collaborations

[1] All of these are the maximum values if all existing programs are successful. Note that the probability of success in drug discovery is not relatively high, and realistically not all programs will be successful.
Source: Total market size of our target diseases and Product Market potential is stated in the previous page

Estimation of potential market size

Multi-billion USD annual peak sales potential for our post-pre-clinical pipeline

Category	Indication[2]	Number of Patients	Peak Sales(USD million)		Our Candidates
			Market Size	Individual Products	
Neurological disorders	Dementia	~55 million	$7.3 billion (2010)	$3.9 billion (2009/Aricept)	M1 agonist, M1/M4 agonist
	Schizophrenia	~20 million	$20.7 billion (2011)	$5.7 billion (2013/Abilify)	M4 agonist, M1/M4 agonist
	Substance use disorders	~10.4 million[1]	-	-	mGlu5 NAM
	Narcolepsy	~3 million	$2.3 billion (2022)	$1.7 billion (2020/Xyrem)	OX2 agonist
	Other	-	-	-	CGRP antagonist, GPR52 agonist
Immunological disorders	Cancer	~42 million	$178.9 billion (2022)	$21.0 billion (2022/Keytruda)	A2a antagonist, EP4 antagonist, CXCR4 mAb
	IBD	~10 million	$23.5 billion (2022)	$7.5 billion (2022/Humira)	CCR6 antagonist, GPR35 agonist, EP4 agonist
	Atopic Dermatitis	~13.3 million	$8.1 billion[3] (2022)	$7.0 billion (2022/Dupixent)	H4 antagonist, PAR2 mAb
Other	T2DM/Obesity	~420 million	$58.3 billion (2022)	$8.8 billion (2022/Ozempic)	GLP1 agonist
	Anorexia	~10 million	-	-	MC4 antagonist
Total			~$299 billion/year	~$56 billion/year	

Source (Number of patients) : World Health Organization, Evaluate Pharma, The European Federation of Crohn's & Ulcerative Colitis Associations (EFCCA), Narcolepsy Network, Inc., GBD 2015 Disease and Injury Incidence and Prevalence Collaborators (October 2016). "Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015". Lancet. 388 (10053): 1545–1602 [1] The number of patients with drug addiction
Source (Peak Sales):Sales of each indications are extracted form Evaluate Pharma's data of sales by disease and sales by individual products (as of 30 June. 2022). [2] Sosei Heptares may target one segment in the market for specific diseases. [3] Since there is no applicable indication category, the market size of "Eczema" is stated. Current market size for Atopic Dermatitis may be larger than stated above.

GPCR targeting startups

Company	Year Founded	Country	Employee	Listed/Private[1]	Technology				Modality	Most Advanced Program			Major Partners
					SBDD	X-ray	Cryo-EM	Others		Stage	Program(s)	MoA	
Sosei Heptares	**2007 (Heptares)**	**UK**	**202**	**Listed ($1.5bn)**	✓	✓	✓	**StaR® Platform (Stabilized GPCR by point mutations)**	**SME mAb**	**Phase2**	**PF-07081532 NBI-1117568**	**GLP-1 Ag M4 Ag**	**10+** **Pfizer, Genentech, Takeda, AZ, AbbVie, Neurocrine, Eli Lilly, GSK, Sanofi...etc**
Structure Therapeutics	2017	US	68	Listed ($0.9bn)	✓		✓	DEL/ASMS hit finding. Virtual screening structures	SME	Phase1	GSBR-120 ANPA-0073	APJ Ag GLP-1 Ag	- -
Septerna	2022	US	13	Private (2022/$100m)	✓		✓	Native Complex™ (GPCR-G protein complexes for screening)	SME	PCC	-	PTH1 Ag TSHR NAM	- -
Confo Therapeutics	2015	Belgium	59	Private			✓	ConfoBodies® to stabilize GPCRs for fragment screen	SME	PCC	CFTX-1554	AT2 Ant	4 Eli Lilly, Lundbeck, Roche, DaiichiSankyo
Escient Pharmaceuticals	2017	US	14	Private (2022/$120m)				Drug discovery targeting MRGPR	SME	Phase2	EP547	MRGPRX4 Ant	- -
Teon Therapeutics	2017	US	9	Private				Targeting metabolic pathways for IO approach	SME	Phase1	TT-816 TT-702	CB2 Ant A2B Ant	1 Merck, CRUK
Domain Therapeutics	2008	France	105	Private				Target ID. bioSens-AI® BRET signalling	SME	Phase1	M1069 DT-9081	A2a/A2b Ant EP4 Ant	4 Merck, Pfizer, Ono, BI,
Tectonic Therapeutic	2019	US	32	Private (2021/$80m)				GEODe™Platform (GPCR Engineering and Optimization Domain)	mAb	Disc	-	-	- -
Maxion Therapeutics	2020	UK	11	Private (2023/$416m)				KnotBody® (Fuse knottins into the CDRs of antibodies)	mAb	Disc	-	-	- -
Receptos[2] (Now Celgene)	2009	US	68 (Dec '14)	Acquired (2015/$7.2bn)	✓	✓		Crystal structures know how from TSRI	SME	Phase3	Ozanimod	S1P modulator	- -
Arena[2] (Now Pfizer)	1997	US	448 (Dec '21)	Acquired (2022/$6.7bn)				Constitutively Activated Receptor Technology(CART)	SME	Phase3	Etrasimod	S1P modulator	3 Eli Lilly, Fujisawa, Taisho

[1] Market caps for the listed companies are as of the end of April 2023. For private companies, the most recently raised funds are shown; for acquired companies, the acquired value is shown.[2] Information on acquired companies is at the time of being acquired.
Source: Factset, Pitch Book, Company's Web

Exclusive Opt-in Rights And ROFN/ROFR[1]

Option to develop up to seven clinical programs for Japan and APAC (ex-China) from Idorsia

	Program	Mechanism of Action	Indication	Stage	Region
Exclusive Opt-in Right	Cenerimod	$S1P_1$ receptor modulator	Systemic lupus erythematosus	Phase 3	APAC (ex-China)[2]
	Lucerastat	Glucosylceramide synthase inhibitor	Fabry disease	Phase 3	
ROFR /ROFN[1]	Selatogrel	$P2Y_{12}$ antagonist	Suspected acute myocardial infarction	Phase 3*	
	ACT-1004-1239	ACKR3 / CXCR7 antagonist	Multiple sclerosis and other demyelinating diseases	Phase 2*	
	ACT-1014-6470	C5aR1 antagonist	Immune-mediated disorders	Phase 1*	
	IDOR-1117-2520	Undisclosed	Immune-mediated disorders	Phase 1*	
	ACT-777991	CXCR3 antagonist	Recent-onset Type 1 diabetes	Phase 1*	

[1] ROFN/ROFR - Right of first negotiation / Right of first refusal
[2] Territories include Japan, South Korea, Australia, Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, New Zealand, Philippines, Singapore, Taiwan, Thailand and Vietnam
* Global Phase

Financial Impact of IPJ/IPK transaction

Transaction expected to be cash flow positive in the first full calendar year

Purchase Price	~JPY65 Bn[1] (CHF400 Mn)
Transaction Funding	**Long-term corporate loan:** ● JPY40 Bn ● 7 year, low-rate loan from Mizuho Bank **From existing cash:** ● JPY25 Bn
Key Dates	**Closing Date** 20 July 2023 (JST) **Purchase Price Payment Date** within a week post-closing
Impact on FY23 Financials	Post-closing, financial results of the acquired entities will be reflected in the Group's consolidated financial results
Impact on Consolidated Financial Results	● The amounts of intangible assets and goodwill arising in the consolidated balance sheet are currently under review by Management / Auditors. ● Goodwill will not be amortized in accordance with IFRS standards, whilst intangible assets will be amortized over the expected sales period. ● SGC's carried forward tax losses will be utilized against future taxable profits. ● Post-closing, the Group will have approximately JPY42 billion cash on balance sheet.

Mid- to Long-Term Impact (Guidance)

Peak Sales (E)

JPY 35 Bn+

Peak EBITDA (E)

JPY 10 Bn+

- Peak forecasts based on PIVLAZ® and Daridorexant performance in Japan, Korea and Taiwan only
- Potential upsides to forecasts include:
  - ✓ Launch of PIVLAZ® and Daridorexant in additional APAC (ex-China) regions
  - ✓ Exercise of opt-in right and launch of Cenerimod and Lucerastat
  - ✓ Exercise of ROFR/ROFN rights and launch of up to additional five products
  - ✓ Launch of existing in-house programs, incl. GPR52 agonist and M1 agonist
  - ✓ Launch of potential other in-licensed products in the future

[1] Based on FX rate 1 CHF = 163 JPY as at 19 July 2023

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Introduction of 'Core Operating Profit'

Core Operating Profit – the financial indicator closer to the reality of our business

Operating Profit "Core"

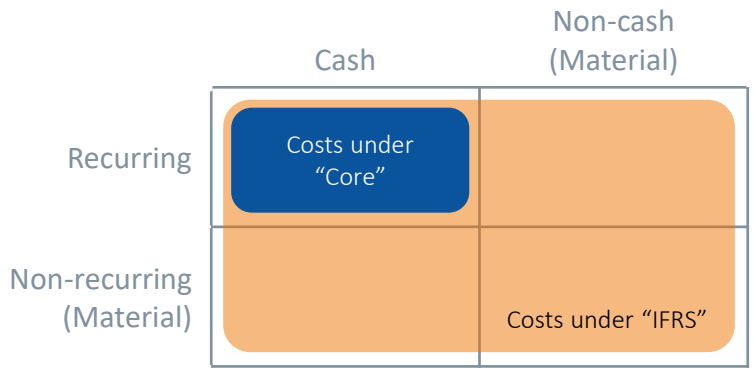
- Core Operating Profit is a new key financial indicator that highlights the underlying recurring cash generating capability of the business.
- Core Operating Profit is defined as IFRS Operating Profit + material Non-cash costs + material non-recurring costs
- Material Non-cash Costs include depreciation, amortization, share based payments and impairment.
- Material Non-recurring Costs include restructuring costs and other material one-off items.
- Core Operating Profit = Cash Earnings + material Non-recurring Costs

+ Material Non-cash Costs

(Depreciation, Amortization, Share based payments, Impairment...etc.)

+ Material Non-recurring Costs

(Restructuring costs and Other material one-off items...etc.)

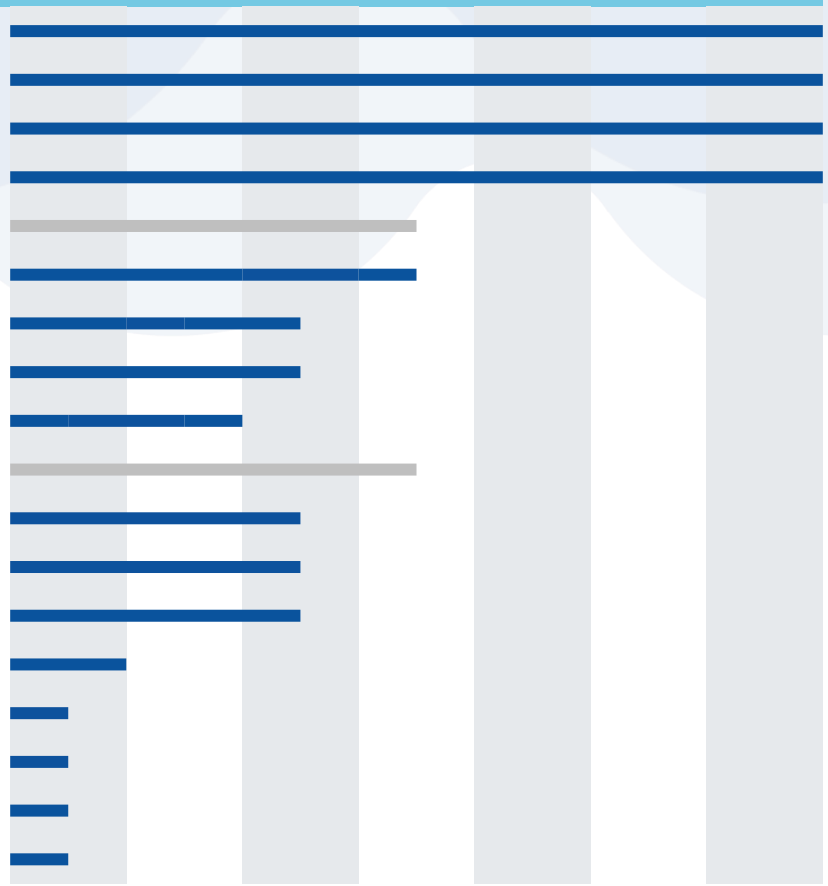


Operating Profit "IFRS"

- Financial results recorded and prepared in accordance with International Financial Reporting Standards (IFRS)

Partnered pipeline

Compound	Target / Mechanism of Action	Modality	Indication	Partner
Partnered				
Seebri® Breezhaler®	LAMA	SME	COPD	NOVARTIS
Ultibro® Breezhaler®	LAMA+LABA	SME	COPD	NOVARTIS
Enerzair® Breezhaler®	LAMA+LABA+ICS	SME	Asthma	NOVARTIS
ORAVI®	Antifungal agent miconazole	SME	Oropharyngeal candidiasis	Hisamitsu
Imaradenant[1]	Adenosine A2a ant. combo	SME	mCRPC	AstraZeneca
NBI-1117568	Muscarinic M4 agonist	SME	Schizophrenia	NEUROCRINE BIOSCIENCES
NBI-1117569	Muscarinic M4 preferring agonist	SME	Neurology diseases	NEUROCRINE BIOSCIENCES
NBI-1117570	Muscarinic M1/M4 agonist	SME	Neurology diseases	NEUROCRINE BIOSCIENCES
NBI-1117567	Muscarinic M1 preferring agonist	SME	Neurology diseases	NEUROCRINE BIOSCIENCES
PF-07081532	GLP-1 agonist	SME	T2DM/Obesity	Pfizer
PF-07054894	CCR6 antagonist	SME	Inflammatory bowel disease	Pfizer
PF-07258669	MC4 antagonist	SME	Malnutrition	Pfizer
PF-06954522	GLP-1 agonist	SME	Metabolic diseases	Pfizer
(Not disclosed)	CGRP antagonist	SME	Neurology diseases	Pfizer
(Not disclosed)	Multi target	SME/LME	Multiple indications	Genentech
(Not disclosed)	Multi target	SME/LME	Gastrointestinal and other	Takeda
(Not disclosed)	Multi target	SME	Neurology	abbvie
(Not disclosed)	Multi target	SME	Diabetes/Metabolic	Lilly



Note: SME = small molecule. LME = large molecule. Seebri®, Ultibro®, Enerzair® and Breezhaler® are registered trademarks of Novartis AG. [1] AstraZenenca have removed the A2a program from their clinical pipeline as at Q3 2021

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Partnered pipeline (cont'd)

Compound	Target / Mechanism of Action	Modality	Indication	Partner	Disc.	PCC	Ph1	Ph2	Ph3	App	Mkt
Co-development											
KY1051	CXCR4 mAb	mAb	Immuno-oncology	sanofi							
(Not disclosed)	PAR-2	Peptide	Inflammatory diseases								
(Not disclosed)	AI-Augmented Drug Discovery	SME	Neurology diseases	PHARMENABLE							
(Not disclosed)	Multi target AI-powered	SME/LME	Immune diseases	verily							
(Not disclosed)	Gut-brain axis drug discovery	SME	Gastrointestinal disorders	KALLYOPE							
Co-owned companies											
TMP301	mGlu5 NAM	SME	Substance use disorders	TEMPERO BIO							
ORX750	OX2 agonist (Oral)	SME	Narcolepsy	CENTESSA, Orexia Therapeutics							

Note: SME = small molecule. LME = large molecule

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In-house pipeline

Compound	Target / Mechanism	Modality	Indication	Originator
In-house Programs				
PIVLAZ®	ETA antagonist	SME	Cerebral vasospasm	sosei HEPTARES
Daridorexant	Dual Orexin antagonist	SME	Insomnia	sosei HEPTARES
HTL'149	GPR52 agonist	SME	Neurology diseases	sosei HEPTARES
HTL'732	EP4 antagonist	SME	Immuno-oncology	sosei HEPTARES
HTL'744	EP4 agonist	SME	Inflammatory bowel disease	sosei HEPTARES
HTL'477	GPR35 agonist	SME	Inflammatory bowel disease	sosei HEPTARES
(Not disclosed)	Muscarinic M1 agonist (JP)	SME	Neurology diseases	sosei HEPTARES
(Not disclosed)[1]	H4 antagonist	SME	Atopic Dermatitis	sosei HEPTARES
(Not disclosed)	SARS CoV-2 Mpro	SME	Coronaviruses	sosei HEPTARES
Multiple programs	Not disclosed	SME/LME	Neurology diseases	sosei HEPTARES
Multiple programs	Not disclosed	SME/LME	GI and Inflammatory diseases	sosei HEPTARES
Multiple programs	Not disclosed	SME/LME	Immunology diseases	sosei HEPTARES
In-house Programs (No longer internally funded. Targeting academic / industrial partnership)				
HTL'310	SSTR5 agonist	Peptide	Hypoglycaemic disorders	sosei HEPTARES
HTL'097	GLP-1 antagonist	Peptide	Hypoglycaemic disorders	sosei HEPTARES
HTL'023	Dual GLP-2/GLP-1 agonist	Peptide	Intestinal failure/NASH	sosei HEPTARES
(Not disclosed)	Apelin agonist	Peptide	Pulmonary Arterial Hypertension	sosei HEPTARES
HTL'641	Dual orexin antagonist	SME	Insomnia and sleep disorders	sosei HEPTARES
(Not disclosed)	PAR-2 mAb	mAb	Atopic Dermatitis/Pain	sosei HEPTARES

Note: SME = small molecule. LME = large molecule. [1] Due to changes of strategy, we deprioritized until we will find another indication opportunity

Glossary

Basic Terminology/Technology		
GPCR	G Protein-Coupled Receptor	There are about 800 types of GPCRs in the human body. While 400 of them are known to be potential drug targets, about 300 of them are not yet drugged
StaR	Stabilized Receptor	Sosei Heptares' proprietary technology to stabilize a GPCR by engineering a small number of single point mutations outside of the ligand-binding site. It enables to identify the structure of GPCRs to be used for SBDD drug discovery as well as antibody drug discovery as antigens
SBDD	Structure-Based Drug Design	A method to design drugs on a computer base based on the analysis of the three-dimensional structure of the drug target (e.g., protein receptor)
TPD	Targeted Protein Degradation	Drugs that promote the degradation of target proteins (e.g., receptors) in cells and aim for therapeutic effects by reducing disease-causing proteins
PAM	Positive Allosteric Modulator	A regulator that binds to unusual active sites (allosteric sites) on the receptor to increase the affinity and effect of the agonist
NAM	Negative Allosteric Modulator	A regulator that binds to an unusual active site on the receptor (allosteric site) and reduces the affinity and effectiveness of the agonist
Ag	Agonist	A therapeutic drug that binds to a receptor and activates an intracellular signaling system similar to biological substances
Ant	Antagonist	A therapeutic drug that suppresses biological reactions by binding to receptors and preventing them from binding to biological substances
PK	Pharmacokinetics	Research and testing on the relationship between drug dosage and blood concentration. Mainly describes the rate process of ADME
PD	Pharmacodynamics	Research and testing on the relationship between drug concentration and pharmacological effects
ADME	Absorption, Distribution, Metabolism and Excretion	A series of process in the absorption of drugs into the body, distribution within the body, metabolism in the liver and other organs, and excretion in the kidneys and other organs
POM	Proof of Mechanism	Proof of mechanism of action, mainly through biomarkers. It can suggest the possibility of efficacy in fewer cases than POC
POC	Proof of Concept	Proof of a therapeutic concept, primarily through clinical efficacy and safety
Ach	Acetylcholine	A neurotransmitter released from the peripheral parasympathetic and motor nerves to transmit nerve stimuli
IND	Investigational New Drug	Information packages for development candidates to be submitted to the U.S. Food and Drug Administration (FDA) at the time of initiation of clinical trials
Ph1	Phase1	A study in humans. The main purpose is to confirm the safety of the drug candidate mainly by healthy volunteers.
Ph2	Phase2	A study in humans. The main purpose is to confirm the efficacy of the drug candidates on a small scale (however, the number of patients varies greatly depending on the disease)
Ph3	Phase3	A study in humans. The main purpose is to determine the efficacy of the drug candidates on a large scale (however, the number of patients varies greatly depending on the disease)
NDA	New Drug Application	An application to the U.S. Food and Drug Administration (FDA) for approval to market a new drug
Disease/Drug		
LAMA	Long Acting Muscarinic Antagonist	An inhalant that dilates bronchial tubes and improves respiratory function by inhibiting the action of acetylcholine receptors (M3), which increase parasympathetic nerves.
LABA	Long Acting Beta2-Agonist	An inhalant that improves respiratory function by stimulating sympathetic beta2 receptors to dilate the bronchi.
ICS	Inhaled Corticosteroid	An inhalant that suppresses airway inflammation to prevent coughing attacks and other symptoms caused by asthma, also promotes the action of beta 2 stimulants and improve airway hyperresponsiveness.
mCRPC	Metastatic Castration–Resistant Prostate Cancer	Cancer that has spread (metastasized) beyond your prostate gland and for which hormone therapy is no longer effective in stopping or slowing the disease.
COPD	Chronic Obstructive Pulmonary Disease	A group of diseases that causes damage to the bronchi and lung due to smoking or inhalation of toxic substances, resulting in breathing problems.
AD	Alzheimer's Disease	Alzheimer's disease is a progressive neurologic disorder that causes the brain to shrink (atrophy) and brain cells to die, the most common cause of dementia .
DLB	Dementia with Lewy Bodies	Protein deposits, called Lewy bodies, develop in nerve cells in the brain regions involved in thinking, memory and movement (motor control), the second most common type of dementia.

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