37th Annual J.P. Morgan Healthcare Conference 2019

Chris Cargill, EVP & Chief Financial Officer
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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.
About Sosei Heptares (Tokyo Stock Exchange: 4565)

**SOSEI FOUNDED 1990, TRANSFORMATIONAL ACQUISITION OF UK BIOTECH HEPTARES 2015**

**26 PROGRAMS IN R&D TODAY**

1. in Phase 3
2. in Phase 2¹
4. in Phase 1²
4. in Preclinical Development
15. in Discovery

**PARTNERSHIPS WITH BIOPHARMA AND ACADEMIA**

**CURRENT PARTNERS**

1. Allergan
2. AstraZeneca
3. Daiichi-Sankyo
4. kymab
5. morphosys
6. MedImmune
7. Novartis
8. PeptiDream
9. Pfizer
10. Imperial College London
11. University of Cambridge
12. NYU
13. University of Glasgow
14. UCL

¹AZD4635 for multiple solid malignancies, HTL0018318 for dementia with Lewy bodies (voluntarily suspended)
²AZD4635 for EGFRm NSCLC, HTL0016878 for neurobehavioral symptoms of Alzheimer’s disease, HTL0018318 for Alzheimer’s disease (voluntarily suspended), HTL0014242 for neurological disorders
We are a Japan-anchored, integrated global biotech company

R&D CENTER
CAMBRIDGE, UK

~120 EMPLOYEES

HEADQUARTERS
TOKYO, JAPAN

~30 EMPLOYEES

- Proprietary StaR\(^1\) GPCR technology underpin
- Research, Drug Discovery and SBDD\(^2\) Platform
- Translational and Early-Stage Clinical Development Expertise
- Business Development Center

Late-Stage Japanese Development Expertise
Access to Capital and Royalty Income from Novartis

We recently moved to Granta Park, Cambridge - one of the world’s top biotech innovation hubs. Driving enhanced science, productivity, and collaboration and partnership opportunities

\(^1\) Stabilized receptor technology
\(^2\) Structure-based drug design
Our StaR® technology enables smarter GPCR drug development

Unique structural insights into GPCRs enable better and smarter drug design

- Improved physiochemical properties
- Better safety and efficacy
- Reduced clinical attrition
- Small molecule, peptide or antibody discovery

Unique, scalable and sustainable platform, delivering differentiated pipeline candidates. Focused on targets with high level of validation.
Remaining true to our philosophy as we evolve

- Technology-driven
- Keep it small
- Get published
- Focus on value creation
- Be productive
Growth and productivity snapshot
Consistently delivering clinical candidates, PCCs and pre-PCCs

1. We have identified 22 agents in total vs. 18 targets, 12 of which were identified since 2015
   • c.2.5 per annum on average (2010–2018)
   • 4 clinical agents (3 targets)
   • 8 PCCs (Nominated Candidates, 7 targets)
   • 6 pre-PCCs (Candidate Selection stage)
   • 2 mAbs in Candidate Selection
   • 2 pre-PCCs in Pfizer Collaboration

2. Projects take on average c.2.5 years to identify a PCC and this has reduced to c.2.0 years since 2015
   • The PCC is now generally synthesized in <500 compounds

Productivity significantly exceeds industry averages

PCC = preclinical candidate, mAbs = monoclonal antibodies
Our model is designed to create and capture optimal value
Reserving the right to choose the best strategy for our proprietary assets

<table>
<thead>
<tr>
<th>Business model strategy</th>
<th>Characteristics</th>
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<tbody>
<tr>
<td>Out-licensing</td>
<td>• Very large indications</td>
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<tr>
<td>Co-develop / joint venture</td>
<td>• Significant clinical trial costs involved</td>
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<tr>
<td></td>
<td>• Late-stage development expertise required</td>
</tr>
<tr>
<td>In-house discovery and development</td>
<td>• Scale commercialization effort needed</td>
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</tbody>
</table>

- Very large indications
- Significant clinical trial costs involved
- Late-stage development expertise required
- Scale commercialization effort needed

- Complementary technology platform (Peptidream – PDPS peptides, Kymab – mAbs)
- Ability to accelerate program & value creation via creation of asset-centric vehicle

- Rare/orphan/specialty disease setting
- Peak sales opportunity $300m+
- Manageable translation and clinical pathway, and digestible development costs
Next wave of novel candidates ready to create value in 2019

1AZD4635 for multiple solid malignancies, HTLD018318 for dementia with Lewy bodies (voluntarily suspended)
2AZD4635 for EGFRm NSCLC, HTL0016878 for neurobehavioral symptoms of Alzheimer’s disease, HTL0018318 for Alzheimer’s disease (voluntarily suspended), HTL0014242 for neurological disorders

Drugs Aggressively Pursued for Multiple Discovery and Development Deals

**Therapeutic Area Focus**
- Immuno-oncology
- GI/Inflammation
- Neurology
- Rare

**No. of Candidates**
- DRUG DISCOVERY (SBDD)
  - Hit/Hit to Lead: 5
  - Lead to Preclinical: 5
  - Candidate selection: 5
- DEVELOPMENT PROGRAMS (IN-HOUSE AND PARTNERED)
  - Preclinical development: 4
  - Phase 1: 4
  - Phase 2: 2
  - Phase 3: 1

**Candidates Selection**

**Advanced Discussions for Next Wave Targets**
- NEW PARTNERSHIPS or IN-HOUSE

**Ready to Enter Phase 1 In-House**
- SSTR
- CGRP
- GLP-1
- GLP-2

Aggressively pursuing new partners for multiple discovery and development deals

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1AZD4635 for multiple solid malignancies, HTLD018318 for dementia with Lewy bodies (voluntarily suspended)
2AZD4635 for EGFRm NSCLC, HTLD018318 for neurobehavioral symptoms of Alzheimer’s disease, HTLD018318 for Alzheimer’s disease (voluntarily suspended), HTLD014242 for neurological disorders
AZD4635: announcing a new $15m milestone from AstraZeneca
Reverse local immune suppression by blockade of Adenosine 2a Receptor pathway

Demonstrated progress with AstraZeneca in I/O
- $10m upfront (2015)
- $10m milestone Phase 1 (2016)
- $12m synergy milestone (2017)
- $15m milestone (2019)

Next-generation I/O therapies to enhance treatment

Partnersed with:

AZD4635
A2aR antagonist

AZD4635
A2aR antagonist

MONOTHERAPY

AZD4635
Anti-PD-L1

durvalumab

AZD4635
Anti-CD73

oleclumab

AZD4635 emerging as a next-generation I/O therapy that may enhance and broaden efficacy of approved checkpoint inhibitors across more tumor types
**AstraZeneca testing AZD4635 in Phase 1b/2 studies**

AZD4635 as monotherapy or in combination in tumors of high unmet need

<table>
<thead>
<tr>
<th>Monotherapy AZD4635 (A2aR antagonist)</th>
<th>I-O naïve and post immunotherapy tumors</th>
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<tbody>
<tr>
<td>ClinicalTrials.gov Identifier: NCT02740985</td>
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<tr>
<td>AZD4635 Post IO NSCLC</td>
<td>AZD4635 IO naïve mCRPC</td>
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<tr>
<td>Primary completion date 2020</td>
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<tr>
<th>Combo with durvalumab (anti-PD-L1)</th>
<th>I-O naïve and post immunotherapy tumors</th>
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<tbody>
<tr>
<td>ClinicalTrials.gov Identifier: NCT03381274</td>
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</tr>
<tr>
<td>AZD4635 + Durvalumab Post IO NSCLC</td>
<td>AZD4635 + Durvalumab IO naïve mCRPC</td>
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<tr>
<td>Primary completion date 2020</td>
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<tr>
<th>Combo with oleclumab (anti-CD73)</th>
<th>Locally advanced/metastatic NSCLC with EGFR mutation</th>
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<tr>
<td>ClinicalTrials.gov Identifier: NCT03381274</td>
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<tr>
<td>AZD4635 + Oleclumab NSCLC with EGFRmut</td>
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<td>Primary completion date 2021</td>
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</table>
Partnered pipeline
Multiple shots on goal with world-leading partners across areas of high-unmet need

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<thead>
<tr>
<th>Product/Program</th>
<th>Modality</th>
<th>Indication</th>
<th>Partner</th>
<th>Discovery</th>
<th>Preclinical</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Marketed</th>
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<tbody>
<tr>
<td>Partnered Pipeline - Legacy Respiratory Products (Traditional out-licensing)</td>
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<tr>
<td>Seebri®/Ultibro®</td>
<td>SME</td>
<td>COPD</td>
<td>Novartis</td>
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<td>QVM149</td>
<td>SME</td>
<td>COPD</td>
<td>Novartis</td>
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<td>Partnered GPCR Pipeline (Traditional out-licensing/collaboration projects)</td>
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<td>A2a</td>
<td>SME</td>
<td>Multiple solid tumors</td>
<td>AstraZeneca</td>
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<tr>
<td>A2a</td>
<td>SME</td>
<td>EGFRm NSCLC</td>
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<tr>
<td>M1</td>
<td>SME</td>
<td>Alzheimer’s disease</td>
<td>Allergan</td>
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<tr>
<td>M4</td>
<td>SME</td>
<td>Alzheimer’s disease</td>
<td>Allergan</td>
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<tr>
<td>M1/M4 dual</td>
<td>SME</td>
<td>Alzheimer’s disease</td>
<td>Allergan</td>
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<tr>
<td>Multiple targets</td>
<td>SME</td>
<td>Pain</td>
<td>Daiichi-Sankyo</td>
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<tr>
<td>Multiple targets</td>
<td>SME/mAb</td>
<td>Multiple indications</td>
<td>Pfizer</td>
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<tr>
<td>Multiple targets</td>
<td>mAb</td>
<td>Inflammation</td>
<td>Morphosys</td>
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<tr>
<td>Partnered GPCR Pipeline (Co-development/profit share)</td>
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<tr>
<td>Multiple targets</td>
<td>mAb</td>
<td>Immuno-oncology</td>
<td>Kymab</td>
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<tr>
<td>Multiple targets</td>
<td>Peptide</td>
<td>Inflammation</td>
<td>Novartis</td>
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Multiple big pharma partners, across multiple modalities, validate our StaR® and SBDD approach

1 Note: SME = small molecule; mAb = monoclonal antibody
In-house pipeline
Rapidly emerging pipeline focused on rare/orphan/specialty disease categories

<table>
<thead>
<tr>
<th>Product/Program</th>
<th>Modality(^1)</th>
<th>Indication</th>
<th>Originator</th>
<th>Discovery</th>
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<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Marketed</th>
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<tr>
<td>Proprietary GPCR Pipeline (Go-to-market/commercialize)</td>
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<td>M₁</td>
<td>SME</td>
<td>DLB (Japan)</td>
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<td>mGluR$_5$</td>
<td>SME</td>
<td>Neurology</td>
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<tr>
<td>SSTR</td>
<td>Peptide</td>
<td>Endocrine disorders</td>
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<tr>
<td>CGRP</td>
<td>SME</td>
<td>Migraine</td>
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<tr>
<td>GLP-1</td>
<td>Peptide</td>
<td>Metabolic diseases</td>
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<tr>
<td>GLP-2</td>
<td>Peptide</td>
<td>Intestinal failure</td>
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1 Note: SME = small molecule

Multiple candidates entering clinical development

- First Subject Dosed in Ph 1 December 2018
- UK regulatory authority and ethics committee approval received. First Subject Dosing expected Q1 2019
Frequently asked questions

1. Has the strategy changed with a new CEO?
   - No change, strategy remains as outlined at November 2018 results

2. Are there any updates on M₁ tox issue?
   - Investigative work with Allergan progressing well

3. Is the advent of Cryo-EM impacting your competitive advantage?
   - No, Cryo-EM is certainly revolutionary but it will not impact our competitive advantage

4. Is there a role for AI / machine learning for GPCRs?
   - Yes, definitely – we are collaborating with Univ. of Cambridge to deploy AI / machine learning
We are rolling out AI across our drug discovery platform

Bioinformatics | GPCR structure | Comp. Chemistry | Cheminformatics
---|---|---|---
Pharmacology | Biomolecular Structure | Protein Engineering | Development

AI DRIVEN
- Target Selection

AI DRIVEN
- StaR® Design

AI DRIVEN
- Ligand Design
- Synthesis Planning

AI DRIVEN
- ADMET Prediction

Data & descriptors

Machine Learning

Artificial Intelligence for Multi-Parametric GPCR Drug Discovery
Thank you!

VISION
To become a leading biotechnology company, anchored in Japan, with a global reach

MISSION
Making a significant contribution to improving the quality of life and health of people around the world

VALUES
Integrity and Accountability, Passion, Courage and Resilience, Openness, Teamwork
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