Silence Therapeutics

Collaboration with AstraZeneca

and R&D update

March 25 2020

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Agenda

• Opening remarks	Iain Ross, Executive Chairman
• Collaboration with AstraZeneca	Iain Ross, Executive Chairman
• R&D Update	Dr Giles Campion, Head R&D, Chief Medical Officer
• Q&A	All participants

Iain Ross

Giles Campion

Rob Quinn

John Strafford

Collaboration with AstraZeneca for the Treatment of Cardiovascular, Renal, Metabolic and Respiratory diseases

- **Research, Collaboration, Option and Licence agreement to discover and develop RNA interference therapeutics for the treatment of serious diseases.**

> Draws on Silence's extensive experience in the development of siRNA therapeutics, together with AstraZeneca's industry leading expertise in disease biology and target identification, to develop first-in-class and differentiated therapeutics to address significant unmet need.

> Five targets anticipated to be started within three years with AstraZeneca having the option to extend the collaboration to a further five targets.

> Silence's GalNAc-siRNA platform to be harnessed for liver expressed gene targets. Both parties to collaborate to achieve targeted delivery of siRNA molecules to other tissues including heart, kidney and lung.

> Silence will be responsible for designing siRNA molecules against gene targets selected by AstraZeneca, and for manufacturing of material to support GLP toxicology studies and Phase I clinical studies.

> Silence will have the option to negotiate for co-development of two programs of their choice starting from Phase II.

> $60 million cash upfront and $20 million equity investment.

> Total deal value over $4 billion

> Option fee of $10 million per target at the point of candidate nomination. Up to $140 million in development milestones and up to $250 million in commercialisation milestones. Total milestones of up to $400 million per target.

> High single digit to low double-digit royalties on net sales for each target.

AstraZeneca

SILENCE THERAPEUTICS

R&D Update

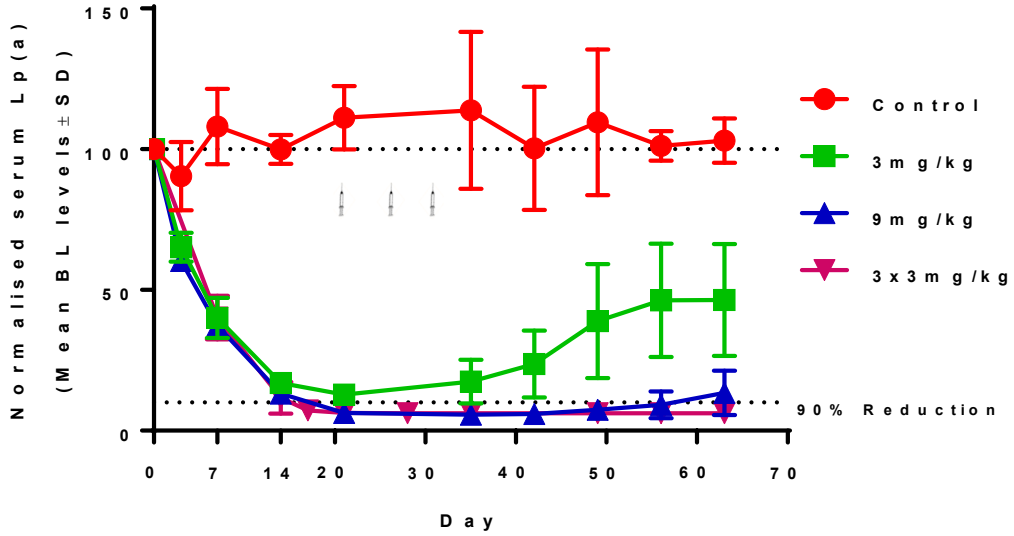
- Re-prioritisation of R&D pipeline due to strengthened balance sheet

- SLN360 brought forward as priority asset
- LP(a) targeting siRNA for cardiovascular disease
- High unmet medical need and excellent preclinical profile
- IND to be filed in H2 2020, interim Phase I data mid 2021

- SLN124 – granted Rare Pediatric Disease designation by the FDA for β Thalassemia
- Screening for patients stopped as precautionary measure
- New protocol with broader patient population to be submitted
- First data H1 2021

- Covid-19: Necessary steps taken to maintain Company operations and health and wellbeing of employees

Preclinical profile of SLN360 in NHP



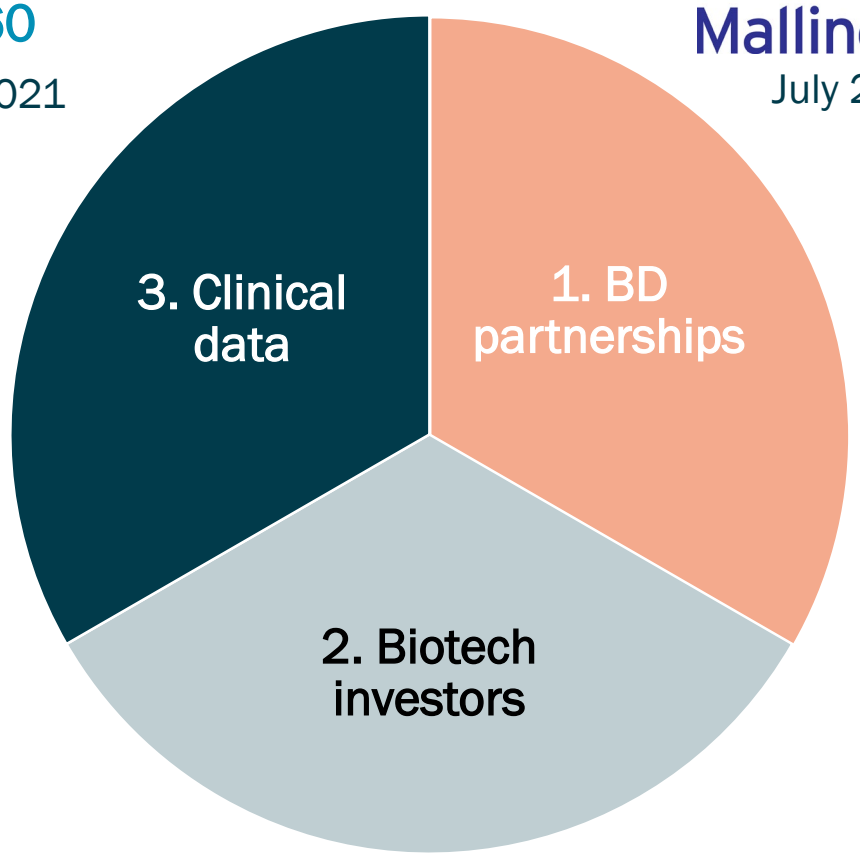
Other Recent Highlights from Q1

- CEO recruitment progressing well with announcement possible as soon as mid-2020
- Technology Evaluation Agreement with Takeda signed in January 2020
- Scientific Advisory Board formed, to be led by Professor Sir Gordon Duff
  - World leading scientists and clinicians to guide Silence's ground-breaking siRNA research programmes
  - Dr. Annemieke Aartsma-Rus, Dr. Art Levin, Dr. Henry Ginsberg, Dr. John Porter
- Silence Therapeutics, Inc. established, as well as a New York office, and 1st US-based employee (Dr. Barbara Ruskin, SVP, General Counsel and Chief Patent Officer
- Expansion of US Investor Relations activity with presentations or attendance at several investor conferences

Platform validation: putting the pieces in place to unlock value

SLN360
Middle 2021

SLN124
H1 2021



Mallinckrodt
July 2019

Takeda
Jan 2020

AstraZeneca
Mar 2020

Silence Therapeutics - Summary

Valuable Platform	> Reproducible, proprietary gene silencing (RNAi) therapeutics platform, rapidly generating internal pipeline and out-licensing options. Platform validated through collaborations with AstraZeneca, Mallinckrodt and Takeda
Growing Clinical Pipeline	> SLN360 (CVD with high LP(a)) - IND/CTA in H2 2020 > SLN124 (β-Thalassemia and MDS[1]) - Phase Ib trial underway > SLN500 (C3) - IND/CTA in 2021
Strong Experienced Team	> Pioneers in siRNA for over 18 years, growing clinical team, and experienced biopharma Board and Management team > New CEO recruitment ongoing
Target Selection	> Focused on targeting indications in rare diseases and large population targets, including new medicines for cardiovascular disease and complement-mediated diseases
Strong Financial Position	> Strong financial position with a cash runway extending beyond key clinical milestones such as SLN360 and SLN124 Phase I trial readouts

HQ in London

R&D in Berlin

+ New office in New York

Approx. 45 employees across all sites

Notes:
[1] MDS = Myelodysplastic syndrome

Q&A