



## **Silence Therapeutics Announces Positive Response by USPTO that Affirms Validity of Four Foundational RNAi Patents**

*USPTO issues notice of intent to issue reexamination certificates associated with patents covering innovative “Zamore Design Rules” licensed by Silence from the University of Massachusetts Medical School*

**London, December 12, 2011** – [Silence Therapeutics plc](#) (AIM: SLN) (“Silence” or the “Company”), a leading global RNA interference ([RNAi](#)) therapeutics company, announces that the United States Patent and Trademark Office (USPTO) has completed its reexamination of four key RNAi patents that form part of the foundational “Zamore Design Rule” patent families. Following a review requested by an anonymous third party during 2010, the USPTO has concluded that the reissued claims are patentable and has issued Notices of Intent to Issue Reexamination Certificates. The prior art cited in the reexaminations was unsuccessful in invalidating the patents.

The four patents (US 7,459,547, US 7,732,593, US 7,772,203 and US 7,750,144) form part of the foundational “Zamore Design Rule” patent families that disclose various efficacy-enhancing methods and structural elements for RNAi therapeutics. Silence has exclusively licensed three “Zamore Design Rule” patent families in their entirety for applications in the human healthcare field from the University of Massachusetts Medical School. The three patent families generally disclose methods of enhancing the silencing activity of RNAi agents through certain structural modifications. The claims associated with the reexaminations include coverage for methods of enhancing silencing of a pharmaceutical composition containing short interfering RNA (siRNA), micro RNA (miRNA), pre-miRNA or short hairpin RNA (shRNA) molecules.

**Thomas Christély, Chief Executive Officer of Silence Therapeutics, said:** *“We are very pleased that the USPTO has reissued these four patents. This outcome sends a clear message regarding the strength of Silence’s intellectual property. We believe that there is significant value in the Zamore technology as a fundamental tool for the development and commercialisation of RNAi therapeutics with enhanced efficacy and will continue to work to translate this value into our own RNAi therapeutic pipeline.”*

Silence Therapeutics is building and strengthening its global, diverse and competitive intellectual property portfolio. This provides the Company and its partners with a strong proprietary position in the RNAi therapeutics space. At present, Silence’s global patent portfolio contains issued patents and pending applications covering strategic areas of RNAi therapeutic development. These include multiple proprietary siRNA delivery technologies, potent siRNA sequences specific for high-value disease targets and key RNAi sequence and chemical modifications.

**Ends**

**For further information, please contact:**

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**Notes for editors**

**About Silence Therapeutics plc ([www.silence-therapeutics.com](http://www.silence-therapeutics.com))**

Silence Therapeutics plc (AIM: SLN) is a leading biotechnology company dedicated to the discovery, development and delivery of targeted, systemic RNA interference (RNAi) therapeutics for the treatment of serious diseases. Silence offers one of the most comprehensive short interfering RNA (siRNA) therapeutic platforms available today based on a strong intellectual property portfolio and large clinical safety database. Silence's clinical siRNA product pipeline is one of the broadest in the industry.

The Company possesses multiple proprietary siRNA delivery technology platforms including AtuPLEX™, DACC and DBTC. AtuPLEX enables the broad functional delivery of siRNA molecules to targeted diseased tissues and cells, while increasing their bioavailability and intracellular uptake. The DACC delivery system allows functional delivery of siRNA molecules selectively to the lung endothelium with a long duration of target mRNA and protein knock-down. The DBTC delivery system enables functional delivery of siRNA molecules selectively to liver cells including hepatocytes. Additionally, the Company has a platform of novel siRNA molecules based around its AtuRNAi chemical modification technology, which provides a number of advantages over conventional siRNA molecules. Silence's unique RNAi assets also include structural features for RNAi molecules and specific design rules for increased potency and reduced off-target effects of siRNA sequences.

The Company's lead internal drug candidate is Atu027, a liposomal formulation in clinical development for systemic cancer indications and one of the most clinically advanced RNAi therapeutic candidates in the area of oncology. Atu027 incorporates two of the Company's technologies, AtuRNAi and AtuPLEX™. Silence is currently conducting an open-label, single-centre, dose-escalation Phase I study with Atu027 in patients with advanced solid tumors involving single, as well as repeated, intravenous administration. Encouraging interim safety and pharmacokinetic data were presented at the American Society of Clinical Oncology Annual Meeting in June 2011. The study is expected to be completed in the first half of 2012.

The Company's RNAi therapeutic platform has received key validation through multiple partnerships with pharmaceutical companies including AstraZeneca, Dainippon Sumitomo, Pfizer/Quark, and Novartis/Quark. Silence is actively pursuing the establishment of additional partnerships. Silence Therapeutics has operations in both Berlin and London.

**About the "Zamore Design Rule" patent families**

The "Zamore Design Rule" patent families are based on the seminal research of Phillip D. Zamore, Ph.D. at the University of Massachusetts Medical School. Dr. Zamore is a Howard Hughes Medical Institute Investigator, the Gretchen Stone Cook Chair of Biomedical Sciences, and Professor of Biochemistry & Molecular Pharmacology at University of Massachusetts Medical School. He also serves as co-director of the RNA Therapeutics Institute at the University of Massachusetts Medical School.

**Forward-Looking Statements**

This press release includes forward-looking statements that are subject to risks, uncertainties and other factors. These risks and uncertainties could cause actual results to differ materially from those referred to in the forward-looking statements. All forward-looking statements are based on information currently available to Silence Therapeutics and Silence Therapeutics assumes no obligation to update any such forward-looking statements.

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