PRESS RELEASE

Lysogene Provides Update on Efficacy, Safety and Timelines of the AAVance phase 2/3 clinical trial with gene therapy LYS-SAF302 for the treatment of MPSIIIA

- **Topline data of the main cohort of AAVance clinical trial expected in Q3 2022**
- **Stabilization or decreased size of white matter abnormalities observed at injection points for all patients from 12 months post-treatment onwards**
- **Update on Sarepta partnership**

Paris, France — 24 February 2022 at 07:30 am CET — Lysogene (FR0013233475 – LYS), a phase 3 gene therapy platform company targeting central nervous system (CNS) diseases, today provides an update on clinical results and timelines of the ongoing AAVance phase 2/3 clinical trial with the investigational gene therapy LYS-SAF302 for the treatment of MPS IIIA (NCT03612869).

AAVance is an open-label single-arm multicenter trial aimed at evaluating the effectiveness of a one-time intracerebral delivery of a recombinant adeno-associated virus vector rh.10 carrying the N-sulfoglucosamine sulfohydrolase (SGSH) gene (LYS-SAF302, olenasufligene relduparvovec) in children with MPS IIIA. MPS IIIA is caused by mutations in the SGSH gene, which produces an enzyme involved in the catabolism of heparan sulfate. LYS-SAF302 is intended to deliver a functional copy of the SGSH gene and allow the brain to secrete the missing enzyme.

The Company reported positive biomarker data at the WORLDSymposium™ on 10 February 2022, demonstrating biological activity of LYS-SAF302 with reductions, relative to baseline levels, in cerebrospinal fluid concentrations of the storage products heparan sulfate and GM2 & GM3 ganglioside from 6 months post-treatment onwards, as well as serum concentrations of the axonal damage biomarker neurofilament light from 18 months post-treatment onwards.

Recruitment and treatment of patients into the main cohort of the study was completed in Q1 2020 and AAVance timelines were therefore not impacted by the clinical hold issued by the U.S. Food and Drug Administration (FDA) on the IND in June 2020. The company expects to report topline data for the main cohort in Q3 2022, along with results of the observational study in children treated with LYS-SAF302, using video and parent interviewing (also called the Patient Reported Outcome Videos [PROVide] study).

In terms of safety, white matter abnormalities were observed near injection sites of patients treated in AAVance. From 12 months post-treatment onwards, the abnormalities have stabilized or diminished in size in all patients, based on the conclusions of MRI central readers, and no clinically significant symptoms have been observed that can be directly attributed to white matter abnormalities, according to Company assessment.

Considering these encouraging elements and upon upcoming program readouts, the Company will discuss the path forward with regulators in Q4 2022 in the light of the totality of evidence and overall benefit-risk profile of LYS-SAF302.

"Encouraged by the biological activity of the drug evidenced by positive biomarker data, we are looking forward to the forthcoming analysis of the totality of data for patients enrolled in the main cohort of the study", **said Karen Aiach, Founder and CEO of Lysogene.** "*I am very proud of the progress achieved so far by our teams at Lysogene. During Q2 2022, we will be carrying out an important and in-depth work of compiling and analyzing the full set of data collected over the last three years, both in terms of cognitive development but also the patient's behavior, acquisition of skills, and quality of life. We look forward to the soon-to-come data readout to discuss with the regulatory agencies the path forward."*

Update on the Sarepta partnership

As per the termination of the license agreement announced on 13 January 2022, Lysogene has regained global development and commercialization rights for LYS-SAF302. The termination of the license agreement will be effective on 11 July 2022.

In addition, Lysogene terminated the supply agreement with Sarepta on 9 February 2022, which will remain effective for a 60-day period. Lysogene is currently revising the strategy for commercial manufacturing while adhering to the program timelines.

Sarepta will maintain its current equity position in Lysogene until 31 December 2022 as part of an agreement with respect to the winding down of the relationship.

About Lysogene

Lysogene is a gene therapy Company focused on the treatment of orphan diseases of the central nervous system (CNS). The Company has built a unique capability to enable a delivery of gene therapies to the CNS to treat lysosomal diseases and other genetic disorders of the CNS. A phase 2/3 clinical trial in MPS IIIA is ongoing. An adaptive clinical trial in GM1 gangliosidosis is also ongoing. Lysogene is also collaborating with an academic partner to define the strategy of development for the treatment of Fragile X syndrome, a genetic disease related to autism. www.lysogene.com.

Forward Looking Statement

This press release may contain certain forward-looking statements, especially on the Company's progress of its clinical trials and cash runway. Although the Company believes its expectations are based on reasonable assumptions, all statements other than statements of historical fact included in this press release about future events are subject to (i) change without notice, (ii) factors beyond the Company's control, (iii) clinical trial results, (iv) increased manufacturing costs, (v) potential claims on its products. These statements may include, without limitation, any statements preceded by, followed by or including words such as "target," "believe," "expect," "aim," "intend," "may," "anticipate," "estimate," "plan," "objective", "project," "will," "can have," "likely," "should," "would," "could" and other words and terms of similar meaning or the negative thereof. Forward-looking statements are subject to inherent risks and uncertainties beyond the Company's control that could cause the Company's actual results, performance or achievements to be materially different from the expected results, performance or achievements expressed or implied by such forward-looking statements. A further list and description of these risks, uncertainties and other risks can be found in the Company's regulatory filings with the French Autorité des Marchés Financiers, including in the 2020 universal registration document, registered with the French Markets Authorities on April 12, 2021, under number D.21-0296, and future filings and reports by the Company. Furthermore, these forward-looking statements are only as of the date of this press release. Readers are cautioned not to place undue reliance on these forward-looking statements. Except as required by law, the Company assumes no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in the forward-looking statements, even if new information becomes available in the future. If the Company updates one or more forward-looking statements, no inference should be drawn that it will or will not make additional updates with respect to those or other forward-looking statements.

This press release has been prepared in both French and English. In the event of any differences between the two texts, the French language version shall supersede.

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