

## Noga Therapeutics and Lonza Announce Collaboration to Develop Autologous Lentiviral Gene Therapy on the Cocoon Platform

- Collaboration between Noga Therapeutics and Lonza will leverage the innovative Cocoon® Platform for a novel primary immunodeficiency (PID) program
- Noga therapeutics lead product will be tested in a preclinical model towards a first-in-human trial in PID patients
- The Cocoon® Platform is an automated patient-scale therapy manufacturing platform providing end-to-end manufacturing of cell therapy products for pre-clinical scale, with the option to scale up to commercial manufacturing

### Quote from Eytan Abraham, Head of Personalized Medicine at Lonza:

“We are thrilled to be collaborating with Noga to accelerate and enable bringing a novel autologous gene therapy for PIDs to the clinic and patients. This collaboration will be the first instance of harnessing the Cocoon platform to manufacture an autologous gene therapy, thus showcasing the flexibility of the Cocoon system. We believe that by pairing Lonza’s Cocoon Platform, coupled with the array of R&D and manufacturing capabilities and expertise with Noga’s gene therapy technology and skills, we will reinforce our commitment to allow novel therapies to be manufactured reliably, reproducibly, at the needed scale and a sustainable cost.”

### Quote from Noam Diamant, PhD., Chief Executive Officer of Noga Therapeutics:

“The technological gap that delays the development of lentiviral gene therapies for hundreds of Primary Immune Deficiencies (PIDs) must be addressed. We are excited to be working with Lonza to combine the strengths of our Syndogenous™ promoter design platform with those of the Cocoon. By designing an optimal lentivector and by automation of the entire cell therapy process, we will be able to significantly improve the control of this intricate therapy. I hope these advantages will enable us to accelerate the development of a much-needed therapy and to reach patients sooner.”

**Ness-Ziona, Israel and Basel, Switzerland, 12 May 2020** – Noga Therapeutics, a private, pre-clinical-stage biopharmaceutical company developing novel lentiviral gene therapies for primary immune deficiencies, and Lonza, a leading cell & gene therapy manufacturer, announced today that the companies have a research collaboration and manufacturing

agreement in place. This collaboration, aimed at the development of an autologous hematopoietic stem cell-based gene therapy for a primary immune deficiency, will leverage Lonza's expertise in process development and the usage of its proprietary Cocoon® Platform.

The Cocoon® Platform is a closed, highly customizable and scalable platform with minimal touchpoints, which will help Noga Therapeutics to accelerate the development of lentiviral gene therapies. The decentralized setting of the Cocoon® Platform allows for great flexibility, as protocols are performed within a single single-use highly customizable cassette-system.

Lentiviral Autologous Gene Therapy makes use of the clinically efficacious and safe lentiviral gene delivery platform. In this treatment, hematopoietic stem cells are collected from the patient and transduced by lentiviruses that deliver a functional copy of a defective gene. The repaired stem cells are administered back to the patient and give rise to a functional immune system. Over the past two decades, this methodology has proven to be highly efficacious and safe in several primary immune deficiencies. However, some primary immune deficiencies with promising proof-of-concept studies are yet to enter the clinic due to efficacy and safety concerns. To this end, Noga harnesses the power of synthetic biology and bioinformatics to design optimized lentiviral vectors.

## **About Lonza**

At Lonza, we combine technological innovation with world class manufacturing and process excellence. Together, these enable our customers to deliver their discoveries in the healthcare, preservation, and protection sectors.

We are a preferred global partner to the pharmaceutical, biotech and specialty ingredients markets. We work to prevent illness and promote a healthier world by enabling our customers to deliver innovative medicines that help treat or even cure a wide range of diseases. We also offer a broad range of microbial control solutions, which help to create and maintain a healthy environment.

Founded in 1897 in the Swiss Alps, Lonza today operates in 120 sites and offices in more than 35 countries. With approximately 15,500 full-time employees, we are built from high-performing teams and of individual employees who make a meaningful difference to our own business, as well as the communities in which we operate. The company generated sales of CHF 5.9 billion in 2019 with a CORE EBITDA of CHF 1.6 billion. Find out more at [www.lonza.com](http://www.lonza.com) and follow us on Twitter @LonzaGroup or Facebook @LonzaGroupAG.

## **About Noga Therapeutics**

Noga Therapeutics Ltd. ("Noga") is a private pre-clinical stage gene therapy company with the vision of developing novel gene therapies for primary immune deficiencies that are safe, efficacious, reproducible and affordable to any PID patient in need."

Our proprietary Syndogenous™ promoter design platform allows optimization of the promoter to produce an expression cassette that closely mimics physiological regulatory patterns, allowing for the development of better therapies for a higher number of PIDs in which tight regulation of transgene expression is a necessity. With our global partnerships, advisors and collaborators, with our research facilities in Ness-Zionna Israel (Weizmann science park).

For more information, visit [www.Noga-tx.com](http://www.Noga-tx.com) or send email inquiries to [info@noga-tx.com](mailto:info@noga-tx.com).

## **Lonza Contact Details**

### **Dr. Kristin Koehler**

Investor Relations

Lonza Group Ltd

Tel +41 61 316 8782

[kristin.koehler@lonza.com](mailto:kristin.koehler@lonza.com)

### **Dr. Sanna Fowler**

Head of External Communications

Lonza Group Ltd

Tel +41 61 316 8929

[sanna.fowler@lonza.com](mailto:sanna.fowler@lonza.com)

## **Noga Contact Details**

### **Noam Diamant**

Co-founder and CEO

Noga Therapeutics Ltd.

Tel +972 54 64654656; [Noam@Noga-tx.com](mailto:Noam@Noga-tx.com)

## **Additional Information and Disclaimer**

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