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NanoCarrier and Axcelead Signed Comprehensive Collaboration Agreement

NanoCarrier Co.,Ltd (President and CEO: Shiro Akinaga) ("NanoCarrier") and Axcelead, Inc. (President and CEO: Tomoyuki Fujisawa) ("Axcelead") have entered into an agreement to build a comprehensive collaborative relationship (the "Collaboration") for the research, development and manufacture of mRNA drugs (the "Agreement").

NanoCarrier had been pursuing clinical development mainly of anti-cancer drugs utilizing micellar nanoparticle technology, but successively suspended development(project)s due to failures to achieve key endpoints. In response, we have been considering restructuring our growth strategy. We have decided not to conduct late-stage clinical development in-house and have decided to take the dynamic change in modality caused by the new coronavirus pandemic as an opportunity to change our business model. By leverage our experience in nucleic acid drug R&D and the networks we have built with global biotech ventures, academia, and Japanese government agencies, NanoCarrier has decided to transform its business model into a revenue-generating company by creating intellectual properties ("IP") on mRNA therapeutics and related technologies and out-licensing them from the non-clinical stage.

Axcelead Drug Discovery Partners, Inc. ("Axcelead DDP"), a subsidiary of Axcelead and one of the largest integrated drug discovery platform companies in Japan, which was incorporated by curving out of all IND-enabling functions from core team of over 200 people from Takeda Pharmaceutical Company Limited (TSE1: 4502) (NYSE:TAK) , and ARCALIS, Inc.("ARCALIS"), a joint venture with mRNA therapeutics company, Arcturus Therapeutic Holdings Inc. (NASDAQ: ARCT).



Axcelead DDP 's team of experts has a track record of more than 100 Investigational New Drug ("IND") applications and 20 New Drug Applications ("NDA"). ARCALIS is currently constructing a plant in Minamisoma, Fukushima Prefecture, which will be equipped with state-of-the-art manufacturing and quality control systems that meet current Good Manufacturing Practice ("cGMP") standards for pharmaceuticals and will be used for contract manufacturing of mRNA vaccines and pharmaceutical products worldwide.

To date, the two companies have established PrimRNA Inc. in April 2021, a joint venture to develop mRNA-based therapies for osteoarthritis ("OA"), a project adopted by the Japan Agency for Medical Research and Development ("AMED").

To promote the new mRNA therapeutics business, the two companies have signed the new comprehensive collaboration agreement to establish the comprehensive collaborative relationship in a series of operations related to mRNA therapeutics research, development, and manufacturing. Through this collaboration, the two companies will promote R&D by maximizing the use of external resources to reduce fixed costs associated with R&D and create attractive new mRNA therapeutics IP with a high probability of out-licensing to pharmaceutical companies. Through this agreement, the two companies will promote an integrated business that encompasses the creation of new mRNA medicine targets that meet the R&D needs of pharmaceutical companies, the conduct of non-clinical studies, the creation of IP for new medicine candidates, and the sale of IP to pharmaceutical companies.

In response, NanoCarrier President Akinaga said, "We have been pioneering drug discovery using the new modality of mRNA for about six years in Japan, ahead of our competitors. By collaborating with Axcelead, we expect to dramatically improve our Chemistry, Manufacturing and Control ("CMC") and non-clinical development capabilities for mRNA therapeutics and create a series of new mRNA therapeutics that cover a variety of disease areas and provide them globally. We expect that the collaboration between Axcelead and NanoCarrier will enable us to efficiently conduct drug discovery research for multiple mRNA therapeutics targets," commented Mr. Fujisawa, President of Axcelead, "It will be possible to rapidly acquire IPs for new mRNA therapeutics modalities based on an understanding of market needs. We expect we will be able to develop a drug discovery IP development business for mRNA therapeutics modalities that will enable efficient out-licensing to global pharmaceutical companies in the non-clinical development stage from clinical candidate compound determination to IND."

Although the impact of this collaboration on NanoCarrier's business performance for



the fiscal year ending March 31, 2023 will be minimal, we believe that this collaboration will contribute to the enhancement of our corporate value over the medium to long term. If there is any impact on future business performance, it will be disclosed promptly. In addition, we plan to disclose details of new mRNA drug candidates in due course, including those that we are already promoting. Although this collaboration does not fall under the standards for timely disclosure, we are voluntarily disclosing this information because we believe it is useful.

In addition, in order to secure funds for this collaboration above and strengthen the capital relationship with Whiz Partners, Inc., which owns 100% of Axcelead, NanoCarrier through funds it manages as a general partner, has decided to issue its 6th Convertible Bonds and its 20th Warrants to THE KENKO FUTURE Investment Limited Liability Partnership, of which Whiz Partners, Inc is a general partner. For details, please refer to the "Notice Concerning the Offering of the 6th Convertible Bond (Refinancing) and the 20th Warrant to be Issued by Third Party Allotment" released today.