

Particle Works Partners with Earli Inc. to Develop DNA-LNPs for Early-Stage Cancer Treatment

ST NEOTS, CAMBRIDGESHIRE, UNITED KINGDOM, March 27, 2023 /EINPresswire.com/ -- Particle Works, a leading provider of innovative microfluidic nanoparticle synthesis platforms, is supporting Earli Inc. in its mission to detect, locate and treat cancers at the earliest stages. San Francisco-based Earli will benefit from Particle Works' highly controlled and automated technologies – the Automated Library Synthesis (ALiS) System and Automated Nanoparticle (ANP) System - to accelerate and optimize DNA-LNP formulation screening for potential cancer treatments.

Earli – which boasts some of the brightest minds in oncology and nanomedicine on its Scientific Advisory Board – has cited the importance of lipid nanoparticles to its work, allowing the selective expression of biomarker



Earli is using Particle Works' ALiS and ANP System to accelerate and optimize DNA-LNP formulation screening for potential cancer.

proteins in cancer cells. This requires the careful formulation of LNPs to target tissues beyond the liver, and the delivery of DNA cargoes not just to the cytoplasm, but to the nucleus of cells. Particle Works' systems use the same microfluidics technology across multiple scales, allowing Earli to precisely produce LNPs of consistent size and structure, while reducing time, labor and resource costs.

"We are very proud to partner with Earli, and support the company's commitment to developing early-stage cancer treatments," explained Lee Jeffries, Managing Director of Particle Works. "We believe this will significantly assist Earli in accelerating its formulation screening. Moreover, the company shares our vision around process optimization, and will use the ANP System alongside the ALiS to move from screening to optimization in one easy step, keeping consistency in the fluidic pathways. Our team at Particle Works is committed to providing innovative solutions that can drive breakthroughs in research and development, and we believe this collaboration is a great step in that direction. We look forward to holding future workshops with the Earli team at their facility."

Badri Ananthanarayanan, Head of Delivery at Earli, added: "Our goals are best addressed by a high-throughput engineering approach, enabling us to



The team at Earli is looking forward to using its new Particle Works platforms to support its discovery and development efforts.

generate and test hundreds of LNP formulations at small scale, then rapidly advancing the best candidates to larger scale for in vivo testing. Particle Works' formulation platforms – the ALiS and ANP Systems – provide a strong solution for our needs, allowing us to maintain a precisely controlled formulation process across multiple scales to support our discovery and development efforts."

About Particle Works

Particle Works combines a strong heritage in engineering with nanoparticle knowledge, microfluidic expertise and in-house microfluidic chip fabrication. We design and manufacture state-of-the-art particle engineering platforms, paving the way to particle perfection.

Our technology is used in a wide range of applications, including the production of nanoparticlebased vaccines, medicines, and therapeutics. Recently spun out of the Dolomite Microfluidics brand, Particle Works was born as a dedicated and focused drug delivery brand. We have been at the forefront of this rapidly changing science, listening and adapting as our customers' needs have evolved. Our platforms enable scientists to formulate particles faster, ensuring they are ready for their next breakthrough and the scale up of discoveries.

Particle Works is part of Blacktrace Holdings Limited – a world leader in Productizing Science[™] – and is based in Royston (near Cambridge) UK. We have offices in the USA, Japan and Vietnam, and worldwide distributors offering technical assistance and support.

About Earli Inc.

Earli is focused on detecting, localizing, and treating cancer early, when a cure is most likely.

Instead of searching for cancer, Earli's technology *forces* cancer cells to reveal themselves by producing Synthetic Biopsy markers that do not already exist in the human body. This canceractivated synthetic biology platform allows for a first-of-its-kind differentiation between malignant and benign lesions, massive signal amplification, and highly targeted treatment.

The clinical stage bioengineering firm is located in Redwood City, California.

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