Study Shows That Caris Life Sciences’ ADAPT Biotargeting System™ Has Discovered Protein Expression Pattern Differences Between Two Prostate Cancer Patient Subpopulations

First time findings published in Nucleic Acids Research demonstrate the ability to differentiate exosomes from cancer cell subtypes from the same tumor type offering broad potential applications in biomarker discovery

IRVING, Texas, Feb. 12, 2020 – Caris Life Sciences®, a leading innovator in molecular science focused on fulfilling the promise of precision medicine, today announced the publication of new data in Nucleic Acids Research, illustrating that use of the Company’s proprietary ADAPT Biotargeting System™ can lead to the identification of differences in protein expression patterns between exosomes from two related prostate cancer cell lines, vertebral cancer of the prostate (VCaP) and lymph node cancer of the prostate (LNCaP).

The paper, “ADAPT identifies an ESCRT complex composition that discriminates VCaP from LNCaP prostate cancer cell exosomes,” also demonstrates that the ADAPT platform can be a powerful method that allows for the enrichment of polyligands that can distinguish even between different subpopulations of the same disease.

The results show that the ADAPT Biotargeting System has the resolution and sensitivity to discover differences in protein complexes using exosomes secreted by cancer cells from the same tumor type.

“The results of this research are highly significant in that they show that the ADAPT system can be deployed against multiple cancer types in various biological matrices and offers broad potential applications in biomarker discovery,” said David Spetzler, M.S., Ph.D., M.B.A., President and Chief Scientific Officer of Caris Life Sciences, and an author of the study. “Further, we were able to show that in prostate cancer, ADAPT not only discriminated between cancer types but between subtypes of a specific lineage. We anticipate that this could potentially help inform treatment decisions based on the patient’s specific molecular profile in prostate cancer and across a range of tumor types.”

“The differences in the composition of the Endosomal Sorting Complex Required For Transport (ESCRT) pathway and associated complexes between exosomes derived from VCaP and LNCaP cells could point to them as novel biomarkers for these different prostate cancers,” said
Michael Famulok, Ph.D., University of Bonn (Germany), Life & Medical Sciences Institute (LIMES), Max Planck Fellow and co-author of the study. “We look forward to further investigating this potential and how the ADAPT system can be used to gain a greater understanding of the molecular composition of cells across tumor types.”

The ADAPT Biotargeting System™ is Caris’ proprietary unbiased profiling platform that uses a broad library of synthetically-manufactured molecules (aptamers) that bind to a wide range of biological targets and characterize complex biological systems in their native state, enabling them to profile biological samples at a systems-wide scale.

The paper was published online on January 28 in *Nucleic Acids Research*, and is available online here and DOI: [https://doi.org/10.1093/nar/gkaa034](https://doi.org/10.1093/nar/gkaa034).

**About Caris Life Sciences**
Caris Life Sciences® is a leading innovator in molecular science focused on fulfilling the promise of precision medicine through quality and innovation. The company’s suite of market-leading molecular profiling offerings assesses DNA, RNA and proteins to reveal a molecular blueprint that helps physicians and cancer patients make more precise and personalized treatment decisions.

Caris is also advancing precision medicine with Next Generation Profiling™ that combines its innovative service offerings, Caris Molecular Intelligence® and ADAPT Biotargeting System™, with its proprietary artificial intelligence analytics engine, DEAN™, to analyze the whole exome, whole transcriptome and complete cancer proteome. This information, coupled with mature clinical outcomes on thousands of patients, provides unmatched molecular solutions for patients, physicians, payers and biopharmaceutical organizations.

Whole transcriptome sequencing with MI Transcriptome provides the most comprehensive and unique RNA analysis available on the market and covers all 22,000 genes, with an average of 60 million reads per patient, to deliver extremely broad coverage and high resolution into the dynamic nature of the transcriptome. Assessing the whole transcriptome allows us to dig deeper into the RNA universe to uncover and detect fusions, splice variants, and expression changes that provide oncologists with more insight and actionable information when determining treatment plans for patients.

Caris Pharmatech, a pioneer of the original Just-In-Time research system with the largest research-ready oncology network is changing the paradigm from the traditional physician outreach model to a real-time approach where patient identification is completed at the lab and the physician is informed so that the patient can be enrolled days earlier, and remain in the local physician’s care, without having to travel to a large central trial site. This fundamentally redefines how pharmaceutical and biotechnology companies identify and rapidly enroll patients in precision oncology trials by combining Caris’ highest quality industry leading large-scale molecular profiling services with Pharmatech’s on-demand site activation and patient enrollment system.
Headquartered in Irving, Texas, Caris Life Sciences offers services throughout the U.S., Europe, Asia and other international markets. To learn more, please visit www.CarisLifeSciences.com or follow us on Twitter (@CarisLS).

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