

## **AtlasXomics and EpiCypher announce partnership to commercialize spatial epigenomics assays**

New Haven, CT and Research Triangle Park, NC – January 23<sup>th</sup> 2024 – AtlasXomics and EpiCypher announce their partnership to develop CUT&Tag kits and assay services for spatial epigenomics applications. These assays will be developed on AtlasXomics' DBiT-seq platform using CUT&Tag reagents and antibodies from EpiCypher, expanding the spatial 'omics toolbox to histone post translational modifications (PTMs), transcription factors, and other chromatin regulators.

Spatial technologies enable joint analyses of cellular and molecular heterogeneity from intact tissues. The application of ultra-sensitive chromatin mapping assays, such as CUT&Tag, to spatial techniques is critical to the study of biological mechanisms in development and disease. CUT&Tag (Cleavage Under Targets and Tagmentation) was developed at Fred Hutchinson Cancer Center by Dr. Steven Henikoff (a molecular biologist and Howard Hughes Medical Institute Investigator) and commercialized by EpiCypher. This approach uses a fusion of Tn5 transposase, protein A, and protein G (pAG-Tn5) to cleave and add sequencing adapters at antibody-bound chromatin. Due to its remarkable sensitivity and adaptability, CUT&Tag has emerged as the leading platform for single-cell and spatial epigenomics applications.

AtlasXomics' DBiT-seq (Deterministic Barcoding in Tissue for Spatial Omics Sequencing) platform was originally developed by Professor Rong Fan, Harold Hodgkinson Professor of Biomedical Engineering at Yale University. DBiT-seq utilizes a combination of microfluidics and next-generation sequencing for high-resolution spatial profiling in tissues. DBiT-seq is rapidly gaining traction in the field, with successful applications in a wide range of tissues in over 50 laboratories worldwide. AtlasXomics has commercialized DBiT-seq for spatial ATAC-seq assays to map chromatin accessibility and is partnering with EpiCypher to introduce spatial CUT&Tag for profiling chromatin proteins, including histone PTMs and transcription factors.

“By seamlessly integrating molecular biology with histology, the DBiT-seq platform is revolutionizing epigenomics research,” stated Colin Ng, Vice President of Business Development at AtlasXomics. “We have developed robust spatial assays that incorporate EpiCypher’s proprietary pAG-Tn5 enzyme and high-efficiency antibodies to provide the optimal balance of sensitivity and specificity required for in-depth exploration of histone modifications and chromatin-associated proteins. Together, we will bring spatial CUT&Tag assays to market, including an expanded set of validated antibodies to provide customers with immediate access to diverse critical targets.”

EpiCypher holds key rights to CUT&Tag technology and a proprietary nucleosome-based approach to develop ultra-efficient antibodies for spatial and single cell CUT&Tag assays. “Spatial CUT&Tag depends on specific and efficient core reagents to capture more data per cell, which allows deeper biological insights,” said Dr. Martis Cowles, Chief Business Officer at EpiCypher. “We are very impressed with the DBiT-seq platform and look forward to working with AtlasXomics to maximize its impact on chromatin science and precision medicine.”

AtlasXomics and EpiCypher have focused initial development efforts on fresh frozen samples. Their long-term goal is to optimize spatial CUT&Tag for formalin-fixed paraffin-embedded (FFPE) samples, thereby greatly enhancing the versatility of these assays for clinical applications.

**About EpiCypher** – EpiCypher was founded in response to the growing demand for high-quality reagents to study chromatin regulation and enable epigenetics-focused drug discovery. The Company is at the forefront of chromatin mapping technologies with the CUTANA™ platform for ultra-sensitive ChIC, CUT&RUN, and CUT&Tag profiling assays. EpiCypher also offers the largest collection of defined designer nucleosomes (dNucs) on the market along with complementary high-throughput assays and services. EpiCypher is dedicated to bringing these transformative technologies to market and offers superior products and assay services to researchers worldwide.

**About AtlasXomics** –AtlasXomics, a 2020 Yale University spin-out, is commercializing a novel discovery platform that provides clinicians and researchers with unprecedented multi-omics tissue atlases. This innovative platform, called “Deterministic Barcoding in Tissue for spatial-omics sequencing” (DBiT-seq), leverages microfluidics and next generation sequencing (NGS) to create transformative multi-omics maps (proteomics, transcriptomics, and epigenomics) in tissue at cellular resolution, unlocking information about interactions between cells in localized neighborhoods. AtlasXomics is introducing groundbreaking spatial omics solutions to the market, starting with spatial epigenomics through its spatial CUT&Tag and spatial ATAC-seq assays.

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