Akoya to Help Support the Human Cell Atlas (HCA) Initiative with Single-Cell, Spatial Imaging Capabilities

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CODEX's spatial phenotyping capabilities will contribute to HCA investigators' ability to build comprehensive tissue maps.

MARLBOROUGH, Mass. — March 23, 2021 –Akoya Biosciences, Inc., The Spatial Biology Company®, today announced its support for the Human Cell Atlas (HCA) initiative, offering the CODEX® solution's single-cell, whole-tissue imaging capabilities to HCA members under favorable commercial terms. Currently, there are more than 2,000 members of the HCA consortium.

The mission of the Human Cell Atlas is to create comprehensive reference maps of all human cells to describe and define the cellular basis of health and disease. Highly multiplexed, single-cell analysis methods allow biological researchers to catalogue the vast diversity of cellular phenotypes in a sample. In addition, HCA researchers also analyze the spatial and geographical context of individual cells across entire tissue sections.

"Detailed spatial investigation of the cells in human tissues is allowing HCA researchers to study how cells function and interact at the molecular level, helping to create a 3D map of the body and gain insight into how cells such as immune cells communicate with healthy or diseased cells. Effective spatial methods are needed to enable this," said Dr. Sarah Teichmann, Ph.D., Co-Chair of the Organizing Committee for the International HCA and Head of Cellular Genetics at the Wellcome Sanger Institute.

Akoya's CODEX® platform generates high resolution maps of millions of cells from each tissue section, enabling comprehensive spatial phenotyping.

Dr. Kai Kessenbrock, Assistant Professor at the Chao Family Comprehensive Cancer Center, University of California, Irvine, and an HCA investigator, added, "As part of the Human Breast Cell Atlas Project, we've been complementing single-cell sequencing modalities with single-cell imaging data from the CODEX platform, so we can put the cellular diversity in context. This deep resolution allows us to investigate where in the tissue these cell types are located and how they organize into functional cellular neighborhoods, thus influencing tissue biology. Spatial phenotyping is a critical next step in single-cell biology which can be used to build a comprehensive cell atlas of human tissues."

Spatial phenotyping complements single-cell RNA-Seq-driven cell phenotyping, and when conducted on Akoya's CODEX platform, it enables researchers to get an expansive, multi-omics view of cell biology.

"The value of the CODEX platform is to provide unbiased, whole tissue and single-cell imaging, which could greatly contribute towards building a cell atlas and advancing the mission of the Human Cell Atlas initiative," said Brian McKelligon, CEO of Akoya. "As the newest commercial supporter of the HCA, Akoya will add this powerful capability to the HCA investigator network's spatial toolkit to assist them in developing a comprehensive cell atlas, with spatial context."

Dr. Kai Kessenbrock will share the latest Human Breast Cell Atlas data in an upcoming Nature webinar titled, "**Human Cell Atlas: A spatially resolved map of human breast tissue**," on Tuesday, March 30 at Noon Eastern / 9 a.m. Pacific. To register for this event, please visit: akoyabio.com/HCAwebinar.

About Akoya Biosciences
As The Spatial Biology Company®, Akoya Biosciences' mission is to bring context to the world of biology and human health through the power of spatial phenotyping. The company offers comprehensive single-cell imaging solutions that allow researchers to phenotype cells with spatial context and visualize how they organize and interact to influence disease progression and treatment response. Akoya offers two distinct solutions, the CODEX® and Phenoptics™ platforms, to serve the diverse needs of researchers across discovery, translational and clinical research. To learn more about Akoya, visit www.akoyabio.com.

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