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Cell Atlases as Roadmaps to Understand and Treat Disease

Orit Rozenblatt-Rosen is the senior director of single cell genomics at the Broad Institute of MIT and Harvard, where she is also scientific director of the Klarman Cell Observatory. In this role, she works on the scientific planning, organization, and execution of the Klarman Cell Observatory projects, collaborations, and activities. The Klarman Cell Observatory aims to systematically chart cellular circuits in mammalian cells and tissues. The Observatory builds on cutting-edge experimental and computational technologies as well as collaborations that span diverse scientific disciplines.

Rozenblatt-Rosen is also the lead scientist at the Broad for the international Human Cell Atlas Initiative. The Human Cell Atlas aims to create comprehensive reference maps of all human cells as a basis for both understanding human health and treating disease.

Rozenblatt-Rosen, who joined the Klarman Cell Observatory in 2012, is also an institute scientist at the Broad and has a background in cancer research, epigenetics, systems biology, genomics, and single-cell genomics. Rozenblatt-Rosen helped develop and implement systematic pipelines for genomic profiling and analysis of single cells from freshly dissected tumors. In 2016 Rozenblatt-Rosen received the Broad Excellence Award in Science.

As a research scientist at the Dana-Farber Cancer Institute, Rozenblatt-Rosen led a team of experimental and computational biologists. Her team performed systematic analyses of host network perturbations induced by DNA tumor viruses to help interpret cancer genomes.

Previously, Rozenblatt-Rosen was a postdoctoral fellow and instructor in the laboratory of Broad institute member Matthew Meyerson at the Dana-Farber Cancer Institute. In the Meyerson laboratory, her work focused on understanding the links between tumor suppression and epigenetic mechanisms.

Rozenblatt-Rosen earned a B.S. in biology from Tel Aviv University and a Ph.D. from the Weizmann Institute of Science.