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Velvet revolution in biomarkers: Transforming and scaling the art of flow cytometry for the omics age

A major part of modern biomarker research relies on-omics data, the systematic collection and analysis of big data for various biological patterns, most notably genomics and proteomics. At the same time, with the current intense focus on immunooncology, former niche-technologies are becoming key read-outs for biomarker studies, notably flow-cytometry based immunophenotyping with its capability to characterize the immune-status of patients.

Given the complexity of cell populations in the immune-system, an -omics approach seems desirable to find various biomarkers, e.g. for patient stratification, target discovery or rational design of combination therapies. However, in its current state, flow cytometry is as much an art as a science, and does not provide sufficient reproducibility and data comparability for the creation of large data sets.

Dr. Ehrhardt's presentation shows how a rigorous focus on problem solving innovation and quality allows the creation of consistent large databases of cytometry-based immunophenotyping information, and key strategies to mine the collected information for the urgently needed new biomarker information.

Biography

Anka G Ehrhardt is a biophysicist with a doctorate degree in human physiology. She is currently working in the United States building and directing a team applying the latest technologies in support of the development of new live saving drugs.

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