Mass Cytometry is a novel technological platform primarily aimed at the multiparametric analysis of protein expression profiles and phenotypic complexity of biological system at the single cell level. CyTOF uses element isotope tagged antibodies for protein detection and allows up to 40 parameters per cell overcoming the limitations of emission spectral overlap associated with fluorochromes utilized in conventional flow cytometry. Currently, available flow cytometry technologies based on fluorescence detection are limited to around 18 simultaneous parameters measured due to the limited availability of different fluorochromes and spectral overlap between them.

Data acquired on CyTOF2 showing ViSNE map of a healthy human PBMC

Instrumentation and access:

The Emory Vaccine Center/CFAR Immunology Core can provide assistance on the design, execution and analysis of CyTOF experiments.

The current Mass Cytometer (CyTOF2) is located at the Emory Vaccine Center- CFAR Immunology Core Laboratory Room 1051. For personnel/technical contact:

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