Measurement of immune cell function using ImageStream® Cytometry

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Many assays for immune function require imaging, but immune cells present significant challenges to image-based analysis due to their rarity and the need for simultaneous multispectral immunophenotyping, making statistically robust quantification difficult. Thus, immune function assays are ideally performed by the Amnis® ImageStream® imaging flow cytometry platform, which quantifies imagery of large populations of cells. This publication shows several examples of ImageStream® immune function assays, including activation of NF-κB translocation in whole blood cell pDC, internalization and trafficking of viral DNA within pDC, chemokine-induced monocyte shape change, and T cell – APC immune synapse formation.