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BioLegend: Committed to Enabling Superior Multicolor Flow Cytometry for Enhanced Complex Immunophenotyping

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Multicolor flow cytometry (MCFC) is a primary technology for studying the phenotypic and functional heterogeneity of the immune system. Recent progress in MCFC technologies resulted in multi-laser instruments and highly sensitive polymeric fluorophores that allow simultaneous detection of more than 20 parameters for multiplexed multicolor assays.

BioLegend first introduced the novel family of Brilliant Violet[™] (BV) fluorescent molecules providing superior tools for the violet laser with the following members: BV421[™], BV510[™], BV570[™], BV605[™], BV650[™], BV711[™], and BV785[™].

Complementing our high quality products, we present here our invaluable technical support that simplifies and enhances the design and performance of MCFC applications. We will illustrate this effective support with recently published advanced MCFC panels that were employed to perform an extensive immunophenotypic characterization of innate and adaptive leukocytes in human PBMC. All panels were adapted to a common flow cytometer that included a 561nm laser line. Commercially available BV dye-conjugated reagents were used to expand and strengthen the resolution of the panels. Neither a 532nm laser line nor nanocrystal-conjugated antibodies were used. Results from these redesigned panels was analyzed and their performance was compared to published data. In addition, MCFC panels for detection of intracellular cytokines (IFN γ , IL-2, IL-4, IL-10, IL-17A, IL-22), Foxp3 and surface antigens were developed and optimized particularly for the identification of IL-10 producing cells and their associated phenotypes.

The results illustrate how BioLegend provides superior reagents and offers valuable technical service that enables scientists to generate accurate and perceptive MCFC results to further advance your research.