



CDMaps: Expression profiling of CD molecules on human leukocyte and lymphocyte subsets

Since the early 1980s, HCDM has aimed to characterize the structure, function and distribution of leucocyte surface molecules and other molecules of the immune system. Importantly, newly generated antibodies were tested and their expression patterns were clustered to define new antigens and reliable antibodies.

Over the past 4 decades, about 400 antigens have been clustered. Still, their expression patterns were limited by the available techniques and focus of the HLDA workshops. To overcome these limitations in knowledge, the HCDM started CDMaps with the aim to profile the expression patterns of all CD markers on human leukocyte and lymphocyte subsets.

CDMaps is a collaborative effort with 4 academic and 4 industry partners. Using multi-color flow cytometry, all major leukocyte (neutrophils, eosinophils, basophils, monocytes) and lymphocyte (NK-cells, B- and T-cells subsets) from blood, tonsil and thymus, are defined with backbone markers, and all CD molecules are introduced separately as drop-in.

To ensure reproducibility, measurements are performed at 4 sites with a standardized protocol and standardized instruments settings on the flowcytometer according to the EuroFlow consortium (www.euroflow.org). With the use of BD Quantibrite™ Beads, all CD molecules will be quantified as number of molecules per cell.

The CDMaps project will thus generate an enormous database of protein expression profiles, which will serve a unique resource for basic, translational and clinical studies into the human immune system.

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