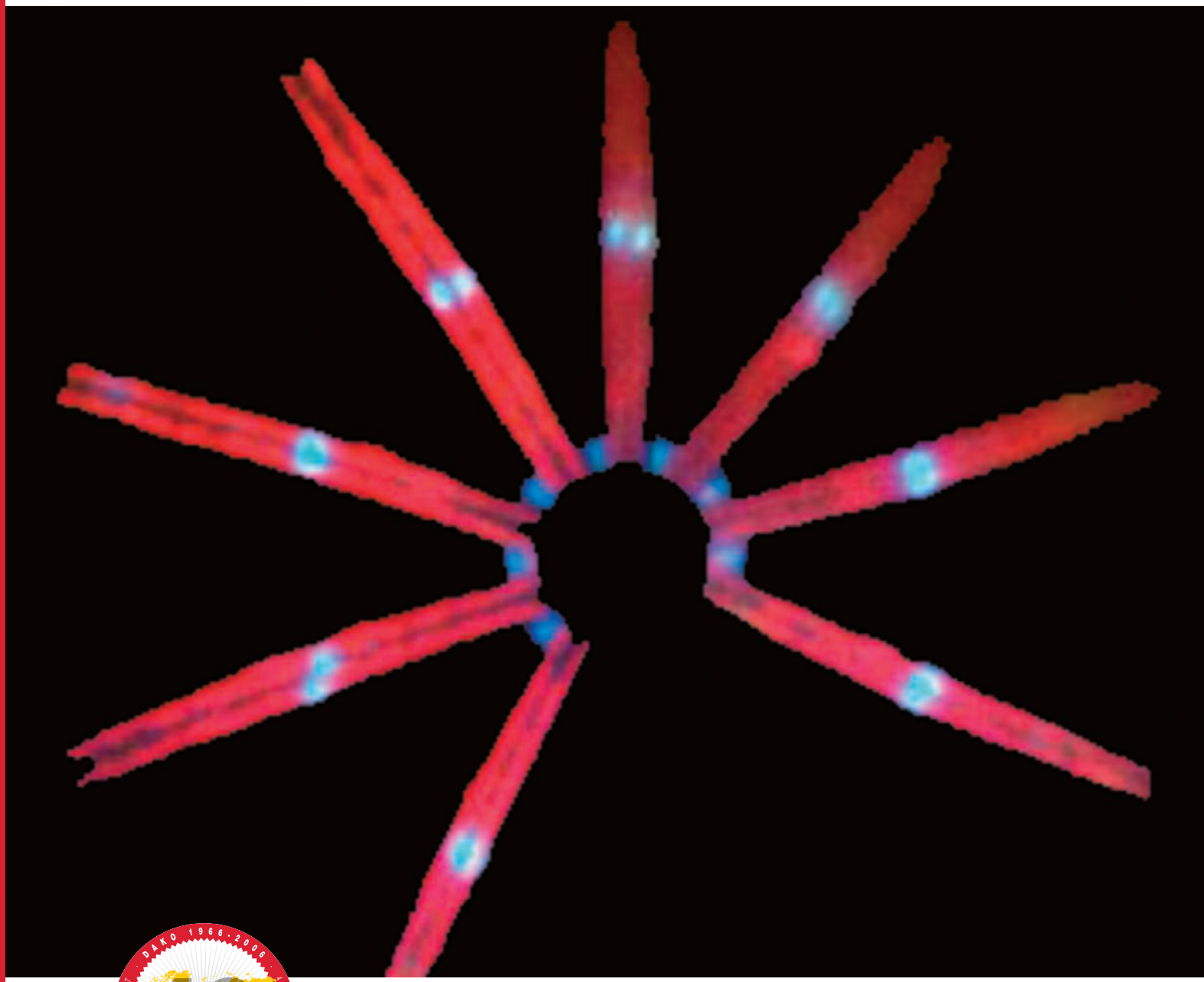
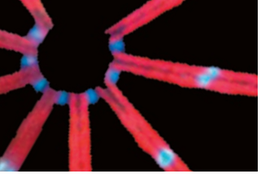
FLOW CYTOMETRY

MoFlo® and CyAn™ | Selected References





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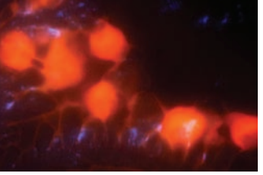

Aquatic Organisms

Aquatic microorganisms are gaining scientific relevance as model systems, ecological indicators, and sources of novel genetic material. Since these organisms occur naturally in suspension and contain chlorophyll, phycoerythrin and other autofluorescent photosynthetic pigments, they are ideal candidates for flow cytometry. The CyAn ADP High-Performance Analyzer and the MoFlo High-Performance Cell Sorter excel at resolving and isolating aquatic organisms ranging from submicron bacteria to large dinoflagellates.

MoFlo

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Bacteria

Bacteria have broad scientific relevance in today's research laboratory. Whether they are of interest for traditional microbiology, as a system for high-throughput screening, or as a vehicle for gene expression studies, their unique characteristics make them well suited for study by flow cytometry. With superior resolution for small particles, the CyAn ADP High-Performance Analyzer and the MoFlo High-Performance Cell Sorter offer fast, versatile, high-resolution platforms for evaluating and manipulating bacteria, viruses, fungi, protists, and other microorganisms.

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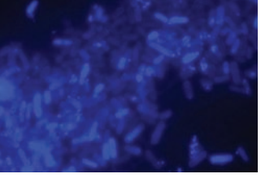

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Cancer

Although cancer, an extremely complex disease process involving genetic, environmental and behavioral factors, can stem from a vast range of cell types, it displays the common characteristic of uncontrolled cell division resulting in abnormal tissue growth. By enabling researchers to obtain specific cell cycle, phenotypic, and functional information about the mechanism in which cells become malignant and the body's response, the CyAn ADP High-Performance Analyzer and the MoFlo High-Performance Cell Sorter ultimately contribute to the development of cutting-edge cancer treatments and novel vaccines.

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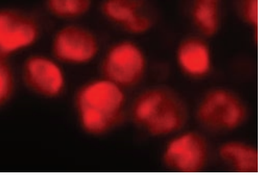

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Dendritic Cells

Dendritic cells — the most potent antigen-presenting cells in the immune system — typically comprise less than 2% of lymphoid organs. The CyAn ADP High-Performance Analyzer rapidly characterizes this complex population and the MoFlo High-Performance Cell Sorter quickly and accurately purifies these rare cells, providing a functional end product for use in further investigations.

CyAn ADP and MoFlo

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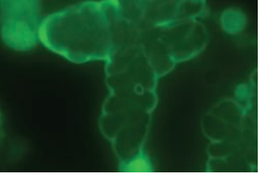

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Drosophila Cells

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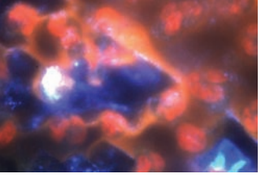

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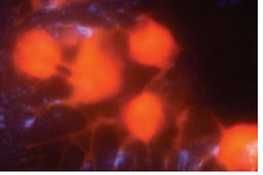

High-Throughput Screening

Interest is growing in the use of flow cytometers to screen cell- or bead-based combinatorial libraries.1-3 Increasingly, flow cytometric assays are used to detect molecules that bind to a target protein in vitro or exhibit a particular activity in a cell-based assay. Flow cytometry also enables screening of protein libraries expressed in cells or displayed on the surface of bacteria or beads. A flow cytometer, for instance, can detect modulation of a signal transduction pathway by a particular small molecule and identify proteins with a particular binding specificity, enzymatic activity, expression level and stability. The CyAn ADP High-Performance Analyzer and the MoFlo High-Performance Cell Sorter are finding wide application in this arena.

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MHC Multimer Assays

Fluorescent major histocompatibility (MHC) class I- and class II-peptide multimers are finding increasing application in the study of antigen-specific T-cells. Together, the CyAn ADP High-Perfomance Analyzer and the MoFlo High-Performance Cell Sorter allow rapid detection and purification of these cells, which typically comprise less than 1% of peripheral blood mononuclear cells.

CyAn ADP and MoFlo

Memorial Sloan-Kettering Cancer Center
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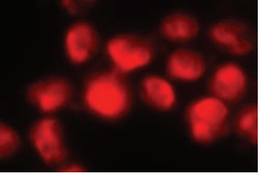

Stem Cells

Both hematopoietic and non-hematopoietic stem cells continue to garner increasing attention in laboratories around the world. Studies continue to define phenotypic markers, in vivo reconstitutional activity, and creation of model systems for stem cell development, multi-drug resistance (mdr) and use in genetic therapies. Together, the CyAn ADP High-Performance Analyzer and the MoFlo High-Performance Cell Sorter are ideal for identifying, isolating and recovering viable populations of these valuable cells from a variety of sample sources.

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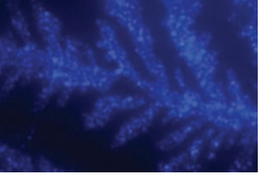

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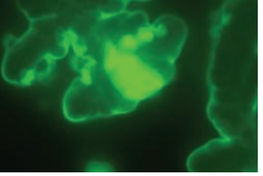

T- and B-cells

Classic subjects for flow cytometric analysis, T and B lymphocytes play a central role in the function of the immune system. With their powerful and adaptive platforms, the CyAn ADP High-Performance Analyzer and the MoFlo High-Performance Cell Sorter enable efficient multiparametric identification and isolation of the almost infinite number of subsets of these and other immune cell types, revealing the complexities of cellular and humoral immune response.

CyAn ADP and MoFlo

Memorial Sloan-Kettering Cancer Center
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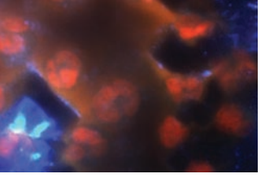

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