Unveiling Platelet-Monocyte Interactions: Precision in Immune Response Research

Hawwari, I. et al. (2024) Platelet transcription factors license the pro-inflammatory cytokine response of human monocytes; EMBO Molecular Medicine and Page 1901

The Challenge:

To understand how platelets regulate monocyte inflammatory responses, researchers needed to accurately quantify both platelet and monocyte cell counts and maintain precise ratios across diverse experimental conditions and human donors.

CASY's Contribution:

The CASY Cell Counter and Analyzer was essential for accurately quantifying platelet and monocyte cell counts. This ensured consistent and reliable cell numbers for experimental setups, regardless of the isolation method (e.g., platelet-depleted or reconstituted monocytes) and across multiple human donors, making it vital for quality control.

Key Benefits to Researchers:

- **Precise Cell Quantification:** Accurately count monocytes and platelets, crucial for maintaining specific cell ratios in complex co-culture experiments.
- **Reliable for Diverse Preparations:** Effectively quantify cell populations from various isolation methods, ensuring consistency across challenging experimental conditions.
- **Ensures Inter-Donor Consistency:** Facilitate robust comparisons of cell counts across multiple human donors, enhancing the generalizability of findings.
- **Facilitates Quality Control:** Serve as a vital tool for verifying critical experimental parameters like platelet depletion or supplementation, ensuring accurate interpretation of immune responses.

CASY's Automated Quantification Ensures Accurate Monocyte and Platelet Counts for Robust Immune Response Studies

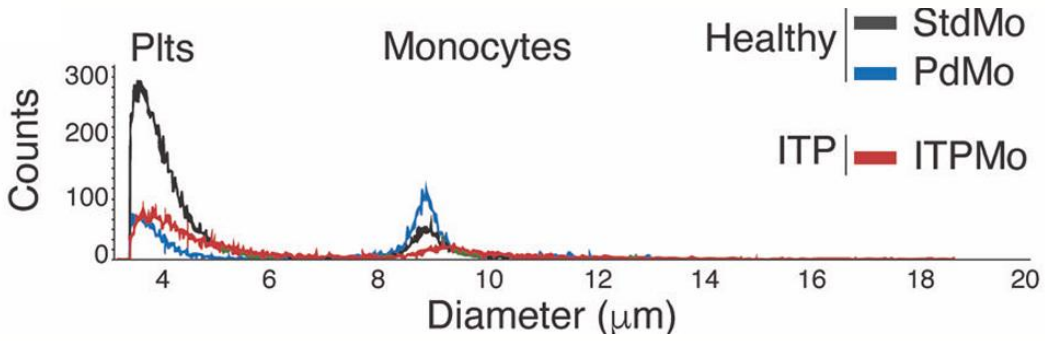

Figure 2. (C) CASY automated cell quantification of monocytes and platelets in preparations of untouched or platelet-depleted monocytes