“Regulation of cytokine signaling by the platelet cytoskeleton”

Platelets are immunologically competent cells containing abundant cytokines such as TGF-β1 that are secreted upon stimulation by soluble agonists. However, the molecular mechanisms underlying cytokine secretion from platelets are undefined. In platelets, the actin cytoskeleton mediates critical intracellular and cell-matrix signaling pathways. Notably, the Wiskott-Aldrich syndrome protein (WASp) regulates actin polymerization in nucleated hematopoietic cells but its role in platelets is unknown. Identifying the precise functions of the platelet actin cytoskeleton and associated proteins may improve our understanding of how platelets influence the host immune response.