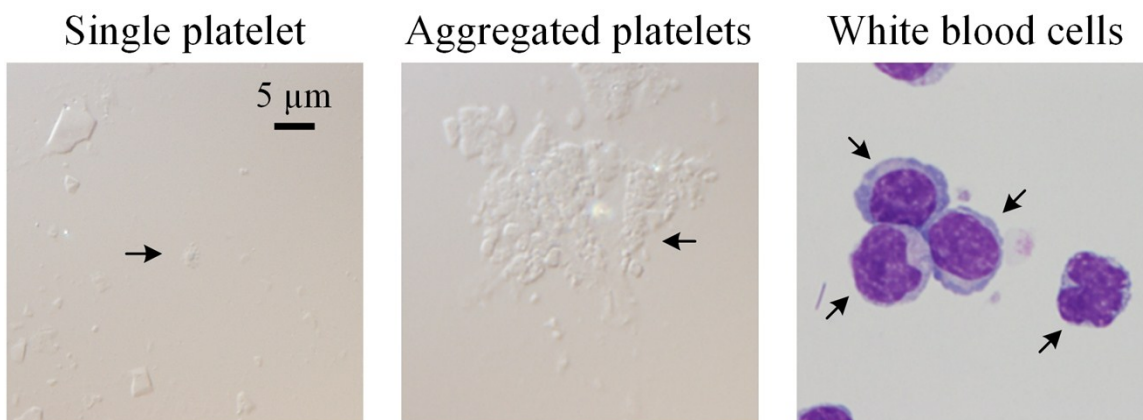
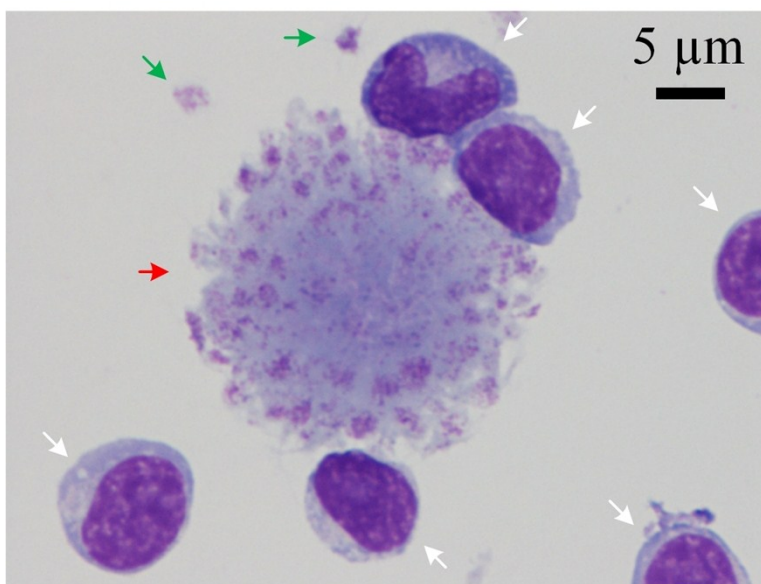


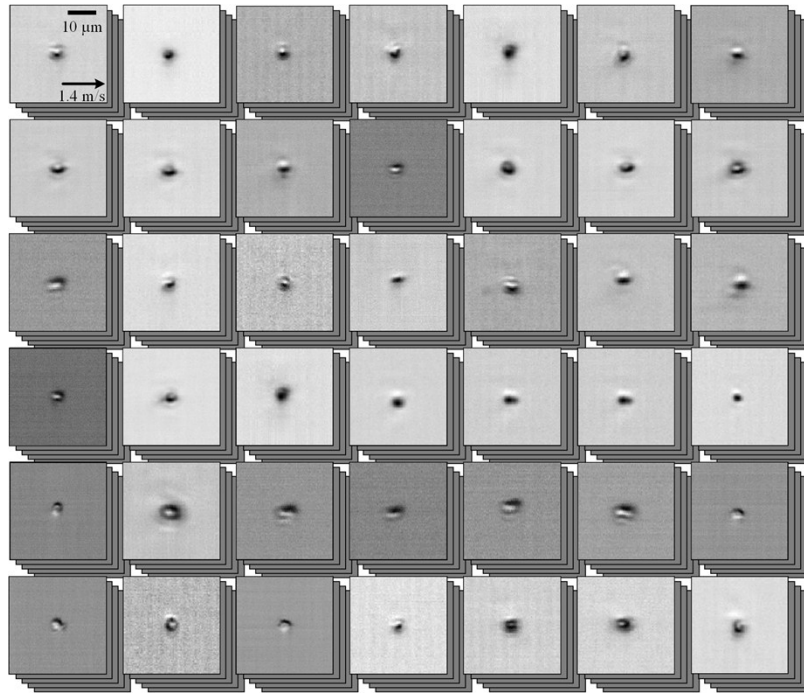
Supplementary Information



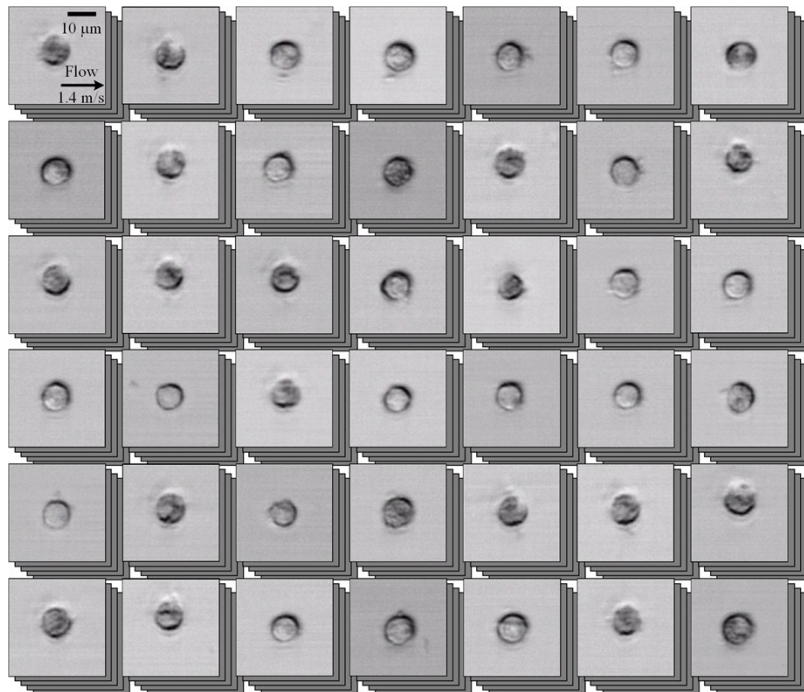
Supplementary Figure 1. Bright-field images of a single platelet, aggregated platelets, and white blood cells under a conventional microscope. The white blood cells were stained with May Giemsa. The black arrowheads in the images indicate the locations of these cells.



Supplementary Figure 2. Bright-field image of a mixture of single platelets, aggregated platelets, and white blood cells. The blood sample was stained with May Giemsa. The green, red, and white arrowheads in the image indicate the locations of single platelets, aggregated platelets, and white blood cells, respectively.



Supplementary Figure 3. Image library of platelets detected by the optofluidic time-stretch microscope. The total number of images that show single platelets is 920. The images were recorded at a flow speed of 1.4 m/s, corresponding to a high throughput of 10,000 cells/s.



Supplementary Figure 4. Image library of white blood cells detected by the optofluidic time-stretch microscope. The total number of images that show white blood cells is 1,540. The images were recorded at a flow speed of 1.4 m/s, corresponding to a high throughput of 10,000 cells/s.