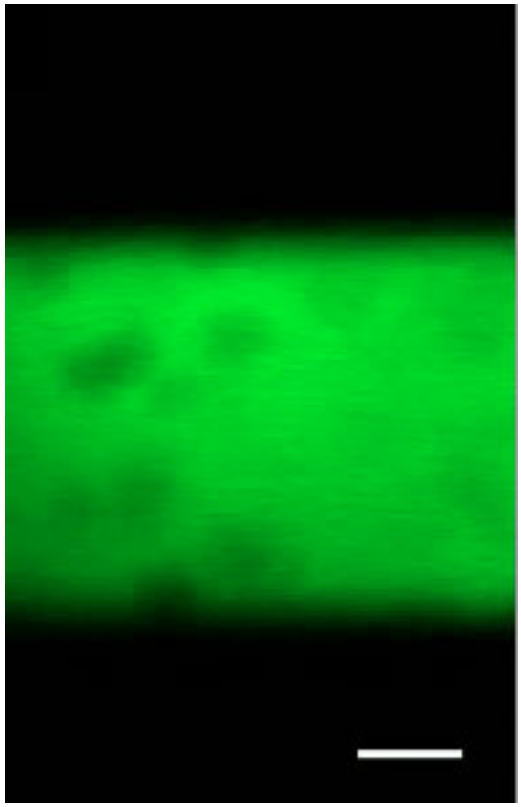

Supplementary Movie 1. Altering sample flow rate to vary stream widths. Five drops of fluorescein dye was added to 20 mL of deionized water and loaded into the sample syringe. This solution was pumped through the MPFC to determine experimental stream widths while varying the ratio between sheath and sample volumetric flow rates α. The volumetric flow rate for sheath was held constant at 600 μL/min, while the sample volumetric flow rate was decreased from 300 to 30 μL/min (α = 2 to 20, stream width ranges from 200 to 1,600 μm). This shows that laminar flow maintains the sample stream within a confined area under the microscope objective. This also demonstrates that a wide range stream width can be easily accommodated, permitting a variety particle sizes to be analyzed on the MPFC. Fluid flow is from left to right, and the images were captured at a rate of 1 frame/second with a 10$\times$ lens (1.2 mm WD, 0.75 NA). The movie was created at 6 frames/second with the scale bar representing 200 μm.