Online supplemental material:

Video 1: real-time video taken by phase contrast microscopy showing rolling and adhesion of leukocytes on LPS-treated HUVECs cultured on cover slip under flow conditions.

Video 2: real-time video taken by phase contrast microscopy showing movement of *C. neoformans* on LPS-treated HUVECs cultured on cover slip under flow condition without rolling and adhesion.

Video 3: real-time video taken by phase contrast microscopy showing movement of *C. neoformans* on HMBEC cultured on cover slip under flow condition without rolling and adhesion.

Video 4: real-time video taken by conventional IVM showing *C. neoformans* in post-capillary of the brain after injection of the yeast cells.

Video 5: real-time video taken by conventional IVM showing a sudden stop of *C. neoformans* in capillary bed of the brain 5 min after injection of the yeast cells.

Video 6: Video taken by spinning disk confocal IVM showing a sudden stop of acapsular (Cap67, red) and encapsulated (B3501, green) *C. neoformans* in the capillary bed of the brain 15 min after injection of a mixture of equal number of both yeasts. Elapsed time is shown at the top right. The time lapse was recorded at 3.17 fps and exported to video at 5fps.

Video 7: Real-time videos taken by conventional IVM showing a sudden stop of polystyrene microspheres in capillary bed of the brain after injection of microspheres. Experimental conditions were as described in materials and methods.

Video 8: real-time video taken by conventional IVM showing a sudden stop of *Saccharomyces cerevasiae* in the capillary bed of the brain after injection of the yeast cells.

Video 9: real-time video taken by conventional IVM showing a sudden stop of *C. neoformans* in capillary bed of the cremaster muscle.

Video 10: a 3D reconstructive movie of figure 4B showing crossing of the capillary (green) by *C. neoformans* (red).