## **Supporting Information**

## Bioinspired Microfluidic Assay for In Vitro Modeling of Leukocyte-Endothelium Interactions

Giuseppina Lamberti<sup>1</sup>, Balabhaskar Prabhakarpandian<sup>2</sup>, Charles Garson<sup>2</sup>, Ashley Smith<sup>2</sup>, Kapil Pant<sup>2</sup>, Bin Wang<sup>1,3</sup>, Mohammad F. Kiani<sup>1,4</sup>

email: mkiani@temple.edu

## **Table of Contents**

| Video clip S-1 | S-2 |
|----------------|-----|
| Video clip S-2 | S-3 |

<sup>&</sup>lt;sup>1</sup> Department of Mechanical Engineering, Temple University, 1947 N. 12th street, Philadelphia, PA 19122

<sup>&</sup>lt;sup>2</sup> Biomedical Technology, CFD Research Corporation, 701 McMillian Way, Huntsville, AL 35806

<sup>&</sup>lt;sup>3</sup> Department of Biomedical Engineering, Widener University, One University Place, Chester, PA 19013-5792

<sup>&</sup>lt;sup>4</sup> Department of Radiation Oncology, Temple University School of Medicine, 3500 N. Broad Street, Philadelphia, PA 19140

**Video clip S-1:** During the first minute after flowing into the vascular channels, neutrophils display rolling, adhesion and migrating behavior on a monolayer of activated endothelial cells in the vascular channels of the assay similar to those observed *in vivo*.

**Video clip S-2:** Time lapse images (every 5 min for 60 min and then every 15 min for the next 60 min) of the movement of neutrophils from the vascular channels to the tissue compartment of the fluidic assay.