

# Ibidi flow system immune cell adhesion assay

*Commonly used acronym: Adhesion assay*

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## Organisation

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**Department** Department of Immunology and Infection

**Country** Belgium

**Geographical Area** Flemish Region

## SCOPE OF THE METHOD

<b>The Method relates to</b>	Animal health, Human health
<b>The Method is situated in</b>	Basic Research, Translational - Applied Research
<b>Type of method</b>	In vitro - Ex vivo

## DESCRIPTION

### Method keywords

adhesion

endothelial cells

migration

shear stress

blood brain barrier

blood flow

### Scientific area keywords

immune cell migration  
human white blood cells  
blood brain barrier  
multiple sclerosis  
cell adhesion  
T lymphocyte  
blood vessel

## Method description

Using an *in vitro* flow system adhesion assay, immune cell adhesion to (blood-brain barrier) endothelial cells can be quantified under physiological blood flow conditions. Endothelial cells can be treated with inflammatory cytokines or therapeutic antibodies to mimic inflammatory diseases. Immune cell adhesion (including rolling, probing or crawling) can be visualized using live-cell imaging.

## Lab equipment

Ibidi pump system and slides to mimic physiological blood flow

## Method status

Published in peer reviewed journal

## PROS, CONS & FUTURE POTENTIAL

### Advantages

- Detailed analysis of migration phenotype (rolling, crawling, probing)
- Compare different genotypes or treatment conditions

### Challenges

- Optimization required
- Time consuming data acquisition and analysis

## REFERENCES, ASSOCIATED DOCUMENTS AND OTHER INFORMATION

### Links

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Oncostatin M triggers



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Immune cell adhesion by compromising blood brain barrier in...

