Ibidi flow system immune cell adhesion assay

Commonly used acronym: *Adhesion assay*

Created on: 31-05-2023 - Last modified on: 06-06-2023

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Organisation

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SCOPE OF THE METHOD

The Method relates to	Animal health, Human health
The Method is situated in	Basic Research, Translational - Applied Research
Type of method	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

Oncostatin M triggers brain inflammation by compromising blood-brain barrier in…

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