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Open **2-3 July 2026** Symposium

Maastricht
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Human iPSC-derived glial cells for functional inflammatory assays and toxicity testing

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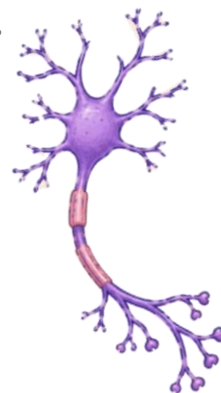
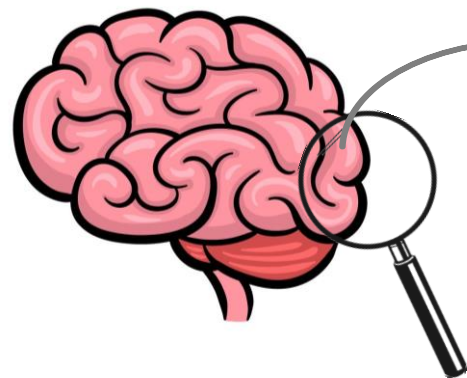
Project: RISK-HUNT3R



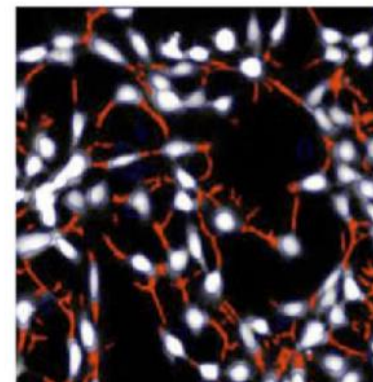
How to assess neurotoxicity?

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Different assays to detect toxicity in neurons

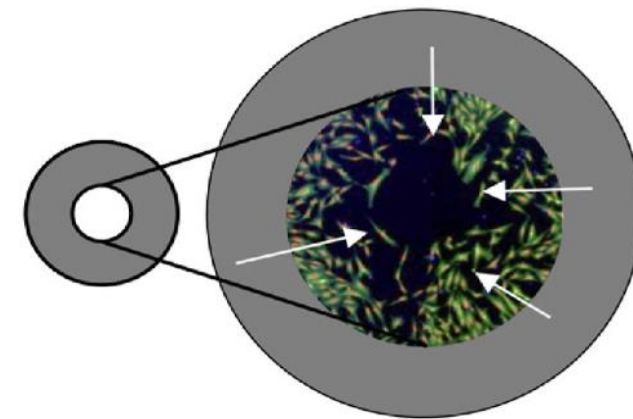


Neurite growth



Adapted from Blum et al., 2023

Cell migration



Main brain cell types

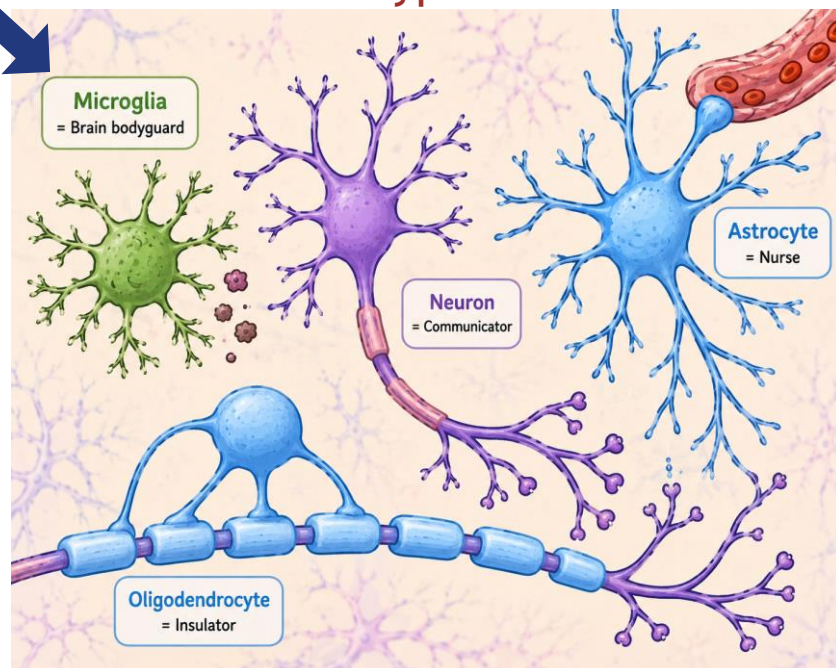


Image generated with ChatGPT

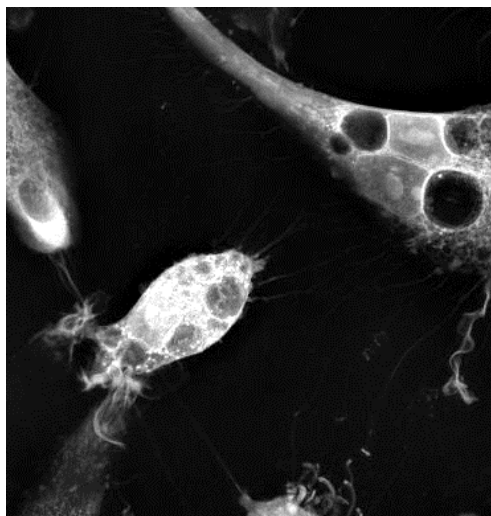
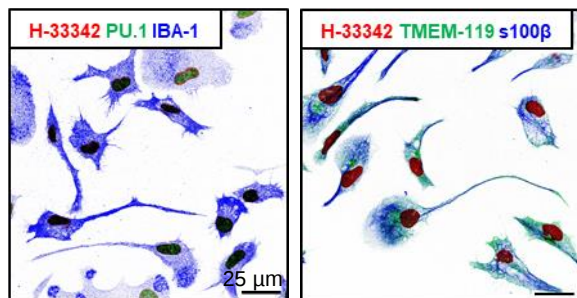
Microglia = brain macrophages → main inflammatory cells

Missing endpoint: Inflammation

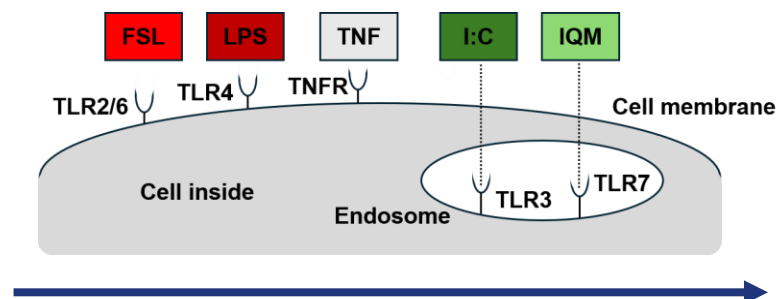
Development of an assay to detect inflammatory activation and how it can be altered by chemicals



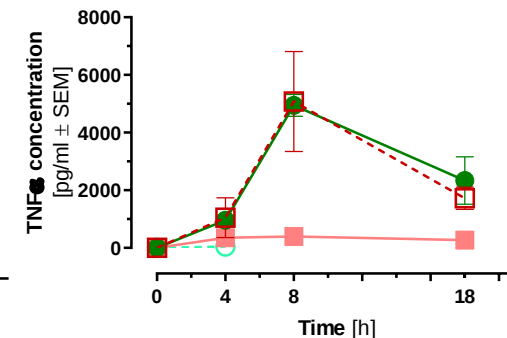
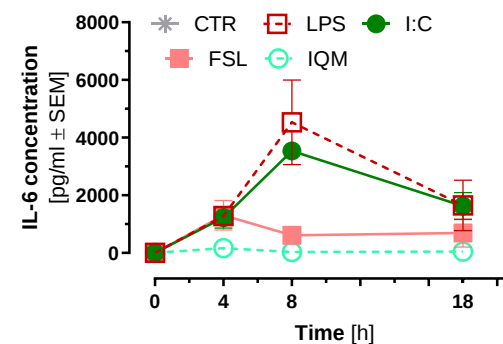
Microglia markers



Inflammatory stimuli



Cytokine release



Wolfbeisz et al., 2025

Microglia can be inflammatory activated



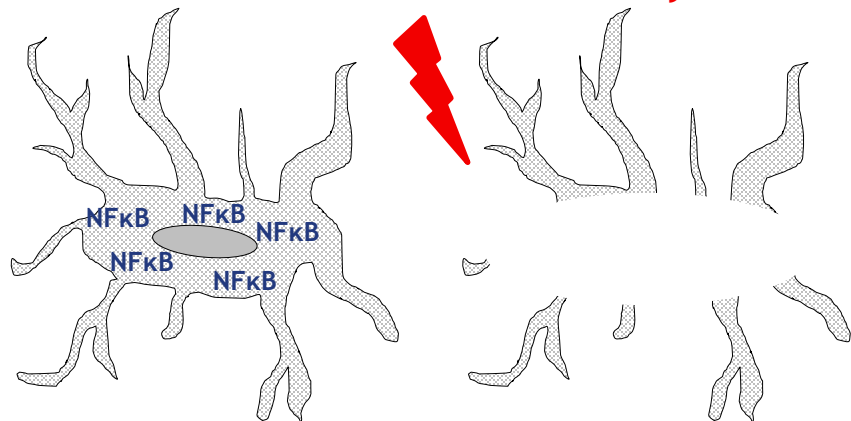


How can we capture inflammatory activation?

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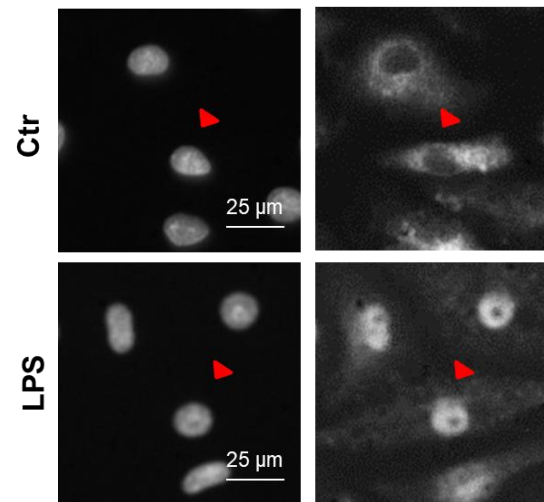
NF κ B translocation

Inflammatory stimulus

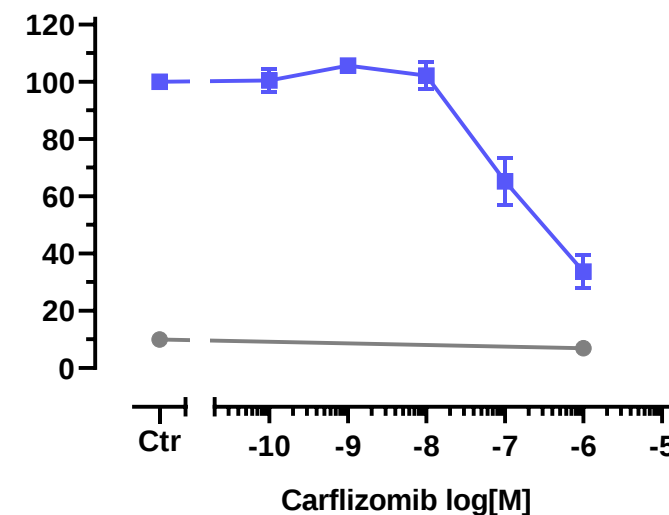
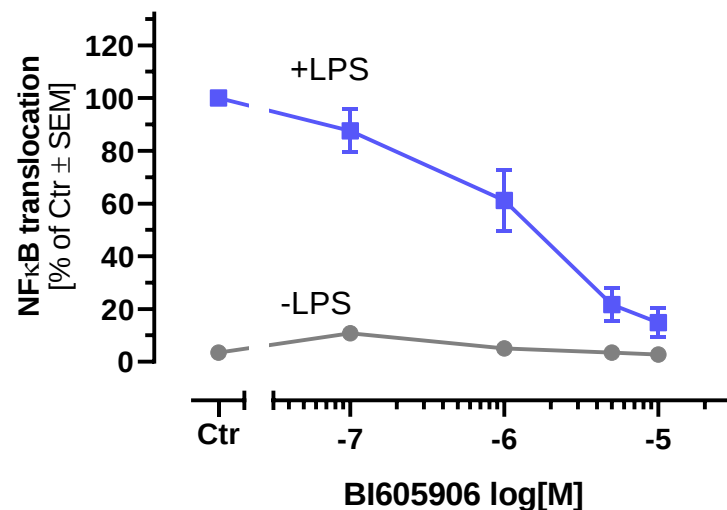
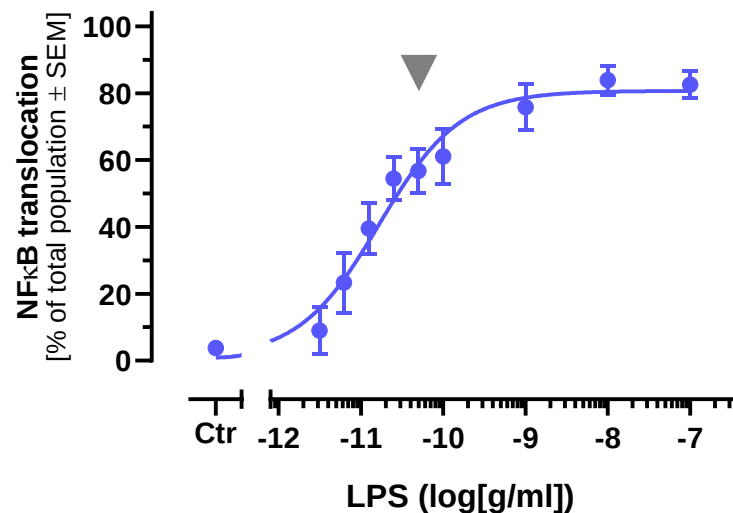
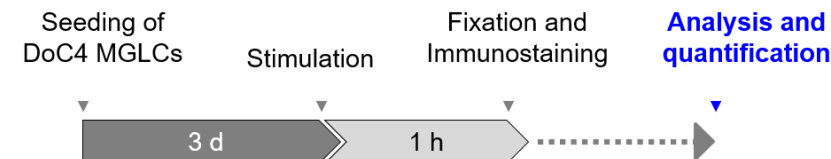


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NF κ B



Assay scheme



The NF κ B translocation assay can capture chemical modulation of inflammatory processes





Acknowledgements

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**RISK [:::]
HUNT3R**

