Primary oligodendrocyte precursor cell culture

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SCOPE OF THE METHOD

The Method relates to	Animal health, Human health
The Method is situated in	Basic Research
Type of method	In vitro - Ex vivo
This method makes use of	Animal derived cells / tissues / organs
Species from which cells/tissues/organs are derived	Mus Musculus
Type of cells/tissues/organs	Brain (cortex)

DESCRIPTION

Method keywords

oligodendrocyte

shakeoff
cell culture
isolation

Scientific area keywords

basic research
fundamental research
differentiation
neuroscience

Method description

This method describes the steps from a living mouse to a single cell solution of primary oligodendrocyte precursor cells.

Lab equipment

Method status

Internally validated

PROS, CONS & FUTURE POTENTIAL

Advantages

Primary cultures give rise to a condition more similar although not identical to the *in vivo* situation when compared to cell line experiments ;
Methodoligcally feasible ;
Highly reproducible ;
Astrocytes can be simultaneously isolated ;

Oligodendrogenesis can be evaluated purely.

Challenges

Interspecies differences ;
Terminal experiment for the lab animal ;
Time consumable (2 weeks to reach an OPC culture, additional time required to reach oligodendrocyte stage).

Future & Other applications

The protocol can be adapted and used in other animal species.

REFERENCES, ASSOCIATED DOCUMENTS AND OTHER INFORMATION

Associated documents

Primary OPC isolation mouse .docx

PARTNERS AND COLLABORATIONS

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Name of the organisation University of Hasselt (UHasselt)
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