Accepted Manuscript

Aβ-oligomer uptake and the resulting inflammatory response in adult human astrocytes are precluded by an anti-Aβ single chain variable fragment in combination with an apoE mimetic peptide

Neuros Genee

Laia Montoliu-Gaya, Sandra D. Mulder, Maaike A.C. Herrebout, Johannes C. Baayen, Sandra Villegas, Robert Veerhuis

PII: S1044-7431(18)30003-4

DOI: doi:10.1016/j.mcn.2018.03.015

Reference: YMCNE 3302

To appear in: Molecular and Cellular Neuroscience

Received date: 5 January 2018 Revised date: 30 March 2018 Accepted date: 31 March 2018

Please cite this article as: Laia Montoliu-Gaya, Sandra D. Mulder, Maaike A.C. Herrebout, Johannes C. Baayen, Sandra Villegas, Robert Veerhuis , A β -oligomer uptake and the resulting inflammatory response in adult human astrocytes are precluded by an anti-A β single chain variable fragment in combination with an apoE mimetic peptide. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Ymcne(2017), doi:10.1016/j.mcn.2018.03.015

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

A β -oligomer uptake and the resulting inflammatory response in adult human astrocytes are precluded by an anti-A β single chain variable fragment in combination with an apoE mimetic peptide

Laia Montoliu-Gaya¹, Sandra D. Mulder², Maaike A.C. Herrebout², Johannes C. Baayen³, Sandra Villegas¹* and Robert Veerhuis^{2,4}*.

- 1 Departament de Bioquímica i Biologia Molecular, Facultat de Biociències, Universitat Autònoma de Barcelona, 08193 Bellaterra, Barcelona, Spain.
- 2 Clinical Chemistry Department, Amsterdam Neuroscience, VU University medical center, De Boelelaan 1117, 1081 HV Amsterdam, The Netherlands.
- 3 Neurosurgery Department, Amsterdam Neuroscience, VU University medical center, Amsterdam, The Netherlands.
- 4 Psychiatry Department, Amsterdam Neuroscience, VU University medical center, Amsterdam, The Netherlands.

Running title:

ScFv-h3D6 and ApoE-MP combined block A β oligomer uptake as well as A β -induced astrocyte activation.

Highlights:

- ScFv-h3D6 inhibits $A\beta$ -oligomer uptake by astrocytes, similar to full-length mAb-h3D6
- ApoE, apoJ, as well as apoE mimetic peptide inhibit Aβ oligomer uptake by astrocytes
- apoE-MP inhibits $A\beta$ oligomer-induced IL-6 and MCP-1 release by astrocytes.
- ApoJ acts opposite to apoE and apoE-MP on $A\beta$ oligomer-induced IL-6 and MCP-1 release.
- ScFv-h3D6 and apoE-MP combined block A β -oligomer uptake and human astrocyte activation.

^{*}Co-corresponding authors. sandra.villegas@uab.cat, r.veerhuis@vumc.nl.

Download English Version:

https://daneshyari.com/en/article/8478357

Download Persian Version:

https://daneshyari.com/article/8478357

<u>Daneshyari.com</u>