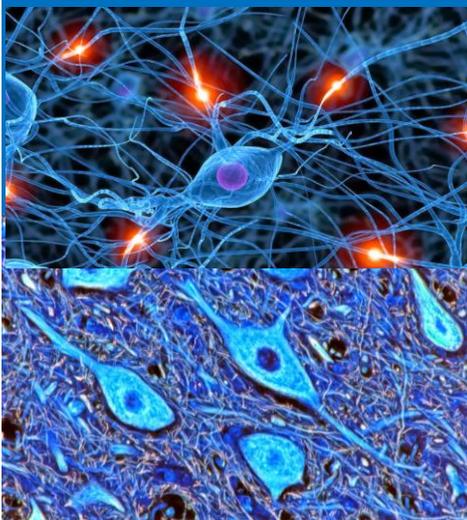


# NEWSLETTER: INTERREG PROJECT 'MEMORIES'

Issue 4, 01.2020

## RECENT PROGRESS:

1. Neurons derived from patient iPSCs: The resulting cell models display biochemical signatures resembling neurodegeneration;
2. Search for differentiation: Differentiation between healthy, sporadic Alzheimer's and familial Alzheimer's, as well as before and after exposure of the cell models to external risk factors were observed;
3. Search for potential biomarkers: More in depth analysis of the genetic differences is ongoing.



## DECEMBER 16<sup>TH</sup>, 2019: 2<sup>ND</sup> SYMPOSIUM OF THE INTERREG PROJECT 'MEMORIES'.

The symposium took place in the very attractive location called *Promotie Zaal* at the KULeuven which breaths the ancient atmosphere of scientific lectures and thesis defenses over the past centuries.

During the scientific morning session researchers from the universities of Hasselt, Ghent, Brussels, Leuven and Antwerp provided an update on the current status of Alzheimer's research in general and within our project. Our understanding of the mechanisms driving the development of Alzheimer's disease is growing and may result in the discovery of diagnostics and therapeutics.

The afternoon session targeted the general public. Kim Plasman (Stichting Alzheimer Onderzoek Belgium) Prof. Frans Verhey (University Maastricht), Prof. Sebastiaan Engelborghs (Universiteit of Antwerp) and Prof. Jos Kleinjans (University Maastricht) gave their more general overview about the current knowledge of this neurodegenerative disease.

The Dutch journalist and publicist Hugo Borst closed the Symposium with sharing his personal experiences with his mother, who suffered from Alzheimer's, reading touching passages from his latest book "Ach moedertje".




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*"Being active, eating and drinking healthy, using your brain, getting enough sleep, taking good care of your teeth even: Is it all about neuro-inflammation?"*

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## 'MEMORIES' IS HITTING THE ROAD

### 1. 29<sup>th</sup> Alzheimer Europe Conference, The Hague, Netherlands

**(23-25.10.2019): Making valuable connections.** The project was presented with a poster (PO.20.11) entitled: *Application of toxicologic approaches to develop a test for diagnosis of Alzheimer's disease before it strikes*. The poster attracted attention primarily because it showed, based on the available literature, the plausibility that modifiable risk factors (e.g. drugs, chemicals, metals) are able to push an aging brain further towards degeneration.



### 2. 11<sup>th</sup> World Congress on Alternatives and Animal Use in the Life Sciences., Maastricht, Netherlands (23-

**27.08.2020).** The Workshop *Biomarker-based in vitro tools targeting early Alzheimer's in a human relevant fashion* was accepted.



#### PROGRAMME:

- Erwin L Roggen (ToxGenSolutions, NL): Objectives of the project 'Herinneringen'
- Sebastiaan Engelborghs (UAntwerpen, B): The current translational gap: problems and solutions
- Carl Borrebaeck (ULund, S): The impact of biomarkers on drug development in the area of Oncology
- Hüseyin FIRAT (FIRALIS, F): Challenges, strengths and limitations
- Jacco Briedé (UMaastricht, NL): Nonanimal approaches for mapping of processes and acquiring knowledge (WP3), and their relevance for humans (WP5)

Looking forward to meeting you there ...

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## Project partners



### Project expertise

#### **Icometrix** (<https://icometrix.com>)

- Supporting prospective evaluation of selected biomarker signatures with Magnetic Resonance Imaging (MRI) for objective quantification of relevant brain structures in individual AD patients.

#### **Stem Cell Institute Leuven, Katholieke Universiteit Leuven** (<https://www.kuleuven.be/samenwerking/scil>)

- Providing the necessary iPSC expertise required for the identification and handling of relevant human iPSC lines, as well as production and quality control of iPSC-derived human neuron cell models for testing.

#### **reMYND** (<https://www.remynd.com>)

- Application of the genetic signatures to validate proprietary AD mouse models and to improve the assessment of *in-vivo* characteristics, pharmacokinetics, pharmacodynamics and the effects of experimental treatments.

#### **ToxGenSolutions** ([www.toxgensolutions.eu](http://www.toxgensolutions.eu))

- Valorisation of (epi-)genetic biomarker signatures as novel methods for diagnosis, novel tools for follow-up of disease progression or response to treatment in humans, and novel drug development.

#### **Department of Biomedical Science, University of Antwerp** (<https://www.uantwerpen.be/nl/faculteiten/faculteit-fbd/onderzoek/departementen-en-ond/dept-biomedische-wetenschappen>)

- Supporting evaluation of emerging biomarker signatures with well-characterized clinical samples (retrospective evaluation), and study cohorts (prospective evaluation).

#### **Department of ToxicGenomics, Maastricht University** (<https://toxicogenomics-um.nl>)

Providing the required expertise in (epi-)genetic approaches for the identification of early-AD specific peripheral biomarker signatures.

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## The INTERREG project “Memories” is made possible with co-financing from the following parties:



Contact us at <https://herinneringen.eu>

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