

CONSORTIUM ISSUES

Detecting early changes related to Alzheimer's disease in adults with Down Syndrome can be difficult due to the presence of intellectual disability and other health issues.

The diagnosis of Alzheimer's disease in persons with Down Syndrome requires appropriate evaluation tools and a specialized team with significant experience.

In order to conduct research projects, the investigating centers need to work hand in hand and harmonize their protocols so that data can be compared and combined.

This consortium also collaborates with other research centers all over the world.

Methods :

- **Harmonizing diagnosis procedures** (in clinical investigations, neuropsychology, biochemistry, blood and CSF, imaging)
 - Defining **common criteria for diagnosis of Alzheimer's disease**
 - Diversifying and multiplying studies thanks to the **sharing of expertises** : cognitive evaluation, clinical evaluation, identification of biomarkers in biochemistry, genetics and imaging
 - **Developing** publications and network
- For a **unique European cohort** (over 1 000 patients) in order to develop clinical trials.

ONGOING PROJECTS

- **Genetic markers** : large-scale genotyping of persons with Down Syndrome in order to identify risk or protective factors of Alzheimer's disease
- **Harmonisation of cognitive evaluation tools**
- **Biological markers** : e.g neurofilaments light analysis in plasma
- **Sleep evaluation** : impact of Alzheimer's disease on sleep of adults with Down Syndrome



CONTACT

contact@horizon21.org

Andre STRYDOM : andre.strydom@kcl.ac.uk

Juan FORTEA ORMAECHEA : jfortea@santpau.cat

Anne-Sophie REBILLAT : annesophie.rebillat@institutlejeune.org

Mary MC CARRON : mccarrm@tcd.ie

Tonnie COPPUS : tonnie.Coppus@radboudumc.nl

Johannes LEVIN : johannes.Levin@med.uni-muenchen.de

Shahid ZAMAN : shz10@medschl.cam.ac.uk

Ellen MELBYE LANGBALLE : eml@aldringoghelse.no

Henrik ZETTERBERG : henrik.zetterberg@clinchem.gu.se

Agneta NORDBERG : agneta.k.nordberg@ki.se

 horizon-21.org



A European project to stop Alzheimer's before it starts

Down syndrome and Alzheimer's disease





HORIZON 21

The Horizon 21 Consortium was born from a collaboration between clinicians from various European centres dedicated to adults and seniors with Down syndrome (DS).

This program aims at **identifying factors that influence Alzheimer's disease development in persons with DS, and developing clinical trials in order to prevent and/or slow the disease in this population.**

ALZHEIMER'S DISEASE AND DOWN SYNDROME

People with DS are at a higher risk of developing Alzheimer's disease precociously. This is because chromosome 21 carries the APP gene which is the precursor of beta-amyloid protein. Beta-amyloid accumulates in the brain of people with Alzheimer's disease and in DS an excess of this protein is produced.

In the DS population Alzheimer's disease onset occurs around the age of 55. After the age of 65 the proportion of people suffering from Alzheimer's disease exceed 80%. In comparison it is less than 4% in the general population.

HORIZON 21 RESEARCH CENTRES ALL OVER EUROPE

The Horizon 21 consortium gathers 10 European centers.



Tonnie COPPUS
Radboud university medical center, Nijmegen



Shahid ZAMAN
Disabilities Research Group
Department of Psychiatry,
University of Cambridge



Mary MC CARRON
Trinity Centre for Ageing and
Intellectual Disability, Trinity
College Dublin




Andre STRYDOM
Institute of Psychiatry, Psychology & Neuroscience, Kings
College London



Anne-Sophie REBILLAT
Jérôme Lejeune
Institute
Outpatient geriatric clinic for
people with Down syndrome,
Paris




Juan FORTEA
Hospital de la Santa Creu i
Sant Pau, Fundació Catalana
Síndrome de Down,
Barcelona



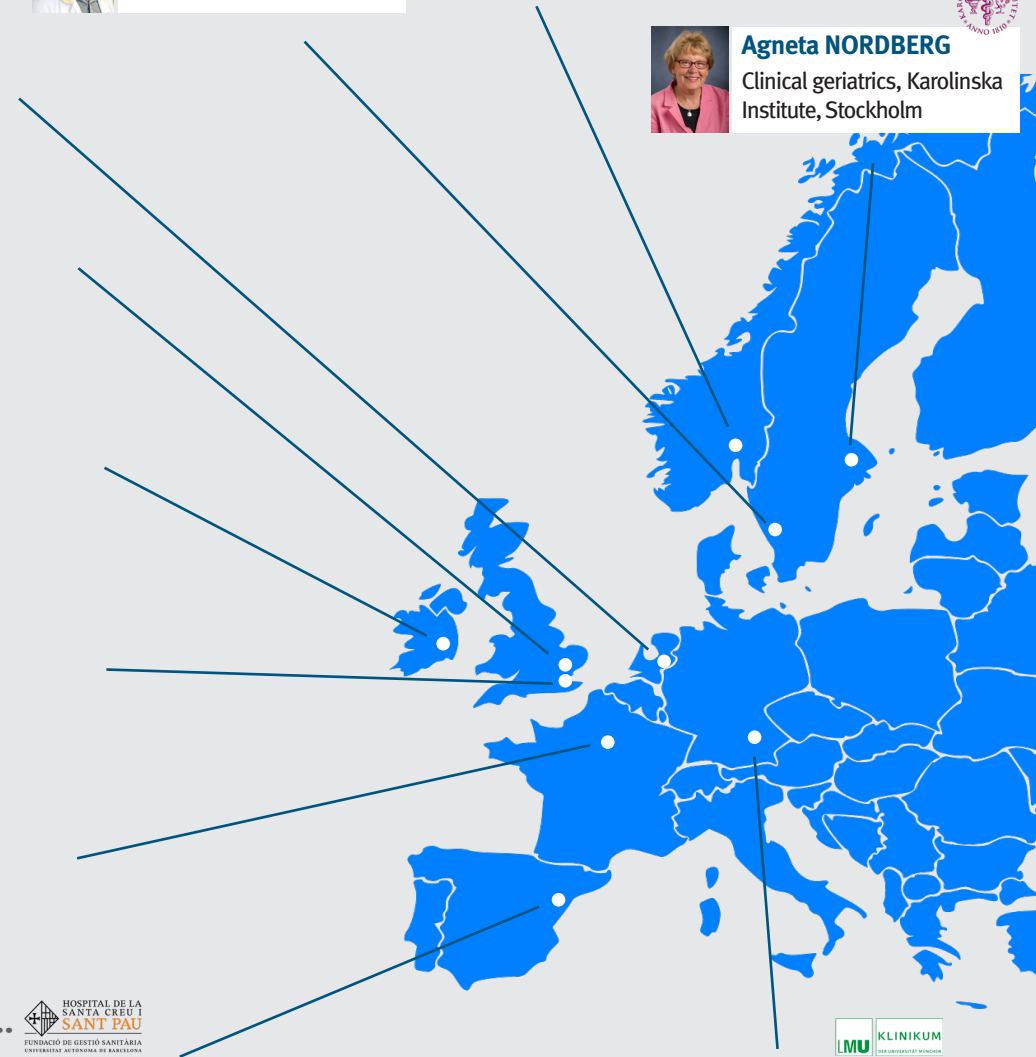
Henrik ZETTERBERG
Institute of Neuroscience
and Physiology, Göteborg



Ellen MELBYE LANGBALLE
Ageing and Health Norwegian
National Advisory Unit, Oslo



Agneta NORDBERG
Clinical geriatrics, Karolinska
Institute, Stockholm




Johannes LEVIN
Department of Neurology,
University Hospital,
LMU Munich

