European research collaboration in Alzheimer's disease and beyond

A series of four parallel sessions introducing you to the state of the art in European neurodegeneration research

Alzheimer Europe Conference
The Hague, Netherlands

Neuronet event
24-25 October 2019, Room Yangtze2

Neuronet
Efficiently Networking European Neurodegeneration Research

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SESSIONS

ROOM YANGTZE2

Thursday, 24 October

10.30-12.00

PARALLEL SESSION P5
EUROPEAN RESEARCH COLLABORATION IN ALZHEIMER'S DISEASE AND BEYOND
Chairperson: ***Lennert Steukers (BE)***

P5.1 Elisabetta Vaudano
P5.2 Carlos Díaz
P5.3 Ana Díaz

14.00-15.30

PARALLEL SESSION P13
FROM RISK TO DEMENTIA – UNDERSTANDING DISEASE PROGRESSION AND ITS CAUSES
Chairperson: ***Craig Ritchie (UK)***

P13.1 María Eugenia Sáez
P13.2 Angela Hodges
P13.3 Martin Hofmann-Apitius

Friday, 25 October

10.30-12.00

PARALLEL SESSION P21
IMPROVING DATA ACCESS AND THE DEVELOPMENT OF PREDICTIVE MODELS
Chairperson: ***Jacoline Bouvy (UK)***

P21.1 Malcolm Macleod
P21.2 Pieter Jelle Visser
P21.3 John Gallacher
P21.4 Dominique Lesuisse

14.00-15.30

PARALLEL SESSION P29
DIAGNOSIS, PATIENT ENGAGEMENT AND TRIALS
Chairperson: ***Carlos Díaz (ES)***

P29.1 José Luis Molinuevo
P29.2 Craig Ritchie
P29.3 Mercè Boada
P29.4 Dag Aarsland

WELCOME

Thank you for joining us in The Hague for a series of sessions focussed on European research collaboration in Alzheimer's disease and beyond. This yearly event brings you insights from research projects that have been launched by the Innovative Medicines Initiative (IMI), Europe's biggest public-private partnership in the life sciences.

As a partnership between the European Union and the European pharmaceutical industry, IMI facilitates open collaboration in research to advance the development of, and accelerate patient access to, personalised medicines for the health and wellbeing of all, especially in areas of unmet medical need such as dementia and Alzheimer's disease.

Our Neuronet programme will introduce the IMI and its neurodegeneration portfolio. As part of this, we will showcase projects that want to improve our understanding of disease progression and its causes.

Furthermore, you will have a chance to learn about European projects that aim to improve data access and the development of predictive models for disease progression. Last but not least, you will learn about research collaboration on diagnosis, patient engagement and clinical trials.

LENNERT STEUKERS
NEURONET PROJECT LEADER
Manager, Clinical Scientist, Janssen Pharmaceutica NV

CARLOS DÍAZ
NEURONET PROJECT COORDINATOR
CEO, SYNAPSE Research Management Partners

European research collaboration in Alzheimer's disease and beyond

Chairperson: ***Lennert Steukers (Belgium)***

P5.1
ELISABETTA VAUDANO
THE INNOVATIVE MEDICINES INITIATIVE AND ITS NEURODEGENERATION PORTFOLIO

The Innovative Medicines Initiative (IMI) works towards breaking silos across stakeholders to work together on a common agenda to tackle the Alzheimer's disease (AD) challenge.

IMI has invested significantly in a broad portfolio of projects on neurodegeneration with a specific focus on AD. We are now starting to harvest the first results from these initiatives.

In the IMI projects, patients are at the centre, as full partners in research. In the IMI neurodegeneration projects individuals at risk for AD, people with dementia and organisations representing their voice play a very valuable role to ensure meaningful outputs and outreach to the citizens for full societal impact.

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P5.2
CARLOS DÍAZ
NEURONET EFFICIENTLY NETWORKING EUROPEAN NEURODEGENERATION RESEARCH

Neuronet is the IMI Coordination and Support Action aiming to collect and analyse information and assets from the various Neurodegenerative Disorders (ND) initiatives supported by IMI, in order to accelerate the development and implementation of novel therapeutics in this area across Europe through enhancing IMI's ND knowledge.

The main objective of Neuronet is to set up an efficient platform to boost synergy and collaboration across the IMI projects of the ND portfolio.

This will assist in identifying gaps, multiplying the portfolio's impact, enhancing its visibility and facilitating dovetailing with related initiatives in Europe and worldwide.

P5.3
ANA DÍAZ
PATIENT AND PUBLIC INVOLVEMENT IN THE IMI RESEARCH PORTFOLIO

Patient organisations can play an important role in IMI projects by ensuring that the voice of "patients" is reflected in the project.

Patient and Public Involvement (PPI) should be conducted in such a way that it promotes the meaningful involvement of people affected by dementia and represents a true partnership between them and the researchers.

Examples of the PPI work carried out by AE, as well as other recent work carried out by other initiates to developed models for patient engagement, will be presented.

From risk to dementia – Understanding disease progression and its causes

Chairperson: ***Craig Ritchie (United Kingdom)***

P13.1
MARIA SÁEZ
ADAPTED
ALZHEIMER'S DISEASE APOLIPOPROTEIN PATHOLOGY FOR TREATMENT ELUCIDATION AND DEVELOPMENT

The ADAPTED project is a major initiative to investigate the APOE gene which is an area of Alzheimer's disease (AD) research which has previously received little attention.

Carrying the genetic variant known as APOE ϵ4 is the highest genetic risk factor for developing Alzheimer's disease, but little is known about precisely why this is.

ADAPTED uses the combined expertise of researchers across different fields to systematically investigate APOE biology, and will provide the research community with a new generation of human cell-based tools to investigate the causes and progression of the disease.

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P13.2
ANGELA HODGES
PHAGO
TARGETING TREM2 AND CD33 OF PHAGOCYTES FOR TREATMENT OF ALZHEIMER'S DISEASE

PHAGO is an innovative research project devoted to the development of immunomodulatory therapies for Alzheimer's disease (AD). The project aims to:

- Gain profound knowledge about the role of the innate immune receptors TREM2 and CD33 for AD;
- Develop novel and innovative tools, which might help to pave the way for new therapeutic strategies for AD;
- Develop a knowledge base to better understand the contribution of innate immunity in different phases of AD.

The new research consortium unites 9 pharmaceutical companies, 3 small biotechnology enterprises and 8 public research organisations from 9 European countries and the US, under the leadership of Janssen Pharmaceutica NV (Belgium) and the University Hospital of Bonn (Germany).

P13.3
MARTIN HOFMANN-APITIUS
AETIONOMY
DISEASE MECHANISMS FOR PATIENT SUBGROUP IDENTIFICATION AND DISEASE PROGRESSION MODELLING

Today, diseases are defined largely on the basis of symptoms, yet while two patients may share the same diagnosis, the underlying causes of their symptoms may be very different.

AETIONOMY aimed to pave the way towards a new approach to the classification of neurodegenerative diseases, particularly Alzheimer's and Parkinson's diseases, thereby improving drug development and increasing patients' chances of receiving a treatment that works for them.

In this pursuit, the project developed two key tools:

- The AETIONOMY Knowledge Base, a unification point of the knowledge and data management on neurodegeneration with a main focus on Alzheimer's and Parkinson's diseases.
- A mechanistic interpretation of multiscale, multimodal clinical data, representing essential pathophysiology mechanisms of neurodegenerative diseases (NeuroMMSig).

Improving data access and the development of predictive models

Chairperson: ***Jacoline Bouvy (United Kingdom)***

P21.1
MALCOLM MACLEOD
EQIPD
DATA QUALITY IN PRECLINICAL RESEARCH

Developing drugs for Alzheimer's disease has proved to be exceptionally challenging.

Increasing the rigour and efficiency of preclinical research may give improved prospects for translational success.

The EQIPD consortium brings together academic and industry researchers to develop a framework for improving research quality.

P21.2
PIETER JELLE VISSER
EMIF
EUROPEAN MEDICAL INFORMATION FRAMEWORK

The EMIF project aimed to develop a common information framework that links up and facilitates access to diverse medical and research data sources.

This opened up new avenues of research for scientists.

The project focussed initially on questions relating to obesity and Alzheimer's disease to provide a focus and guidance for the development of the framework.

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P21.3
JOHN GALLACHER
ROADMAP
REAL WORLD OUTCOMES ACROSS THE AD SPECTRUM

ROADMAP has probably been the most detailed and comprehensive evaluation of real-world evidence in Alzheimer's disease that has ever been conducted.

ROADMAP has demonstrated the ability of academic, industry, patients and regulatory partners to work together on a highly complex, widely distributed, and tightly time-constrained project.

The project released an online tool, a three-dimensional 'heat map' that allows users to visualise how different data sources capture different Alzheimer's disease outcomes at different disease stages.

P21.4
DOMINIQUE LESUISSE
IM2PACT
DISCOVERY OF BLOOD-BRAIN BARRIER TARGETS AND TRANSPORT PATHWAYS TO TREAT NEURO/METABOLIC DISEASES – A PUBLIC-PRIVATE PARTNERSHIP

The overall aim is to further the understanding of the blood–brain barrier in health and disease states towards the development of innovative brain delivery systems.

IM2PACT will focus especially for biopharmaceuticals (e.g., peptides, antibodies, etc.).

The project will also work on the identification of novel disease drug targets in Alzheimer's disease, multiple sclerosis as well as metabolic disease.

Diagnosis, patient engagement and trials

Chairperson: ***Carlos Díaz (Spain)***

P29.1
JOSÉ LUIS MOLINUEVO
AMYPAD
AMYLOID IMAGING TO PREVENT ALZHEIMER'S DISEASE

Current research efforts place the accumulation of the ß-amyloid plaques in the brain, which could be visualised by a nuclear medicine imaging tool called PET (Positron Emission Tomography), as the earliest detectable change in the path towards Alzheimer's disease.

The AMYPAD project is a collaborative European research initiative investigating the value of ß-amyloid PET imaging as a diagnostic and therapeutic marker for Alzheimer's disease.

AMYPAD has three major goals which will be achieved by two major studies (for early diagnosis, to understand the natural history of the early disease phases) and the development of methodology to select people for treatment trials aiming at preventing Alzheimer's disease.

P29.2
CRAIG RITCHIE
EPAD
EUROPEAN PREVENTION OF ALZHEIMER'S DEMENTIA CONSORTIUM

Recent studies suggest that early intervention and prevention might be an effective way to fight against Alzheimer's disease. Many organisations from across Europe have joined forces to set up the EPAD project, a research initiative for the prevention of Alzheimer's dementia.

EPAD aims to address the need for new treatments designed to prevent Alzheimer's dementia. The main study objectives are to:

- Learn and understand better the factors involved in developing Alzheimer's dementia.
- Develop new treatments more quickly which are planned to prevent Alzheimer's dementia.

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P29.3
MERCÈ BOADA
MOPEAD
MODELS OF PATIENT ENGAGEMENT IN ALZHEIMER'S DISEASE

Contributes to shift the environment towards earlier diagnosis of mild and prodromal Alzheimer's disease.

Tests four Patient Engagement models to improve identification of people with mild cognitive impairment in the community.

Will ultimately improve early patients engagement in clinical trials at at an early stage of the disease.

P29.4
DAG AARSLAND
RADAR-AD
REMOTE ASSESSMENT OF FUNCTIONAL DECLINE IN ALZHEIMER'S DISEASE

Collaborative research with aims to improve the assessment of Alzheimer's disease and care for people living with Alzheimer's disease.

The project will do so by exploring how digital technologies —such as smart phones, wearables and home-based sensors— can be used to measure the progression of disability associated with Alzheimer's disease.

It is currently unclear how to use their potential to improve Alzheimer's disease assessment and care —which is exactly what the project is trying find out.

NEURONET PARTNERS

SMALL AND MEDIUM-SIZED ENTERPRISE

SYNAPSE RESEARCH MANAGEMENT PARTNERS

REGULATORY AGENCY

NICE National Institute for Health and Care Excellence

PATIENT ORGANISATION

Alzheimer Europe

IMI ASSOCIATED PARTNER

PARKINSON'S UK

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