Dedicated Brain PET Device Optimized for Brain Imaging

https://neurodegenerationresearch.eu/survey/dedicated-brain-pet-device-optimized-for-brain-imaging/

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Country

USA

Title of project or programme

Dedicated Brain PET Device Optimized for Brain Imaging

Source of funding information

NIH (NIA)

Total sum awarded (Euro)

€ 1,918,912.84

Start date of award

01/04/2013

Total duration of award in years

3

The project/programme is most relevant to:

Alzheimer's disease & other dementias

Keywords

Brain imaging, Positron-Emission Tomography, Devices, Alzheimer's Disease, Radiopharmaceuticals

Research Abstract

DESCRIPTION (provided by applicant): Neurodegenerative diseases, such as Alzheimer and other dementias, present significant societal and economic burden. The number of patients

suffering from these disorders grows rapidly owing to the aging of the world population. Alzheimer’s Association projects that the number of Americans living with Alzheimer’s disease (AD) will increase from 5.4M today to 16 M in 2050. Management and treatment of brain disorders is a critical task facing the healthcare innovation system; continuing progress in this field will depend on early, high-confidence diagnosis. Amyloid imaging agents, the new promising class of Positron Emission Tomography (PET) radiopharmaceuticals, enable diagnosis of Alzheimer’s pathology at the early stages of disease. Brain Biosciences seeks to make neurological PET imaging affordable and widely available both in the clinic and in the research laboratory. To achieve this goal we aim to develop, validate, and obtain 510(k) FDA clearance for CerePET””, a compact, portable, high-performance, and cost- effective, PET scanner for brain imaging. This innovative device is designed to achieve high resolution at a fraction of the cost of currently marketed whole body PET systems. CerePET applications include: (i) evaluation of amyloid burden in patients with suspected Alzheimer disease, mild cognitive impairment, and other neurodegenerative disorders, (ii) multicenter clinical trials of CNS-targeted pharmaceuticals using PET scan as a biomarker, (iii) clinical neuroscience research. During this Fast-track SBIR project, CerePET will be rigorously validated using a set of internationally recognized tests. CerePET imaging performance will be characterized per NEMA NU2-2007; the scanner will be used in a clinical study comparing amyloid burden in patients with Alzheimer’s disease and healthy controls.

Lay Summary
PUBLIC HEALTH RELEVANCE: This application proposes to develop small-footprint, high performance Positron Emission Tomography (PET) scanner optimized for brain imaging. This device will lower the cost and increase availability of neurological PET examinations both in the clinical and research settings.

Further information available at:

Types:
Investments > €500k

Member States:
United States of America

Diseases:
Alzheimer's disease & other dementias

Years:
2016

Database Categories:
N/A

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