Imaging agents for synucleinopathy drug discovery

https://neurodegenerationresearch.eu/survey/imaging-agents-for-synucleinopathy-drug-discovery/

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Country

USA

Title of project or programme

Imaging agents for synucleinopathy drug discovery

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Total duration of award in years

2

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synucleinopathy, imaging agent, alpha synuclein, Lewy Body Dementia, Lewy Bodies

Research Abstract

Project Summary/Abstract Drug discovery efforts targeting dementing illnesses of the elderly have been hampered by a series of failed clinical trials. The negative results could reflect misunderstanding of disease mechanisms, but they also may stem from study of heterogeneous patient populations with disease that had advanced too far to benefit from therapy. According to the latter hypothesis, better stratification of patient populations and identification of early stage disease could greatly improve clinical trial performance. This application seeks to develop small-

molecule probes of ?-synuclein aggregates that are found in a range of neurodegenerative disorders including Lewy Body Disease (LBD), the second leading cause of dementia in the U.S. Radiotracers based on such compounds could serve to detect pre-mortem disease early in its course, to distinguish forms of synucleinopathy from pure Alzheimer's disease, and to establish disease stage on the basis of pathology spatial distribution. To address this need, an iterative discovery approach involving structure activity relationship analysis is proposed, followed by lead optimization studies. Over the long-term, when combined with emerging therapies for neurodegenerative disorders, direct pre-mortem detection of protein aggregates has the potential to improve drug discovery efforts for dementia.

Further information available at:

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Investments < €500k

Member States:
United States of America

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N/A

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Database Categories:
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