Humanized yeast models to study aspects related to Alzheimer's and Parkinson's disease

Commonly used acronym: *Humanized yeast*

Created on: 08-02-2020 - Last modified on: 11-02-2020

Contact person

Joris Winderickx

Organisation

Name of the organisation Katholieke Universiteit Leuven (KUL)

Department Biology

Country Belgium

Geographical Area Flemish Region

SCOPE OF THE METHOD

The Method relates to	Human health
The Method is situated in	Basic Research, Education and training, Translational - Applied Research
Type of method	In vitro - Ex vivo

DESCRIPTION

Method keywords

Yeast

ABeta42

Tau

MAPT

SNCA

Alpha-synuclein

Synphilin-1
screening
drug testing
cell death
protein folding
protein aggregation
Alzheimer
Parkinson

Scientific area keywords

neuroscience
neurodegeneration
Tauopathy
Alzheimer
Parkinson

Method description

We have developed and validated yeast models to study aspects related to protein folding diseases like Alzheimer's and Parkinson's disease. These models allow to gain further insight in the cellular processes involved in the etiology of these disorders and as such identify potential new bio-markers and targets for therapeutic intervention. These models also offer a screening platform to identify lead compounds, to test the efficacy of drugs or to perform mode-of-action studies.

Lab equipment

Standard yeast culture equipment ;
Multi-well microplate spectrophotometer/shaker.

Method status

Published in peer reviewed journal

PROS, CONS & FUTURE POTENTIAL

Advantages

Proven biological relevant eukaryotic system ;

Low cost compared to mammalian cell based systems.

Challenges

Unicellular model

Future & Other applications

Similar yeast based models can be developed for other disease areas, such as cancer.

REFERENCES, ASSOCIATED DOCUMENTS AND OTHER INFORMATION

References

http://lirias.kuleuven.be/cv?Username=U0009565

Links

Additional information

Coordinated by

sciensano VUB

Financed by

Vlaanderen verbeelding werkt

bruxelles environnement leefmilieu brussel .brussels