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

**Commonly used acronym:** Humanized yeast

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### SCOPE OF THE METHOD

<table>
<thead>
<tr>
<th>The Method relates to</th>
<th>Human health</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Method is situated in</td>
<td>Basic Research, Education and training, Translational - Applied Research</td>
</tr>
<tr>
<td>Type of method</td>
<td>In vitro - Ex vivo</td>
</tr>
<tr>
<td>This method makes use of</td>
<td>Other (e.g. bacteria): Yeast models based on expression of ABeta peptides, protein Tau, alpha-synuclein or Synphilin-1</td>
</tr>
</tbody>
</table>

### 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**


**Associated documents**

**Links**

**Additional information**

**PARTNERS AND COLLABORATIONS**

**Organisation**
**Name of the organisation** KU Leuven
**Department** Biology
**Country** Belgium
**Geographical Area** Flemish Region