Antibodies associated with autoimmune encephalitis in patients diagnosed as neurodegenerative dementia syndromes


### Supplementary eTable 1. Antibody tests

<table>
<thead>
<tr>
<th>Test</th>
<th>Antigen</th>
<th>Confirmation techniques</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial CBA <em>(Euroimmun, Lübeck, German)</em></td>
<td>NMDAR</td>
<td>IHC, live neurons</td>
</tr>
<tr>
<td></td>
<td>DPPX</td>
<td>IHC, live neurons</td>
</tr>
<tr>
<td></td>
<td>CASPR2</td>
<td>IHC, live neurons</td>
</tr>
<tr>
<td></td>
<td>LGI1</td>
<td>IHC, live neurons</td>
</tr>
<tr>
<td></td>
<td>GABAbR</td>
<td>IHC, live neurons</td>
</tr>
<tr>
<td></td>
<td>AMPAR</td>
<td>IHC, live neurons</td>
</tr>
<tr>
<td></td>
<td>GlyR</td>
<td>IHC, live neurons</td>
</tr>
<tr>
<td>Commercial ELISA <em>(Medizym anti-GAD 96, Medipan GMBH, Berlin, Germany)</em></td>
<td>GAD65</td>
<td>IHC</td>
</tr>
<tr>
<td>In-house CBA</td>
<td>IgLON5 (live)</td>
<td>IHC, live neurons</td>
</tr>
<tr>
<td></td>
<td>DPPX (fixed)</td>
<td>IHC, live neurons</td>
</tr>
<tr>
<td></td>
<td>NMDAR (fixed)</td>
<td>IHC, live neurons</td>
</tr>
<tr>
<td></td>
<td>LGI1 (live)</td>
<td>IHC, live neurons</td>
</tr>
<tr>
<td></td>
<td>CTNT1 (fixed)</td>
<td>IHC, live neurons</td>
</tr>
<tr>
<td></td>
<td>CASPR1 (fixed)</td>
<td>IHC, live neurons</td>
</tr>
<tr>
<td></td>
<td>AMPAR (live)</td>
<td>IHC, live neurons</td>
</tr>
<tr>
<td></td>
<td>GABAbR (live)</td>
<td>IHC, live neurons</td>
</tr>
<tr>
<td></td>
<td>GlyR (live)</td>
<td>IHC, live neurons</td>
</tr>
</tbody>
</table>

### Supplementary eTable 2. Baseline characteristics of the total neurodegenerative dementia cohort based on the dementia subtypes.

<table>
<thead>
<tr>
<th></th>
<th>Total (n=920)</th>
<th>AD (n=358)</th>
<th>FTD (n=283)</th>
<th>DLB (n=161)</th>
<th>Other (n=118)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex (male)</td>
<td>542 (59%)</td>
<td>172 (48%)</td>
<td>169 (60%)</td>
<td>129 (80%)</td>
<td>65 (55%)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Age at onset, median in years (IQR, range; n=865)</td>
<td>62 (56-68, 16-90)</td>
<td>62 (56-69, 52-82)</td>
<td>60 (54-65, 40-90)</td>
<td>66 (60-71, 43-86)</td>
<td>63 (57-68, 16-83)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Age at memory clinic, median in years (IQR, range; n=846)</td>
<td>65 (59-71, 30-91)</td>
<td>66 (59-72, 33-85)</td>
<td>63 (58-68, 41-91)</td>
<td>68 (64-74, 45-85)</td>
<td>65 (60-71, 30-84)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Onset to memory clinic, median in years (IQR, range; n=862)</td>
<td>3 (1.8-4, 0-20)</td>
<td>2.6 (1.1-4, 0-15)</td>
<td>2.5 (1.7-4.8, 0-20)</td>
<td>3 (2-3, 0-15)</td>
<td>3 (2-3, 0-18)</td>
<td>0.093</td>
</tr>
<tr>
<td>RPD</td>
<td>60/862 (7%)</td>
<td>33/321 (10%)</td>
<td>18/275 (7%)</td>
<td>8/151 (5%)</td>
<td>1/115 (1%)</td>
<td>0.002</td>
</tr>
</tbody>
</table>

RPD: Refractory Parkinson's disease

<table>
<thead>
<tr>
<th>Antibody</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year outpatient clinic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical dementia diagnosis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AD</td>
<td>AD, primary progressive aphasia</td>
<td>AD, posterior cortical atrophy</td>
<td>DLB</td>
<td>AD</td>
<td>FTD with ALS</td>
<td>AD, primary progressive aphasia</td>
<td></td>
</tr>
<tr>
<td>Time onset to sample (months)</td>
<td>108</td>
<td>18</td>
<td>60</td>
<td>12</td>
<td>40</td>
<td>48</td>
<td>36</td>
</tr>
<tr>
<td>CSF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 WBC, normal protein; tau and p-tau normal, AB42 ↓</td>
<td>Not performed</td>
<td>1 WBC, normal protein; tau ↑, p-tau ↑, AB42 normal</td>
<td>8 WBC, normal protein; tau ↑↑, p-tau ↑↑, AB42 normal</td>
<td>2 WBC, normal protein; tau ↑↑↑, p-tau ↑↑↑, normal</td>
<td>Not performed</td>
<td>0 WBC, normal protein; tau ↑, p-tau ↑, AB42 ↓</td>
<td></td>
</tr>
</tbody>
</table>