**INTRODUCTION**

Alzheimer’s Disease (AD) results in subtle cognitive and functional changes in the brain, which can be identified using neuropsychological and functional measures. These measures are often not well-suited to identify the subtle changes in cognition that manifest during the earlier stages of AD. While delayed recall and rate of forgetting have traditionally been considered hallmark cognitive markers of AD, more recent data suggests that measures of proactive interference are highly sensitive to early markers of AD.

Recently, our group developed the LASSI-L to identify early deficits in AD. The LASSI-L was developed to identify deficits in AD at a stage where neuropsychological and functional measures are not yet inflated to identify the subtle changes in cognition that manifest during the early stages of AD. The LASSI-L is highly sensitive to very early markers of AD. Our work has demonstrated that proactive and semantic interference are strongly related to amyloid load in AD.

**METHODS**

Three studies employing newly developed cognitive and functional measures:

**LASSI-L and Medial Temporal Atrophy (MTA)**

Examined the association between SUVR and LASSI-L measures in different brain regions. The LASSI-L was negatively correlated with SUVR scores in the precuneus and posterior cingulate.

**LASSI-L and Amyloid**: Examined the association between LASSI-L and Florbetapir, a PET imaging agent. The LASSI-L was positively correlated with Florbetapir scores in the precuneus and posterior cingulate.

**Conclusion**: The LASSI-L is a more refined and sensitive measure of proactive and semantic interference. It is highly sensitive to AD at an early stage and is not inflated by level of education and cognitive reserve.

**RESULTS**

Table 1: Correlations Between Medial Temporal Lobe Atrophy and LASSI-L Measures in 16 MCI Patients

<table>
<thead>
<tr>
<th>Task</th>
<th>SUVR Precentral</th>
<th>SUVR Postcentral</th>
<th>SUVR Precuneus</th>
<th>SUVR Posterior Cingulate</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATM</td>
<td>-0.66**</td>
<td>-0.50</td>
<td>-0.46**</td>
<td>-0.44</td>
</tr>
<tr>
<td>Banking</td>
<td>-0.58**</td>
<td>-0.41</td>
<td>-0.43**</td>
<td>-0.42</td>
</tr>
</tbody>
</table>

* Left hemisphere MTA scores were negatively correlated with List A2 Cued Recall (r=-.53; p<.01), first cued recall of List B (r=-.40; p<.05), and second cued recall of List B (r=-.50; p<.001).

**DISCUSSIONS**

The authors report no conflicts of interest for this work.

Gratitude is expressed to Marina Sarno, MS for her assistance with poster preparation.