Dear Members of Our Research Community,

We at the Poston Lab and the Stanford Pacific Udall Center would like to take the opportunity to express our sincere gratitude for your time and participation in our research on Parkinson’s disease and parkinsonian disorders.

This year has presented extra challenges for completing research during the Covid-19 pandemic. However, we are committed to continuing to perform research in a safe manner. We have been hard at work compiling and interpreting valuable information given to us by research participants and the fruits of our efforts will soon be available for shared access in the scientific community.

Your dedicated participation lies at the heart of our scientific research. As a show of thanks, here is an update on our progress to date.

**Research Recruitment**

With the help of our research assistants, we have recruited 628 volunteers for research through Stanford and 160 volunteers through the Pacific Udall Center. We are actively recruiting participants with diagnoses of Parkinson’s disease and healthy controls.

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Stanford Recruitment</th>
<th>PUC Recruitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parkinson’s disease and Lewy Body Dementia</td>
<td>406</td>
<td>110</td>
</tr>
<tr>
<td>Atypical Parkinsonism (MSA, PSP, CBS)</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Mild Cognitive Impairment &amp; Early Alzheimer's Disease</td>
<td>34</td>
<td>15</td>
</tr>
<tr>
<td>Healthy Control</td>
<td>163</td>
<td>35</td>
</tr>
<tr>
<td><strong>Total Enrolled</strong></td>
<td><strong>628</strong></td>
<td><strong>160</strong></td>
</tr>
</tbody>
</table>

Special thanks from the Poston Lab (from left to right and top to bottom):
Kathleen Poston, MD, MS;
Christina Young, PhD;
Kristen Wheeler, PT, DPT;
Marian Shahid, MS;
Ho Bin Kim
What People are Saying About Participating in Our Research Studies:

“FacePrint Study – We are seeking volunteers to participate in a 30-minute study looking at facial movements in neurodegenerative diseases. We hope to validate a diagnostic tool developed by Stanford undergraduate, Erin Smith, for early detection of Parkinson’s disease. Volunteers with Parkinson’s disease, REM sleep behavior disorder, multiple system atrophy, progressive supranuclear palsy, corticobasal syndrome, or healthy controls are invited to participate.

For more information, contact:
Kristen Wheeler (kjwheele@stanford.edu)

➢ Pacific Udall Center (PUC) & Stanford Healthy Brain Aging Project sponsored by the NIH Alzheimer’s Disease Research Center Programs – We are still actively recruiting people with Parkinson’s disease, Lewy Body Dementia, and healthy older adults for our longitudinal research studies.

For more information, contact:
Christina Wyss-Coray (ADRCstanford@stanford.edu)
or Maria-Lucia Campos (udallcenter@stanford.edu)

➢ Tau PET Imaging Study – We are recruiting volunteers to participate in a PET imaging study of the brain to determine the impact of tau protein tangles on cognition.

For more information, contact:
Marian Shahid (mshahid@stanford.edu)

“It is nice to be doing something that makes me feel a bit more in control of my disease.”

“I am happy to do anything I can to help people in the future who are dealing with the same thing I am.”

“My doctor has been so amazing! I am glad I can participate in her studies to help give back.”

“It takes so long to get diagnosed with PD. If your research can help others get diagnosed earlier, that would be great!”

Recruitment for Research Studies

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Pacific Udall Center Fact Sheet

- The main focus of the Pacific Udall Center (PUC) is studying cognitive impairment and dementia in Parkinson's disease.
- Morris K. Udall Centers of Excellence for Parkinson's Disease Research are named in honor of the former US Congressman who battled Parkinson's disease.
- There have been up to 9 Udall Centers in the United States.
- The Pacific Northwest Udall Center was launched in 2009 as a collaboration between the University of Washington, Oregon Health and Science University, and the VA Health Care System.
- In 2016, Stanford University was added and the Pacific Northwest Udall Center was renamed the Pacific Udall Center.
- The PUC is funded by the National Institute of Neurological Disorders and Stroke (NINDS).

- Pacific Udall Center Accomplishments include:
  - Enrolling over 1000 research participants with PD.
  - Training over 100 students, fellows and junior faculty.
  - Publishing over 200 peer-reviewed scientific papers.

- To learn more about the Udall center please visit https://udallcenter.stanford.edu.
Dr. Beth Mormino completed a PhD in Neuroscience at UC Berkeley in the laboratory of Dr. William Jagust, where she performed some of the landmark studies on the novel amyloid tracer (PIB) with PET imaging. Her research was critical to understanding how some cognitively normal older individuals have amyloid build up in their brain. This initial work provided evidence that the pathophysiological processes of Alzheimer’s disease begin years before clinical symptoms and are associated with subtle changes to brain regions critical for memory. In 2017, Dr. Mormino joined the faculty at Stanford University in the department of Neurology and Neurological Sciences. Her research program focuses on combining imaging and genetics to predict cognitive trajectories over time, and the integration of novel PET scans to better understand human aging and neurodegenerative diseases, such as Parkinson’s Disease and Lewy Body Dementia.

“Yes. With guidance from the Cardinal Research Recovery we have developed detailed protocols for our research staff and for our research participants that focuses on reactivating our research studies while minimizing the risk that anyone transmits the coronavirus (SARS-CoV-2) to anyone else within our research environment. The health and wellbeing of our research participants is our highest priority. These changes include minimizing the number of staff interacting with research participants on site, pre-screening of covid symptoms and exposures before the visit, and frequent covid testing of research staff.”
Ho Bin graduated from Pomona College where he majored in Math and minored in Computer Science. After graduating, he worked in the Neurobiology Department at Stanford before moving to New York to work at the Hospital for Special Surgery (HSS) in the Department of Orthopaedic Surgery and Biomechanics. At Stanford, he worked on optimizing software and hardware used in tracking eye movement in Alzheimer’s Disease mice. At HSS, he worked on MR image data processing, contributed to statistical analysis used in making sense of research data, and presented at weekly surgeon meetings. Ho Bin came back to Stanford in order to build more imaging research and programming experience but also because he missed being in California. Outside of work, he likes to surf.

Kristen graduated with a Bachelor of Science degree from Appalachian State University where she studied Exercise Science. Following her undergraduate training, she received a Doctor of Physical Therapy degree from Duke University in 2014. She worked as a physical therapist primarily with the geriatric population in home health and skilled nursing facilities. After working in healthcare for several years, Kristen realized that there is a need for major improvements in diagnosing and treating various conditions. This led to her desire to become involved in research. Kristen hopes to bring her clinical background into the research world to help discover ways of making a greater impact in the lives of the patients she has treated. She recently moved from Colorado to California and joined the Poston Lab in August 2020. Outside of work, she enjoys running, hiking and going on adventures with her husband and golden retriever.
Feb 17th, 2021, 9:00am PST
Podcast “Dr. Gilbert Hosts”
Dr. Kathleen Poston discusses the Pacific Udall Center and Cognitive Impairment in PD
Sponsored by the American Parkinson Disease Association
https://www.apdaparkinson.org/resources-support/educational-video-library/

April 2nd, 2021, 10:00am PST
Zoom talk with Dr. Kathleen Poston
Presented by Willow Glen Parkinson’s Support Group
To join go to https://dpf-org.zoom.us/j/85147978459
or go to zoom.com, click join a meeting, and enter
Meeting ID: 851 4797 8459
In addition to amyloid proteins, tau protein tangles may also place people at increased risk for cognitive impairment and dementia. Prior to the early 2010s, it was only possible to identify tau deposits by examining brain tissue after death. However, in the past decade, the development of selective tau tracers for positron emission tomography (PET) imaging has allowed researchers to identify and measure tau in living individuals. This breakthrough has led to significant advances in our understanding of diseases such as Alzheimer’s disease, but the role of tau in Parkinson’s disease is still largely unknown. Dr. Kathleen Poston has obtained a grant from the National Institute of Neurological Disorders and Stroke (NINDS) to examine this important topic.

Over the next few years, we will be inviting people with Parkinson’s disease and Lewy Body Dementia to undergo tau PET scans. This will allow us to make pictures such as those shown in Figure 1. In this figure, we show tau PET scans from four individuals – two who are cognitively normal and two with mild cognitive impairment (MCI). Notably, it is unclear what pattern we will see in those with Parkinson’s disease and Lewy Body Dementia. With these scans, we can test whether more tau in certain brain regions relates to cognitive impairment. Additionally, we will follow people over time to determine whether tau may be important for changes in cognition in the context of Parkinson’s disease. This knowledge will be critical for furthering our understanding of Parkinson’s disease and Lewy Body Dementia in order to assist with the development of disease modifying treatments.

Figure 1: Tau PET scans in 4 individuals: (top) two cognitively normal older adults and (bottom) two older adults with mild cognitive impairment (MCI).
Resources

If you or a loved one has Parkinson’s Disease the following resources may be useful.

• **Medical Equipment Loan Closets:**
  Loan closets provide medical equipment such as walkers, canes, wheelchairs, and bathroom equipment free of charge. Here is a list of a few loan closets available in the Bay Area:
  • [https://www.homecares.org/](https://www.homecares.org/)
  • [https://www.avenidas.org/medical-equipment-loan-closet-now-open/](https://www.avenidas.org/medical-equipment-loan-closet-now-open/)
  • [https://norcalsci.org/equipment-list](https://norcalsci.org/equipment-list)
  • [http://www.soldiersdove.org/](http://www.soldiersdove.org/)

• **Support Groups:**
  • [http://med.stanford.edu/parkinsons/northern-california-resources/support-groups.html](http://med.stanford.edu/parkinsons/northern-california-resources/support-groups.html)
  • [https://www.parkinsonsinstitute.org/about-parkinsons-disease/support-groups/](https://www.parkinsonsinstitute.org/about-parkinsons-disease/support-groups/)

• **Other Resources:**
  • [https://www.apdaparkinson.org/community/california/](https://www.apdaparkinson.org/community/california/)
  • [https://geriatrics.ucsf.edu/sites/geriatrics.ucsf.edu/files/docs/20parkinson.pdf](https://geriatrics.ucsf.edu/sites/geriatrics.ucsf.edu/files/docs/20parkinson.pdf)

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**Home Safety Tips For Fall Prevention:**

- Remove throw rugs in home to prevent tripping
- Place non-slip mats in shower/tub and use a shower bench
- Put grab bars in shower and throughout bathroom
- Use a raised toilet seat
- Have adequate lighting throughout home
- Keep walkways clear and have open space between furniture
- Use rails on both sides of stairs or consider stair chair lift
- Use an assistive device such as a walker or cane if needed
- Keep cords and wires secured near walls
- Add colored tape on the edge of steps to help visualize steps better
- Have a Life Alert button in case of falls
- To assess your personal needs have an occupational therapist complete a home safety check

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Scientific Papers


