

Michael J. Fox: This is Michael J. Fox. Thanks for listening to this podcast. Learn more about The Michael J. Fox Foundation's work and how you can help speed a cure at michaeljfox.org.

Intro: Welcome to a recap of our latest Ask the PhD video. Listen as scientists at The Michael J. Fox Foundation break down the latest Parkinson's research projects in the search for the next big breakthrough. Learn more about Parkinson's disease research. Free resources like this podcast are always available at michaeljfox.org.

Maggie Kuhl: At The Michael J. Fox Foundation, we continue to make strides in our mission toward groundbreaking Parkinson's research. Our latest step, a \$10 million competition enabled by global business leader and philanthropist, Ken Griffin. This program encourages scientists to develop a game-changing Parkinson's tool. The Michael J. Fox Foundation staff scientist, Dr. Jamie Eberling, has been at the forefront of this effort.

Dr. Jamie Eberling: Alpha-synuclein is a protein that's found in everybody. In Parkinson's disease, alpha-synuclein accumulates in the brain abnormally. We think that by getting rid of those clumps of alpha-synuclein in the brain, we might be able to improve the symptoms of Parkinson's disease. There are a number of companies that are working on drugs to lower levels of alpha-synuclein in the brain, these drugs are progressing through clinical trials. But how would we know that we've lowered the levels of alpha-synuclein in the brain, unless we have some way of measuring that? The best way would be to be able to actually visualize alpha-synuclein in the brain.

Maggie Kuhl: And the Foundation hopes to do just that by supporting research to develop a PET tracer, a kind of drug that binds with the protein alpha-synuclein and shows its volume and location in a brain scan.

Dr. Jamie Eberling: It's very hard to find a drug that binds to alpha-synuclein but that doesn't also bind to other things. We don't know for sure that it's even possible to make, but I think we'll have an answer within the next couple of years.

Maggie Kuhl: The Foundation has been enabling work on alpha-synuclein tracers for over a decade, even announcing a prize to the first to develop the tool.

Dr. Jamie Eberling: We launched the Alpha-Synuclein Imaging Prize in 2016. It's a \$2 million prize to the first group that develops a selective alpha-synuclein PET tracer.

Maggie Kuhl: And in 2019, research teams received another impetus to work in this area.

Dr. Jamie Eberling: The Ken Griffin Alpha-Synuclein Imaging Competition is a new program that we recently launched. It's a \$10 million program in total.

Maggie Kuhl: Researchers are hopeful that alpha-synuclein tracers will advance development of new treatments to slow or stop Parkinson's.

Dr. Jamie Eberling: If a trial fails, is it because lowering alpha-synuclein in the brain isn't a good therapeutic strategy or is it because we didn't actually lower alpha-synuclein in the brain? At this point, we wouldn't know. So we want to make sure that we're selecting patients with Parkinson's disease that have alpha-synuclein in the brain, and this can be really challenging early in the disease because the diagnosis is often uncertain. Then once you enroll the right patients, you can make sure that your drug is having a desired effect of lowering those levels in the brain. When I started at The Michael J. Fox Foundation, very few groups were working to develop an alpha-synuclein PET tracer, so the initial funding that the Fox Foundation provided was to generate the tools and the assays that are needed in order to work in this field. And those are the tools that are being used today by many groups. So I think that was a really important contribution that started things, and we've continued to fund more and more groups, both industry groups and academic groups, to continue to work on this problem. Because the more that work on it, the better chance we have that somebody will succeed — and maybe more than one person, hopefully.

Maggie Kuhl: Thank you for your support of Parkinson's research. Visit michaeljfox.org for more on these projects and how you can play a role in speeding a cure for Parkinson's disease.

Outro: Did you enjoy this podcast? Share it with a friend or leave a review on iTunes. It helps listeners like you find and support our mission. Learn more about The Michael J. Fox Foundation at michaeljfox.org. Thanks for listening.

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