

# Google Co-Founder Backs Vast Parkinson's Study

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Sergey Brin, the billionaire co-founder of Google, says he plans to contribute money and his DNA to a large study intended to reveal the genetic underpinnings of Parkinson's disease.



Rick Wilking/Reuters

Sergey Brin of Google and his wife, Anne Wojcicki, whose company scans DNA to offer data on customers' health risks and other traits.

The study, to be announced Thursday, will be conducted by 23andMe, a company co-founded and co-managed by Mr. Brin's wife, Anne Wojcicki. The company offers a personal genomics service, in which it scans the DNA submitted by its customers and provides information on their health risks, ancestry and other traits.

Now it hopes to use its service and its growing database of consumer DNA to conduct medical research. The company hopes to recruit 10,000 people with Parkinson's disease for the study.

Mr. Brin, 35, revealed last September that he had a genetic mutation that sharply raised his risk for developing Parkinson's. His mother, Eugenia Brin, already has the disease.

"I kind of give myself 50-50 odds of getting Parkinson's in 20 or so years, 25 years," Mr. Brin said in an interview. "But I also give it a 50-50 shot of medicine catching up to be able to deal with it."

Mr. Brin, who will pay the bulk of the study's costs, declined to say what that cost would be. The people with Parkinson's disease who enter the study would receive the same analysis of their DNA as other 23andMe customers, but would pay only \$25 instead of the usual \$399.

Executives at 23andMe say they hope to do similar studies for other diseases. "There's a huge opportunity for us if we can make research more efficient," Ms. Wojcicki said.

Such studies might also become a source of revenue for the company, if, say, drug companies, were to pay for 23andMe to mine its database or to analyze the DNA of patients in clinical trials.

The company, however, would never sell customers' individual DNA data, the executives said. Even when the company does research in-house, they said, names are removed from the data. And customers would have to agree to be involved in a study.

About 1.5 million Americans, most 50 and older, have Parkinson's, a neurological disease that interferes with movement, speech and other functions.

Helping to recruit people with Parkinson's for the study will be the nonprofit Parkinson's Institute and Clinical Center, as well as the Michael J. Fox Foundation for Parkinson's Research, which was started by Mr. Fox, the actor, who also has the disease.

The patients in the study will fill out Web-based questionnaires about their symptoms and lifestyles. Existing customers of 23andMe who don't have Parkinson's can volunteer to serve as controls. Mr. Brin will be one of the controls.

By comparing the DNA of the patients and the controls at 600,000 spots across the genome, researchers hope to find genetic variations, beyond those already known, that are linked to the disease.

Such studies, known as genome-wide association studies, have been done for numerous diseases, including Parkinson's. But many involve only a few hundred patients, instead of the 10,000 that 23andMe hopes to recruit. And by having people sign up online, 23andMe hopes to recruit the bulk of the volunteers within a month, which would be very fast.

Eric S. Lander, director of the Broad Institute, a genomics research center in Cambridge, Mass., said the idea of having patients "self-organize" into an online community for a study, rather than be recruited, was intriguing. "It seems like a Googley thing to do," he said.

But Dr. Kari Stefansson, the chief executive of DeCode Genetics, a company in Iceland that has done numerous gene-hunting studies using DNA from its countrymen, said there was nothing novel about the study. His company, he said, has done studies involving more than 10,000 people with a disease.

"The only thing that is remarkable is that there is a very rich man who is going to fund it," Dr. Stefansson said.

Sarah Murray, director of genetics at the Scripps Translational Science Institute in San Diego, said a potential problem with the study was that the participants would report their symptoms, rather than being examined and interviewed by a doctor. That could mean the data might be of poor quality.

The company 23andMe might not even exist were it not for the interest Mr. Brin took in Parkinson's after his mother's case was diagnosed. He and Ms. Wojcicki, who worked at a health care hedge fund, met Linda Avey, the other founder of 23andMe, because Ms. Avey was running a Parkinson's disease genetics study at another company.

Google has invested \$3.9 million in 23andMe, which is based, like Google, in Mountain View, Calif., and is named for the 23 pairs of human chromosomes. Mr. Brin found out from 23andMe's service that he had a mutation in the LRRK2 gene that predisposed him to Parkinson's disease. His mother also has that mutation.

Mr. Brin and Ms. Wojcicki said they would check whether their son, who was born in November, also has the mutation, though he will not be able to donate his DNA in the usual way — putting saliva in small tubes, as 23andMe has promoted at celebrity-studded "spit parties."

"Babies can't spit into a tube," Mr. Brin said.