

Student studies benefits of exercise for patients with Parkinson's disease

Part of a series profiling undergraduate researchers provided by University of Pittsburgh Office of the Provost.

By Niki Kapsambelis

Exercise is the route of salvation for dieters and athletes alike, but research fueled in part by the work of Pitt senior Melissa Masnovi suggests it may also help protect brain function in people who have Parkinson's disease.

Masnovi, a native of Bethel Park, Pa., conducted the research under the supervision of Dr. Judy Cameron, a professor in the Department of Psychiatry, as part of the Brackenridge Fellowship summer research program through Pitt's Honors College. The project looked at the effects of exercise on protecting brain cells from the effects of Parkinson's, a disorder caused by a falloff in dopamine production in the part of the brain that controls motor movements.

As a result, Parkinson's patients experience slow movement and tremors. Among the most common neurological disorders, Parkinson's affects 1 to 2 percent of the adult population older than 50.

Masnovi, who is majoring in neuroscience and communication, was attracted to the project after reading about Cameron's work through her adviser. The two set up a meeting to discuss Masnovi's involvement, which included setting up the study's parameters for one of the tests used to score motor movement. Masnovi also independently interpreted results.

"It was a valuable experience because it taught me how to be a researcher," says Masnovi. "Dr. Cameron helped me, but it was more of my project."

Cameron, who specializes in neuroscience, chose a portion of a larger project on Parkinson's to give Masnovi for her research.

"It was a process of creating a new way of analyzing motor function so we could quantitatively tell whether the exercising (subject) looks different from the control," Cameron says. "We taught her how to do the behavioral analyses, and she learned to score the videotapes by playing them back frame-by-frame."

As part of the Brackenridge Fellowship, Masnovi presented her findings — an assignment she aced, according to Cameron.

"She did a fantastic job speaking and was comfortable answering questions," Cameron says. "I think in part that's because she was involved in every part of

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— **Dr. Judy Cameron,**
Pitt professor

the process; when people asked questions, she really knew it inside and out."

Cameron was also impressed with the caliber of Masnovi's intellectual acumen.

"There was a lot of learning that has to be going on" in association with the project, Cameron explains. "That takes a lot of interest and motivation on the part of the student, and she had those qualities."

Cameron has trained more than 100 undergraduates in her lab, many of whom complete senior theses.

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Additionally, a subset of those students are excited enough by the scientific process to shape their career goals on the basis of the research experience, she notes.

Masnovi plans to attend Pitt's School of Law beginning in August and is considering a joint degree program with the Graduate School of Public Health. Though she is not completely certain of her career plans, she does hope to pursue some form of health law.

"I really like that public health aspect, and hopefully I'll be able to do some research in the future," she says.



Dr. Judy Cameron and undergraduate researcher Melissa Masnovi are all smiles after Melissa's well received Brackenridge talk.

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