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Cramming it all in: Dr. Jeff Carroll discusses family, research, being gene positive and HDBuzz

By Julie Stauffer

On the kind of cool, grey, drizzly day that marks fall on the West Coast, Jeff Carroll is putting together his new research lab at Western Washington University.

In a lot of ways, the 34 year old has it made: an impressive list of scientific publications, a job offer that has brought him back home to friends and family and a reputation as an up-and-coming researcher with a knack for communicating complex topics.

Ironically, he owes it all to a small DNA stutter, a few extra CAG repeats passed on from his grandmother to his mother, and now on to him.

As a 20-something, Jeff was bright but lacked direction. After dropping out of high school, he spent a few years in the army and was dabbling in a few community-college philosophy courses when his mother was diagnosed with Huntington disease (HD). With little information then available about the disease, Jeff signed up for a biology class to get a better grasp on what was happening to his mom.

One thing led to another. He completed a PhD with world-renown HD researcher Dr. Michael Hayden and recently wrapped up a post doc at Harvard Medical School. He is a co-founder of HDBuzz, a website covering Huntington's

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research that attracts more than 70,000 visits a month, and he is a highly soughtafter speaker who regularly earns standing ovations at Huntington's conferences.

"HD has given me a lot of clarity and direction," he says.

Don't misunderstand him. He would far prefer not to have a fatal neurodegenerative illness looming over his future. But given that there is a gene creating changes in his brain that will eventually manifest as HD, Jeff is determined to make the most of the time he has. That means prioritizing and focusing on what is most important in his life.

"As grad school got really busy, I decided 'look, I'm going to do two things," he recounts. "'One is have a family and one is work.'"

So when Jeff isn't busy with his wife and fiveyear-old twins, you'll find him at the lab bench, in the classroom or wrestling with the clearest way to explain Huntington's discoveries to families around the world via HDBuzz.

Just as soon as his lab is set up, he will continue the work on HD metabolism that he began with Dr. Marcy MacDonald while at Harvard. According to Jeff, metabolism in Huntington's is "manifestly screwed up."

"You get HD patients that are eating 6,000 calories a day in some specialized nursing

home and they're losing weight dramatically and we don't know why," he says. By investigating brain cell metabolism in HD mice, he hopes to come up with some answers.

In his new role as a university lecturer, Jeff is looking forward to turning his students on to neuroscience. Meanwhile, HDBuzz has taken off in a big way. Less than a year after its launch, the site offers updates in ten languages, including Danish, Polish and Portuguese, and praise is flooding in from around the globe.

Yes, it makes for an unforgiving workload, but Jeff is driven as much by his love of science as his passion for helping families like his, who are grappling with HD.

"Figuring out how the human brain works is the most exciting thing humans have ever done, and I get to be a tiny little speck of that," he says. "That's pretty cool."

If his life would have been better without the HD gene, well, so be it. "The bottom line for me is that you don't choose your situation, but you do choose how to react to it," he says.

For Jeff Carroll, that means trying to push back the boundaries of science, give the Huntington's community the information it's hungering for and take care of his family for as long as he possibly can.



Huntington's disease research news. In plain language. Written by scientists. For the global HD community. Go to <u>www.HDBuzz.net</u> to see what the Buzz is all about!