How So Many May Benefit From One Woman's Distressing Hair Loss Experience

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In the summer of 2009, Angela Christiano, an associate professor of dermatology and genetics at Columbia University, made headlines when her research team announced the discovery of genes that cause alopecia areata, a disease that can cause rapid hair loss on the scalp and body. In an interview with *The New York Times*, Christiano talked about what happens next and her own struggle with alopecia.

Christiano first discovered she had alopecia in 1995, after a hairdresser noticed a bald spot on the back of her head. A quick trip to the Columbia clinic confirmed she had alopecia. Then more bad news. There weren't many treatment options available.

At the same time, Christiano was setting up her own laboratory at Columbia and deciding on a new research project. Her alopecia diagnosis led her to look into the disease. What she found was minimal at best.

"In the months after my diagnosis, I went through panic and shock," Christiano said. "Then I began reading all the papers on alopecia and I thought, 'Maybe this is the hand of fate directing me to a topic; this is a wide-open field.'"

It seems alopecia was mostly considered a cosmetic disease, and most researchers chose to focus on life-threatening diseases. What's more, the tools needed to properly understand alopecia weren't yet available, and the Human Genome Project—an international research program created to study all human genes—hadn't finished its work.

"There were no road maps," Christiano said. "Nobody had yet solved a complex disease where multiple genes are involved, which is what alopecia is."

So Christiano forged ahead by laying the groundwork of a project. Her team focused on finding single genes that control normal hair growth cycles and worked with the National Alopecia Areata Foundation (NAAF) to set up a patient registry for alopecia.

Then in 2008, Christiano's lab moved on to a full-scale research project. Her study was the first about alopecia to use a gene-wide approach. Christiano compared the DNA of 2,000 patients, half with alopecia and half without the condition. The result? The team identified 39 markers for the disease. In addition, the researchers also found that alopecia wasn't connected to skin diseases, as previously thought. The condition was actually linked to rheumatoid arthritis, type 1 diabetes and celiac disease.

What Christiano's research fndings mean for people with these conditions is new hope. "It should have amazing benefits," Christiano said. "We have a chance of pushing forward with clinical trials for potentially effective drugs much sooner than we'd thought."

Who'd have imagined this result from one woman's hair-loss experience? To read more about Christiano's study, click here.
