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Leading the Way



Nigel Parry for Newsweek

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Growing up, I had very little interest in science. I was the kid who always read and read. In high school, in Iron River, Wis., girls were given the option of taking home economics or science: I took home ec. No one in my family had gone to college. My mom raised six kids, working as a cook. She worked so hard that I was motivated to have an office and an academic life. After high school, I started working as a bookkeeper at the local Ford dealership. I realized I didn't have much opportunity, so I enrolled as a business major at the University of Wisconsin in Superior. In my junior year, I took a class in human genetics for non-majors, and it was the most amazing thing to think, How are we made?

I switched my major to biology and immersed myself in biology, chemistry, physics and lots and lots of math. At first I didn't get great grades. I got my degree in biology in 1983 and went to work as a lab technician in Kansas, where I also got my master's in biology. By then, I realized that I loved research, and I applied for the Ph.D. program in biochemistry at Cornell and went on for a postdoctorate with Dr. David Page, at MIT's Whitehead Institute, when gene discovery was starting. I mapped genes on the Y (male) chromosome that are deleted in infertile men.

Working on human reproduction was a backwater of developmental biology; there weren't that many people working in this field. There were times when I was discouraged. As an assistant professor, the first paper I submitted to the journal *Nature* was rejected. I wondered, Do I know the right people? Am I doing the right work? With advances in human stem-cell research, this work is now of central importance. The world has really changed.

I consider myself a human reproductive biologist. Currently, I supervise 16 researchers at **UCSF** investigating the genetic causes of human infertility. We are looking at how to get a human stem cell to become a germ cell, a sperm or an egg. Nothing is more important to me than the origin of life.

What genes are required for our life? How does a human embryonic stem cell develop into a sperm or an egg, the cells that combine to create a child? What causes infertility? Why do some people make few or poor quality reproductive cells? It's a genetic black box. If you look at the controversy surrounding human embryonic-stem-cell research, so much of it is because we don't understand what life is.

This subject matters to me so much. I see infertility as a major health problem, not a minor inconvenience. It greatly impacts a couple's entire quality of life. My own experience really weighs in here. During my time as a postdoctoral fellow, I was diagnosed with ovarian cancer. I was 34 at the time of surgery. I didn't contemplate egg-saving because I have always thought adoption was a good option. I had faith it would all work out. And at 47, I am going to become a mother soon. My husband, Fred, and I are in the process of adopting an older child from Guatemala. I'm going to have to learn Spanish.

I know that it's difficult to balance a family and a research career in science, with irregular schedules and 10- to 12-hour workdays. I see how the women—and the men—in my lab struggle. I don't know if there's a right time to do things in life, but I think there's probably a right time for each person. I think the women who make it work in life and in the lab have great partners. And I think women have to be very, very, very flexible to make it all work.