

Scientist Spotlight

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Charles Limb



Dr. Charles Limb is a professor of head and neck surgery at Johns Hopkins Medical School, and a faculty member at the Peabody Conservatory of Music. His work has helped clarify the functions of the cerebral cortex, one of the major brain regions we discussed in class.

Please view Charles Limb's [TED Talk](#) at the following site. Note: I recommend turning on the subtitles to make it easier to follow along with his talk. Subtitles are available in 27 languages by clicking selecting the language on the bottom right of the video. A transcript is also available.

Ben Barres



Dr. Ben Barres was (sadly, recently deceased) a Stanford professor of neurobiology. He studied diseases related to signaling in the nervous system, and in particular the roles of supporting cells around neurons. Dr. Barres was also a leader in science equity and the effort to address gender gaps. He was uniquely positioned to address these issues, since he presented both as a woman and a man scientist at different times in his career.

Please read this article from [Stanford news](#) about Dr. Barres, as well as this one from [Nature](#).

If you are interested in hearing more from Ben Barres, you can search for him on [YouTube](#). He has some videos on his research and also on his experiences as a transgender person.

Agnes Day

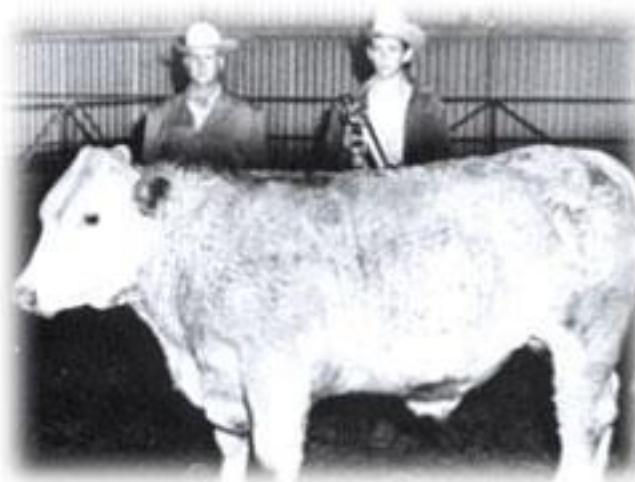


Dr. Agnes Day is a microbiologist and cancer researcher in the college of medicine at Howard University in Washington D.C. Dr. Day grew up the youngest of 13 children in a poor family in Florida. Initially a microbiologist, Dr. Day recalls the strange coincidence that brought her into cancer research, "when [I] got hired at Howard the only lab space available to me at the time was in the cancer center — a beautiful, nice big lab, so I said, 'I'll take it.' Taking that lab space meant that

[I] had to do cancer research. Since I had done research on these connective proteins, [I thought,] ‘Hey, I’ll study metastasis.’ And that’s what I’ve been doing since 1986.” Dr. Day specializes in understanding the genetics of cancer, particularly focusing on the disproportionate impacts of cancer on African American populations.

Read this brief [interview](#) with Dr. Day. Also read this [landmark paper](#) by Dr. Day—don’t attempt to understand every biology term, just try to find the main themes of what she did/discovered.

Raymond Dubois



Dr. Dubois is on the right.

Dr. Dubois is a medical doctor and cancer researcher, specializing on the role of inflammation in cancer progression. He was one of the first researchers to discover that treatment with aspirin could lower an individual's risk of colon cancer.

Review this [video](#) of Dr. Dubois describing some of his work by. (Note: Though it's a very short video, you should probably watch it a few times. In a short time, Dr. Dubois covers a lot of territory.) Then review this [article](#) that Dr. Dubois's daughter

wrote about him for the science podcast/magazine, [The Story Collider](#). If you want more detailed information about Dr. Dubois work, and also more background info on him, see this [article](#).

Lawrence David



Dr. Lawrence David is a Filipino-American biologist currently working as a professor at Duke University and Harvard. His work focuses on the trillions of bacteria that live on and in the human body, and he is particularly interested in how bacteria contribute to health and disease in the developing world, including in Bangladesh and other non-western areas. He also helped start a website to showcase illustrated, science-related poetry (<http://www.sciku.org/>).

Please listen to the [story](#) told by Lawrence David. This is from a podcast called [Story Collider](#), which includes a wealth of stories about how science has impacted people's lives in interesting or amusing ways. Next, read this [article](#) reporting on some of the striking results of Lawrence David's work.

Darlene Cavalier

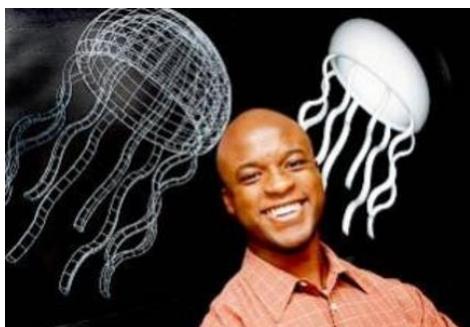


This scientist spotlight is a bit unusual in a few ways. Most notably, Darlene Cavalier is not actually a scientist in the strict sense. Rather, she advocates for “citizen science,” the concept that individuals who are not scientists can and should engage with scientific work going on around them. She is also a former NBA cheerleader, and started the group, Science Cheerleader. This appears to counteract stereotypes on a number of levels. Personally, I was surprised to learn just how many professional cheerleaders are concurrently pursuing PhD's and other advanced degrees in science (many profiled at [their website](#))! In that sense, this assignment still does give us insights into some folks who are practicing scientists.

Listen to the Story Collider [podcast](#) by Darlene Cavalier. Additionally, browse through some of the projects/activities available on Darlene Cavalier's citizen science website, [SciStarter](#).

John Dabiri

by Marci Cole Ekberg, Diablo Valley College



Dr. John Dabiri is a biophysicist in the Division of Engineering and Applied Science at the California Institute of Technology. Dr. Dabiri was born in Toledo, Ohio to parents who emigrated from Nigeria. He studies jellyfish movement and fish schooling behavior from an engineering point of view.

Read an article about Dr. Dabiri by clicking [here](#). Listen to an [interview](#) with Dr. Dabiri here. Read his [biography](#) and watch a video of him [here](#).

Clare Fieseler

By Katherine Farrar, UCSF



Dr. Clare Fieseler describes is an ecologist who studies how ecosystems, including coral reef ecosystems respond to climate change resilience. She is also a science journalist (<http://www.cfieseler.com/about/>).

Watch this brief National Geographic documentary about Clare Fieseler's portrait project about women scientists, titled "Outnumbered", by [clicking here](#). (You can view the portraits by [clicking here](#).) Then listen to this Nerdette Podcast interview with Clare Fieseler (minute 1:20 to 18:45) by [clicking here](#).

You may wish to explore Claire Fieseler's [Twitter feed](#) and [website](#).

Renee Hlozek

by Valerie Greene, DeAnza College



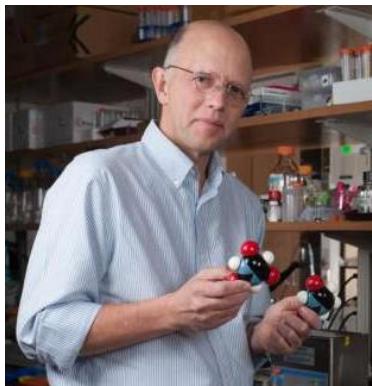
An offhand sexist comment enrages Renee Hlozek and leads her to dig into how her colleagues really view people who aren't the stereotypical scientist. Dr. Renee Hlozek is the Lyman Spitzer Jr. Postdoctoral Fellow in Theoretical Astrophysics at Princeton University, the Spitzer-Cotsen Fellow in the Princeton Society of Fellows in the Liberal Arts and is currently a Senior TED Fellow.

Her research focuses on theoretical cosmology; as a member of the Atacama Cosmology Telescope she measures the Cosmic Microwave Background radiation to decipher the initial conditions of the universe. When not investigating the cosmos, she loves to sing (loudly), read and bake. She makes a mean Negroni.

Listen to the Story Collider [podcast](#) by Renee Hlozek.

Nick Hud

by Allyson Spence, Sonoma State University



Nick Hud is a Georgia Tech professor of chemistry and biochemistry. He studies the structure and function of DNA in viruses as well as the origin of life, with a particular focus on RNA. He discusses some of the difficulties he experienced when sharing his research with non-scientists such as his mother as well as with the Catholic Church. How he finally is able to communicate the beauty of scientific research is definitely unconventional.

Listen to this Story Collider [podcast](#) by Nick Hud. Then, review this article about Dr. Hud's research into the [RNA origin of life](#).

Frances Kelsey

By Steve Waters, Los Medanos College



Frances Kathleen Oldham Kelsey (July 24, 1914 – August 7, 2015) was a Canadian pharmacologist and physician. As a reviewer for the U.S. Food and Drug Administration, she refused to approve the sale of thalidomide in the USA because she lacked evidence for the drug's safety during pregnancy. Her concerns proved to be justified when it was shown that thalidomide caused serious birth defects in Europe and Canada. Her refusal to relent to pressure from the drug's manufacturer prevented many thalidomide-related birth defects in the United States.

Please read this [article](#) and [this one](#) about Frances Kelsey. You may also find this [Khan Academy video](#) about gene-environment interactions helpful.

Nancy Rabalais

by Marci Cole Ekberg, Diablo Valley College



Dr. Nancy Rabalais is a marine ecologist dedicated to documenting and mitigating the effects of hypoxic zones—aquatic areas with low dissolved oxygen levels commonly known as “dead zones”—that have expanded dramatically in the Gulf of Mexico and many other coastal systems around the globe. She is a researcher as well as the director of the Louisiana Universities Marine Consortium.

Read her [biography](#) and watch the video on the same page.

Pardis Sabeti



By Susan White, Cañada College and Mission College

Pardis Sabeti is a geneticist at Harvard University. She studies infectious diseases, such as malaria and Ebola, in particular looking at their DNA for mutations. When she's not in the lab or traveling to Africa for her research, she performs with her alternative rock band, Thousand Days. Dr. Sabeti was born in Iran and came to the U.S. with her family as a young child.

Watch this [video](#) about Dr. Sabeti's scientific and musical careers.

Now read [this article](#) about Dr. Sabeti's recent work on the Ebola virus. Please read at least until the picture of the aid worker, although you may read the whole article if you wish.

If you'd like to hear Dr. Sabeti's band play or hear more from her about her research, you can find a number of videos on YouTube. Dr. Sabeti has also studied evolution and natural selection.