Dr. Farmer was one of the first students at Stanford University to graduate with a B.S. (1994) in a new interdisciplinary environmental program called Earth Systems that incorporated courses in biology, geology, and economics. She found a dream job with the U.S. Forest Service studying small forest carnivores and getting paid to hike in the southern Sierra Nevada mountains. She spent much of her time, however, wondering if driving the research vehicles was causing more damage to the ecosystem through climate change than doing good through the research. Working for the Environmental and Energy Study Institute and the U.S. Climate Action Network during the negotiation of the Kyoto Protocol in the United Nations Framework Convention on Climate Change led her back to graduate school to study paleoclimatology and learn more about how our climate system functions.

Her doctoral dissertation, completed in 2005 at the Lamont-Doherty Earth Observatory of Columbia University, developed a new multi-species proxy for thermocline depth in the upper ocean, and presented new high-resolution climate records from the Southern Hemisphere. As an Associate Professor in the Geology, Environment, and Sustainability Department at Hofstra University, she teaches classes on Planet Earth, Environmental Geology and Natural Hazards, Field Methods, Sedimentation, and Paleoclimatology. Her current research includes developing records of past hurricane impacts from Long Island sediment cores, as well as studying evacuation decisions by Long Island residents before the landfall of hurricane Sandy.