Jane Goodall: Famed chimp researcher embraces questionable science on GMOs, gene drives

Jane Goodall is a primatologist, ethologist, and anthropologist, and founder of an eponymous institute that advocates for environmental conservation and animal welfare. Goodall has stirred controversy because of her vocal opposition to crop biotechnology, and more recently, CRISPR gene editing, and her promotion of what many scientists say is quack science.

She has authored several books for adults and children and has appeared in numerous films. She is best known for her 55-year study of wild chimpanzees' social and family interactions in Tanzania and was named a “Messenger of Peace” by the United Nations. In 2013, Goodall was asked, “which living person do you most despise, and why?” She responded: “The agricultural company Monsanto, because I know too much about GM organisms and crops.”

A year later, Goodall published the book “Seeds of Hope: Wisdom and Wonder from the World of Plants” and dedicated a chapter to GMOs, writing: “The most recent monstrous crime against plants – at least in my view – is the tinkering with their DNA.” Goodall noted that the book’s chapter on GMOs “is perhaps the most controversial of this book and one I feel the most passionate about.”

The book was savaged by critics. The Daily Beast called it a “troubling, error filled book,” noting that it included many plagiarized passages and including the lifting of passages from scientifically unsupportable passages from anti-GMO websites. Her chapter on GMOs is “riddled with unsupported claims backed by dubious studies,” wrote Michael Moynihan, criticizing her for supporting the scientific consensus on climate change but not GMO safety.
Mark Hoofnagle, a surgeon and writer of the popular Denialism blog, wrote that Goodall had joined a group of anti-GMO writers who have shown “profound ignorance of basic biology. … We should always be saddened when yet another famous scientist decides to go emeritus and abandon the reality-based community.”

Hoofnagle argued that, like other famous scientists who fall for pseudoscientific theories, her fame and willingness to stray into fields of science outside of her expertise are likely to blame for her anti-GMO views.

_Sadly, Goodall has not only shown a pretty poor level of scholarship with this new book, but also, has fallen in with cranks promoting implausible risks of this biotechnology. It’s unfortunate because she should be respected for her previous work as an environmentalist and a conservationist._

Goodall’s book chapter on GMOs relies heavily on studies led by controversial researcher Gilles-Éric Sérinali (GLP profile here) whose cited work was retracted and republished in a predatory journal without peer review, activist social scientists such as Vandana Shiva (GLP profile here) and cites anti-GMO activist groups, such as GM Watch (GLP profile here).

Goodall has criticized farmers who grow GMO crops that are herbicide-tolerant because it has led to an increase in the use of glyphosate, which she claimed pose risks to the health of animals and humans. “Personally, I find it difficult to accept that GM foods pose no risk to humans—at least, not if we base our conclusions on the results of animal experimentation,” she said.

Glyphosate’s toxicity is less than common table salt. (GLP FAQ here). The US EPA, World Health Organization, European Food Safety Authority, German Federal Institute for Risk Assessment (under contract to the European Commission) and numerous other independent regulatory agencies have found no serious health consequences from the trace amounts of glyphosate in our food supply.
She also raised environmental concerns, claiming that glyphosate has led to the rise of “superweeds,” which she said are choking farms and requiring even more applications of “dangerous chemicals.” Her reference to “superweeds” refers to a common suggestion by anti-GMO activists that herbicide-resistant GMO crops have sped up the development of herbicide-tolerant weeds. Weed scientists have noted that all weeds eventually develop resistance to any pesticide, including those used by organic farmers, through repeated exposure. Herbicide-tolerant weeds predate the introduction of GMOs in the 1990s and glyphosate in the 1970s. University of Wyoming professor of weed expert Andrew Kniss summarized the science: “Almost any way you look at the data, it appears that GM crops are no greater contributor to the evolution of superweeds than other uses of herbicides.”

Goodall wrote the foreword for lawyer Steven Druker’s controversial 2015 anti-GMO book “Altered Genes, Twisted Truth: How the Venture to Genetically Engineer Our Food Has Subverted Science, Corrupted Government, and Systematically Deceived the Public”. She called it “one of the most important books of the last 50 years”, and joined him on a promotional tour. Goodall described Druker as a hero worthy of a Nobel prize.

In his review of the book, Dr. Terry Simpson wrote that it was “filled with logical fallacies.” “On page after page, I discovered that his discussion of genetically modified organisms provided no new insights, and were filled with false and misleading information,” Simpson wrote. “The book is a lengthy editorial, filled with some simplistic explanations of biology (many too simplistic) and factual errors.”

In a March 2015, Goodall is quoted as saying politicians have been “deluded” into pushing “Frankenstein Food”, biotechnology supporters have committed “fraud” and are “anti-science.”

In 2016, Goodall expanded her attacks on biotechnology away from transgenenics, targeting CRISPR gene editing. She co-authored a letter, along with fellow anti-GMO activist-scientist David Suzuki [GLP profile here] and philosopher Vandana Shiva [GLP profile here], advocating against the use of gene drives, which are incorporated in genetically altered mosquitoes designed to wipe out the spread of the Zika virus.

“We believe that a powerful and potentially dangerous technology such as gene drives, which has not been tested for unintended consequences nor fully evaluated for its ethical and social impacts, should not
be promoted as a conservation tool,” the letter reads.

Writing on Goodall’s deep involvement in the anti-GMO movement, biologist and author Jerry Coyne noted: “I don’t know if Jane Goodall is simply ignorant of the evidence for the safety of GM (genetically modified) food, or, like Lynn Margulis, has become so taken by her own fame that she thinks her pronouncements on subjects outside her field are decisive.”

Education

Goodall never obtained a bachelor’s degree, but earned a PhD in ethology (science of animal behavior) from Cambridge University. After meeting Goodall, notable Kenyan archaeologist and palaeontologist Louis Leakey, who was looking for a chimpanzee researcher, arranged for her to attend Cambridge, where she began the program at the age of 28.