# Scientist Accused of Playing God After Creating Artificial Life by Fiona Macrae

<http://www.dailymail.co.uk/sciencetech/article-1279988/Artificial-life-created-Craig-Venter--wipe-humanity.html#ixzz2v1WrPA2K>

1 Scientists today lined up to air their fears over a genome pioneer's claims that he has created artificial life in the laboratory. In a world first, which has alarmed many, maverick biologist and billionaire entrepreneur Craig Venter, built a synthetic cell from scratch.

2 The creation of the new life form, which has been nicknamed 'Synthia', paves the way for customized bugs that could revolutionize healthcare and fuel production, according to its maker. But there are fears that the research, detailed in the journal *Science*, could be abused to create the ultimate biological weapon, or that one mistake in a lab could lead to millions being wiped out by a plague, in scenes reminiscent of the Will Smith film *I Am Legend*.

3 While some hailed the research as “a defining moment in the history of biology”, others attacked it as a shot in the dark, with “unparalleled risks”. The team involved has been accused of “playing God” and tampering with the essence of life.

4  Dr. Venter created the life form by synthesizing a DNA code and injecting it into a single bacteria cell. The cell containing the man-made DNA then grew and divided, creating a hitherto unseen life form. Kenneth Oye, a social scientist at the Massachusetts Institute of Technology in the U.S., said: “Right now, we are shooting in the dark as to what the long-term benefits and long-term risks will be.”

5 Pat Mooney, of the ETC group, a technology watchdog with a special interest in synthetic biology, said, “This is a Pandora's box moment - like the splitting of the atom or the cloning of Dolly the sheep, we will all have to deal with the fall-out from this alarming experiment.” Dr. David King, of the Human Genetics Alert watchdog, said, “What is really dangerous is these scientists' ambitions for total and unrestrained control over nature, which many people describe as playing God.”

6 Professor Julian Savulescu, an Oxford University ethicist, said, “Venter is creaking open the most profound door in humanity's history, potentially peeking into its destiny. He is not merely copying life artificially or modifying it by genetic engineering. He is going towards the role of God: Creating artificial life that could never have existed.”He said the creation of the first designer virus was a step towards “the creation of living beings with capacities and a nature that could never have naturally evolved”. The risks were “unparalleled”, he added. And he warned: “This could be used in the future to make the most powerful bioweapons imaginable.”

7 Dr. Venter, who was instrumental in sequencing the human genome, had previously succeeded in transplanting one virus’ genome - its entire cache of DNA - into another bacterium, effectively changing its species. He has taken this one step further, transplanting not a natural genome but a man-made one. To do this, he read the DNA of *Mycoplasma mycoides,* a virus that infects goats, and recreated it piece by piece. The fragments were then 'stitched together' and inserted into a bacterium from a different species. There, it sprang to life, allowing the virus to grow and multiply, producing generations that were entirely artificial.

8 The transferred DNA contained around 850 genes - a fraction of the 20,000 or so contained in a human's genetic blueprint. In future, bacterial 'factories' could be set up to manufacture artificial organisms designed for specific tasks such as medicines or producing clean biofuels. The technology could also be harnessed to create environmentally friendly virus capable of mopping up carbon dioxide or toxic waste.

9 Dr Venter, a 63-year-old Vietnam War veteran known for his showman tendencies, said last night: “We are entering a new era where we're limited mostly by our imaginations.” He claimed that any unwanted organisms would be deliberately “crippled” so that they cannot survive outside the lab. Brushing aside the ethical concerns of his work, Dr. Venter wrote in his autobiography that it would allow “a new creature to enter the world”.

10 Last night, he claimed the breakthrough had changed his views on the definition of life. “We have ended up with the first synthetic cell powered and controlled by a synthetic chromosome and made from four bottles of chemicals,” he said. “It is pretty stunning when you just replace the DNA software in a cell and the cell instantly starts reading that new software and starts making a whole new set of proteins and within a short while all the characteristics of the first species disappear and a new species emerges. That's a pretty important change in how we approach and think about life.”

11 The process was carried out on one of the simplest types of bacteria, under strict ethical guidelines. The research team insists that they cannot think of a day when the technology could be used to create animals or people from scratch.

\*Three years later in 2013 *Popular Science* reported in 2013 that:

Scientists have made an embryonic clone of a person, using DNA from that person's skin cells. In the future, such a clone could be a source of stem cells, for super-personalized therapies made from people's own DNA.

It's unlikely that this clone could develop into a human, say the scientists, a team of biologists from the U.S. and Thailand.

**Playing God & Why Somebody Has To Do It by Moorfield Story**

<http://storeyinstitute.blogspot.com/2013/01/playing-god-why-somebody-has-to-do-it.html>

1 Prince Charles warned of the “disastrous consequences” of biotechnology. The precise dangers were never revealed. But according to Reuters he said, “tampering with nature is an affront to God.” Conservative historian Paul Johnson called biotechnology a “new, infant monster.” Gertrude Himmelfarb has written that such research is *contra naturn* (against nature) and laments that this alone is not longer sufficient to put the fear of God into scientists.

2 But throughout human history each new scientific discovery was subjected to the same assault.

3 In 1752 a funny looking man flew a kite on the banks of Schuylkill. From that little experiment Benjamin Franklin discovered the principles of electricity as exhibited in lightning. Once he understood the facts of nature he was able to manipulate it. Lightning had a tendency to strike trees, high buildings, church steeples, etc. Franklin put his discovery to good use by inventing the lightning rod. His invention was not well received. The clergy of the day found such an invention demonic. It was man playing God.

4 Throughout Europe and the United States churches refused to attach lightning rods to their steeples. For decades after the invention of the device steeples continued to be struck in disproportionate numbers. The tower of St. Marks in Venice was repeatedly struck even though Franklin’s invention was brought to Italy by the physicist Beccaria. Church authorities saw the invention as contrary to nature. In 1761, 1762 and 1766 the tower was struck. After this last incident the church quietly attached a lightning rod.

5 Inoculation and vaccination faced the same uphill battle. In 1772 Rev. Edward Massey preached and published his sermon “The Dangerous and Sinful Practice of Inoculation.” When Dr. Zabdiel Boylston of Boston experimented with inoculation the clergy raised such a stink that the city forbade him from further use of the treatment. Andrew White, in his “A History of the Warfare of Science with Theology in Christendom”, wrote that Boylston’s opponents insisted that “for a man to infect his family in the morning with smallpox and to pray to God in the evening against the disease is blasphemy”; and the smallpox is ‘a judgement of God on the sins of the people,”; that inoculation is ‘an encroachment on the prerogatives of Jehovah whose right it is to wound and smite.’”

6 From the very beginning science was seen as an “encroachment on the prerogatives of Jehovah.” Church Fathers Tertullian and Augustine both condemned anatomy as butchery. Many such theologians feared what the practice would mean for the resurrection of the dead. This belief carried over to surgery as well. And for centuries such medical care was unavailable. Medicine was so suspect that there arose the proverb: “Where there are three physicians there are two atheists.”

7 Today we live in world that is a far, far better place because of these experiments. Today we eat corn that was, in fact, a result of early man’s experiments in biotechnology: Native Americans cross bred two prairie grasses to create an entirely new species. They created something “unnatural” in that experiment. By the time the Pilgrims landed they had no idea that corn they ate on Thanksgiving was contrary to God’s original plan; to them it was natural.

8 Even our modern potato was unknown to primitive man. Centuries of selective breeding have removed undesired genes and replaced them with desired ones. Primitive biotechniques were used in the fermentation of alcohol and the manufacture of cheese. The efficiency of the techniques may have been improved but the basic principles predate our discovery of DNA, genes and cloning…

9 Man’s nature is that he is a rational creature who must manipulate nature to survive. In its raw state nature is disease, hunger and death. It is the “dog eat dog” world that many advocates of the natural deplore in other fields. But, if nature has intrinsic value, then man’s use of nature to survive destroys that value thus “man’s alleged destructiveness and evil is directly in proportion to his loyalty to his essential nature. Man is a rational being. It is his application of his reason in the form of science, technology, and an industrial civilization that enables him to act on nature.... thus, it is his possession and use of reason—manifested in his technology and industry—for which he is hated.” Man has always manipulated nature because left to its own devices nature is brutal. It leads to human lives that are, short and brutish.

10 Native  North Americans burned down entire forests to make hunting easier. Buffalo were slaughtered by the tens of thousands with most left to rot. This was accomplished by stampeding entire herds over a cliff. The Vora “buffalo jump” site in Wyoming has the remains of some 20,000 animals. The arrival of Aborigines in Australia quickly led to the demise of several “giant” macropodids (kangaroos and related species). In New Zealand the Maoris, according to science writer Matt Ridley, “sat down and ate their way through all twelve species of giant moa birds.” The Aztecs depleted their soil in Mexico…

11 It was only with the evolution of concepts of private property rights and science that man changed how he dealt with the world. He learned how to manipulate nature through science so as to create lasting benefits. And, with the advent of property rights he had the incentive to avoid
Say what you will about science, tampering with nature, or “playing God”, the results can’t be denied. Human’s live longer, healthier, better lives because of it.

12 From the moment the first man stood upright he was playing God. It’s natural for him to tamper with nature. He no longer relied on just body hair for warmth, but created clothes. He artificially lit and heated his dwellings by conquering the nature of fire. He grew his own food and manipulated its genetic structure by cross breeding. Instead of using his “God-given” feet for transit he harnessed wild horses and domesticated them, eventually creating the wheel. Without wings he learned to fly and, of all the species that we know of in the universe, he is the only one to walk on the moon.

13 When man left footprints among the stars he was playing God. When he performs heart surgery he is playing God. Each premature baby placed in an incubator and kept alive through “artificial” means lives because some researcher, some doctor, played God. When third world peasants flee to higher ground, because a meteorologist has warned them of an impending hurricane and the resulting flood, thousands of lives are spared because someone played God.

14 When man does not play God the world is a mean and brutal place. It is a world where old age is the mid 20s. It is a world where most infants die before reaching maturity. It is a world where the diabetic suffers pain finding release only in an early death. It is a world where disease and famine are rampant. It is a world where there is no warmth in the winter and no light after sunset. It is a world where each flash of lightning so terrifies men, women and children that they cringe in fear in the recesses of some darkened cave. It may be natural. But it is cruel and monstrous.