

James Watson, who helped discern the structure of DNA, predicted that humans will soon be able to direct their own evolution — a prospect not universally embraced. *John Gibbins / Union-Tribune*

DNA trailblazer foresees designer genes

Watson says humans could shape evolution

By Bruce Lieberman
STAFF WRITER

For James Watson, the future of humanity lies in what science can tell us about our genes.

On the surface, that may not seem like a shocking statement from a man who 50 years ago helped divine the structure of DNA, the double helix of molecules that encodes our biology.

But Watson, who shared a 1962 Nobel Prize with co-discoverers Maurice Wilkins and Francis Crick of the Salk Institute in La Jolla, also predicts that 21st century science will empower humans to actually direct their own evolution.

Scientists will find the genes behind a long list of diseases and cure many of them, Watson said. Parents will be able to find out if their children are genetically predisposed to alcoholism and violence and be able to warn them.

Babies may be genetically engineered to be smarter, happier, more athletic and better looking. A pregnant mother could have the power to know if her unborn child will be handicapped or mentally ill and choose to end the pregnancy.

It is all because of science's grasp of deoxyribonucleic acid, DNA — the subject of a five-part series on public television beginning today that recounts the discovery of DNA's structure in 1953 and the biological

revolution it sparked.

One of the biggest legacies of the DNA discovery is an emerging appreciation for human diversity, Watson said.

"We're going to understand why people are different," he said during a recent trip to San Diego. "I think that's going to lead to a better society because we'll be more tolerant."

During an interview in La Jolla, Watson talked about the future of genetics and how the advancing knowledge of DNA will give people choices they never thought possible.

"DNA," produced by Thirteen/WNET New York and stretching over five consecutive Sundays, begins with the epic discovery of DNA's double helix and continues with a look back at the first genetic engineering experiments, the emergence of today's biotech industry, the rise of genetically modified plants and crops, the race to decode the human genome, the quest to find the genetic causes of cancer, and the prospects for altering the human race through genetic engineering.

It is in the last segment, titled "Pandora's Box," where Watson, 75, shares some of his most controversial views.

Among them is the idea that new genetic tests will empower parents to decide the fate of their unborn children.

"I think if you knew a child would be born handicapped physically and mentally in some way, I wouldn't want to have a child born if I could bring a healthy child" into the

world, Watson said.

The scientist's views have been shaped in part by his family's own experience. His son suffers from an undiagnosed mental illness that displays symptoms of both autism and schizophrenia.

Mental illness, physical handicaps, disease and other disorders are "genetic injustices," and science is acquiring the ability to set many of them right, Watson said.

He has spent much of the past 40 years studying the biology of cancer. At Cold Spring Harbor Laboratory in New York, where he serves as chancellor, scientists are attempting to catalog the genes responsible.

Watson said DNA can tell humans about not only what we are but also who we are. There are probably genes that make people talkative or introverted, good at math or bad at math, right-handed or left-handed, he said. There are probably genes for lust, and for maternal love.

Identify those genes, and someday people may be able to control which ones get turned on and which ones are suppressed. Designer babies shouldn't be feared but embraced, Watson said.

"I think it's human nature to try to improve your life," he said. "We should count on knowledge being used to improve human life, rather than being used to increase human problems."

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