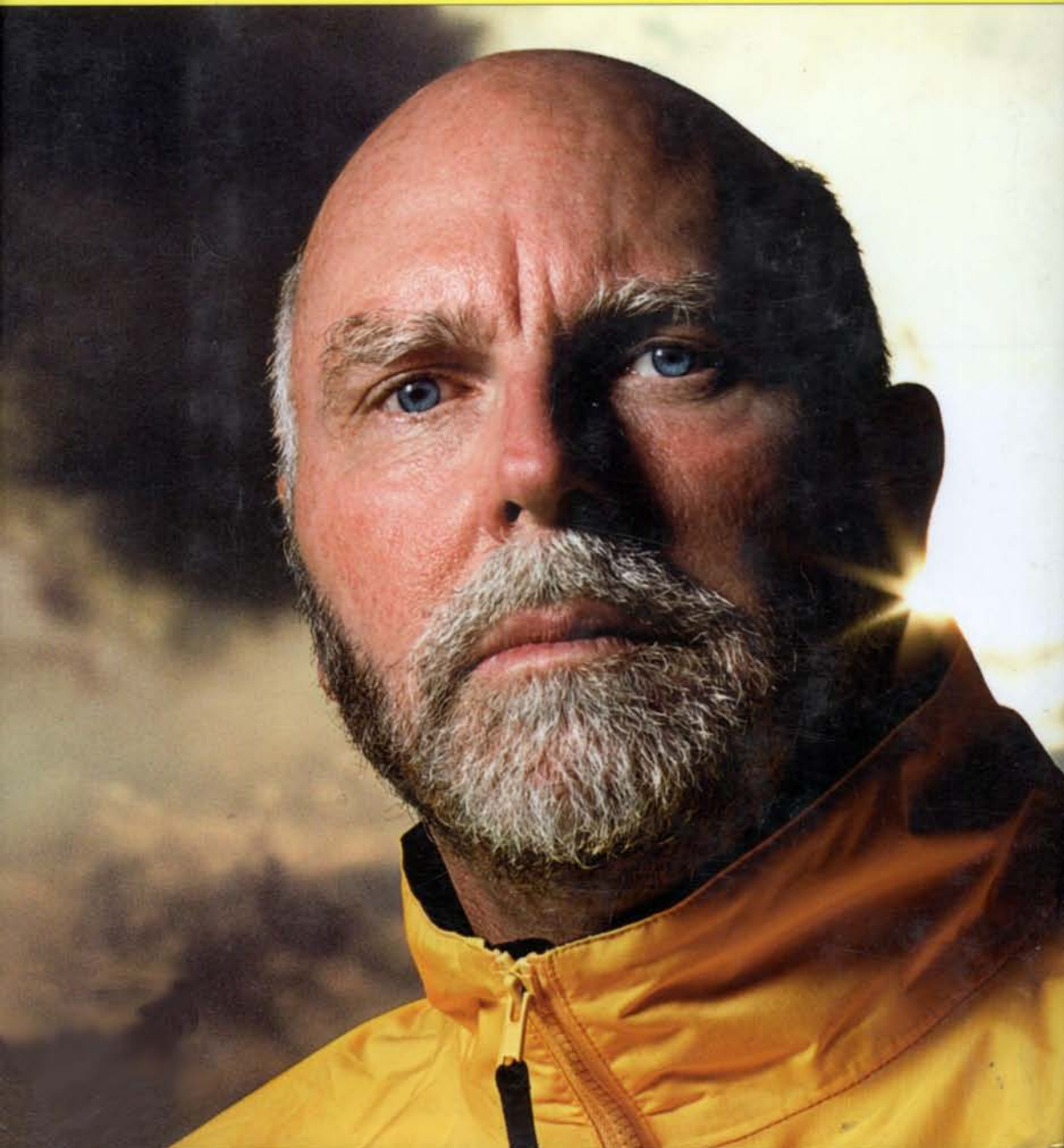


# A LIFE DECODED

*My Genome: My Life*

J. CRAIG VENTER



Of all the extraordinary scientific achievements of the past century, perhaps none can match the deciphering of the human genetic code, both for its technical brilliance and for its implications for our future. It has charted a landscape in which we will discover the most intricate workings of our species, the particularities of our own individual genetic makeup, and the promise of novel approaches to health and medicine that will mark a new stage in human development, one in which inherited biology is no longer necessarily destiny.

*A Life Decoded* is the story of this singular milestone in our history, told by the man who through a combination of vision, tenacity, ingenuity, and insight challenged conventional wisdom and refuted his critics to reveal the human genetic code. Growing up in California, Craig Venter was an unremarkable student, with little interest in his schoolwork and even less motivation to complete his education. But being drafted as a Navy medic in Vietnam piqued his interest in science and medicine, and after jump-starting his education, he received advanced degrees and quickly established himself as a gifted and outspoken scientist. At the National Institutes of Health he introduced novel techniques for rapid gene discovery, and at his own research institute in 1995 sequenced the first genome of a living species in history, the bacterium *Haemophilus influenzae*.

That success prompted him to take on the dauntingly more ambitious goal of the entire human genome—billions of letters of genetic code that would test the limits of both human and computational abilities. Venter not only set himself this almost inconceivably ambitious goal but also announced he could reach it more quickly, and for far less money, than the government-sponsored Human Genome Project—a prediction he fulfilled in 2001. The story of that quest is at the heart of *A Life Decoded*, and

rarely has the chronicle of a scientific adventure been more dramatic or, ultimately, more profoundly moving. The account of the decoding of the human genome is, on one hand, a thrilling story of detection, featuring machines that refused to function the way they should have, as well as flashes of virtuosity from an increasingly pressured, small band of dedicated researchers. But it is also a revealing, and often troubling, look at how science is increasingly practiced today—a discipline in which financial demands, political machinations, and ego all too often undermine the pursuit of knowledge that might save lives.

But reading the human genome is only the beginning of a revolution in our relationship with the world. Craig Venter has built on that foundation, as he explains in the closing pages of *A Life Decoded*, to investigate the genomes of the atmosphere and the oceans, to transplant genetic material from one organism into another, and to create synthetic life—all projects with the potential to address the most urgent problems of the twenty-first century. That, finally, is the purest goal of science and lies at the heart of this inspiring and remarkable book.

J. CRAIG VENTER is one of the leading scientists of the twenty-first century. A pioneer in the world of genomic research, he is recognized for his visionary contributions to the field. In February 2001, Venter published the completed sequence of the human genome. He is the founder and president of the J. Craig Venter Institute. He lives near Washington, D.C.

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*Praise for*  
J. CRAIG VENTER

“It’s thanks to Venter, aggressive and hard-nosed as he is,  
that the world can read the score of the human symphony.”

—*Time* (Person of the Year 2000)

“[Venter is] not just trying to understand how life works;  
he’s trying to make it work for him, and for us.”

—*The Atlantic*

“Venter alone is taking the measure of life’s true diversity  
and dreaming up new life-forms at the same time.”

—*Wired*



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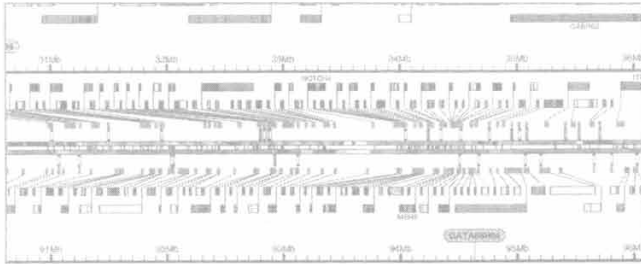
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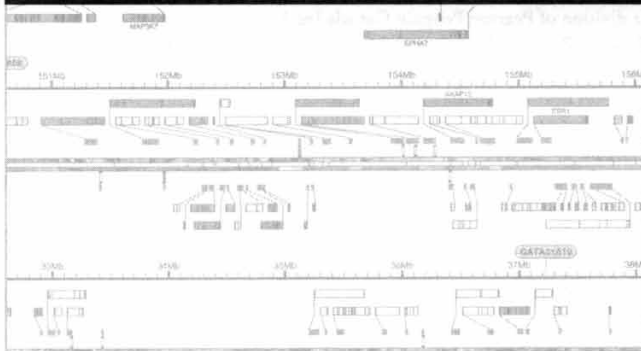


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J. CRAIG VENTER



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MY GENOME: MY LIFE

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To my son, Christopher Emrys Rae Venter, and  
my parents, John and Elizabeth Venter



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# A LIFE DECODED





*(top, left)* The Venters, a typical American family, on a visit to Ocean Beach, California, in 1948. (Mother, Elizabeth; me, age two; Father, John; and older brother, Gary)

*(top, right)* Me, age three, outside Bayside Manor home in Millbrae, California, not far from San Francisco airport.

*(above)* Me, age five, in kindergarten class photo (second from left, front row).

*(right)* A happy seven-year-old enjoying life.

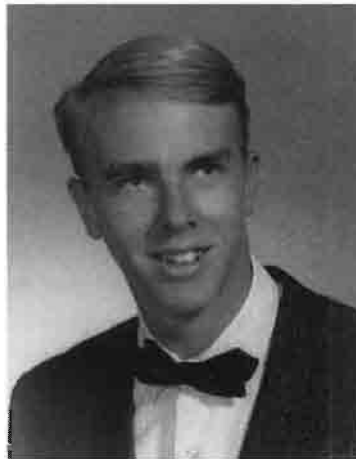


Eighth grade report card, showing the result of my refusing to take spelling tests the year before. (Some parents may, perhaps, find some hope on seeing similar report cards from their children.)

Key to Marking:		Effort	
A Excellent	D Dismal	This rating tells whether the child is working to the best of his ability. Unsatisfactory effort is a matter of fact, not opinion. U or U- means that the child should be encouraged by the parent.	
B Good	S Satisfactory		
C Average	U Unsatisfactory		
D Barely Passing	Inc Incomplete because of absence		
F Failing			
Student's Name: <i>John G. Kendall</i>		TEACHER AND ROOM	
REPORTS			
		1	2
READING	Effort: <i>D- C-</i>		
	Conduct: <i>U S</i>		
ALGEBRA	Effort: <i>U S</i>		
	Conduct: <i>U S</i>		
ENGLISH	Effort: <i>U S</i>		
	Conduct: <i>U S</i>		
SOCIAL STUDIES	Effort: <i>U S</i>		
	Conduct: <i>U S</i>		
SCIENCE	Effort: <i>U S</i>		
	Conduct: <i>U S</i>		
PHYSICAL EDUCATION	Effort: <i>U S</i>		
	Conduct: <i>U S</i>		
ARTS	Effort: <i>U S</i>		
	Conduct: <i>U S</i>		
MUSIC	Effort: <i>U S</i>		
	Conduct: <i>U S</i>		
PEWMAKING	Effort: <i>U S</i>		
	Conduct: <i>U S</i>		
STUDY	Effort: <i>U S</i>		
	Conduct: <i>U S</i>		
RECREATION	Effort: <i>U S</i>		
	Conduct: <i>U S</i>		
GENERAL BEHAVIOR	Effort: <i>U S</i>		
	Conduct: <i>U S</i>		
ATTENDANCE	Effort: <i>U S</i>		
	Conduct: <i>U S</i>		
ADVISOR'S COMMENTS			
ASSIGNMENT FOR NEXT YEAR: All non assignments are high. Please do not forget to bring your assignments to school.			
Teacher's Signature: <i>Richard J. Williams</i>			



Mills High School swim team, 1963 (me, front row, fourth from the left).



Mills High School graduation photo, 1964. I graduated courtesy only of a D- in place of the F that seemed likely in government class.



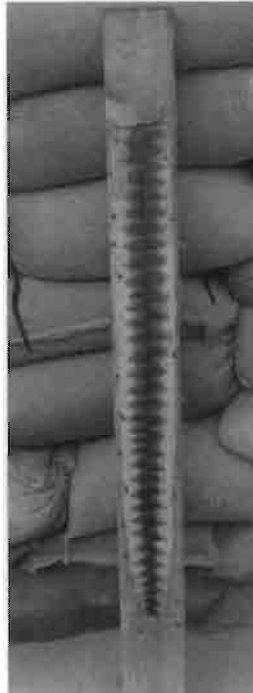


A toughened version of me, with friends in Counterinsurgency School in the swamps of Virginia as preparation for Vietnam, 1967.



China Beach, Da Nang, Vietnam; me with a venomous sea snake that bumped into my leg while I was swimming in the surf.

Sea-snake skin pinned to a board with hypodermic needles while drying in the hot sun outside of a bunker. This memento now hangs on the wall of my office.





Intensive care ward with Striker frames in a Quonset hut hospital, Da Nang, Vietnam, where I spent the first six months of my tour. This photo shows the striking diversity of patients we treated at any given time, from wounded and burned children to Koreans to POWs.



Treating patients at an orphanage outside of Da Nang in 1968. Skin infections were common.

Wedding day, November 1968, Geneva, Switzerland. I met Barbara Rae, of New Zealand, while on R & R from Da Nang in Sydney, Australia.



Working in a San Diego boatyard on my nineteen-foot folk boat, *PAIX*, soon after starting at UCSD as a junior-college transfer student.



Single-handed sailing on *PAIX* out the channel from Mission Bay into the Pacific Ocean.

Me with my mentor, the late Nathan (Nate) O. Kaplan, and Barbara after we graduated from UCSD with new Ph.D.s in 1976.



In Buffalo, New York, enjoying the afternoon with son, Christopher Emrys Rae Venter, born at the end of the blizzard of 1977.



A winter break at Falling Leaf Lake, near Lake Tahoe, with Christopher, Barbara, and dear friends and College of San Mateo mentor Bruce Cameron and his wife, Pat Cameron.



My early Buffalo Medical School lab team, which focused on the adrenaline receptor isolation.



As a single parent celebrating Christopher's third birthday in an old row house near the Buffalo Medical School, 1980.



Racing my eighteen-foot Hobie Cat off a Canadian beach was an important escape from work for me.



My second wedding ceremony, with my new wife, former graduate student Claire M. Fraser, in Centerville, Massachusetts, in October 1981.

My father after a good day of golf, shortly before he died in his sleep on June 10, 1982, from sudden cardiac death.





My NIH pre-genomics lab team after the transition from receptor biochemistry into molecular biology.



*Sirius*, my thirty-three-foot Cape Dory in Bermuda shortly after surviving a major gale while sailing from Annapolis to Bermuda.



In my NIH lab, trying to boost the morale of my team after *The Washington Post* reported that Jim Watson had declared at a Senate hearing that monkeys could do my EST method of gene discovery. Claire bravely wore the monkey suit to mock Watson.



At the helm of my Frers-designed eighty-one-foot sloop, *Sorcerer*, at the start of the great ocean race from New York City to Falmouth, England, in May 1997.

*(Photo by Rolex.)*



Receiving the New York Yacht Club trophy for winning the contemporary division of the transatlantic race from Commodore Bob James in Falmouth, England, in 1997. The last time the trophy was presented to an American was in 1905, to the skipper of the schooner *Atlantic*.



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