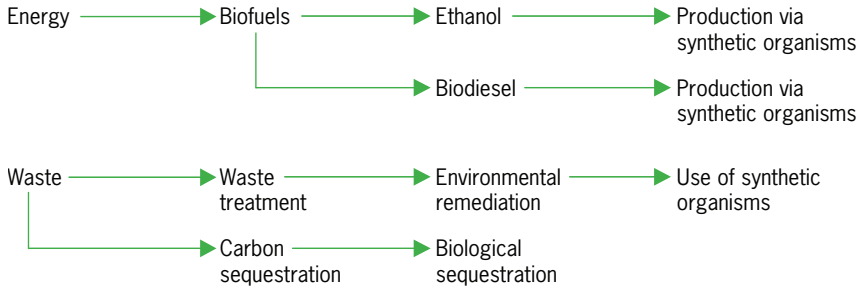


**Key Technologies** Bacterial genome manipulation and synthetic cell creation

**Key Product Families** "Biologically-based software"

**Products Available?** No

**Areas of Activity**



**Company Snapshot**

In 2001, start-up Celera Genomics – run by genomics entrepreneur J. Craig Ventner – published the results of its privately-funded \$300 million initiative to sequence the human genome, which competed with the publicly-funded \$3 billion Human Genome Project. Four years later, Ventner founded a company called Synthetic Genomics, which splices DNA sequences into microorganisms to rationally program specific metabolic functions. Drawing on research conducted at founder Craig Venter’s Institute for Genomic Research, the company is working to synthesize a custom genome using selected, specific DNA with important environmental and commercial applications. The first step to reach this goal is to develop a minimal genome that can provide an “operating system” for the insertion of the desired DNA segments, which the company refers to as “biologically-based software.” Ventner himself spent a three-year ocean journey scooping up microbes from the seas whose DNA may serve as potential “source code” for said software. Using the minimal genome, which contains only the genetic material for necessary life functions, the desired DNA segments are inserted for the development and replication of their functions.

Founded in 2005 with \$30 million in venture capital, Synthetic Genomics is continuing its research and development of the core synthetic organism-based technology. As of 2006, it does not have a product commercially available, but has cited goals of releasing a working product by late 2007. The company has hopes for many important applications of this technology. It believes the synthetic organisms will be initially useful in the production of biofuels and hydrogen. This technology also has key applications in environmental remediation by synthesizing organisms for waste remediation and carbon sequestration.

**Key Figures**

Revenue: \$0 (2005) (estimate) – Employees: 6 to 10 (2005) – Unprofitable (estimate)

**Synthetic Genomics**  
 9601 Blackwell Rd Ste 200  
 Rockville MD 20850  
 United States  
 www.syntheticgenomics.com

Type: Start-up

Status: Private

Year Founded: 2005

Parent Company: None

**Level of Cleantech Focus**



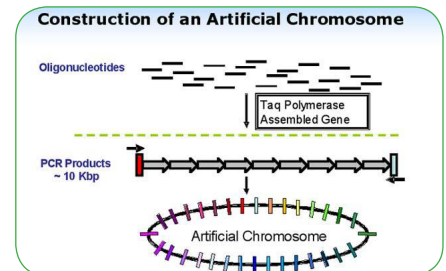
**Platform/Application Technology**



**Business Model**



**Value Chain Role**



Synthetic Genomics aims to engineer environmentally useful organisms from minimal synthetic chromosomes



Founder J. Craig Ventner has also founded Diversa Corporation, Celera Genomics, and Human Genome Sciences

*This report is based on information obtained from sources believed to be reliable but no independent verification has been made, nor is its accuracy or completeness guaranteed. This report is published solely for informational purposes and is not to be construed as a solicitation or an offer to buy or sell any securities or related financial instruments.*

**Key People****Craig Venter****Founder, Chairman, Chief Executive Officer, Co-chief Scientific Officer**

Is also the Founder and President of the Venter Institute and the J. Craig Venter Science Foundation, and the Founder and Chairman of the Institute for Genomic Research

**Aristides A. Patrinos****President**

Was the Director of the Office of Biological and Environmental Research, directing the department's research activities in human and microbial genome research, structural biology, nuclear medicine, and health effects and global environmental change

**Hamilton O. Smith****Founder, Executive Vice President, Co-chief Scientific Officer**

Won the 1978 Nobel Prize for his work on the discovery of restriction enzymes, an important tool in the field of recombinant DNA technology

**Juan Enriquez****Founder, Director**

Was the Founding Director of Harvard Business School's Life Sciences Project and Founder of Biotechnology

**David Kiernan****Founder, Executive Vice President, General Counsel**

Is a senior litigation partner at Williams & Connolly in Washington, D.C.

**Clyde Hutchinson****President of Scientific Advisory Board**

Helped develop site-directed mutagenesis techniques and is the world's foremost expert on mycoplasmas

**Contact Information****Aristides Patrinos****President**

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apatrinos@syntheticgenomics.com

**Venture Capital Funding**

Transaction date	Transaction type	Transaction amount (US\$ millions)	Transaction investors
June 1, 2005	Series A	30.0	Draper Fisher Jurvetson, Biotechnology, Alfonso Romo

**Company Relationships**

Company	Type	Status
Venter's Institute for Genomic Research	Company's IP supplier	Active
Massachusetts Institute of Technology (MIT)	Development partner	Active
Alfred P. Sloan Foundation	Project funding	Active

**Key Events**

Date	Description
February 2, 2006	Named Dr. Aristides Patrinos as President to help shape the research and business direction of the company
July 25, 2005	Announced a new 15-month project to examine the societal implications of synthetic genomics
July 10, 2005	Announced hopes to complete its technology in two years and have some sort of application commercially available
June 29, 2005	Launched the company with initial focus on ethanol and hydrogen production and with eventual applications in pharmaceuticals, carbon dioxide sequestration, and environmental remediation
June 1, 2005	Received \$30 million in venture capital from Draper Fisher Jurvetson