

ATP Partners with NIH to Accelerate the Human Genome Project

- ATP's past support for the development of high-risk technologies has enabled practical use of DNA information.
- ATP partners with NIH to accelerate commercially practical DNA technologies.
- NIH genome scientists cooperate with ATP to review high-risk proposals in DNA technology.
- Dr. Francis Collins considers ATP a partner in advancing commercial application of DNA information.
 - "Real public benefit would depend upon major expansions in commercial markets for DNA analysis."
 - "Success of the genome project wasn't guaranteed in the early days, even less sure was the promise of these commercial markets."
 - "We at the NIH genome project appreciate the partnership we've had...in the development and implementation of the NIST ATP program. This experience has had a lasting positive effect on advancing our research agenda and also on how we run our own programs."
- ATP accelerated the progress of the Human Genome Project
 - ATP-funded advances in DNA chip technology have greatly improved the speed and quality of DNA testing.
 - Affymetrix DNA chips incorporate ATP-supported technology.
 - ATP-funded DNA chip technology is now used in all areas of biotechnology.
- ATP funded development of high-throughput sequencing machines (PE-Biosystems). Hundreds of high-throughput sequencing machines are used at both NIH and Celera Genomics.

ATP Support Has Helped Establish Leading Biotech Companies

- Some observers say ATP is the "godfather" of the U.S. biochip industry.
 - Affymetrix (Santa Clara, CA) started independent operations in 1993, received ATP award in 1994. Affymetrix had 512 employees in 1999 with sales totaling \$201M in 2000.
 - PE Biosystems (Foster City, CA) received ATP awards in 1994, 1995, and 1998. The company had 3,504 employees in 1999 with \$1.4B in sales in 2000.

- Gene Trace Systems (Alameda, CA) was "basically just a couple of guys and an idea" in 1994. The ATP award in 1995 "really launched us...allowed us to be something real" (Christopher Becker, President). GeneTrace now has more than 40 employees. "I can speak for small companies in saying that [ATP] stepped up to provide us funds and took risks where the venture capitalists would not."
- Vysis (Downers Grove, IL) was incorporated in 1991 and received its first ATP award in 1994. By 1999, Vysis had 138 employees and in 2000 reached \$21M in sales. "Two-thirds of all of Vysis' current technology, and all of our future technology, can be traced back to ATP funding" (Uwe Miller, Director of Advanced Technology).
- Nanogen (San Diego, CA) was founded in 1993 and received an ATP award in 1995. By 1999 Nanogen had 142 employees and by 2000 had reached \$11M in sales. The ATP funding award was "like a godsend" in "getting us going as a company" (James O'Connell, Vice President of Research).

Sources: Quotations are from Nature Biotechnology, Vol.16, (December 1998), p.1306. Company data are from web sources.