

# Biotech's Past, Present and Future

A glimpse at companies, products, key figures and other milestones in the rise of the modern biotech industry

Sources: LifeSciencesFoundation.org, MM&M research

## 1953

Watson and Crick map the molecular structure of DNA—the double helix



## 1973

The era of genetic engineering: Boyer and Cohen (pictured) express recombinant genes in bacteria



## 1976

Genentech Inc., founded by Robert Swanson and Herbert Boyer, gives birth to the biotech industry



## 1980

President Carter signs the Bayh-Dole act, allowing academia to retain IP rights



## 1982

The first bioengineered drug, Eli Lilly's Humulin, reaches market. It was developed by Genentech



## 1986

Congress passes the Technology Transfer Act, which fosters partnerships between NIH and the private sector



## 1989

The first biotech blockbuster: Amgen launches Eprex, a recombinant version of erythropoietin for treating anemia



## 1998

Genentech debuts Herceptin for HER2+ breast cancer, a big step toward personalized medicine



## 2003

The Human Genome Project comes to a close, after 13 years; the genomic sequence was published in 2001



## 2011

Genzyme is acquired by Sanofi for \$20.1 billion, leaving Amgen the biggest standalone biotech



## 2013

The Supreme Court (AMP v. Myriad Genetics) rules that naturally occurring genes are not patentable



## 2015

When Remicade's EU patents expire in two years, it could trigger a biosimilars wave in oncology too

