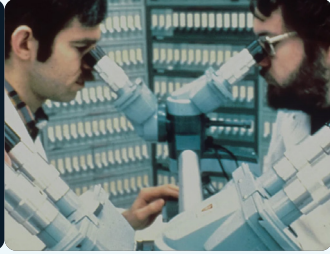


50+ Years of Biotechnology Innovation

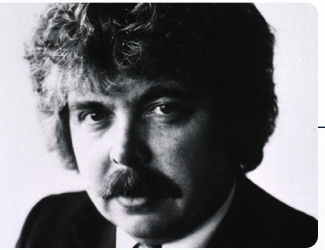
1976: America's First Biotech Company Founding

The company was the first to commercialize recombinant DNA technology. This breakthrough laid the foundation for the modern biotech industry.



1973: Recombinant DNA Technology Emerges

Scientists Stanley Cohen and Herbert Boyer developed the first methods to splice DNA and create recombinant organisms.



1978: Synthetic Human Insulin Developed

This innovation showed that genetically engineered human proteins could be safely and reliably used to replace animal-derived therapies.



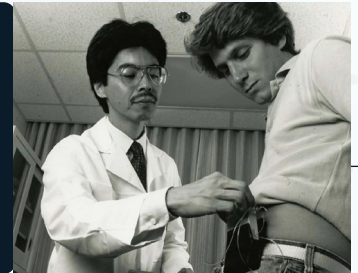
1970s-Present: Advances in Immune Therapies and Precision Medicine

These therapies have transformed cancer care from a "one-size-fits-all" approach to a personalized strategy that significantly improves survival rates.



1982: FDA Approves the First Biotechnology Drug

This milestone enabled the mass production of synthetic, human-identical insulin using genetically modified E. coli, offering a purer, more reliable supply for diabetics.



1982: Small Business Innovation Research (SBIR) Program Established

Congress created SBIR to support small businesses in developing innovative technologies with commercial potential, strengthening U.S. competitiveness by bridging early-stage research and market-ready innovation.



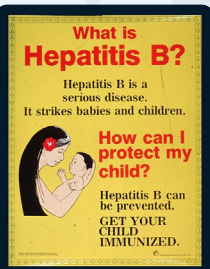
1983: Congress Enacts the Orphan Drug Act

This act incentivized the development of treatments for rare diseases, significantly expanding innovation for underserved patient populations.



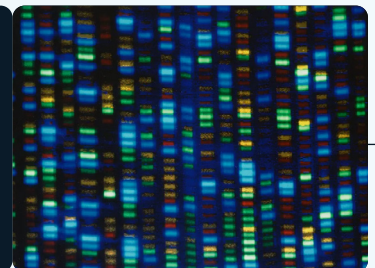
1986: FDA Approves the First Recombinant Hepatitis B Vaccine

This vaccine had a profound public health impact, dramatically reducing rates of chronic hepatitis B infection, cirrhosis, and liver cancer worldwide.



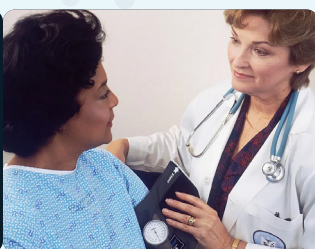
1986-1990: Human Genome Project Initiated

A massive, publicly funded effort to map and sequence the entire human genome was planned and launched, contributing to genomics, personalized medicine, and countless biotech innovations.



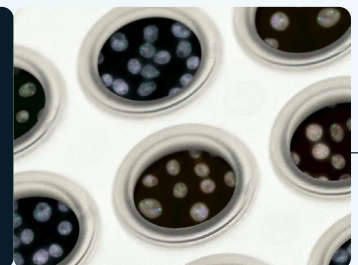
1987: FDA Approves the First Biotech Therapy for Heart Attacks

This landmark revolutionized emergency cardiovascular care, offering a more effective alternative to existing treatments.



1990s: Genomics and Gene Therapies Begin

The first federally approved human gene therapy trial and rapid advances in mapping, sequencing, and genomic tools established biotechnology as central to the future of medicine.



**1992:
FDA Establishes the
Accelerated Approval Pathway**

This program allowed earlier approval of therapies for serious conditions based on surrogate endpoints, speeding patient access while maintaining scientific rigor.



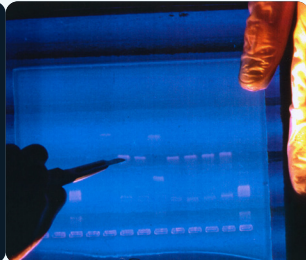
**1992:
Congress Passes the
Prescription Drug User
Fee Act (PDUFA)**

The ability of the FDA to collect fees from drug developers to speed the review process became a crucial mechanism in a more efficient regulatory pathway.



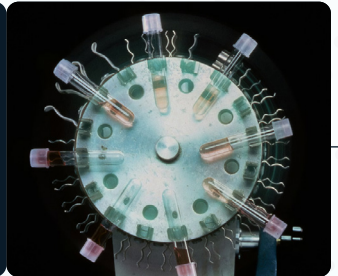
**2000–2003:
Human Genome
Project Milestones**

In 2000, a draft of the human genome was announced. Completed in 2003, this genetic blueprint of our species marked one of the most significant scientific achievements ever.



**2000s:
Biotech Transitions from
Research to Global Industry**

As biotechnology became a driver of modern medicine and commercial innovation, the decade saw rapid growth in monoclonal antibodies, biologics, and platform-based drug development, alongside major investment.



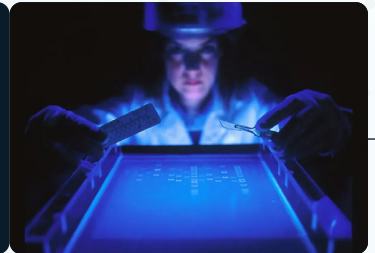
**2012:
Establishment of Rare Pediatric
Disease Priority Review
Voucher (PPRV) Program**

This program encourages the development of new treatments for rare pediatric diseases by awarding sponsors a transferable voucher upon approval of an eligible drug.



**2012:
Commercialization of
Gene Editing**

Gene editing provides an accessible, precise tool for altering genomes. It led to numerous start-ups and research pathways.



**2013:
Supreme Court Rules Human
Genes Cannot Be Patented**

This landmark ruling opened the field of genetic diagnostics to broader competition, lowering barriers to innovation and enabling more accessible, affordable genetic testing across the biotech sector.



**2016:
Congress Enacts the 21st
Century Cures Act**

This significantly increased funding for biomedical research, including NIH initiatives, and accelerated pathways for drug development and modern clinical trial designs.



**2017:
FDA Approves the First CAR-T
Cell Therapy for Cancer**

This milestone demonstrates the power of living medicines and launches a new era of personalized immunotherapy.



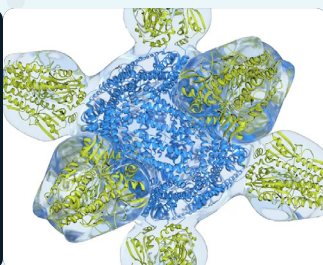
**2020–2021:
Advancement of
mRNA Technology**

The global deployment of mRNA technology marked the first large-scale demonstration of programmable, RNA-based therapeutics. Its success accelerated mRNA's adoption for vaccines, oncology, and rare-disease therapies far beyond infectious disease.



**2020s:
Advances in Genomics
& AI Convergence**

The biotech industry has spearheaded advances in sequencing technology; AI for protein structure prediction and drug discovery; and synthetic biology.



To learn more,
scan the QR code or
visit [FightOfOurLives.com](https://www.fightofourlives.com)

