

Commemorating 75 Years of Discovery and Innovation at the NSF

THE U.S. NATIONAL SCIENCE FOUNDATION (NSF) OPPORTUNITIES AND GRAND CHALLENGES

The NSF has been a major supporter of RCSB PDB, and enables RCSB.org data and services to provide infrastructure for new ideas in research.

BIOTECHNOLOGY

GREEN FLUORESCENT PROTEIN

GFP, a tiny fluorescent protein from jellyfish, has revolutionized cell biology.

EMERGING INDUSTRIES IN THE BIOECONOMY

CRISPR-CAS9

Cascade and CRISPR help bacteria remember how to fight viral infection. This technology is transforming our understanding of gene regulation.

BUILDING A BETTER FUTURE

PLASTIC EATING ENZYMES

Researchers are looking to Nature to find ways to dispose of discarded plastic, bringing biology to industry along the way.

ARTIFICIAL INTELLIGENCE

DESIGNING PROTEINS

50 years of open access to the PDB has accelerated scientific advances in protein structure architecture and AI/ML prediction tools.

On May 10, 2025, the NSF commemorates its 75th anniversary

PDB SUPPORTS THE GOALS OF THE NSF

Empower

RCSB PDB is committed to training, supporting, and empowering a community of researchers and future scientists

Discover

- RCSB.org tools drive research across all NSF directorates, illuminating biology from Agriculture to Zoology
- PDB structures aid understanding societal challenges, such as the physics of aging
- CryoEM resolution revolution and predicted protein structures are advancing the frontiers of research
- RCSB PDB accelerates data-intensive research through advanced cyberinfrastructure
- Structural biology provides foundational knowledge into the rules that make life work

Impact

- RCSB PDB safeguards structural biology data generated with NSF funding of more than half a billion dollars worth of NSF data over the lifetime of the PDB
- PDB structures have contributed data to >1 million published research papers

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The images were created by science communication intern Xinyi Christine Zhang (Harvard). Visit pdb101.rcsb.org to download high resolution versions.