



Life Sciences R&D

Accelerating Discovery While Securing Data

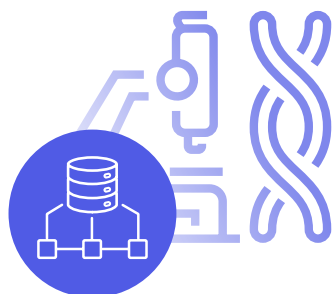


Life Sciences R&D Is Outpacing Traditional Storage

The race to develop new therapies, diagnostics, and drugs requires many moving parts. At the center of it all is a strong data foundation. As research organizations scale across global sites and partners, storage infrastructure often struggles to keep pace. Exploding volumes of genomic, imaging, and experimental data are overwhelming legacy NAS systems, ultimately slowing collaboration, increasing risk, and limiting the return on AI investments. As R&D timelines compress, modernizing the data foundation is no longer optional. It's a strategic imperative.

To keep discovery moving, life sciences organizations are modernizing how they manage research data to support efforts such as:

- ✓ Accelerating AI-driven discovery across modeling and simulation workflows.
- ✓ Enabling secure collaboration across distributed research teams and partners.
- ✓ Strengthening IP protection and compliance as data sharing expands.



By 2025, genomics research is expected to generate

~40 EB

(exabytes) of data, doubling approximately every 7 months

(National Library of Medicine)

Organizations that rely on traditional NAS systems are hitting roadblocks in modern life sciences R&D:

Data Explosion. Genomic sequencing, bioinformatics, imaging, and high-throughput screening generate massive volumes of unstructured data. As research expands across trial sites and partners, legacy NAS struggles to scale efficiently, forcing overprovisioning, increasing operational costs, and limiting flexibility.

Fragmented Collaboration. Life sciences R&D depends on globally distributed teams across pharma, biotech, CROs, CMOs, and academic labs. When storage is siloed across departments and regions, manual transfers and version conflicts delay progress and complicate secure data sharing.

AI-Readiness Gaps. AI models are only as powerful as the data they can access. Disconnected storage environments make it difficult to unify, govern, and prepare datasets for AI training – turning strategic AI investments into underperforming initiatives instead of engines of discovery.

Growing Security and IP Risk. Ransomware attacks on research institutions continue to rise, putting years of intellectual property at risk. Fragmented environments increase exposure, while patchwork security add-ons often lack native file-to-object immutability.

Regulatory and Compliance Pressure. Long-term retention mandates and global standards, including HIPAA, GxP, FDA 21 CFR Part 11, EMA, and GDPR, require stronger governance and control across distributed research environments.

CTERA Intelligent Data Platform for Life Sciences R&D

The CTERA Intelligent Data Platform delivers the modern file foundation research organizations need to collaborate at speed, safeguard intellectual property, and operationalize AI with confidence.

- ✓ A global file system with local edge caching provides fast, secure access to active research data at every site, maintaining a single source of truth.
- ✓ Immutable, ransomware-resistant snapshots protect every file with instant recovery across locations.
- ✓ Policy-based tiering enables cost-effective scaling while keeping active data local.
- ✓ End-to-end encryption and zero-trust controls secure sensitive IP across distributed environments.
- ✓ Built-in compliance and governance simplify audits and support data residency requirements.
- ✓ AI-ready data services unify file access across locations, enabling seamless integration with AI/ML pipelines.
- ✓ Seamless deployment into existing environments minimizes disruption.



PROVEN AT SCALE

CTERA is trusted by leading healthcare and government organizations to manage petabytes of sensitive, unstructured data across hundreds of global sites. With a military-grade security posture and unmatched flexibility, CTERA is built to meet the demands of modern life sciences.

Ready to accelerate discovery with a secure intelligent data platform? Let's talk.

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