

## VDURA for Life Sciences

Unlock the full potential of your life sciences data with the VDURA Data Platform.

### Highlights



VDURA supports multiple microscopes at NYSBC and replaced two legacy storage systems.



UOW consolidated JBOD and NFS NAS devices onto VDURA, gaining **8x** bandwidth improvement, **4x** concurrent users, and **2x** GPU servers.



VDURA enables up to **30x** improvement in CryoSPARC data transfer rates with version 4.3 or later.

### Introduction

Innovations in genomics, cryogenic electron microscopy (cryo-EM), drug discovery, bioinformatics, and other life sciences disciplines depend on the ability to rapidly store, analyze, and retrieve vast volumes of data. Legacy storage systems just aren't fast, adaptable, or reliable enough to meet the performance and capacity demands of modern life sciences applications.

That's where we come in.

The VDURA Data Platform provides a robust and intuitive solution that streamlines data management, accelerates research pipelines, and eliminates storage complexities. Here's how we help transform data into discoveries at labs across the globe.

### High-throughput analysis

High-throughput techniques such as next-generation sequencing (NGS) and cryo-EM produce large amounts of data that demand exceptional processing power and storage capabilities. The VDURA Data Platform delivers infinitely scalable performance and capacity, providing the necessary speed and space to handle large-scale analyses without bottlenecks. This scalability ensures that as research demands grow, VDURA grows with them, offering continuous, uninterrupted access to critical data.

### Seamless data integration and management

Life sciences research generates diverse data types that require seamless integration and efficient management. The VDURA Data Platform offers an unparalleled blend of performance,

durability, and simplicity, enabling researchers to effortlessly consolidate and manage large datasets. By integrating diverse storage media within a single, globally accessible architecture, VDURA ensures that data from various sources and formats can be easily accessed, analyzed, and stored, reducing complexity and enhancing productivity.

## Advanced protection for sensitive and valuable data

In life sciences, data not only needs to be accessible but also secure. VDURA is built on a foundation of superior data protection, employing advanced erasure coding and encryption to safeguard sensitive research data against loss and corruption. Integrated redundancy and automated recovery processes maintain data integrity and ensure availability, making VDURA a reliable backbone for life sciences research infrastructure.

## Intelligent data discovery and movement

The VDURA Data Platform's discovery and movement capabilities allow researchers to efficiently locate and mobilize data across various storage environments. Powerful search and scan capabilities enable them to quickly locate specific datasets and experiments, and an easy-to-use data movement tool lets them manage backup and archive options.

## Cost-effective solutions tailored to research needs

Managing budget constraints is a critical aspect of research. The VDURA Data Platform's versatile architecture seamlessly blends high-

performance and cost-effective storage options, allowing institutions to optimize their storage solutions without overspending. This approach not only reduces the total cost of ownership but also maximizes the value of research investments.

## Use Cases

### Cryo-EM

The VDURA Data Platform reduces computation times for cryo-EM, enabling faster insights into protein structures essential for drug design and disease understanding.

### Genomic sequencing

VDURA handles vast genomic datasets with ease, streamlining sequencing and analysis while ensuring data security and accessibility to support advanced genetic research.

### Bioinformatics

VDURA simplifies the integration and analysis of complex biological data, accelerating discoveries in personalized medicine and epidemiological studies by enabling more efficient data management.

### Drug discovery and development

VDURA optimizes the drug development process by managing diverse research data seamlessly, speeding up the transition from discovery to clinical trials and market.