



# The Power Behind Precision Antibody Discovery

Antibody therapeutic development is becoming faster and more data-driven. High-quality, accurate data is a key strategic asset for modern biopharma enterprises involved in biologic drug development. Lifesaving biologic drugs of the future will be delivered by companies that leverage 'big data' during the development process to minimize failures and increase success rates.

The ability to integrate data and collaborate across discovery, pre-clinical and clinical development of biologic drugs is essential for modern day success. Speed and accuracy is mission critical. Competitive advantage belongs to enterprises that embrace high-power informatics platforms. Geneious Biologics delivers unprecedented capability to accelerate precision antibody discovery.

## The future of precision antibody discovery is now

The Geneious Biologics cloud platform facilitates real-time collaboration on data and workflows and has been designed and built as an enterprise solution for commercial antibody discovery and screening, in collaboration with industry partners. The platform is scalable and customizable to cater for specific customer workflows and functional data requirements, and has preconfigured workflows for analyzing mAb, TCR or even synthetically constructed antibody libraries.

Delivered through a modern, intuitive web interface, Geneious Biologics provides a fully managed data platform and informatics system in a highly secure cloud computing infrastructure. Leveraging Amazon Web Services' (AWS) industry-leading security services, Geneious Biologics removes on-premise requirements for specialized personnel and hardware while enabling enterprise organizations to increase throughput and improve drug discovery.

## Geneious Biologics delivers:



### Scalability

The power and flexibility to scale up quickly and efficiently



### Accuracy

The confidence to pick winners and eliminate failures



### Competitive Advantage

The edge to innovate faster and beat competitors to market



### Collaboration

The right information at the right time



### Integration

The ability to access data wherever it resides



### Configuration

The capability to work with and enhance existing systems

## Turning complex data into powerful business benefits

### Scale up quickly and efficiently

Enterprises involved in antibody therapeutic development need scalable computing to cope with growing or fluctuating operational demands as their throughput needs change. As a fully hosted cloud solution Geneious Biologics helps businesses scale up by delivering additional capacity on demand within a predictable cost structure. Customers don't need to worry about not being able to meet their computational requirements - Geneious Biologics has it covered.

### Pick winners and eliminate failures

Accuracy is critical in identifying quality antibody candidates and reduces time and money spent on sub-optimal candidates. Many laboratories rely on multiple, disparate software and hardware solutions that create disjointed and inaccurate data sources. Geneious Biologics enables data consolidation from multiple sources and advanced analytics on a unified cloud platform. Enterprises can make better, data driven decisions based on accurate, relevant laboratory information.

### Innovate faster and beat competitors

Antibodies are the fastest growing class of therapeutics. To remain competitive, enterprises involved in antibody discovery must find ways to increase return on R&D investment, limit failures and commercialize successes faster. Geneious Biologics provides agility by enabling large scale computational analyses and data management in the cloud. Geneious Biologics also limits the requirement for on-premise hardware and maintenance, allowing enterprises to free up resources to focus on innovation that keeps them ahead of competitors.

### The right information at the right time

To improve speed, accuracy and efficacy in identifying and discarding sub-optimal candidates or entire projects earlier, scientists need to share findings in real time, across global organizations. Geneious Biologics enables scientists to collaborate on their findings more effectively. By aggregating mission critical data into a unified, central database, Geneious Biologics makes it searchable across the organization during antibody discovery, removing significant duplication of effort.

### Access data wherever it resides

To remove data silos and provide better access to mission critical data, across the organization, enterprises involved in antibody therapeutic development need integrated systems. Geneious Biologics integrates data from multiple systems to be analysed together with sequence data stored in the cloud. Geneious Biologics has been specifically developed to incorporate integration points which allow a seamless flow of data across a customer's business.

### Works with and enhances existing systems

Many enterprises involved in antibody therapeutic development rely on proprietary analysis pipelines and software which has been built internally. Customizations, needed to get third party systems to operate with those developed in house, are typically very expensive to both build and maintain. Geneious Biologics lifts the burden of expensive, time consuming customization work by offering a highly configurable system developed with customers' configuration needs at its core.

## Features at a glance

### Analyse Sequences

- Efficiently analyse Sanger and NGS datasets
- Annotate CDR/FR Regions from germline or custom databases
- Highlight sequence features, assets, and liabilities
- Annotate various antibody types including mAb, Fab, scFv, VHH, TCR, and VH/ VL pairs

### Identify Statistical Trends

- Cluster sequences by regions or custom combinations
- Identify dominant clones
- Group functionally similar sequences
- Compare frequencies across samples

### Visualize and Discover

- Integrate assay data
- Search and filter using powerful queries
- View interactive graphs, trees, and alignments
- Build reports with tables, graphs and comments

### Manage Data

- Collaborate with team members and share results
- Search for sequences in a central database
- Import and export data seamlessly
- Access a secure and reliable cloud computing platform