

BIOREGISTER



Bioregister is a complete biologics entity registration system that enables organizations to ensure uniqueness of their biological candidates and protect their intellectual property, while providing scientists simple access to entity information to facilitate innovation and discovery. Bioregister supports the registration, relationship tracking, querying, and reporting of DNA, RNA, peptides and proteins, vaccines, plasmids and cell lines, as well as user-defined entities.

MANAGE AND TRACK BIOLOGICS THROUGH THEIR LIFE CYCLE

Biologics discovery research utilizes a diversity of entities, including candidate compounds of various types, as well as research-supporting entities such as animals, vectors and cell lines. Ensuring uniqueness of candidates and protecting intellectual property (IP) is of the highest importance. But equally necessary is that scientists can access the information easily to streamline research, promoting innovation and discovery. Bioregister achieves these goals, enabling scientists to register

ENTITY MANAGEMENT

- Manage sequence-based therapeutic entities such as nucleic acids, short peptides, and antibodies
- Create non-natural monomer libraries with full chemical descriptions, and chemically-modified sequences
- Create complexes, such as antibodies, from constituent sequences
- Keep track of entity lineages and relationships
- Annotate sequences with features, such as sequence motifs, CDRs, etc.
- Easily generate mutated sequences using an intuitive sequence editor
- Residue-scan facility provides fast generation of series of point-mutated sequences
- Compute sequence alignments



Figure 1: Dotmatics Bioregister

biological entities, such as DNA, RNA, peptides and proteins, expression vectors and cell lines. It also tracks lineages and relationships between entities, batches and samples of biological material, and can manage protein production and purification workflows.

Bioregister integrates seamlessly with the Dotmatics Platform or with non-Dotmatics applications in a mixed vendor environment.

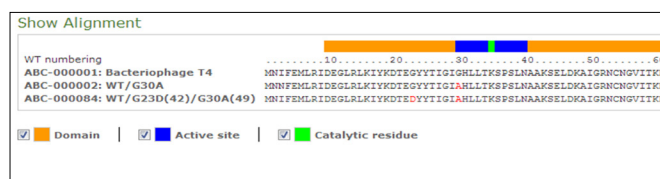


Figure 2: Sequence Alignment

- Automatic calculation of various properties (MW, pI, extinction coefficient, etc.)
- Register sequence entities prior to the sequence being known or determined
- Track sequence variation in variable regions of antibodies
- Query and browse sequences, e.g., subsequence search, BLAST, or find all sequences with a mutation in a specific residue in a peptide family

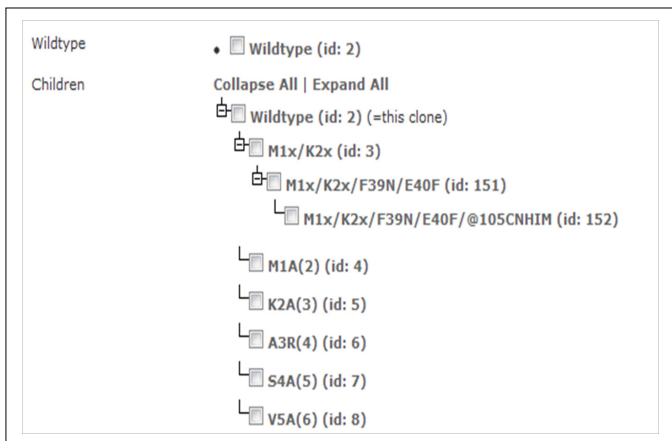


Figure 3: Hierarchical track of the clone lineage

PROTEIN PRODUCTION DATA MANAGEMENT

- Manage data at all stages of the protein production process linked to the biological sequence(s)
- Keep track of expression vectors, cell lines, expression levels, purification protocols, protein concentrations, purities, etc.
- Integrates with Dotmatics Inventory Manager for sample storage

EXTENSIBLE AND CONFIGURABLE

- Create and register custom entities, such as animals, tissue samples, etc.
- Easily extend the data types stored with each entity
- Store any number of documents with any entity (images of blots, protocol descriptions, etc.)

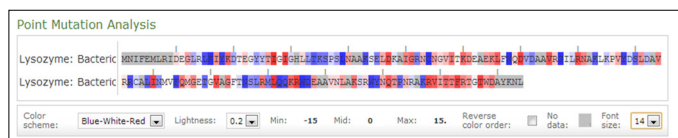


Figure 4: Analyse sequences

BIOREGISTER CENTRALIZES ALL BIOLOGICAL DATA IN A STRUCTURED INFORMATION SYSTEM, PROTECTING YOUR INTELLECTUAL PROPERTY WHILE ALLOWING SIMPLE ACCESS TO FOSTER RESEARCH AND INNOVATION

FULLY INTEGRATED IN THE DOTMATICS PLATFORM

- Bioregister is web-based, and easy to use and manage
- Fully integrated with Browser, Dotmatics' powerful query and reporting tool. This enables users to do real-time reporting providing accurate information when required, with a single click
- Directly integrated with Studies Notebook (ELN), to allow simple, accurate data exchange between apps, streamlining workflows and reducing manual data-entry errors
- Bioregister exposes rich RESTful APIs to facilitate application integration and data exchange within your informatics environment
- Bioregister is a highly configurable, out-of-the-box system that can be adapted to meet your organization's needs. This flexibility also ensures that any future business needs and rules can be met

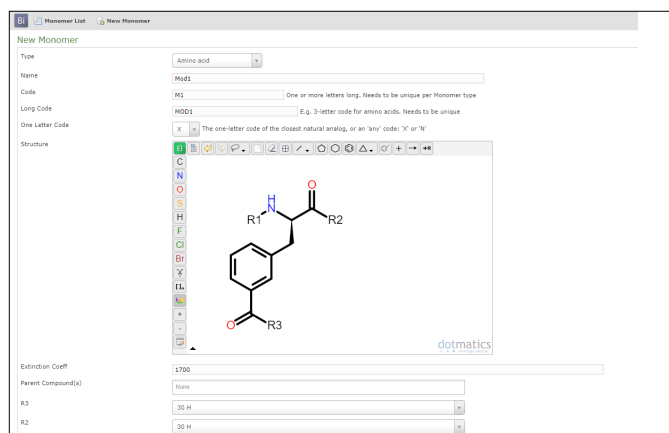


Figure 5: Defining a custom monomer

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