

# Introducing LENS<sup>ai</sup><sup>TM</sup> Immunogenicity Screening

## The future of immunogenicity screening

Introducing LENS<sup>ai</sup> Integrated Intelligence Technology - an innovative platform that integrates advanced AI capabilities to provide unparalleled protein analysis and immunogenicity screening with lightning-fast throughput. LENS<sup>ai</sup> Immunogenicity calculation combines HLA II binding and human proteome presence using BioStrand's proprietary HYFT<sup>®</sup> technology for early stage risk assessment.

### High-throughput immunogenicity analysis

#### Built for high volume

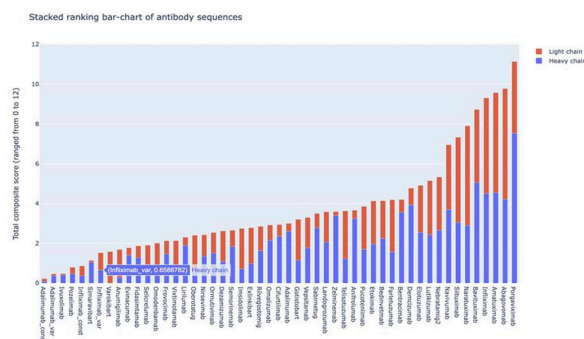
Virtually limitless quantity can be screened, compared and ranked

#### Flexible implementation

Ability to integrate in your own pipelines and workflows

#### Detailed reporting

Massive data package made transparent and instantly usable



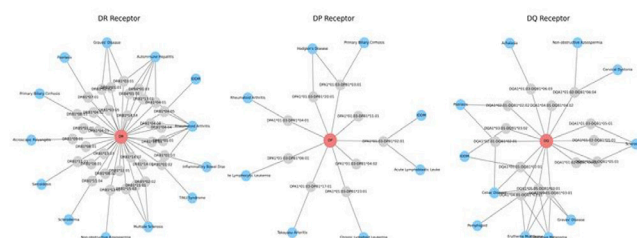
### In-depth immunogenic profiling

#### Built for insight

- Detailed linkage between clone and target
- Geno- and phenotype binding distribution mapped to target indication profile

#### Connecting target, lead and clinical events

MHCII allele phenotypes and genotypes associated with clinical events



Service offered as yearly subscription or project-based.

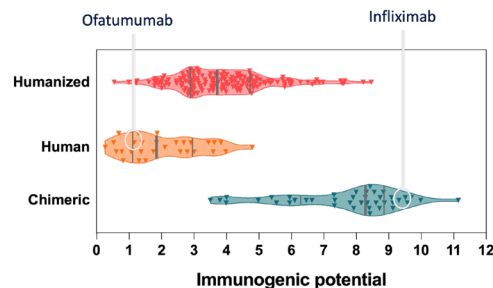
Powering  
Biotherapeutic  
Intelligence



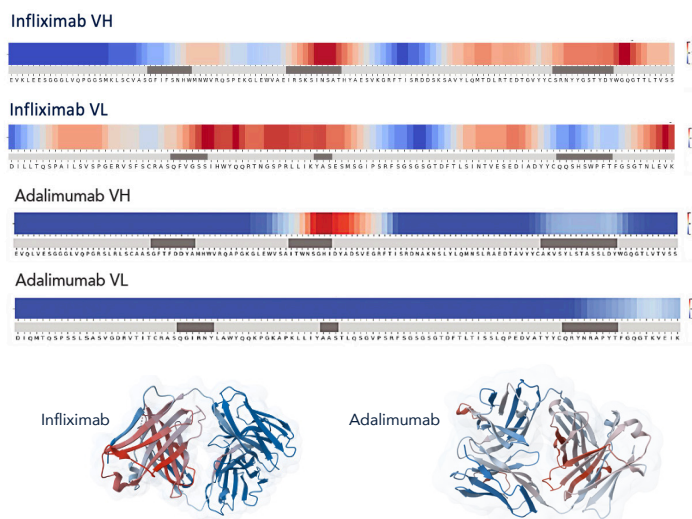
# Introducing LENS<sup>ai</sup> Immunogenicity Screening

Key features: unmatched throughput, speed, scalability, and accuracy

Reference your antibodies against a database of all therapeutic antibodies



## Unparalleled multi-level analyses and comprehensive reporting



## Immunogenicity composite scores of antibodies in the therapeutic structural Ab database (n ≈ 2000):

Parsed based on Nomenclature (n ≈ 260)

### Statistical significance:

Significant difference between all means based on Kruskal-Wallis analysis [P-value: <0,0001]

Significant, Bonferonni corrected, difference between individual groups and Human (control group) based on Mann-Whitney [P-value: 0,0002 and better]

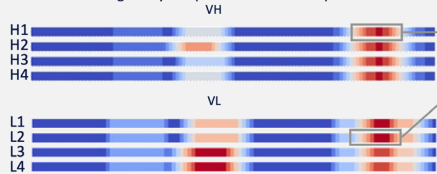
## Immunogenic zones per sequence

Normalized score showing immunogenicity hotspots by combining HYFT Universal Fingerprint proteome screening and HLA II binding scores.

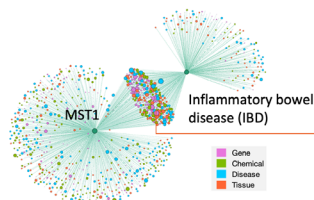
Dark Blue = 0 = low immunogenic potential  
Dark Red = 100 = highest immunogenic potential  
CDR annotations based on IMGT numbering

### Hypothetical MST1 Binding Antibodies

Immunogenicity composite score heat map



Immunogenic hotspots  
Binding the DRB1\*01:03 MHCII allele  
Antibodies associated to MST1



### MST1 – Is linked to - Crohn's disease (IBD)

of IBD may result in part from genetic abnormalities that regulate epithelial barrier function and innate and adaptive immune responses. Crohn's disease shows strong association with CARD15, ATG15L1, and IRGM, which are involved in the innate immunity. In the adaptive immune response, IL23R, MST1, IL12B, and STAT3 polymorphisms are associated with Crohn's disease and ulcerative colitis. Current pharmacologic treatment of IBD, including 5-aminosalicylate, steroids, and immunomodulator therapy, are mainly aimed at suppressing inflammation non-specifically, except biologic therapies such as anti-tumor necrosis factor

### DR Receptor

