

The Evolution of Antibody Screening: Automation-Integrated BLI for Next-Generation Discovery Workflows

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Figure 1: Integrated system featuring Gator® Pivot BLI instrument with Hudson PlateCrane SciClops (360° rotation), plate hotels for 96/384-well formats, and heating/cooling nests—orchestrated by non-coding SoftLinx software

The Challenge

AI-Driven Antibody Design

- Computational tools generate 1,000-5,000+ candidate libraries, demanding unprecedented screening throughput

Outsourcing Acceleration

- Big Pharma outsources wet-lab validation to CROs to avoid building costly in-house capacity

Screening Scalability

- Traditional platforms require significant investment for integration with automation

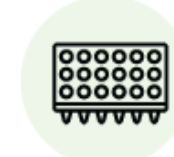
Rising QC Requirements

- Reagent manufacturers need high-throughput expression testing and clone selection

Operational Pressure

- Faster cycle times, higher reproducibility, and leaner operations than traditional platforms can deliver

The Solution: Key Capabilities



Direct Screening from Crude Samples

No purification required—screen directly from supernatants; low non-specific binding



High-Throughput Performance

Process 1,000+ samples/day, up to 32-channel parallel sample processing, 96/384-well plate formats



24/7 Walkaway Automation

True hands-free operation, overnight runs, reliable workhorse



Label-Free BLI from original inventors of BLI Technology

mM to pM dynamic range for real-time kinetics, from 0.025 ug/mL to 2000 ug/mL for IgG quantitation



Wide range of off-the-shelf consumables

Widest range of ready-to-use probes for label-free platforms, learn to use in a day, develop assays within days



Modular Scalability

Benchtop to full robotic integration; automation-friendly system can integrate with any automation platform

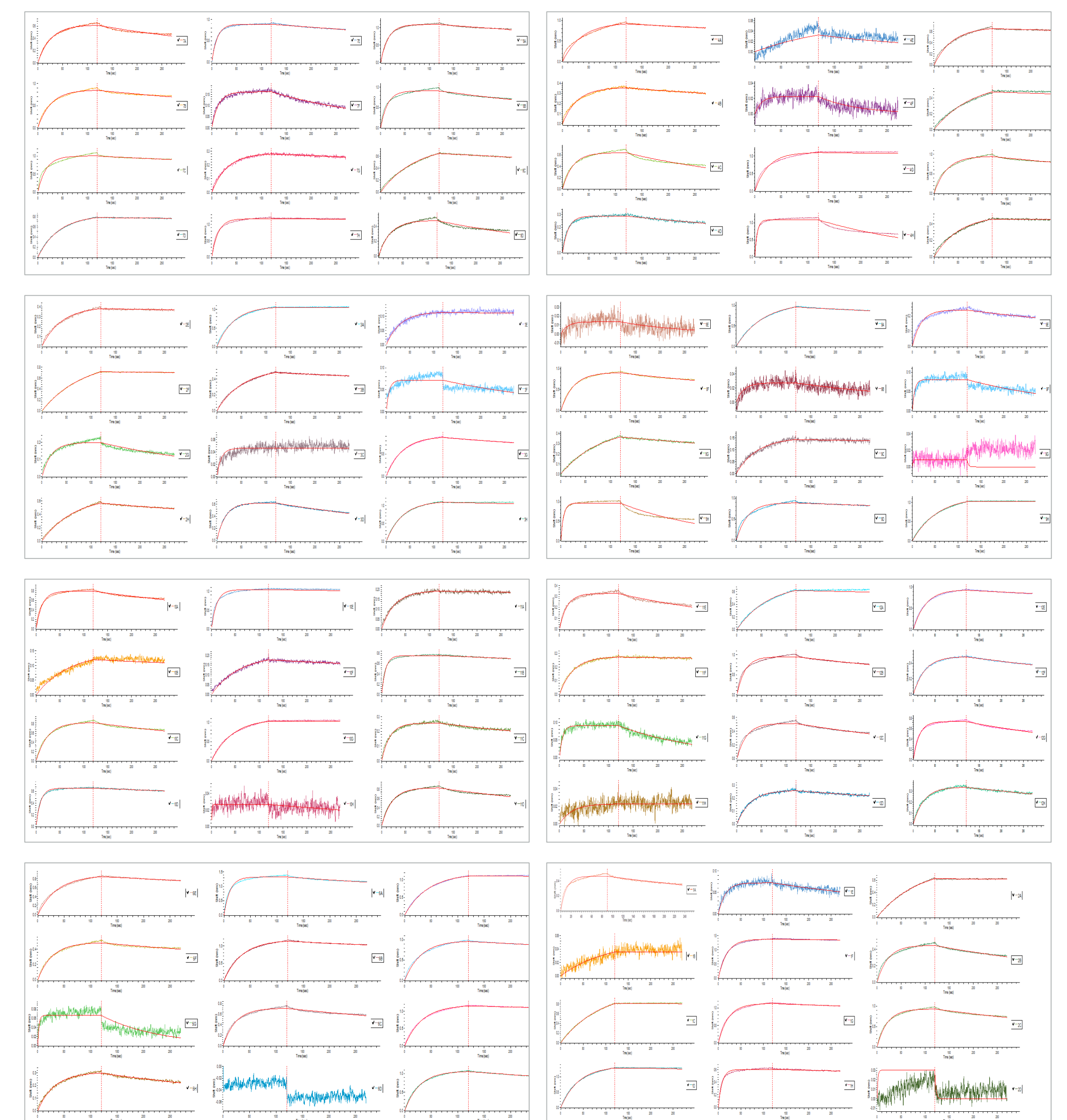


Figure 2: Rapid hybridoma screening of multiple mouse IgG clones was performed using the Gator MFC XT biosensor to identify and select antibody binders against the target protein.

Supported Applications

Pharma & Biotech

- Hybridoma & AI library screening
- Clone selection & process development
- Accelerated hit-to-lead cycles

CROs & Service Providers

- Wet-lab validation for AI models
- High-throughput contract services
- Affinity & expression profiling

Reagent Manufacturers

- High-throughput QC testing
- Clone characterization
- Batch-to-batch consistency

BLI Applications Across The Discovery Pipeline



Biologics Discovery

- Affinity screening
- IgG expression/titer



Biologics Optimization

- Affinity maturation
- Binning/Fc receptor analysis



Protein Expression

- Supernatant screening
- Expression profiling



Bioprocess Development

- IgG titer measurement
- Process monitoring



AAV Analytics

- Capsid titer
- Empty Full ratio



Research Studies

- Real-time binding kinetics
- Protein and small molecule analysis



Manufacturing Analytics

- QC across batches
- Batch release testing



Reagent Development

- Assay development
- Epitope profiling



Small Molecules

- Fragment hits
- Enzyme inhibitors
- Receptor ligands
- Drug-like compounds

SEE THE LIVE DEMONSTRATION AT BOOTH #200