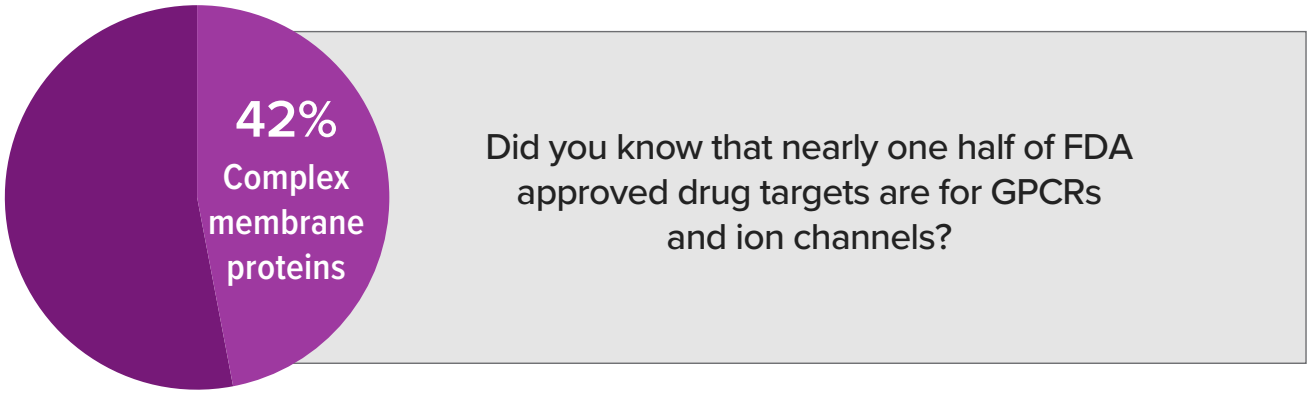
Bridging the Cloning Throughput Gap in Antibody Therapeutics Discovery

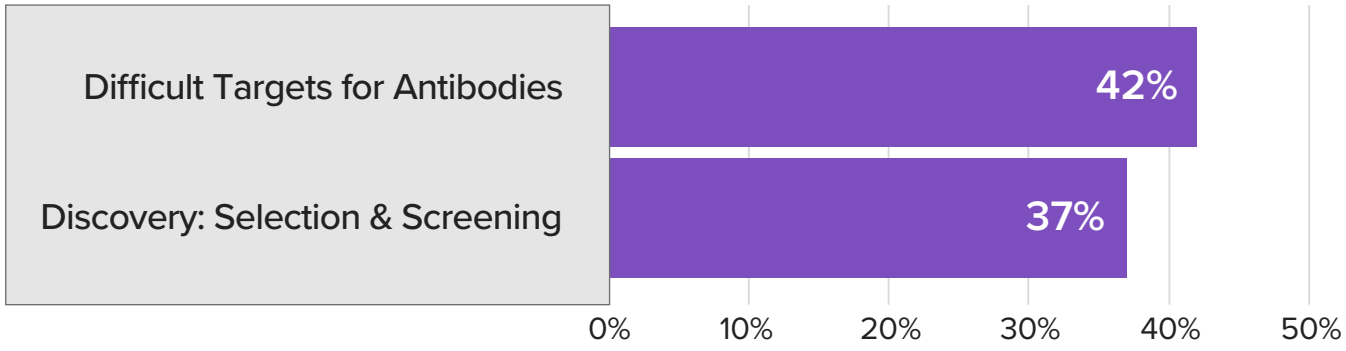
There is increased pressure on antibody discovery pipelines to identify and validate high-quality lead candidates to meet the demand for new therapeutics against difficult target classes such as GPCRs and ion channels.



Current FDA Approved Drug Targets

Antib Ther. 2020 Dec 9;3(4):257-264.

While there is significant therapeutic potential in these targets, identification of functional antibodies has been limited due to challenges in the discovery process. In fact, difficult targets and discovery processes were the top listed challenges in a recent state of the industry report.



Top Challenges in Antibody Development

Adapted from Antibody Engineering and Therapeutics State of the Industry Report 2021

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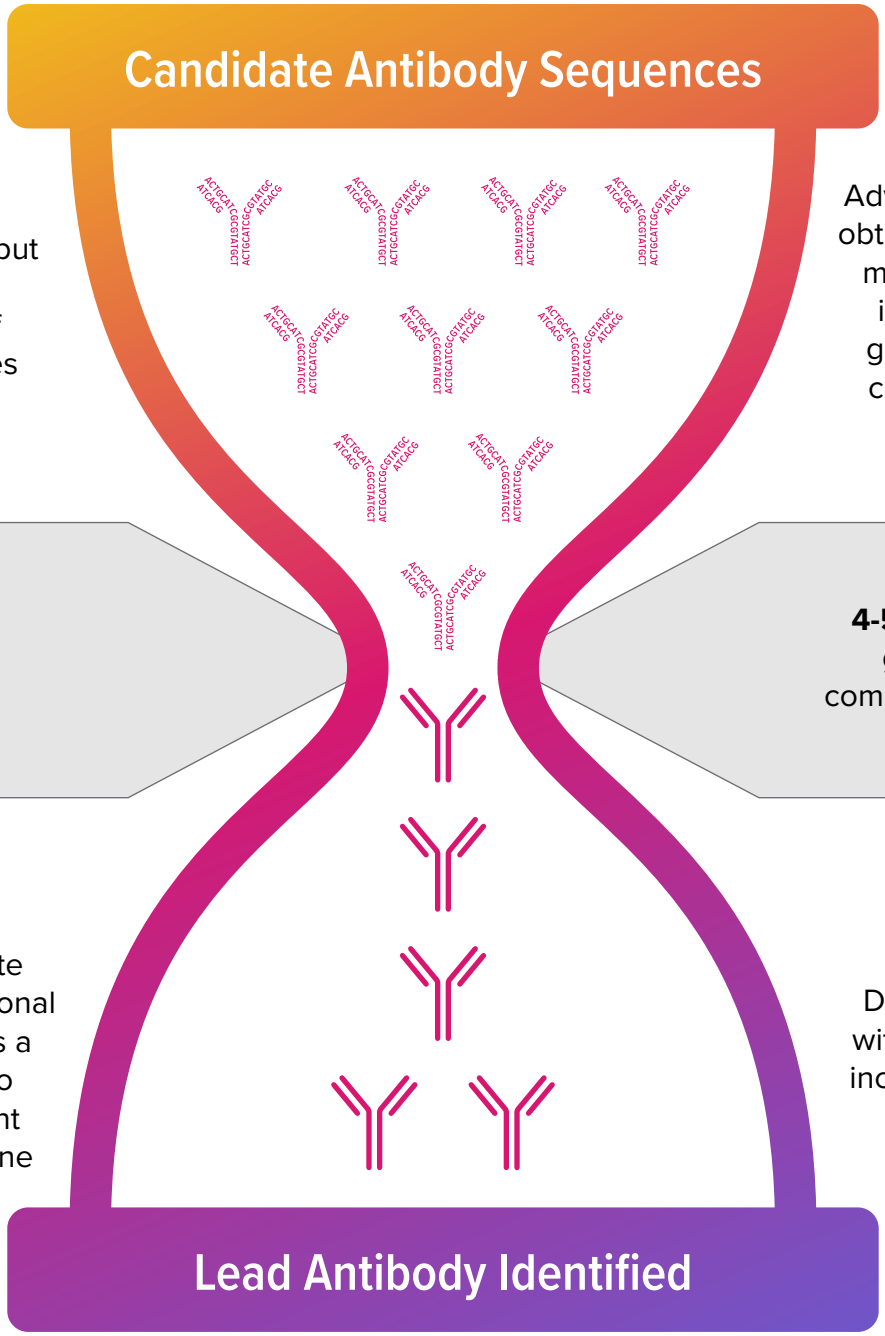
Difficult target classes require screening of large pools of candidate antibodies, but cloning workflows impose a throughput bottleneck



Complex targets require high-throughput screening and characterization of candidate antibodies

Advances in methods for obtaining antigen-specific mAb sequences make it possible to rapidly generate hundreds of candidate sequences

Cloning Bottleneck

4-5 weeks to outsource gene synthesis and complete plasmid assembly

Maintaining adequate throughput with traditional cloning techniques is a significant hurdle to achieving an efficient lead discovery pipeline

Delays impair projects with short timelines and increasingly challenging deliverables

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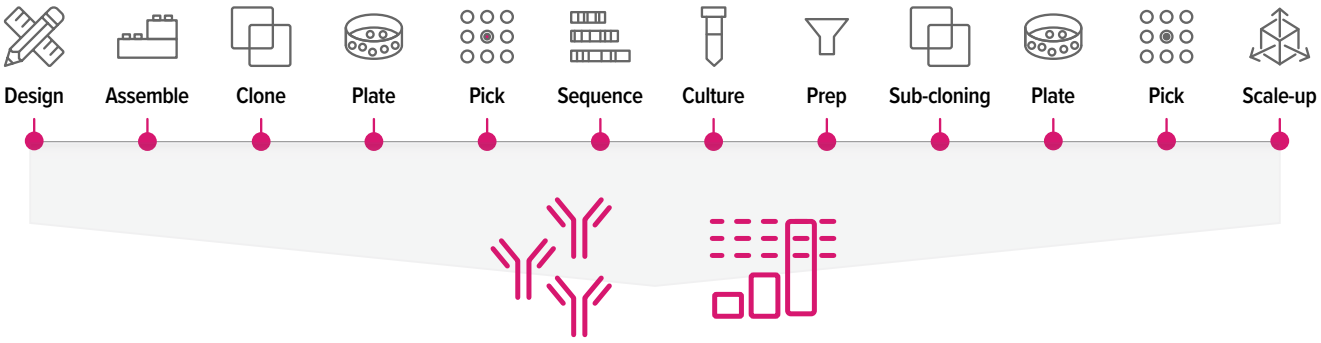
Automating Synthetic Biology Overcomes the Cloning Bottleneck by Rapidly Connecting High-content Sequencing Data to Downstream Characterization

Traditional Manual Workflow

4-5 weeks to complete gene synthesis and plasmid assembly



Automated BioXp Workstation

Build and amplify 24 plasmids per day

Accelerate Antibody Discovery With Telesis Bio

Learn More About Process Optimization in Antibody Discovery

DOWNLOAD THE WHITE PAPER

telesisbio.com/process-optimization-in-antibody-discovery-workflows

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