TWIST BIOSCIENCE

Writing the Future

SynBioBeta 2019

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CEO

@TwistBioscience #WeMakeDNA

It has been an incredible year

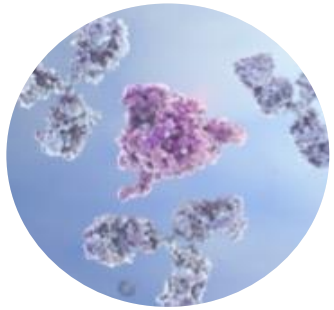
for Synthetic Biology and Twist

IPO October 2018

Thank you for your support in helping achieve this milestone

We’re enabling new discoveries & applications

with longer genes, up to 5Kb



ANTIBODY-BASED DRUG DEVELOPMENT

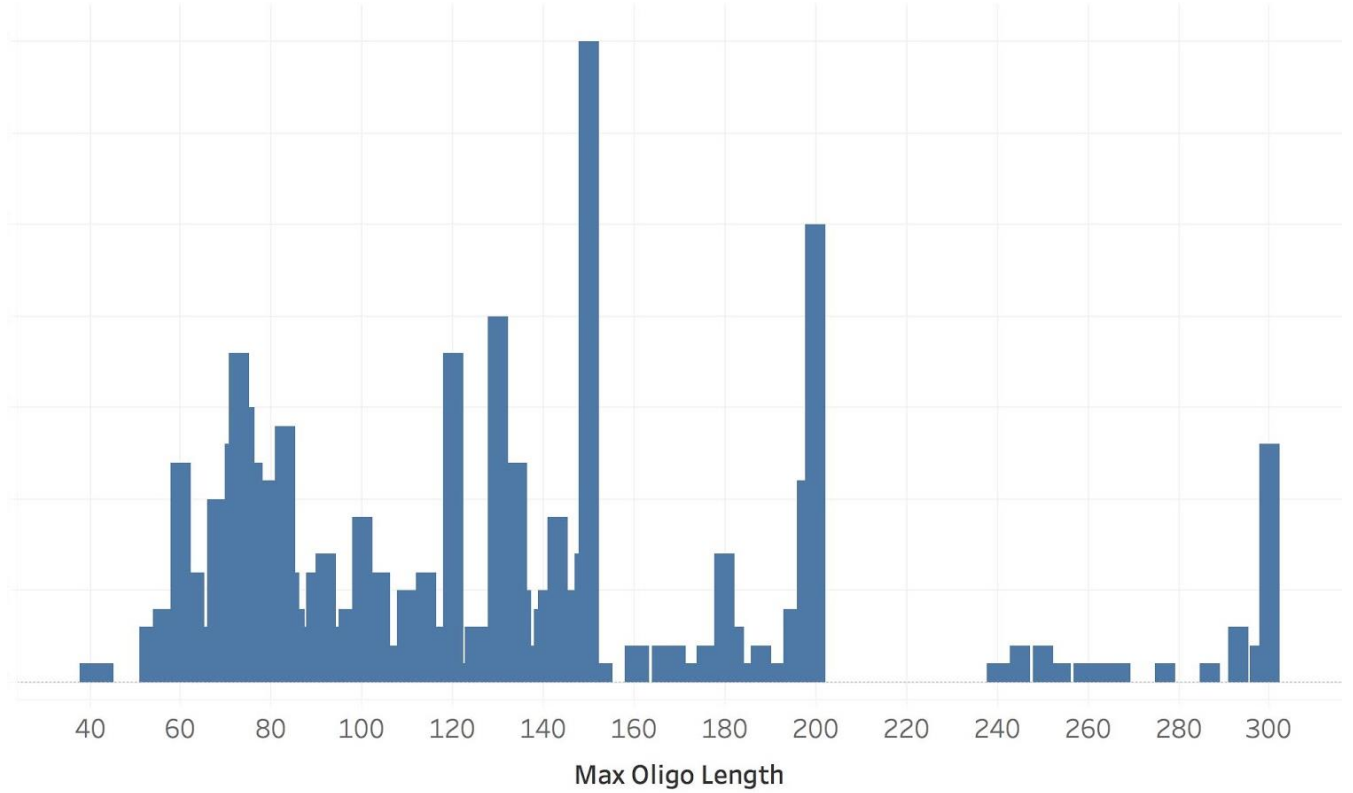
GENE EDITING: DONOR DNA SYNTHESIS

PATHWAY ASSEMBLIES

GENE THERAPY

We launched long Oligo Pools

with an infinite number of unique oligos in a pool, up to 300 bp in length

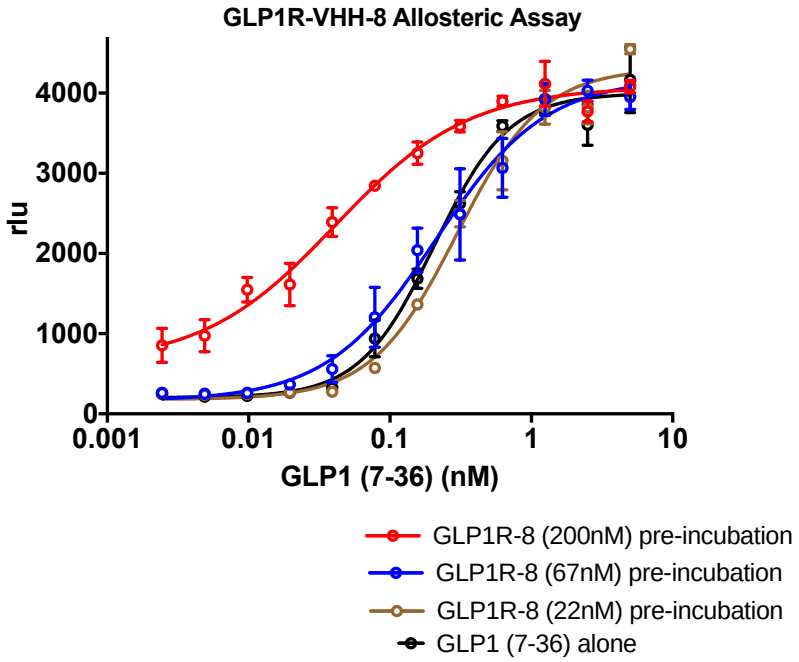


PRECISION EDITING OF TARGET LOCI • MAXIMIZED SCREENING EFFICIENCY • FLEXIBLE POOL SIZES TO FIT YOUR SCREEN

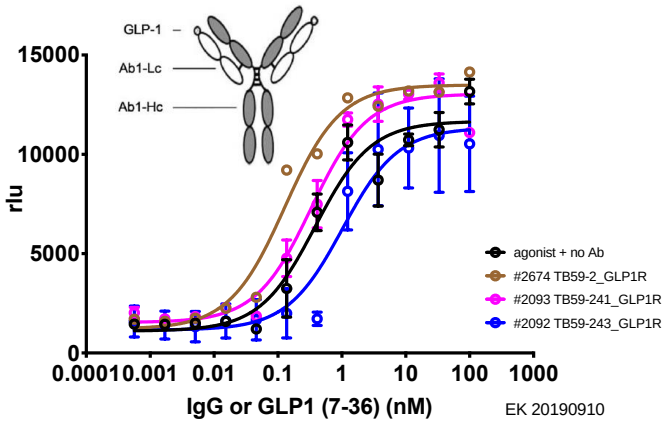
Identified new functional leads

for GPCR targets, using our high quality variant libraries

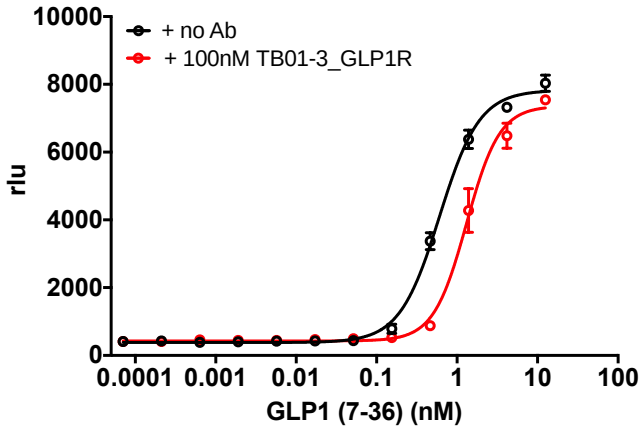
POSITIVE ALLOSTERIC MODULATOR



AGONIST



ANTAGONIST



Data from GLP1R Target Screening

We’re realizing the potential of DNA Data Storage

preserving the world’s data and our cultural history in DNA

STEP 1
Coding

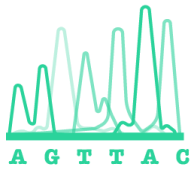
00 → A
01 → G
10 → C
11 → T

STEP 2
Synthesis

STEP 3
Storage

STEP 4
Retrieval

STEP 3
Sequencing
(reading)



STEP 4
Decoding

A → 00
G → 01
C → 10
T → 11

UNESCO
United Nations Educational, Scientific and Cultural Organization

Memory of the World

Deep Purple
Smoke on the Water

We've delivered over 8 Billion bases

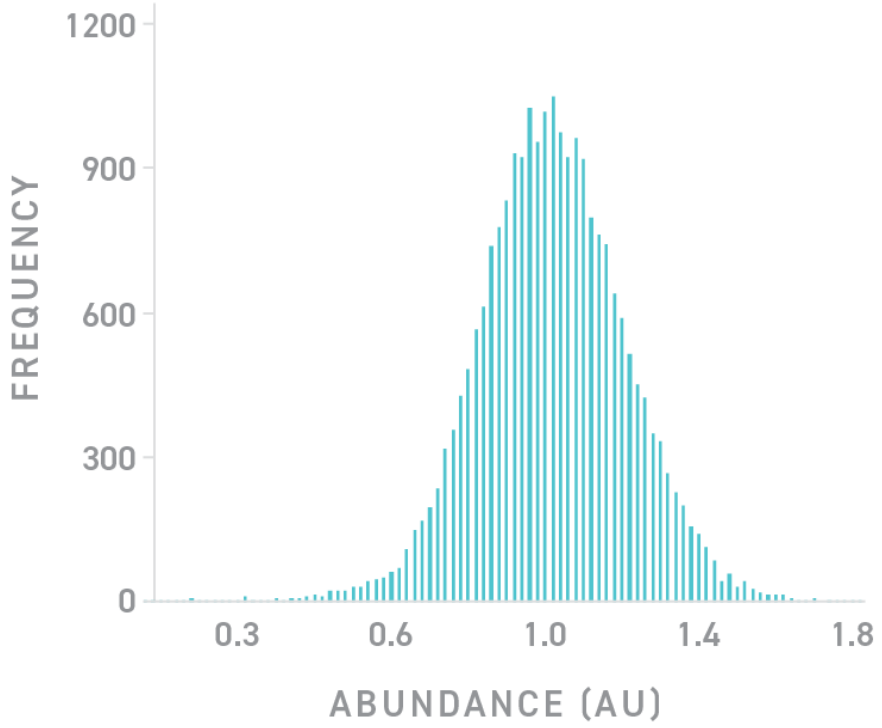
to you in fiscal 2019 and expect to deliver even more in 2020

We’re driving down error rates

providing extremely high-quality disruptive products at affordable prices

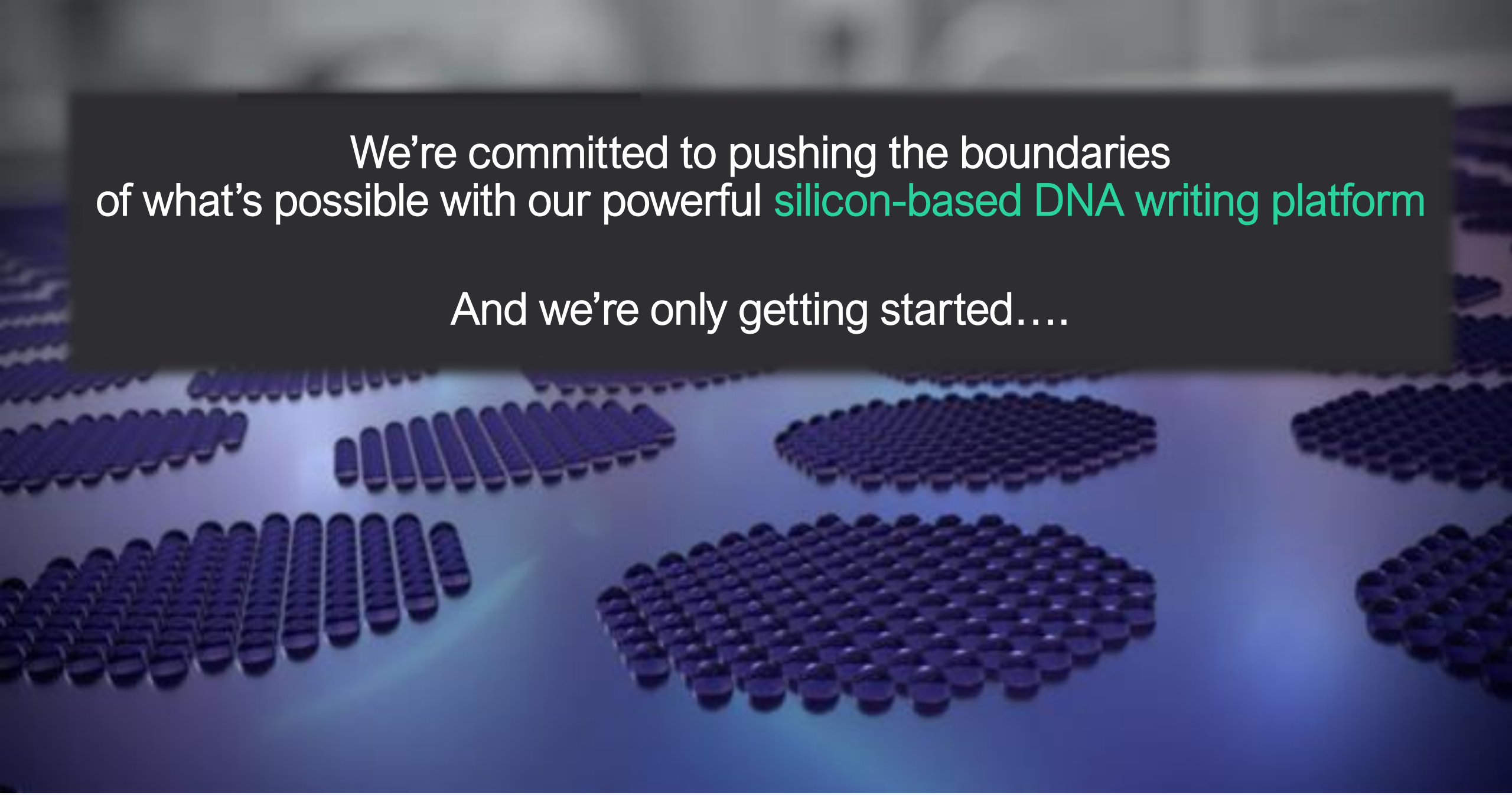
OLIGO POOLS

100% OLIGO REPRESENTATION HIGH UNIFORMITY



OLIGO POOLS

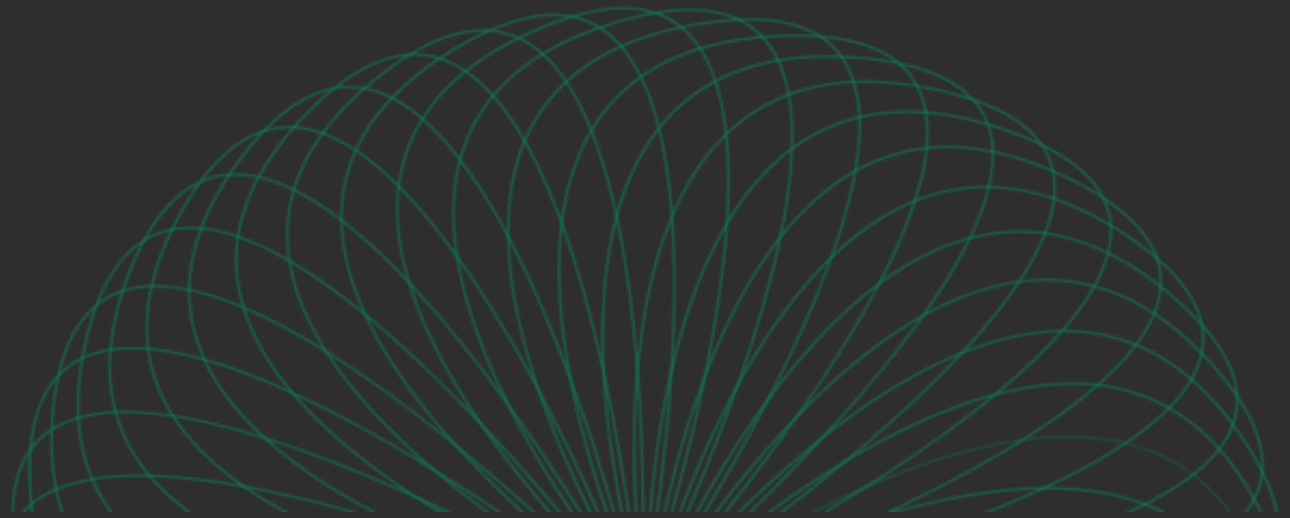
1:2000 BP ERROR RATE HIGH QUALITY


We’re committed to pushing the boundaries
of what’s possible with our powerful silicon-based DNA writing platform
And we’re only getting started….

INTRODUCING

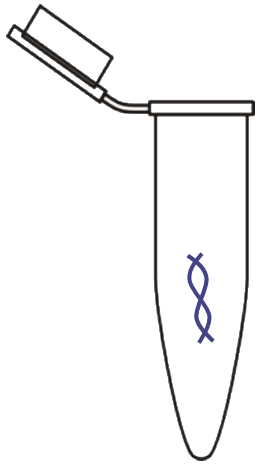
The Twist Innovation Lab

A program designed to translate customer needs into new, disruptive products facilitated by synthetic DNA at a scale previously unavailable.

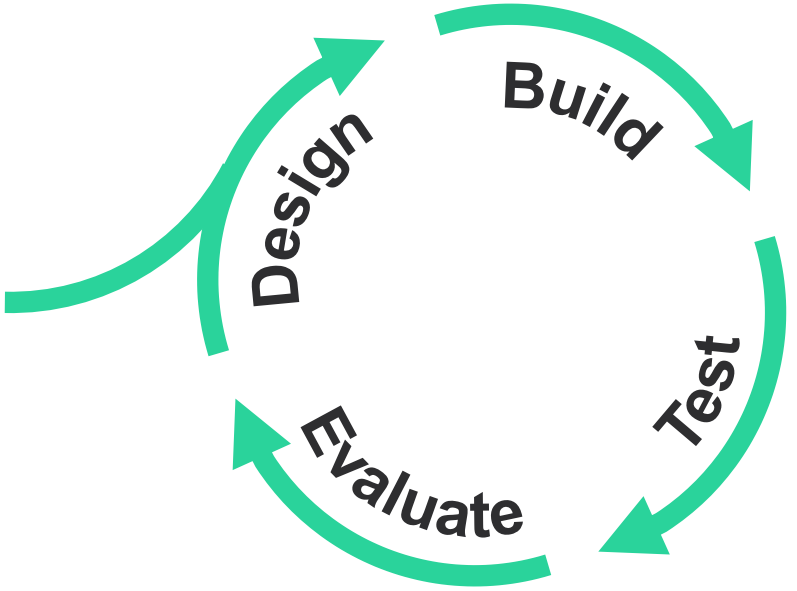


From Single Genes to Gene Pools

Gene pools multiplex the design build test cycle

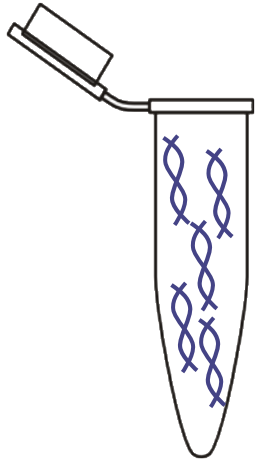


Single genes

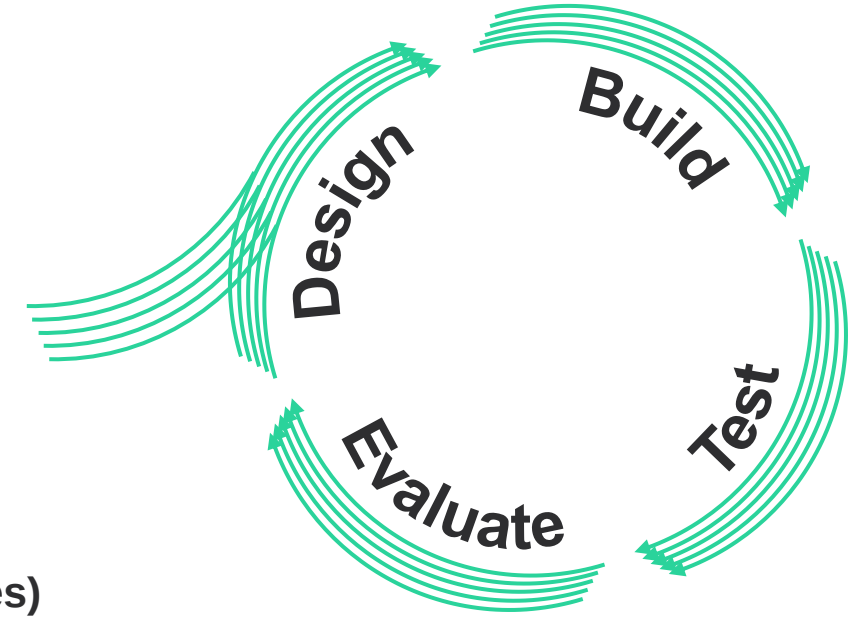


From Single Genes to Gene Pools

Gene pools multiplex the design build test cycle



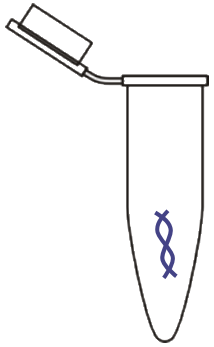
Gene Pool
(10^5 unique genes)



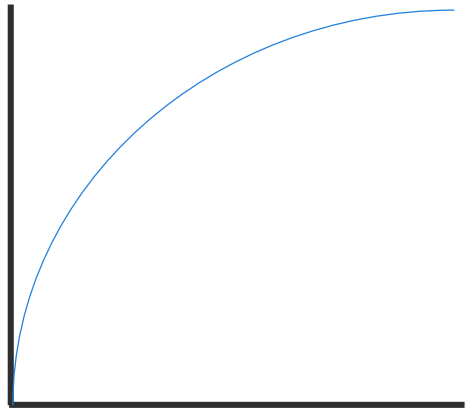
From Single Genes to Gene Pools

Multiplexed designs allow for multiplexed analyses and rapid discovery

Current Gene Suppliers

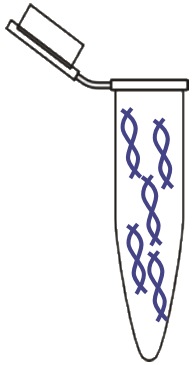


1 gene : 1 tube

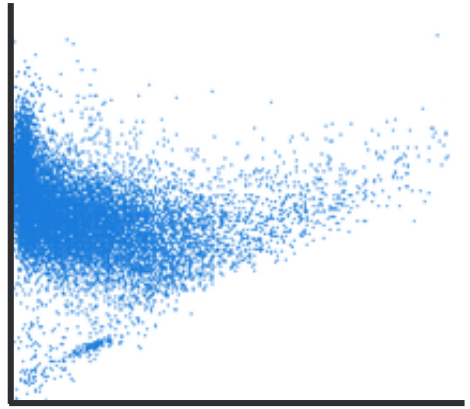


Focused power for targeted studies

New Twist Gene Pools

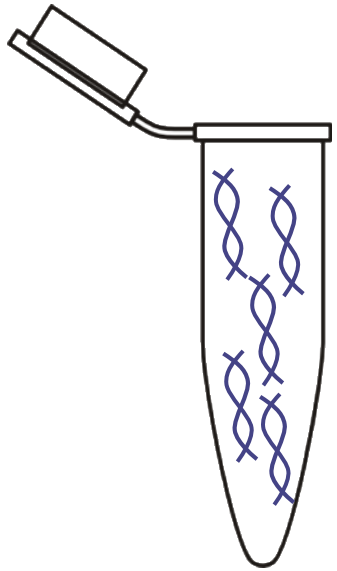


10^5 genes : 1 tube



High-throughput power for broad, rapid target screening and richer data sets

Twist Gene Pools



Gene pools

Offering

- A high-diversity pool of gene fragments (currently) up to 1000 bp in length
- NGS quality controlled uniformity of sequence representation in each pool

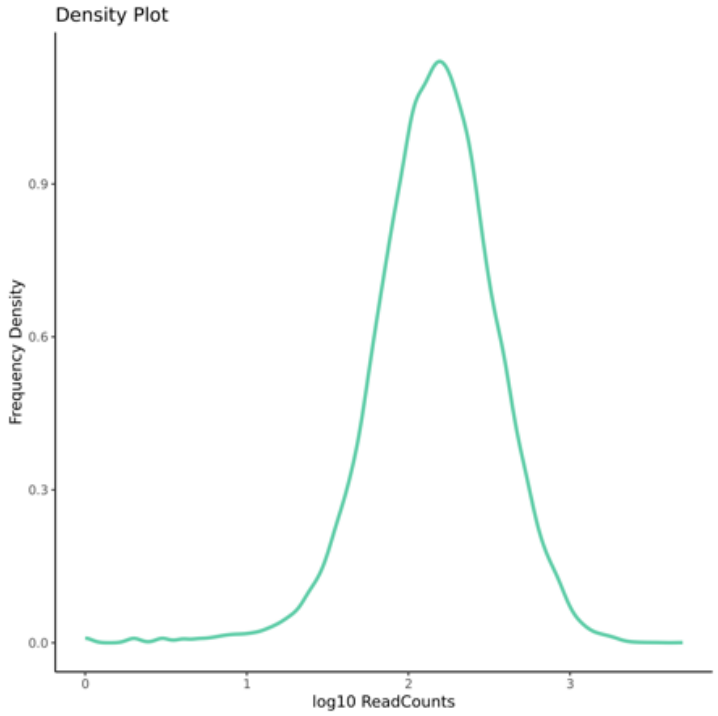
Specifications

- Error rate: 1:1,250
- Sequence length: **300–1000 bp**
- DNA mass yield: 5–20 µg pooled fragment DNA
- NGS QC of uniformity, dropouts and runaways
- Order size: (11,500)–184,000 fragments per pool

Twist Gene Pools

High quality gene pools minimize wasted time and resources in high throughput screens

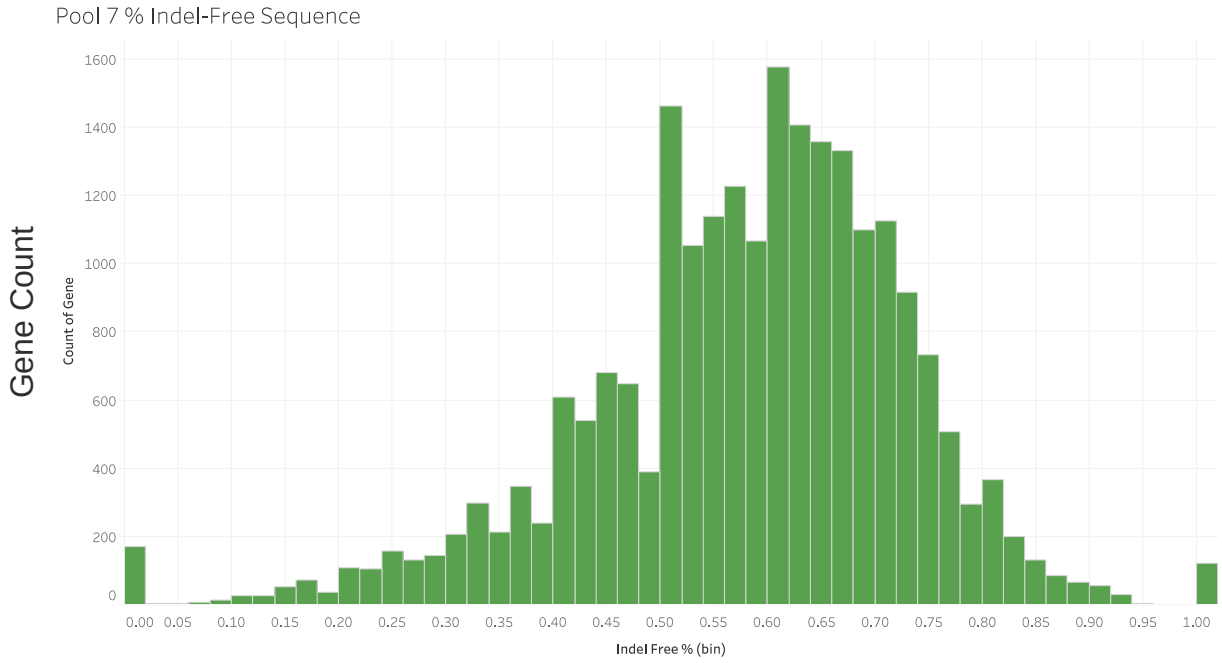
SEQUENCE DISTRIBUTION



Maximize screening efficiency

SEQUENCE QUALITY

%Indel Free Sequences of 400bp Gene Pool



The trend of count of Gene for Indel Free % (bin). The data is filtered on Type, which keeps Pass and Runaway.

Access every sequence

Technology Fueling Growth & Expansion
into new Applications and new Verticals

LEARN MORE AT REBECCA'S WORKSHOP

Redesigning Your Research Funnel

Thursday October 3 at 12:30pm in Room 4

Building and Extending our Footprint

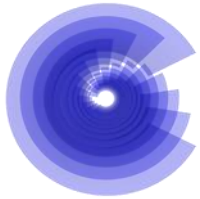
Writing the Future

Writing the Future of Biologics

Writing the Future, Saving the Past

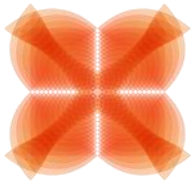
What can Twist do for you?

Precision DNA Synthesis at Scale

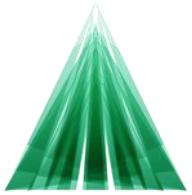


Genes

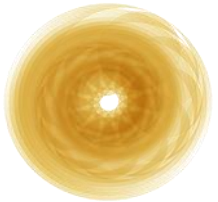
Oligo Pools



Libraries



NGS



Data Storage