

OVERVIEW

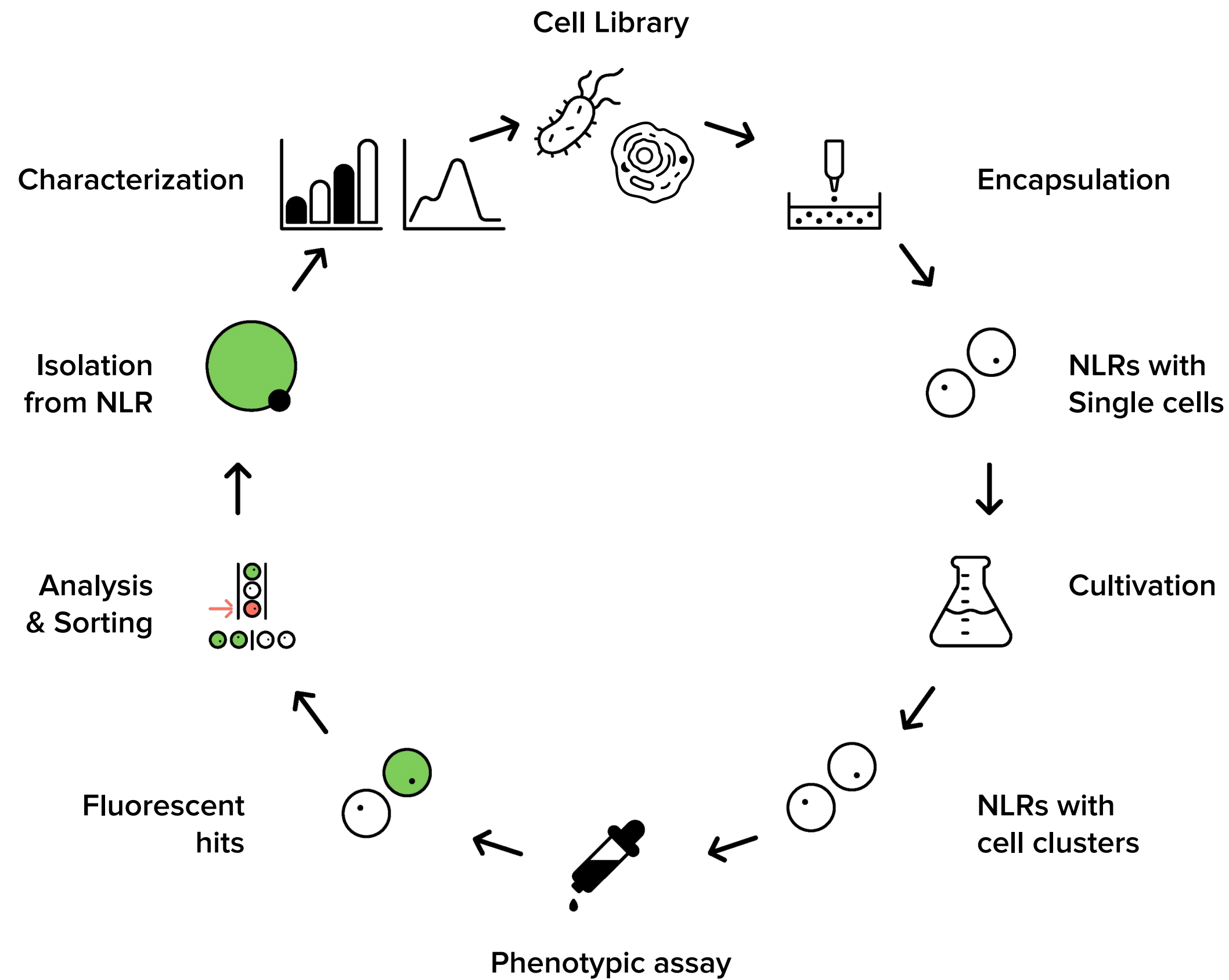
Ultra-high throughput methods for binder screening

	EncapS Encapsulation & Screening	BindSeq Affinity measurements from sequence data
Host Organism	Yeast or Mammalian (including primary cells)	Yeast
Library Size	10,000 - 100,000	1,000 - 10,000
Expression	Secreted and Cell Surface	Cell Surface
Assay	Binding or Cytokine Secretion	Binding
Precision (K_D)	Semi-Quantitative (Low/Med/High Affinity)	Quantitative Measurement of Binding Affinity (K_D)
Timeline	Standard Offering: 5-6 months	Standard Offering: 2-3 Months



EncapS

Encapsulation & Screening in nanoliter-scale reactors (NLRs)



Ultra-high throughput, nanoliter scale

The EncapS technique packages single cells into microscopic hydrogel beads called Nanoliter-Scale Reactors (NLRs).

Up to 100,000 clones per run

By combining multiple runs, single screening campaigns can reach a million clones or more.

Versatile fluorescence measurements

NLRs are sorted with lasers similar to FACS and the platform supports a range of fluorescence-based assays.

Growing cells and secreted products

NLRs support cell growth and proliferation while capturing secreted products, unlocking more complex assays.

Increased sensitivity, reduced noise

Cells in NLRs can proliferate into microcolonies, allowing robust measurements with less cell-cell variation.

Diverse cell types and culture conditions

The platform has been tested with many different media and cell types: bacteria, yeast and mammalian cell lines.



Precise affinity measurements from sequencing data

Binders barcoded for NGS

BindSeq assembles nanobodies, scFv or other binder libraries for yeast display with barcodes identifiable by next-gen sequencing (NGS).

Up to 10,000 candidates in parallel

Binder libraries are mixed with fluorescence-labeled targets at a range of concentrations and sorted with FACS according to binding signal.

Rich datasets at high resolution

By measuring the abundance of barcodes at a different target concentrations, we can estimate the affinity (K_D) for each binder in the library.

