

Is the titer you're getting enough?

Are you leaving yield on the table and not even realizing?

How do you improve yield + CQAs simultaneously?

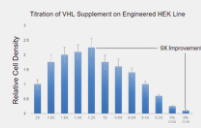
The answers are in your cells. *We know how to find them.*

Van Heron Labs provides the most advanced cellular intelligence available. We profile at depths greater than traditional methods, then translate those results into better processes, products, and therapies.

PROGRAMS LIKE YOURS WHERE WE'VE ALREADY DONE IT

HEK Case Study 1

- 10+ nutrients identified as critical for recombinant HEK strain
- New CD supplement designed.
- Result: 9X increase in cell density over industry standard controls.**



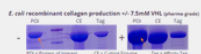
HEK Case Study 2

- 25 ingredients identified for novel CD HEK basal media formulation.
- Result: New CD basal media formulation maintained equivalent cell density + viability of undefined formulation.**

4
HEK
ENGAGEMENTS
COMPLETED

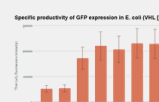
E. coli Case Study 1

- ~20 nutrients identified to optimize titer/specific productivity for a recombinant E. coli strain.
- New CD supplement designed.
- Result: 4X increase in specific productivity/titer to improve margins (\$) of therapy.**



E. coli Case Study 2

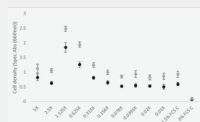
- ~20 nutrients identified to create universal E. coli expression feed product.
- New CD supplement designed.
- Result: 4.5X increase in specific productivity/titer compared to industry standard conditions.**



5
E. COLI
ENGAGEMENTS
COMPLETED

Mv1Lu Case Study 1

- 12 nutrient deficits identified as critical for Mv1Lu strain carrying COV-19 vax.
- New CD supplement designed.
- Result: 3X increase in cell density over industry standard controls.**



Mv1Lu Case Study 2

- Key nutrient deficits + hypoxia identified** for COV-19 vax strain.
- 2 new CD supplements designed.
- Key process parameters optimized.
- Result: 8X increase in cell density over original process.**



1
MV1LU
ENGAGEMENT
COMPLETED

4
CHO
ENGAGEMENTS
IN PROGRESS

A data universe translated to decisions.

Our optimizations result in better outcomes, faster processes, better costs.

200 - 400%

Higher titer

45 - 900%

Greater cell density

30 - 70%

Faster processes

100%

Chemically defined for
mammalian AND microbes

25+

PROJECTS SHIPPED

~50%

REPEAT CUSTOMERS

BACKED BY

NVIDIA Microsoft AWS

Cells are talking. Do you know what they're saying?

vanheronlabs.com

CONTACT@VANHERONLABS.COM

HOW WE DO IT: AN ADVANCED MULTI-NODAL ENGINE

LAYER 01

DEEP CELL CHARACTERIZATION > FUNCTION

Data universe, deconvoluted — expression, full small + large molecule needs, metabolic pathway profile, reactome, function enrichment, cell status, stress diagnosis, prediction + more.

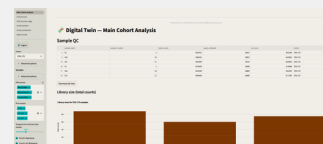


Months of work, instantly.

LAYER 02

CELLULAR BIOLOGICAL DIGITAL TWIN

Your cells, fully unified to a digital model. Understand your cells in your process without a bioinformatics team, months of work, and massive spend. Best complement to in-line analytics available.



Target cells, fully simulated.

LAYER 03

AGENTIC QUERY ENGINE

Simulate, test hypotheses, and compare scenarios + interventions before making decisions or implementing them, using mechanism-backed reasoning from your data, not the literature [unless you want to].



Ask anything, you now have a digital scientific team.

LAYER 04

PREDICTION MODULES

Predict mfg success from starting or upstream process data. Predict Tx quality from cell profile — cell state, viability, expression, metabolism. Identify biomarkers for KQAs + regulatory.



Predict BEFORE you mfg.

The holy grail: predicting manufacturing outcomes — now accessible.

LAYER 05

THE HUMAN LAYER

VHL's team translates the platform outputs into optimized mfg processes, media, and reagent formulations that improve what matters in your process. We can handle discovery to cGMP-scaled clinic-compatible programs for you.

R&D + process + product development — in a single engagement.

Expertise in bioprocessing, PD, media, reagents, and chemically-defined systems. The best team to solve the biggest problems in biotech and bioprocessing

WHAT OUR TECH COULD MEAN FOR YOUR PROGRAM

CROs + CDMOs

Embed deeper cellular intelligence for better performance into your stack. Gain better outcomes, differentiation, and competitive advantage.

BIOLOGICS COMPANIES

Deeply assess sources of cell stress and diagnose process bottlenecks. Identify specific components missing from your current process, explain + eliminate variability. Prime your system for scaling and larger-scale production.

BIOSIMILARS/BIOBETTERS

Optimize viability and titer to improve margins. Improve cell health to improve biologic quality and potency. Use optimized processes and formulations as new IP estates / assets.

MEDIA AND REAGENT COMPANIES

Use deep cellular intelligence to create new best-in-class bioprocessing media and reagents to improve titer and reduce costs. We offer full ingredient transparency.

Optimize productivity and quality from the cellular profile — healthier cells, higher titer, better molecules, faster processes, and decisions.