

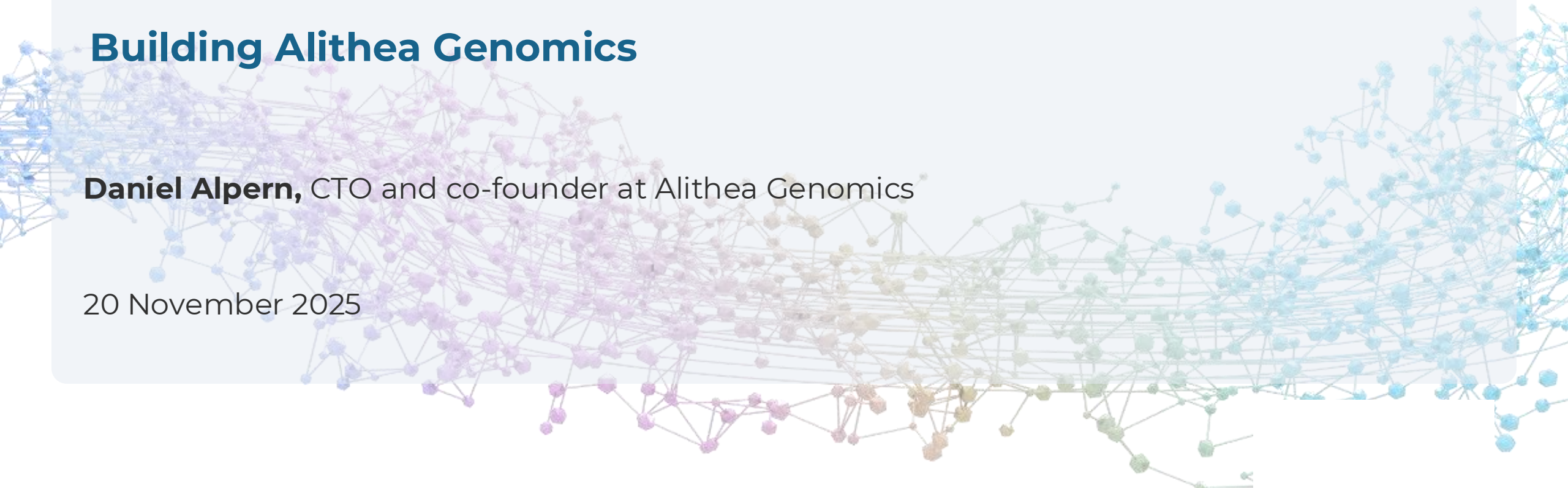


Entrepreneurship in life sciences - guest lecture

Building Alithea Genomics

Daniel Alpern, CTO and co-founder at Alithea Genomics

20 November 2025



Outline

1. **Alitheia Genomics - which problem do we help solve**
2. **How did we get there?**
3. **Lessons learned & Q&A**



**Improve Drug Discovery
by Unlocking the
Potential of
Transcriptomics for
High-Throughput
Compound Profiling**



Many drugs fail because of unforeseen toxicity

Adverse effects discovered too late during clinical trials

Biomea Fusion Announces BMF-219 in Diabetes
Placed on Clinical Hold

June 06, 2024 16:05 ET | Source: Biomea Fusion, Inc.

Tango Therapeutics Announces Discontinuation of TNG348
Program

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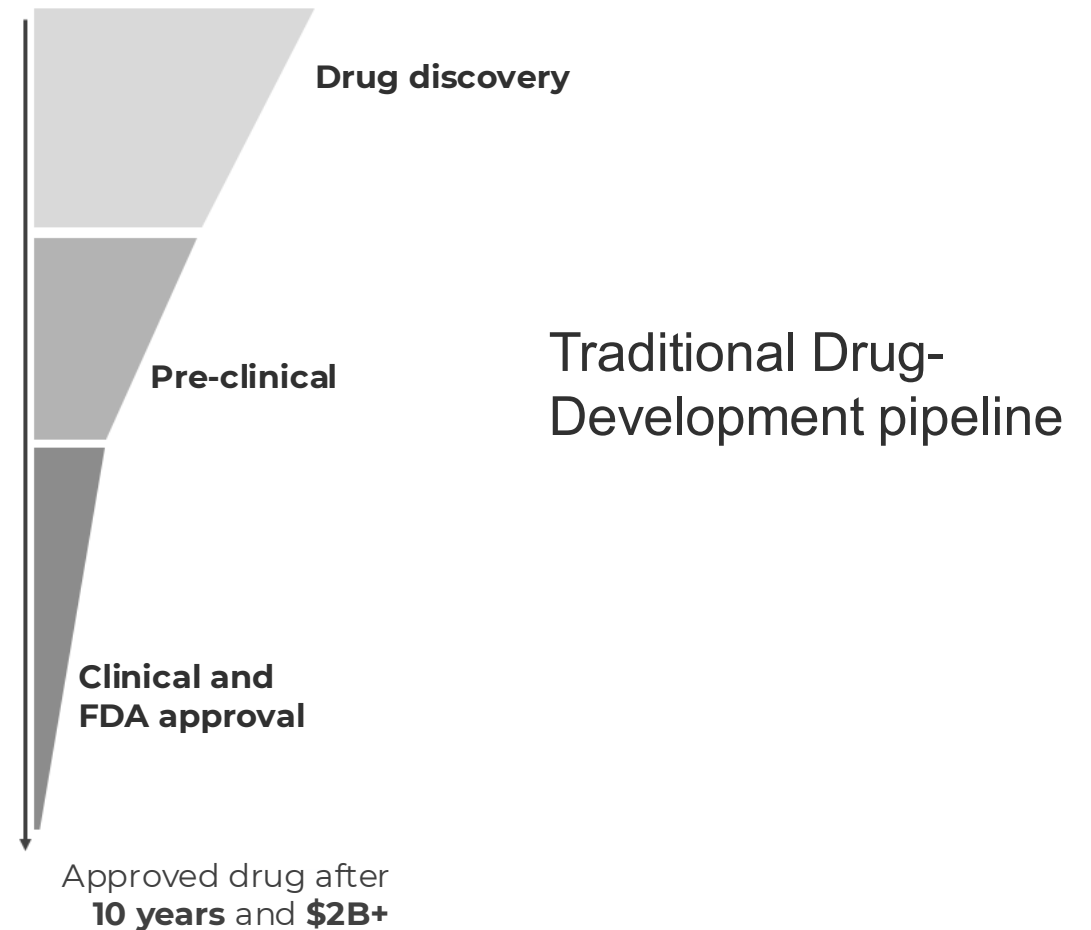
– The phase 1/2 clinical trial of TNG348, a USP1 inhibitor, is being terminated due to toxicity observed in the initial study cohorts –

– Cash runway extended into 2027, PRMT5 and CoREST clinical programs remain on track –

BASED ON RECENT FDA FEEDBACK RAPT THERAPEUTICS
STOPS ZELNECIRNON PROGRAM FOLLOWING CLINICAL HOLD
DUE TO SINGLE SAE OF SEVERE LIVER INJURY

November 11, 2024

[PDF Version](#)



How to reduce drug failures in clinical trials?

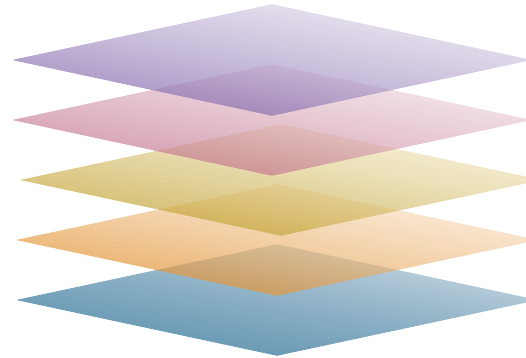
Gather more mechanistic insights in the early developmental phase

Advanced experimental models



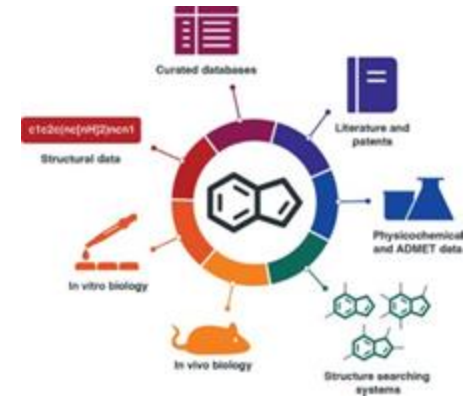
- Human physiology-relevant
- Patient-derived iPSC, Organoids

Multi-Omics Profiling



- Complex phenotyping
- Mechanistic insights

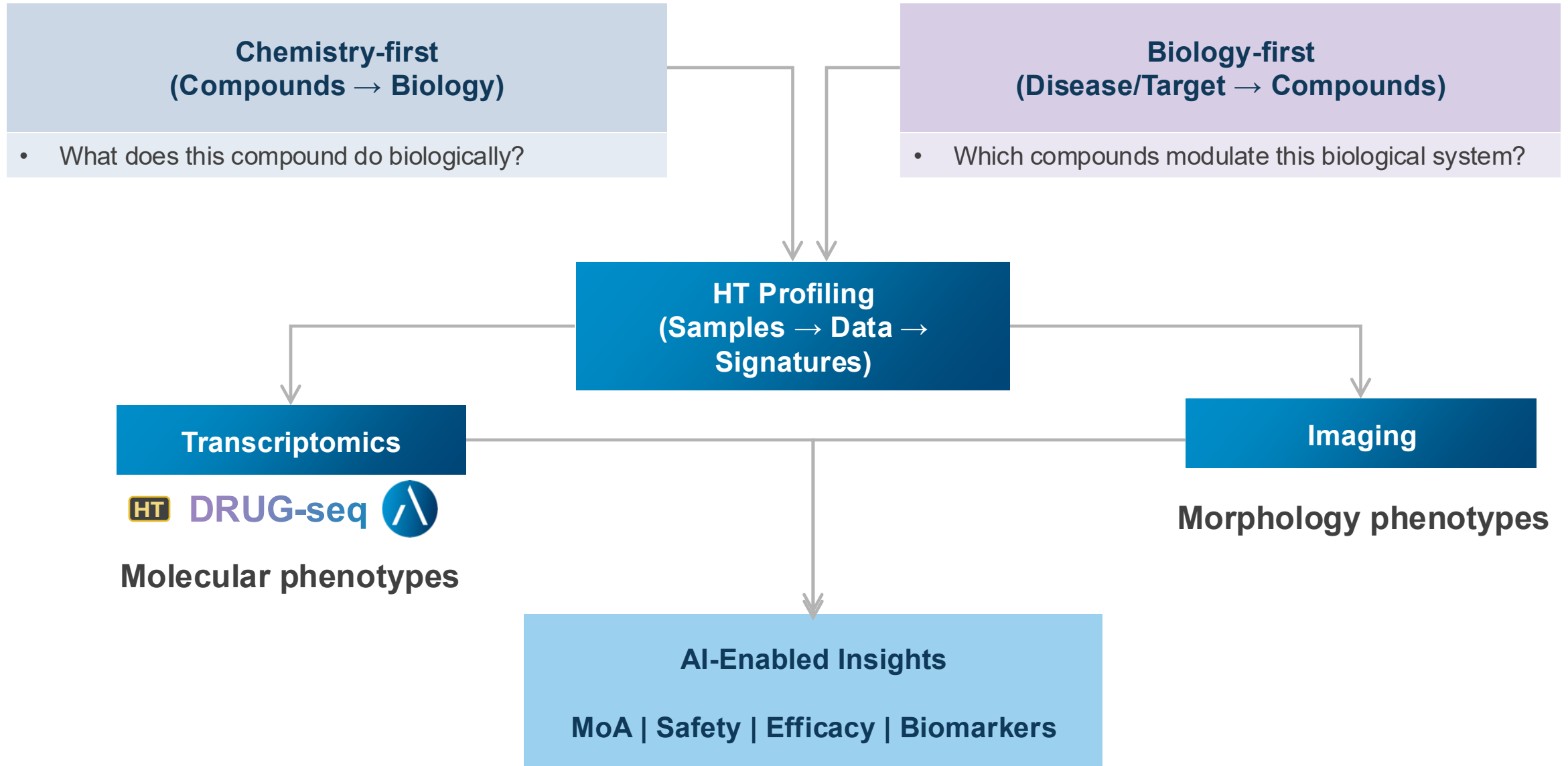
AI/ML integration for Data-driven discovery



From Brown et al., 2018

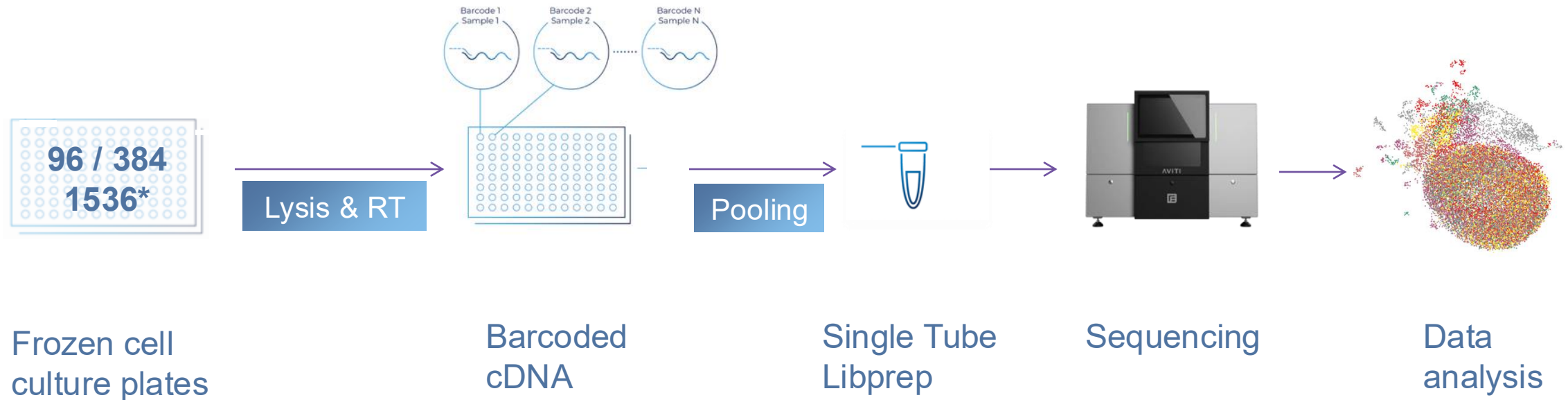
- Prediction of MoA & Toxicity
- Structure Activity Relationships

HT Profiling in Drug Discovery Strategies



DRUG-seq a workflow for large-scale molecular phenotyping

Rapid, low-cost and high-throughput transcriptomics



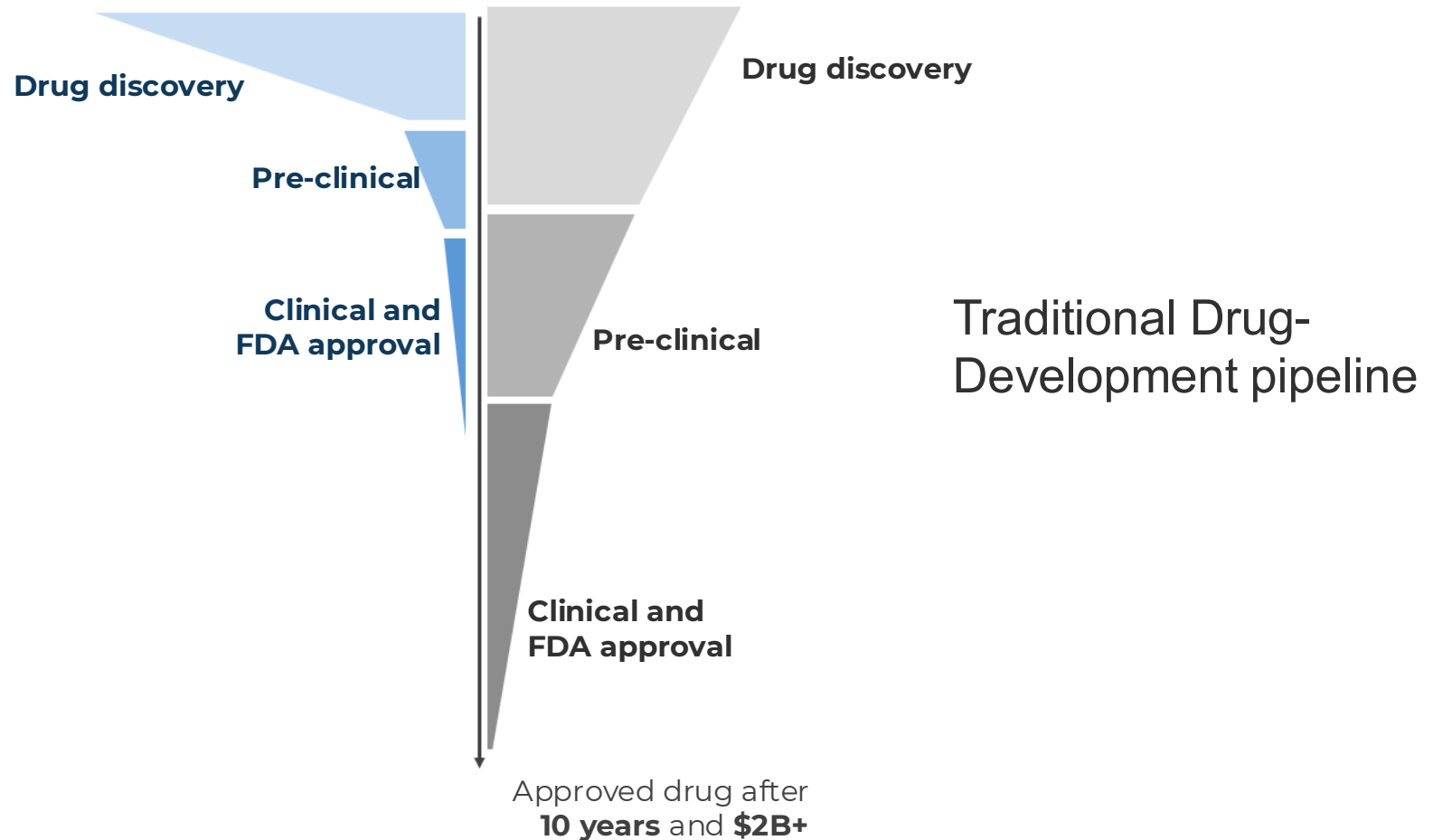
- Highly scalable
- Data comparable across sample types
- Mechanistic insight

* expected Q1-2026

How to reduce drug failures in clinical trials?

Gather more mechanistic insights in the early developmental phase

Drug development
with **Alithea Genomics**

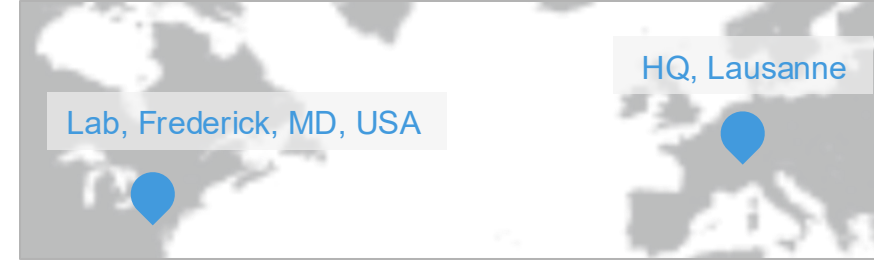


Transcriptomics solutions for biomarker and drug discovery

Enabling high-content molecular phenotyping at scale

2020
Founded
EPFL spin-off

>30
Employees

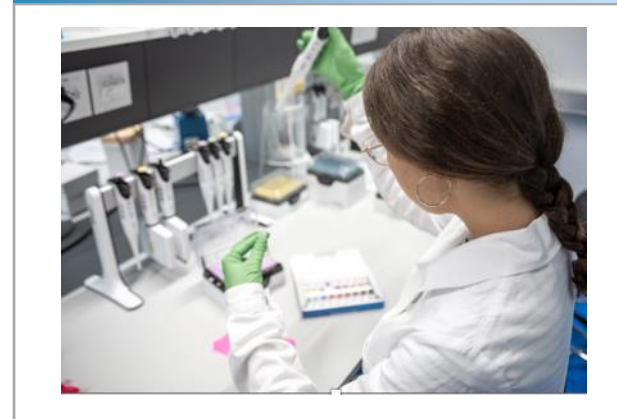


RNA-seq Kits



Samples-to-Library

Tx Services



Samples-to-Data

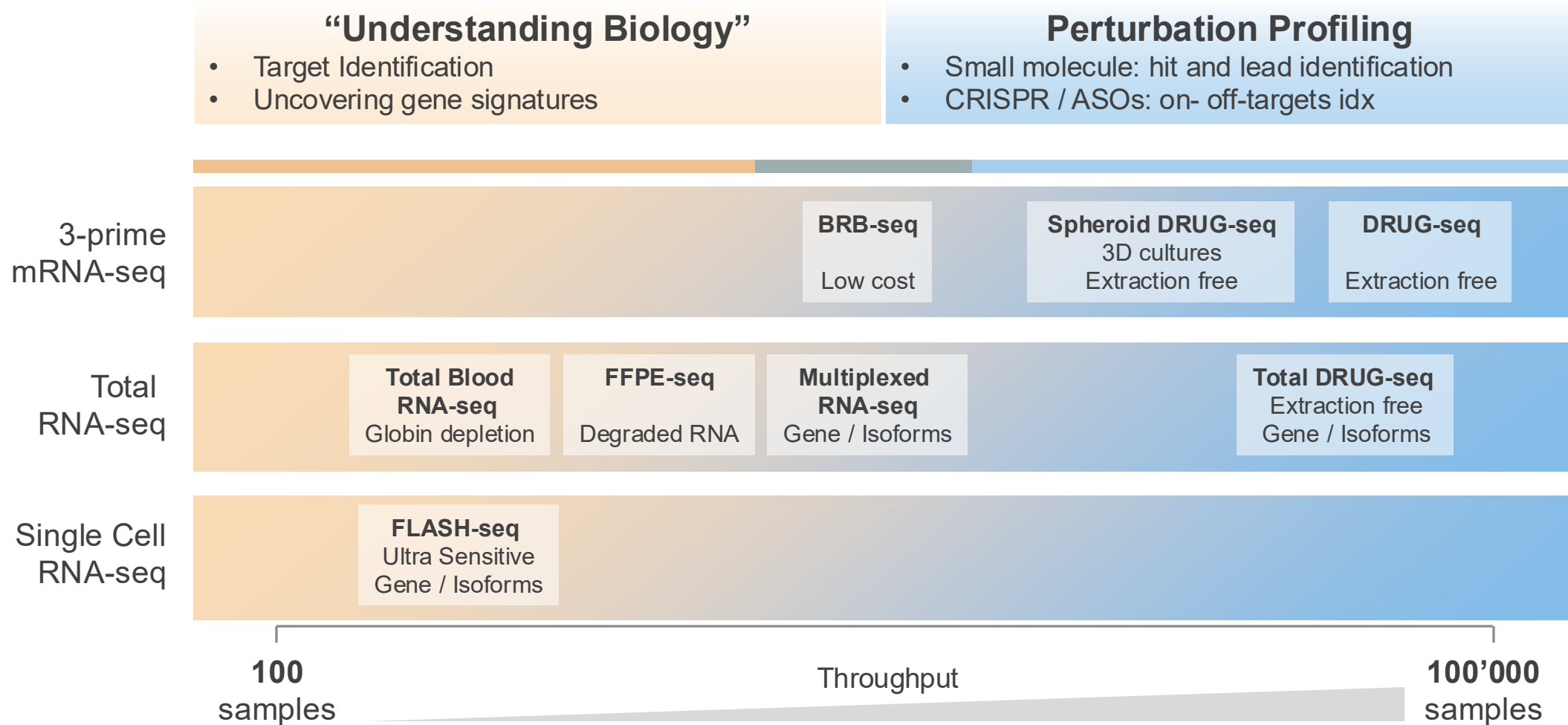
Customers

- Academic
- Biotech
- Pharma, AgroChem
Cosmetics
- CRO



Alitheia's kits portfolio for transcriptomics data generation

Ultra Sensitive and High-Throughput transcriptomics for pre-clinical research



Key clients: Pharma, Agrochem and Cosmetics

Pharma companies

Bayer Pharma

Roche

Novo Nordisk

Novartis

Sanofi

Johnson & Johnson

Amgen

Daiichi Sankyō

Regeneron Pharmaceuticals

GlaxoSmithKline

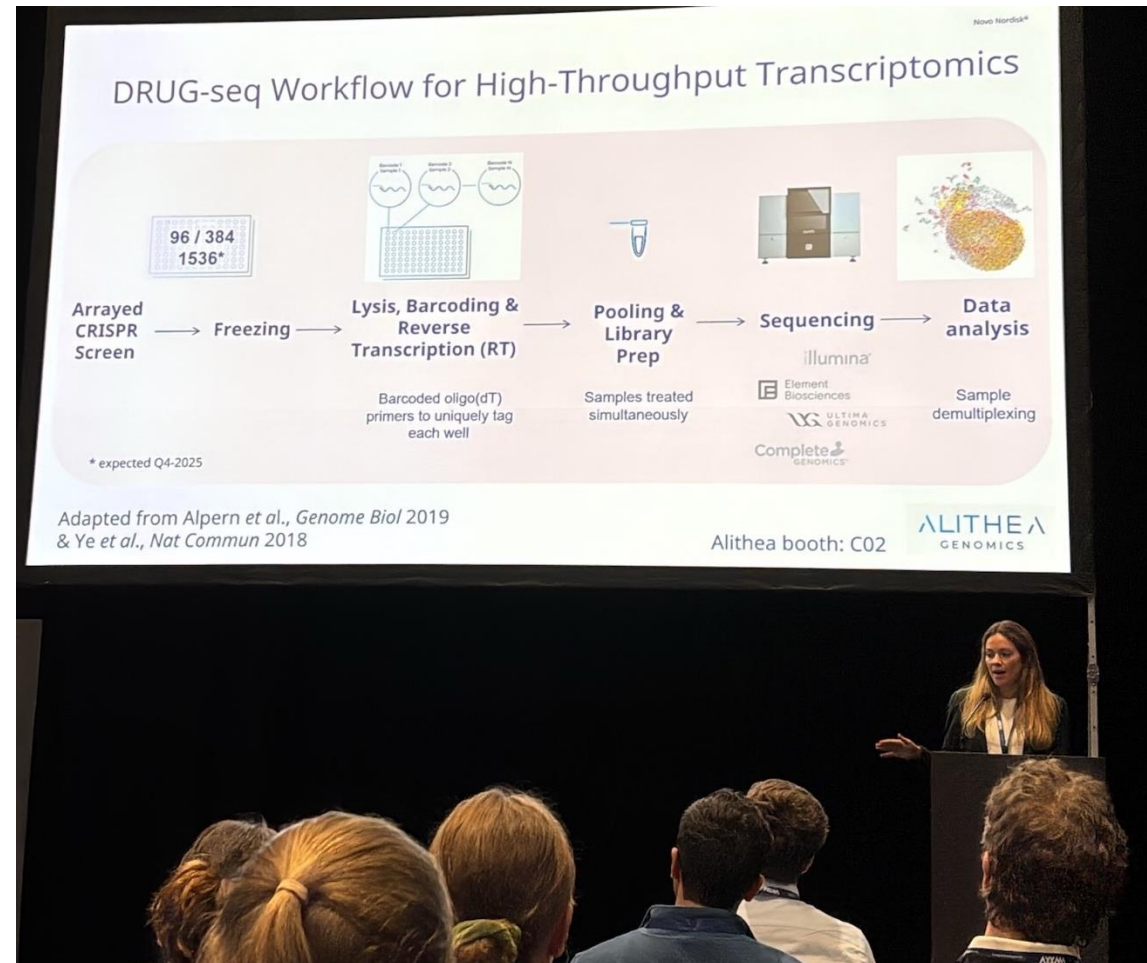
Bristol-Myers Squibb

Agrochem companies

Syngenta

Bayer AG

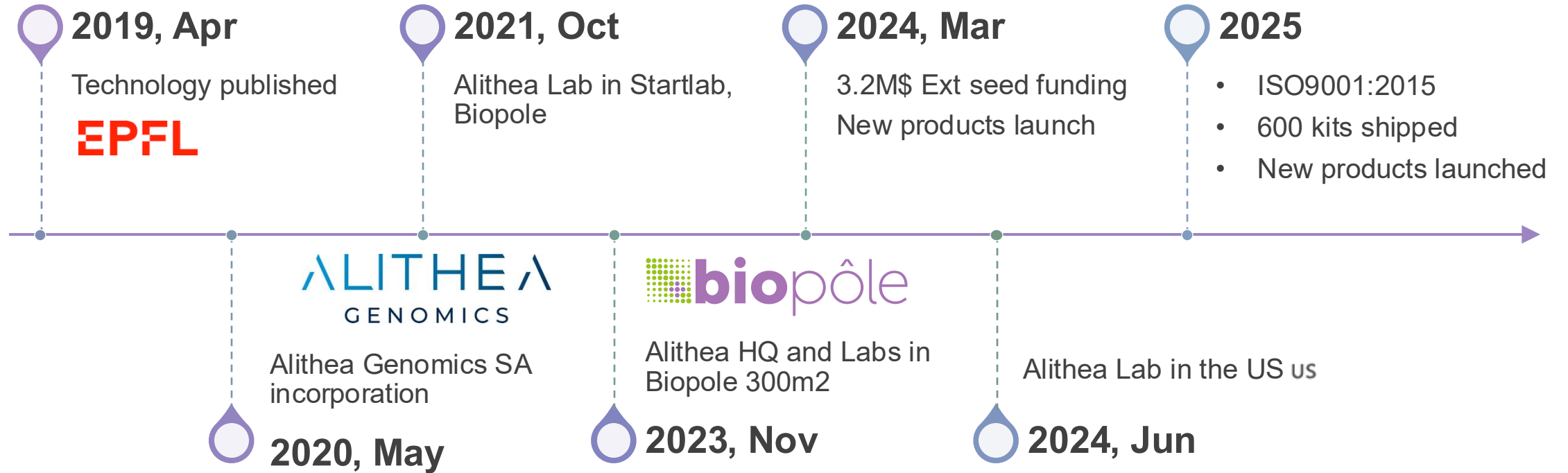
Procter&Gamble



Novo Nordisk HT Automation team presenting Alithea's DRUG-seq

How we started Alithea

Milestones



Alithea Journey

The Founders



Daniel Alpern
CTO and co-founder



Riccardo Dainese
CEO and co-founder



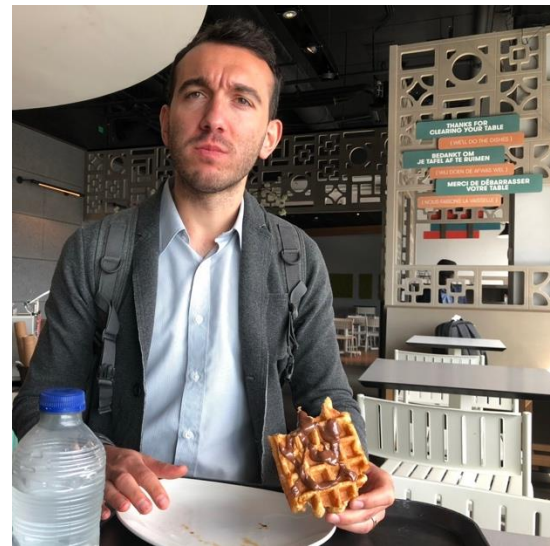
Prof Deplancke
Scientific Advisor



2015



2019



Jan 2020



May 2020

Alithea Journey

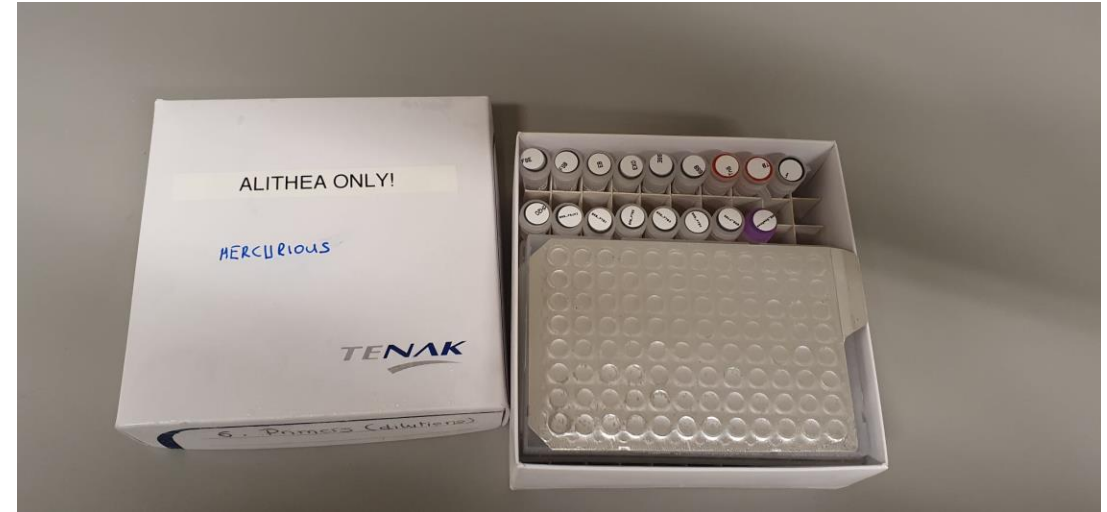
The Team



Questions?

Lessons learned from Alitheia

1. Start with a problem, not a technology
2. Talk to users early
3. Be comfortable with uncertainty
4. Choose cofounders who complement you
5. Patents are valuable, but aren't mandatory
6. Competition is a sign you're solving a real problem
7. In a small company, everyone wears multiple hats



Outstanding local support and community around you

EPFL

Coaching and mentorship

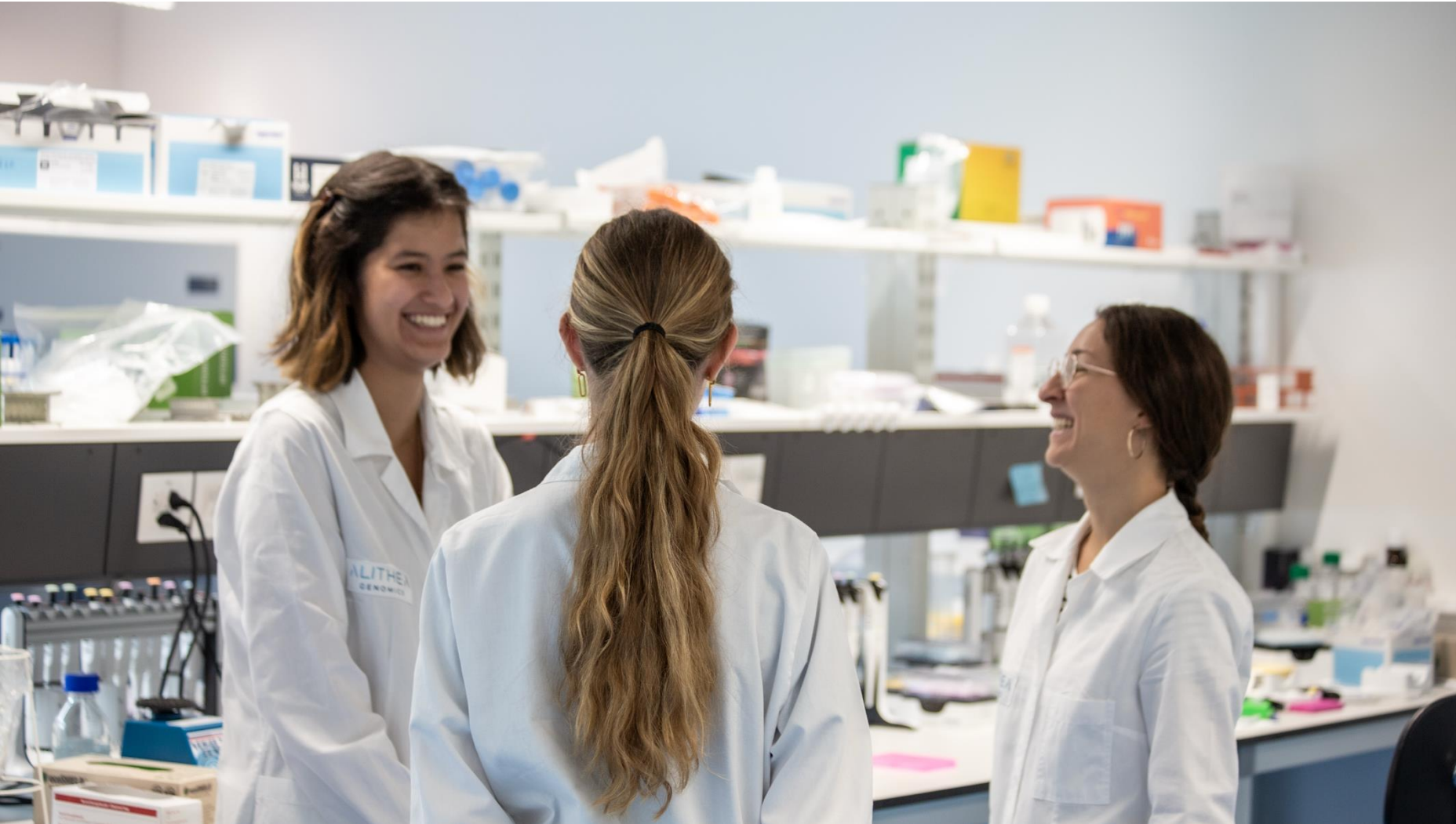
Innosuisse Business Concept training
(www.science2market.ch)

Startup Unit at EPFL: grants and mentoring support

FIT foundation

BRIDGE, Innosuisse coaching

Venture kick



Thank you!

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ALITHEA
GENOMICS

Thank you and reach out!

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