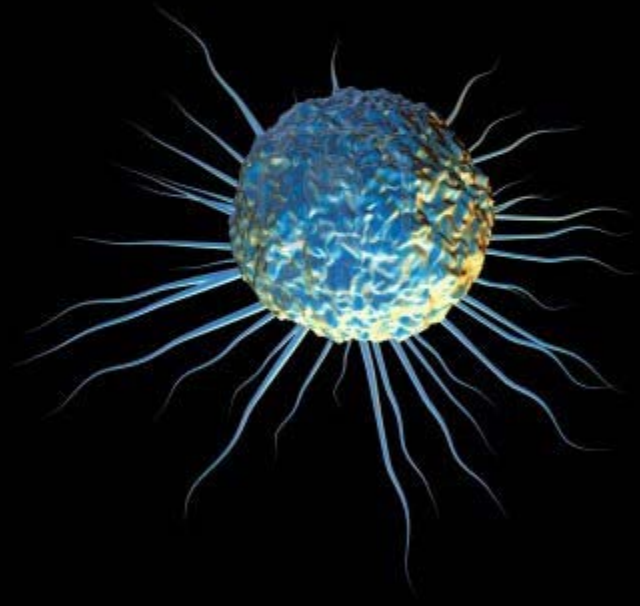


Team Example



Bringing
single-cell western blotting
to stem cell and cancer
research

Interviews: 102

Team: Kelly Gardner, Ph.D.,
Josh Molho, Ph.D.,
Amy E. Herr, Ph.D.

Mentor: Douglas Crawford, Ph.D. (QB3 and Mission Bay Capital)

Existing protein measurement tools are insufficient

1

“Western blotting”

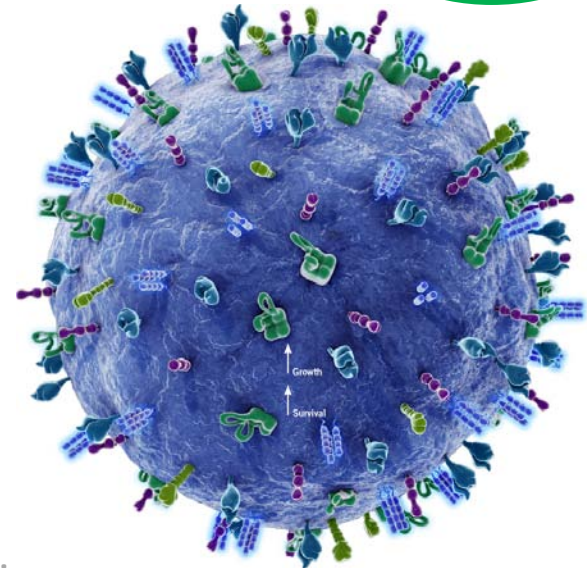
*Average/bulk
measurements only*



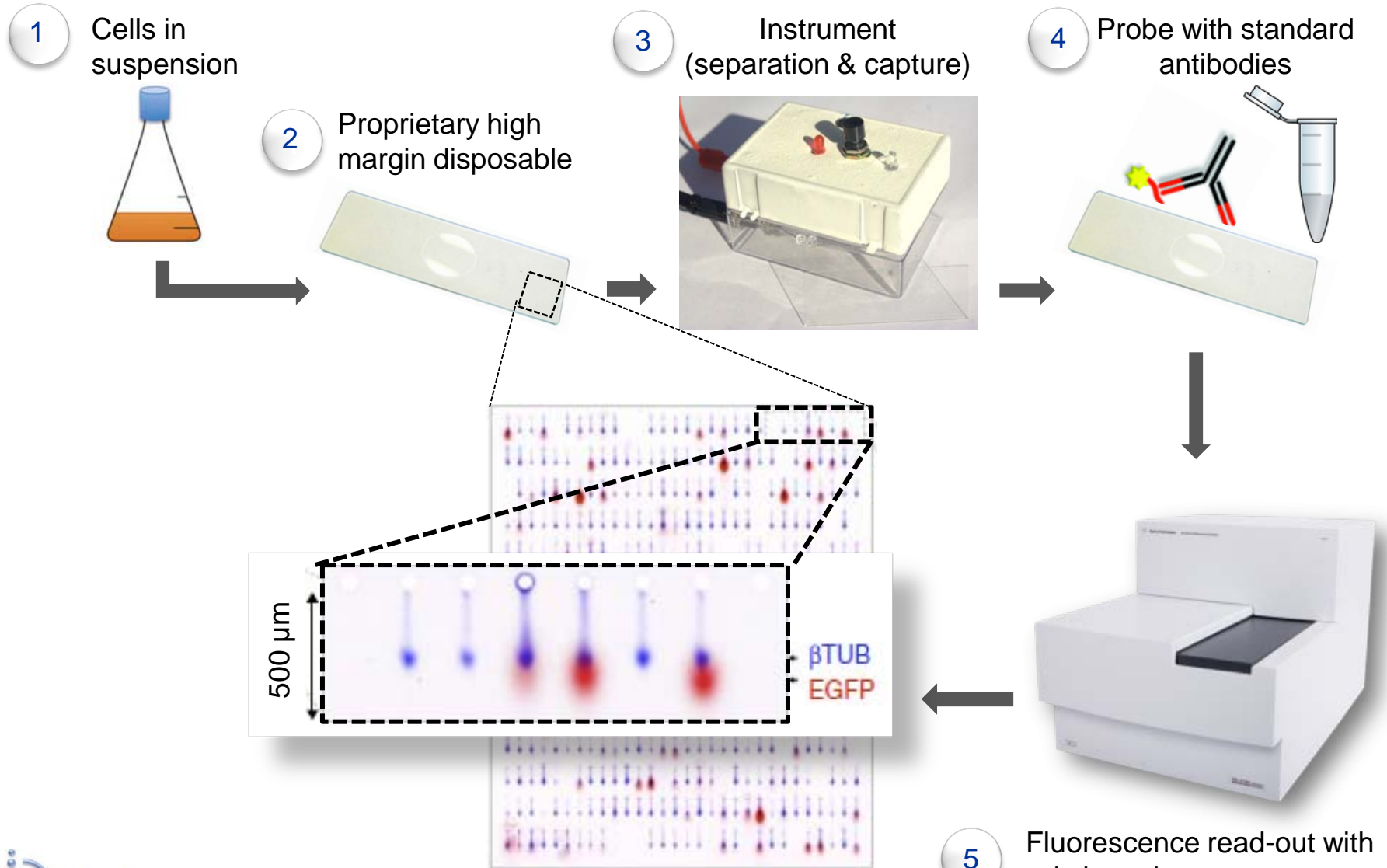
2

Flow Cytometry

*Cell surface
proteins only*



Zephyrus single cell western blot

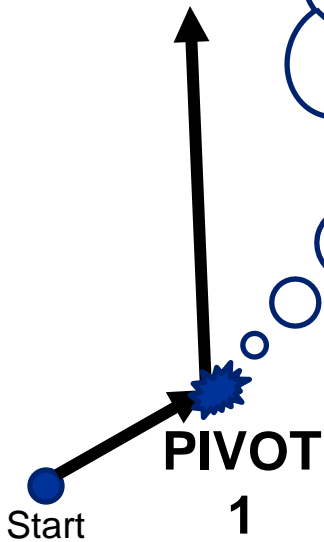
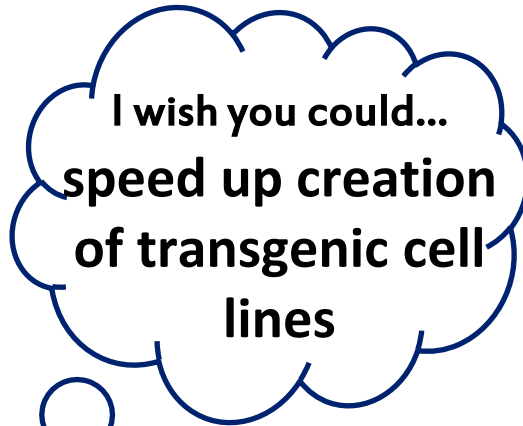


Hughes, Spelke, Xu, Kang, Schaffer & Herr (2014),
Single Cell Western Blotting.
Nature Methods

Testing our hypothesis | Value prop & target customer segment



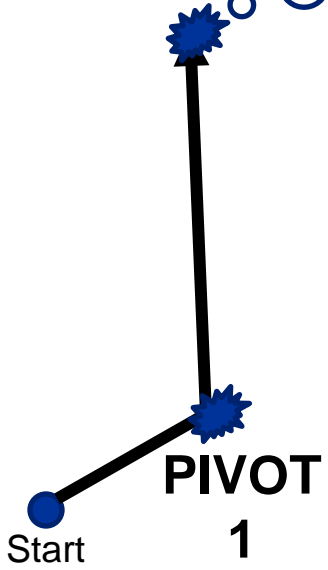
Scalable
Business



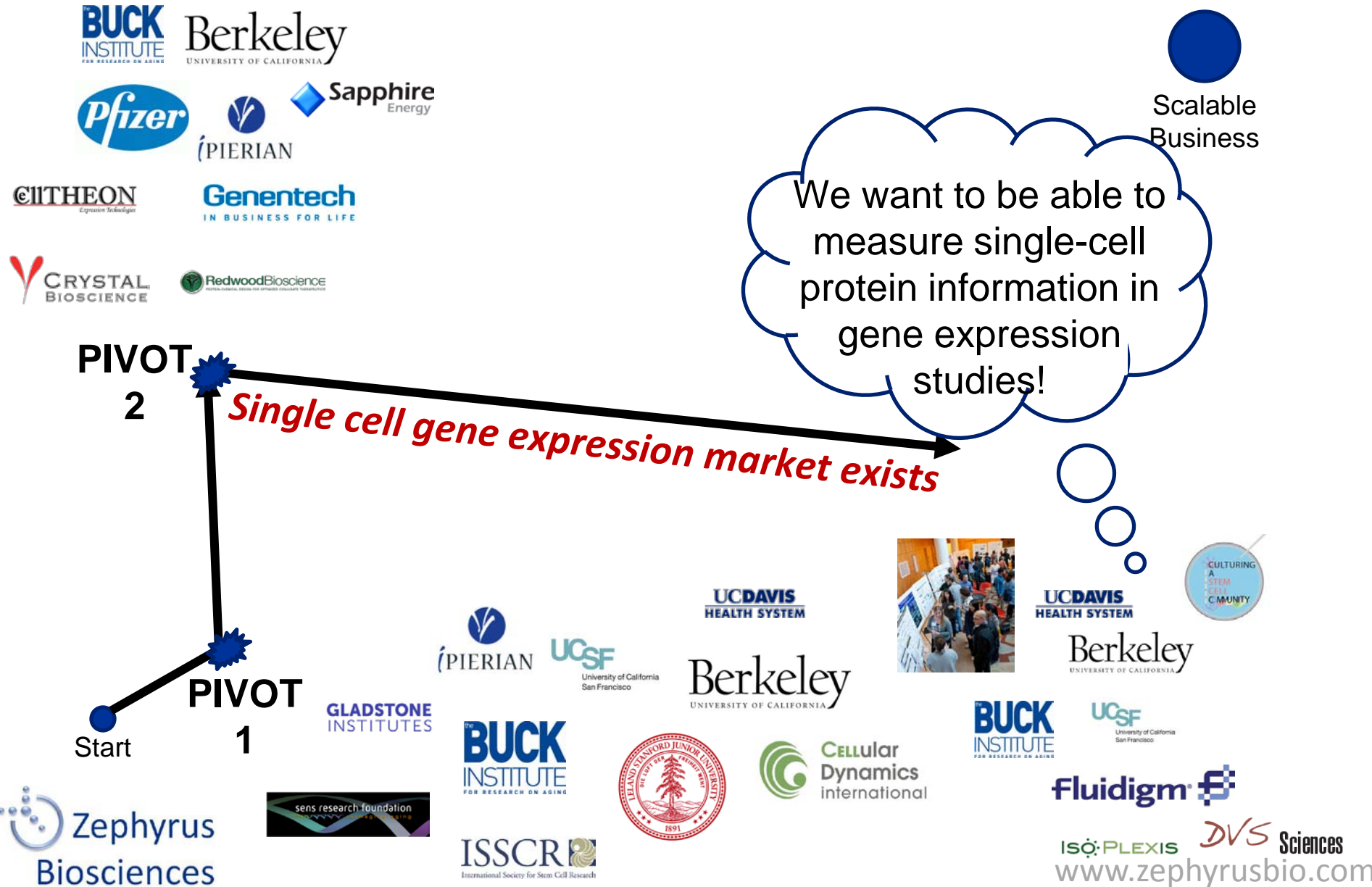
The Zephyrus Journey...



Scalable
Business



The Zephyrus Journey...



The Zephyrus Journey...



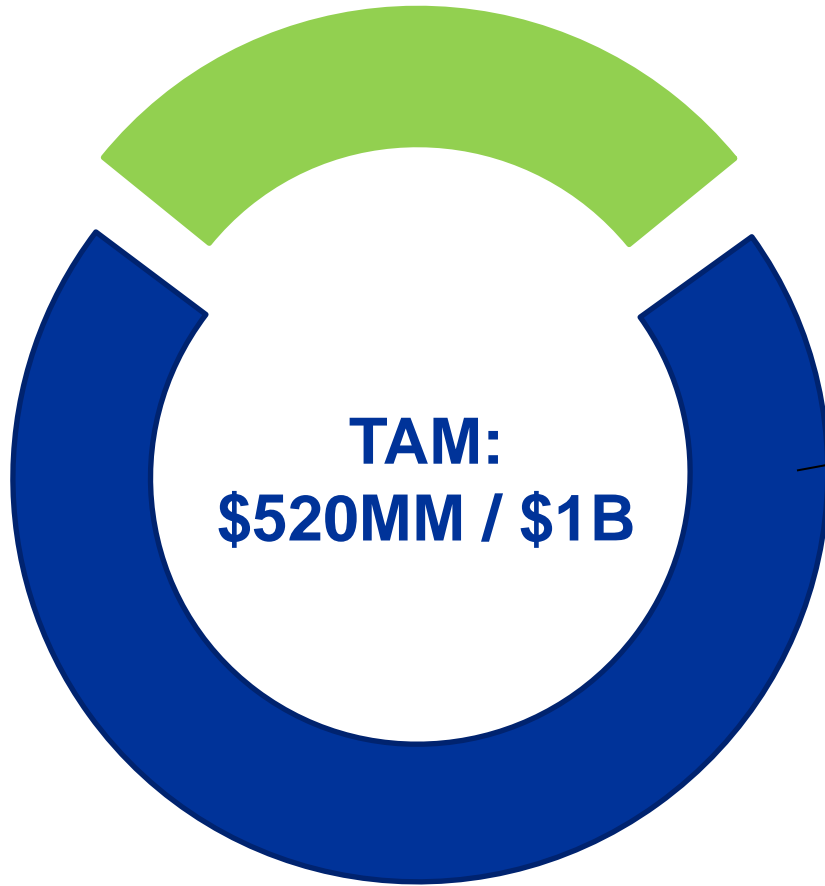

Scalable
Business

Still need to focus!
**Pick a target
application to start
with**



First target market: stem cell & cancer researchers

\$130MM / \$264MM



**Our Target Market:
13,000 funded stem cell and
cancer laboratories who...**

- ✓ *Have access to a microarray scanner*
- ✓ *Have recent publications highlighting single-cell measurements*

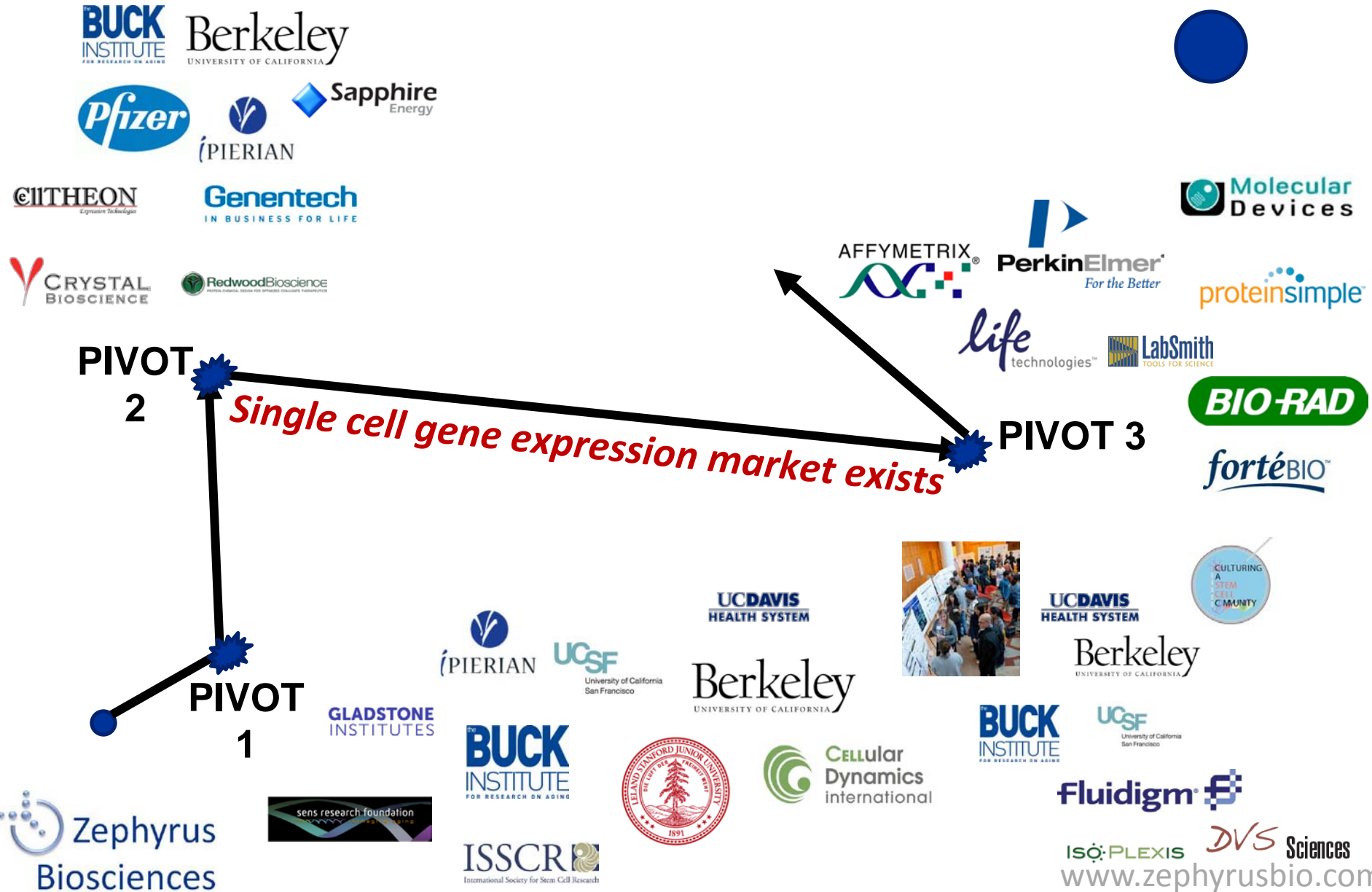
Total Addressable Market:
52,000 funded stem cell and
cancer laboratories globally

*Global stem cell research market:
>\$4B (12% CAGR)*

*Global cancer proteomic profiling:
>\$9B (16% CAGR)*

Total Instrumentation / Annual Disposable

The Zephyrus Journey...



The Zephyrus Journey...

Why a BIG tool?
Products with a few \$MM in revenue are interesting



PIVOT 2

Single cell gene expression market exists

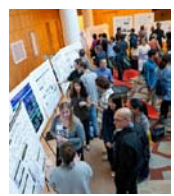
PIVOT 4

PIVOT 3

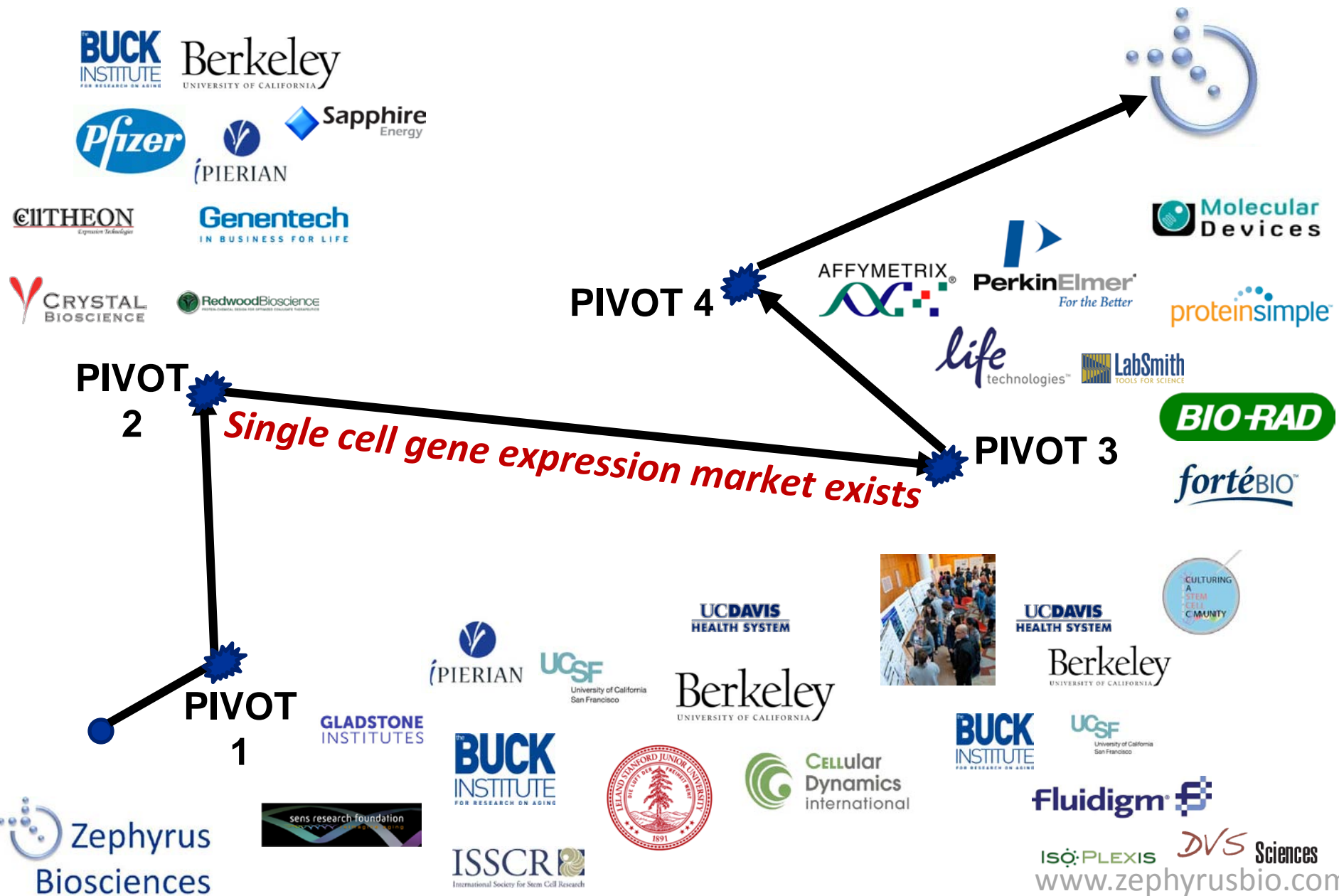


Co-marketing?
We would be interested in partnering if you could help us sell microarray scanners

PIV 1



The Zephyrus Journey...



BUCK INSTITUTE Berkeley
FOR RESEARCH ON AGING UNIVERSITY OF CALIFORNIA

Pfizer **PIERIAN** **Sapphire Energy**

CIITHEON **Genentech**
Equation Technology IN BUSINESS FOR LIFE

CRYSTAL BIOSCIENCE **RedwoodBioscience**

PIVOT 4

AFFYMETRIX **PerkinElmer**
For the Better
life technologies™

Molecular Devices

proteinsimple

PIVOT 2

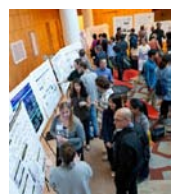
Single cell gene expression market exists

PIVOT 3

BIO-RAD
fortéBIO

PIVOT 1

GLADSTONE INSTITUTES **PIERIAN** **UCSCF** **UCDAVIS HEALTH SYSTEM** **Berkeley**
University of California San Francisco UNIVERSITY OF CALIFORNIA



UCDAVIS HEALTH SYSTEM **Berkeley**
UNIVERSITY OF CALIFORNIA



Zephyrus Biosciences



BUCK INSTITUTE
FOR RESEARCH ON AGING



CELLular Dynamics international

BUCK INSTITUTE **UCSF**
FOR RESEARCH ON AGING University of California San Francisco

Fluidigm

ISOPLEXIS **DVS Sciences**
www.zephyrusbio.com

Route to Commercialization

Progress-to-date:

- ✓ Lab-based prototype established (Nature Methods 2014)
- ✓ Exclusive option on key UC-owned IP
- ✓ Customer & business model validation (UCSF Lean Launchpad)
- ✓ Built out scientific & management team

EARLY ACCESS PROGRAM

Launch: July 2014



Beta-prototype placement in key labs
Launch: December 2014

6 months

Today



Instrument & disposable development

Seed funding

Route to Commercialization

Progress-to-date:

✓ Lab-based prototype established (Nature Methods 2014)

✓ Exclusive option on key U IP

✓ Customer business validation (UCSF Launchpad)

✓ Built out & management team

EARLY ACCESS PROGRAM

Launch: July 2014



Beta-prototype

Impact of Lean Launchpad:

LLP interviews helped us identify customers for our EARLY ACCESS program where customers can send samples to be analyzed in our company lab.

We are currently accepting customers!
If interested, please contact
info@zephyrusbio.com

Seed funding

Route to Commercialization

Progress-to-date:

- ✓ Lab-based prototype established (Nature Methods 2014)
- ✓ Exclusive option on key UC-owned IP

- ✓ Customer & business model validation (UCSF Lean Launchpad)
- ✓ Built out scientific & management team

EARLY ACCESS PROGRAM

Launch: July 2014



Beta-prototype placement in key labs
Launch: December 2014

Software plug-ins for data analysis



Scale sales force



Today

6 months

6 months

9 months+

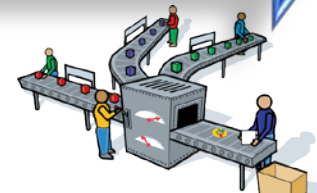
Instrument & disposable development

Seed funding

- Support prototypes
- Expand product capabilities to integrate with FACS



Series A



Transfer to manufacturing

Full product launch (Q1 2016)

Progress Update – 6 months since Lean Launchpad

- ✓ Single-cell western blotting article published in Nature Methods (initially the #1 most emailed article, currently #3 most read article)
- ✓ Set up company lab at QB3 start-up incubator at UC Berkeley, accepted into prestigious Janssen Lab incubator @953 in San Francisco
- ✓ Hired R&D engineer
- ✓ Technology successfully translated into company labs (chip fabrication, assay operation, electrophoresis & blotting on single cells)
- ✓ On target to launch EARLY ACCESS program next month: first three customers in final negotiations + more in the pipeline
- ✓ Closing a \$1.5M investment round from Angels and VCs (including mentors from the LLP program!)