



**pepper bio**

DISCOVERY IS IN THE DATA



# We're tackling **big** challenges in healthcare

## Oncology

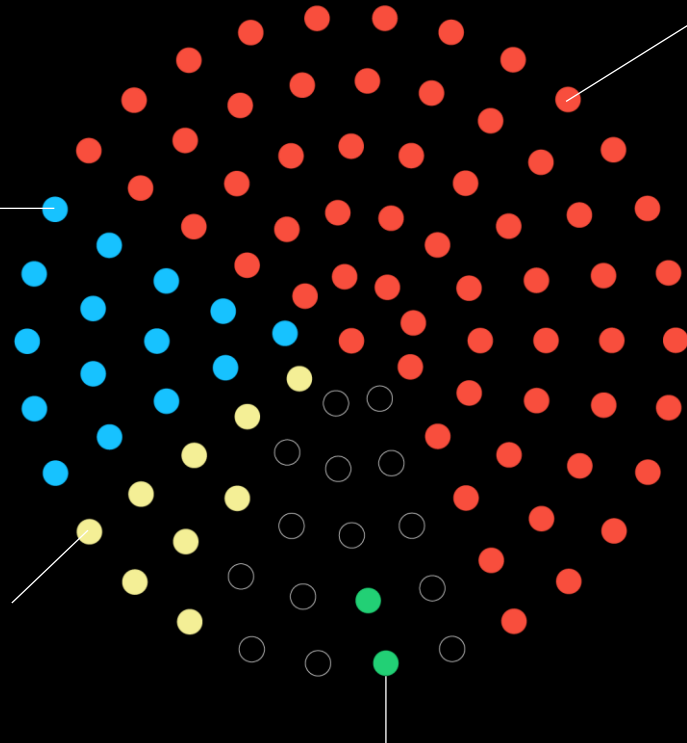
\$201B (2021) | 9.7% CAGR

1 out of 6 people worldwide dies due to cancer.

## Neurodegenerative

\$34B (2020) | 4.9% CAGR

1 out of 9 people worldwide dies due to a disorder of the nervous system.



## Inflammatory diseases

\$98B (2020) | 9.3% CAGR

3 out of 5 people worldwide die due to chronic inflammatory diseases.

Only 1 out of 50 people worldwide lives to reach the age of 80.

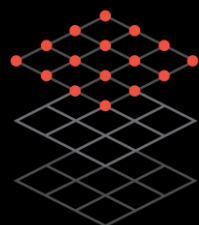


**The market  
demands  
a more effective  
solution**



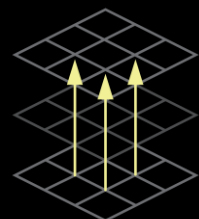
**Functional**

Not static, far-removed



**Global**

Not partial, pre-selected



**Causal**

Not correlative

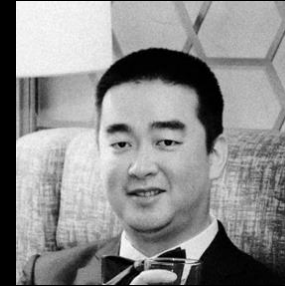


# We are scientist-founders



**SAMANTHA DALE STRASSER, PHD**  
CSO & Co-founder | PhD, MIT

- Developed Pepper's technology
- Studied multi-omics while an NSF Graduate Research Fellow in EECS mentored by Douglas A. Lauffenburger at MIT
- Former Churchill Scholar and Goldwater Scholar



**JON HU**  
CEO & Co-founder | MBA, Harvard Business School

- Led Atidiv (formerly Loft), an enterprise solutions Guild portfolio company, as its CEO, growing the company from 200 to 300 people
- Expanded Techweek, a tech conference and Guild portfolio company, to 2 new cities as COO



Guild Capital



**CHRISTOPHER NICHOLSON, PHD**  
Head, Biology | PhD, Newcastle University

- Identified novel regulators of vascular calcification and atherosclerosis as a Senior Research Fellow at Harvard Medical School and MGH
- Lead development of COVID-19 outcome prediction model



**CAITLIN BROWN, PHD**  
Head, BD | PhD, Brown University

- Pharma equity analyst at Cowen
- Built strong network of relationships as she led academic projects in Ferroptosis resistance and studied ovarian cancer and reproductive systems, resulting in 9 publications while at Brown University and UMass Med School





# Our advisory board



Stanford University



Variant Bio

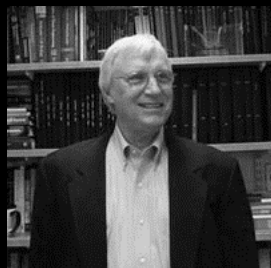


GNS HEALTHCARE



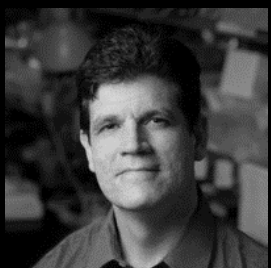
median

UC San Diego



**DOUGLAS  
LAUFFENBURGER, PHD**

- Professor, MIT
- Founder, Biological Engineering, MIT



**DEAN FELSHER, MD, PHD**

- Professor, Oncology, Stanford
- Director, Translational Research, Stanford



**IMRAN NASRULLAH, JD**

- VP & Head, Open Innovation Center North America – East, Bayer
- Former Director, Strategic Partnering & Business Development & Licensing, Boehringer-Ingelheim



**TOM RUSH, PHD**

- Chief R&D Officer, Variant Bio
- Former US Lead, Functional Genomics, GlaxoSmithKline



**JEROME WINDSOR,  
PHARM D**

- SVP, Corporate Development & Product Strategy, GNS Healthcare
- Former VP, Strategy & Business Development, Median Technologies



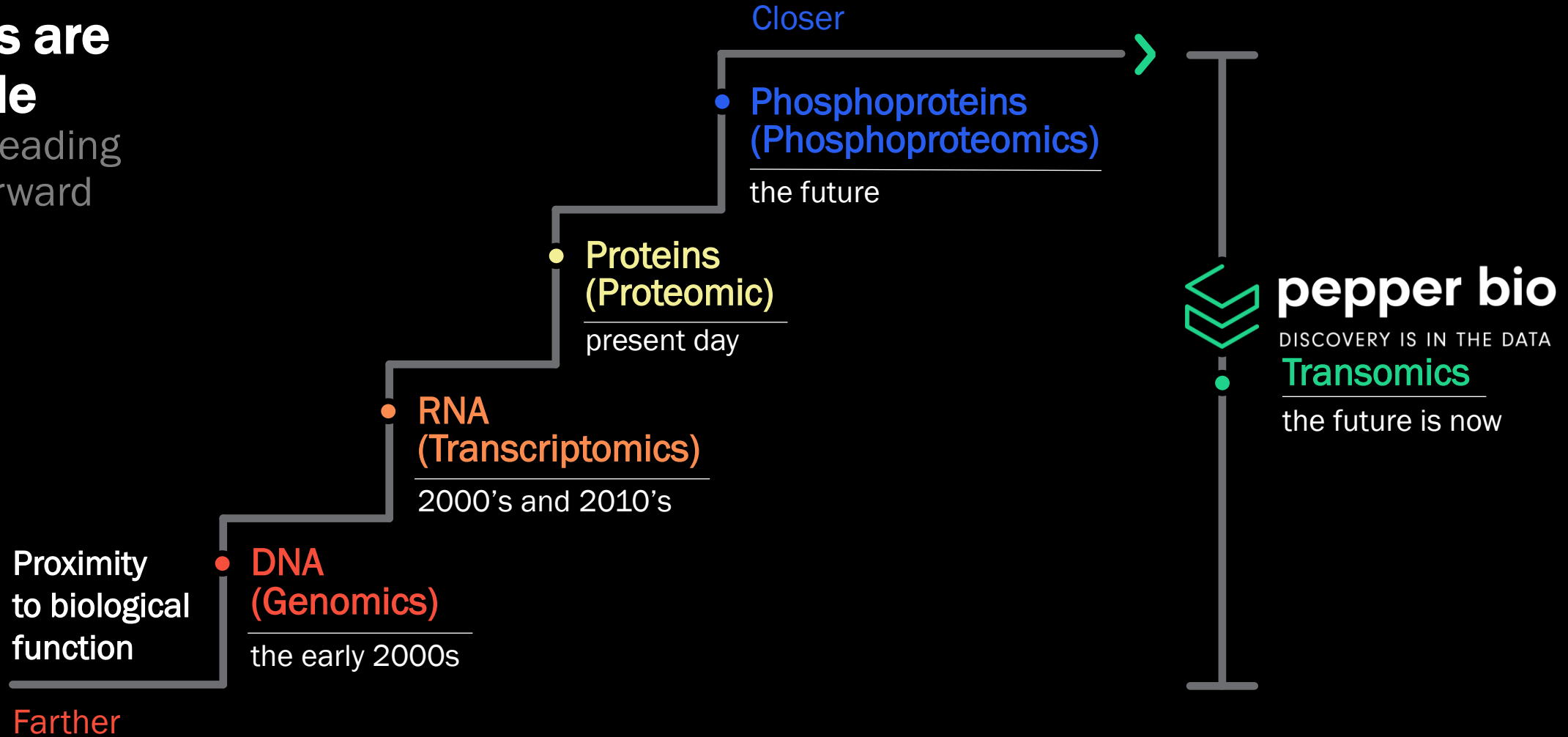
**PETER HORNBECK, PHD**

- Director, Cell Signaling Technology
- Founder, PhosphoSitePlus



# Full-stack omics solutions are inevitable

Pepper is leading the way forward







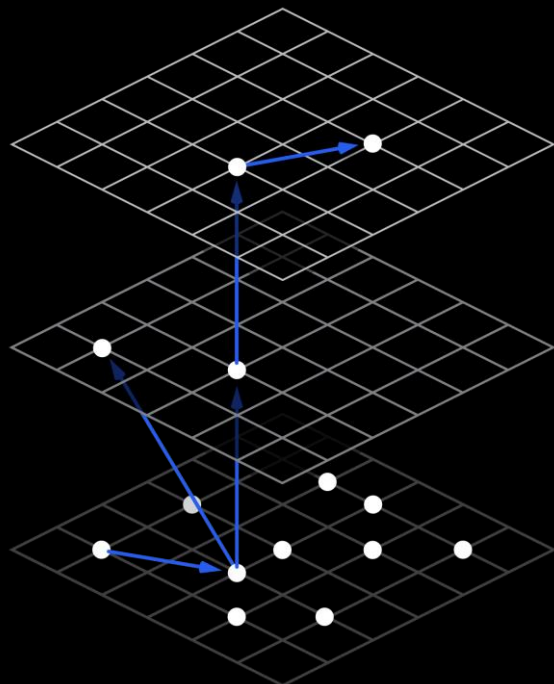
# Transomics ushers in a new era of drug discovery

Today

Proteomics

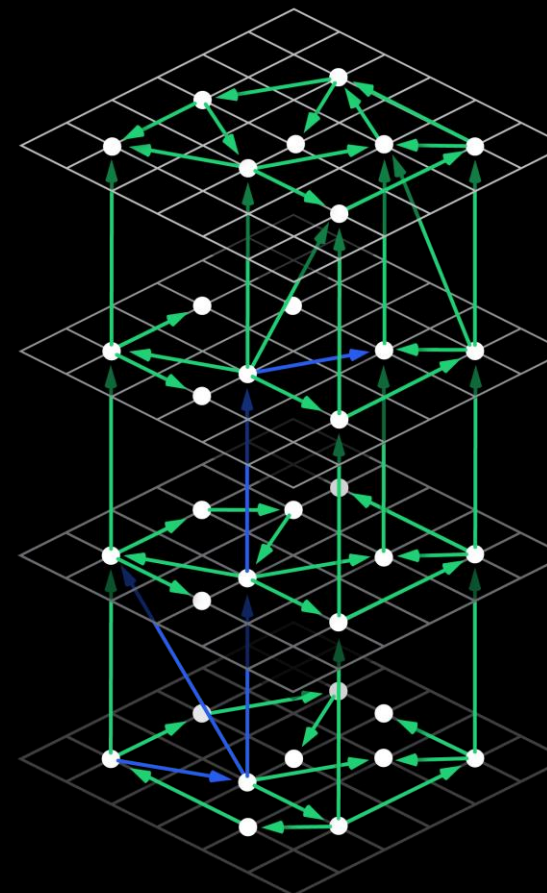
Transcriptomics

Genomics



**pepper bio**

DISCOVERY IS IN THE DATA

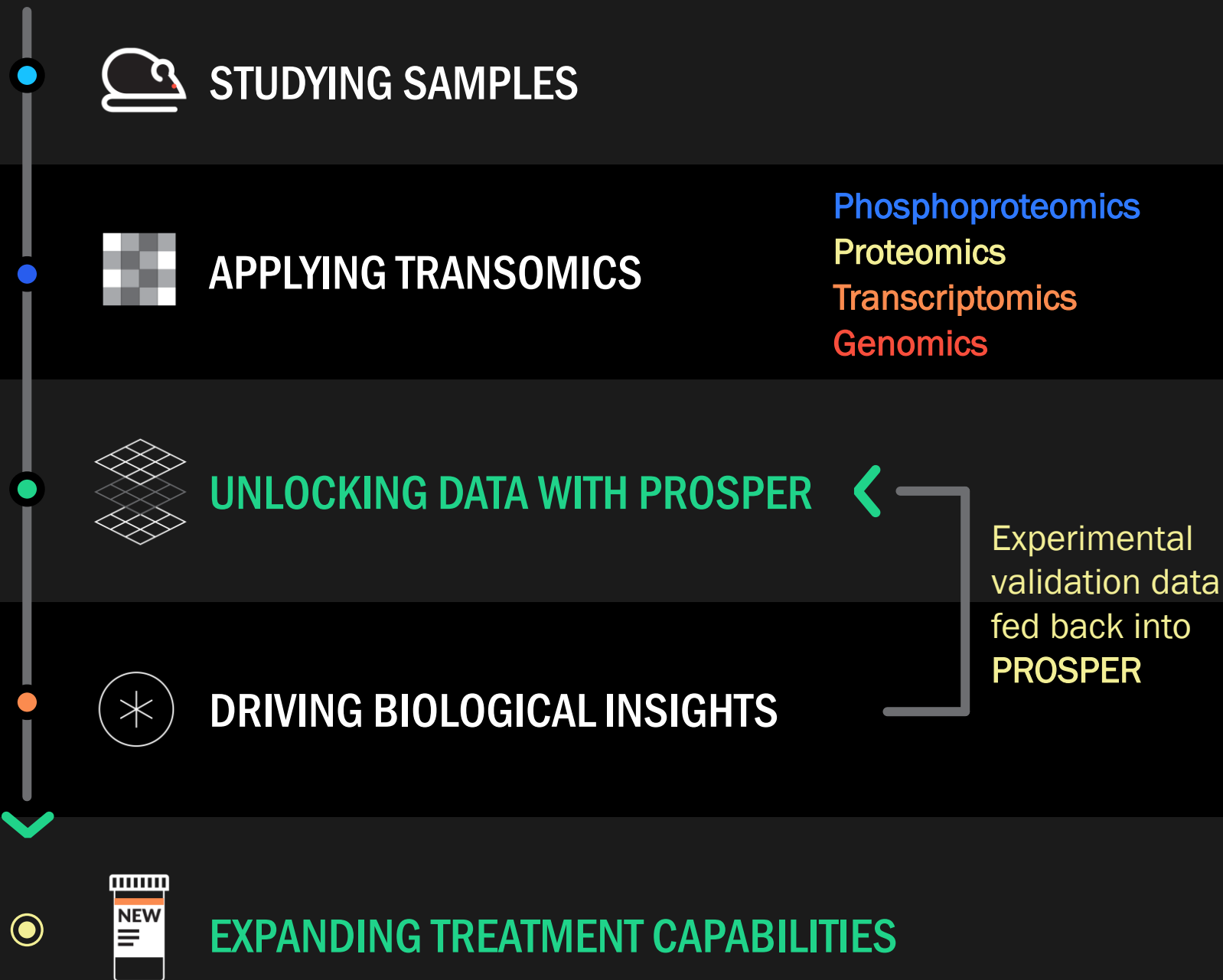


Phosphoproteomics



# Pepper's PROSPER platform

A full-stack solution  
advancing drug  
discovery from  
target ID through  
clinical trials







## Our business model

### Platform partnerships

- Partner with drug developers
  - Upfront and milestone payments
- 

### Internal pipeline

- Develop the highest priority targets and assets
- Drug discovery from beginning to end
- License / sell to drug developers after de-risking



# We are building the world's largest proprietary transomics database

## ● Pepper-led (de novo)

- Funded by Pepper
- Supports platform advancement, validation, and benchmarking

## ● Partnerships

- Pepper owns or has exclusive, perpetual raw data access
- Pepper owns all internally processed data

### SOURCES

- Drug developers
- Academic labs
- Strategic partners

## ● Publicly available

- Cleaned, formatted, and integrated
- Proprietary algorithm used



# Demonstrated PoC across three therapeutic areas

## Neurodegenerative

Working with a paid partner

0 0 0 0 0 0 0 1 0 1 0  
0 0 1 0 0 0 0 1 1 0 1  
1 0 0 0 0 1 1 0 1 1  
1 1 0 1 0 0 0 1 0 0 0  
1 0 1 0 1 1 0 0 0 0 0  
0 1 1 0 0 1 1 1 1 1  
1 1 1 1 1 1 0 1 0 1  
1 0 0 1 0 1 1 1 1 0  
0 0 1 0 1 0 0 1 0 0  
0 0 0 0 0 1 0 0 1 0

### Proprietary disease database

Transomic neuro disease data



### Drug MOA study

Indication expansion



### Pending paper

Strasser *et al.*, 2022

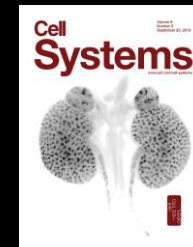
## Oncology

Developing proprietary database and publishing under Pepper Bio

0 0 0 0 0 0 0 1 0 1 0  
0 0 1 0 0 0 1 1 0 1  
1 0 0 0 0 1 1 0 1 1  
1 1 0 1 0 0 0 1 0 0  
1 0 1 0 1 1 0 0 0 0  
0 1 1 0 0 1 1 1 1 1  
1 1 1 1 1 1 0 1 0 1  
1 0 0 1 0 1 1 1 1 0  
0 0 1 0 1 0 0 1 0 0  
0 0 0 0 0 1 0 0 1 0

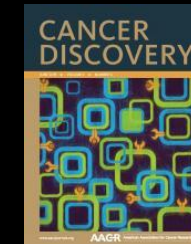
### Proprietary disease database

Transomic oncology disease data



### Cell Systems

Brubaker, *et al.*, 2019



### Cancer Discovery

Poulin, *et al.*, 2019

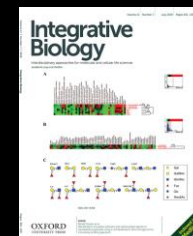
## Inflammatory

Pre-clinical validation with industry partner



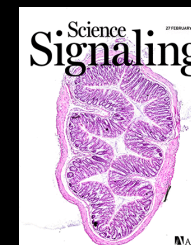
### Indication expansion

Expansion into IBD from RA



### Integrative Biology

Strasser, *et al.*, 2019



### Science Signaling

Lyons, *et al.*, 2018



## Our assets

2 industry  
and academic  
partnerships

---

3 partnership  
letters  
of intent

---

5 peer-reviewed  
publications  
and patents

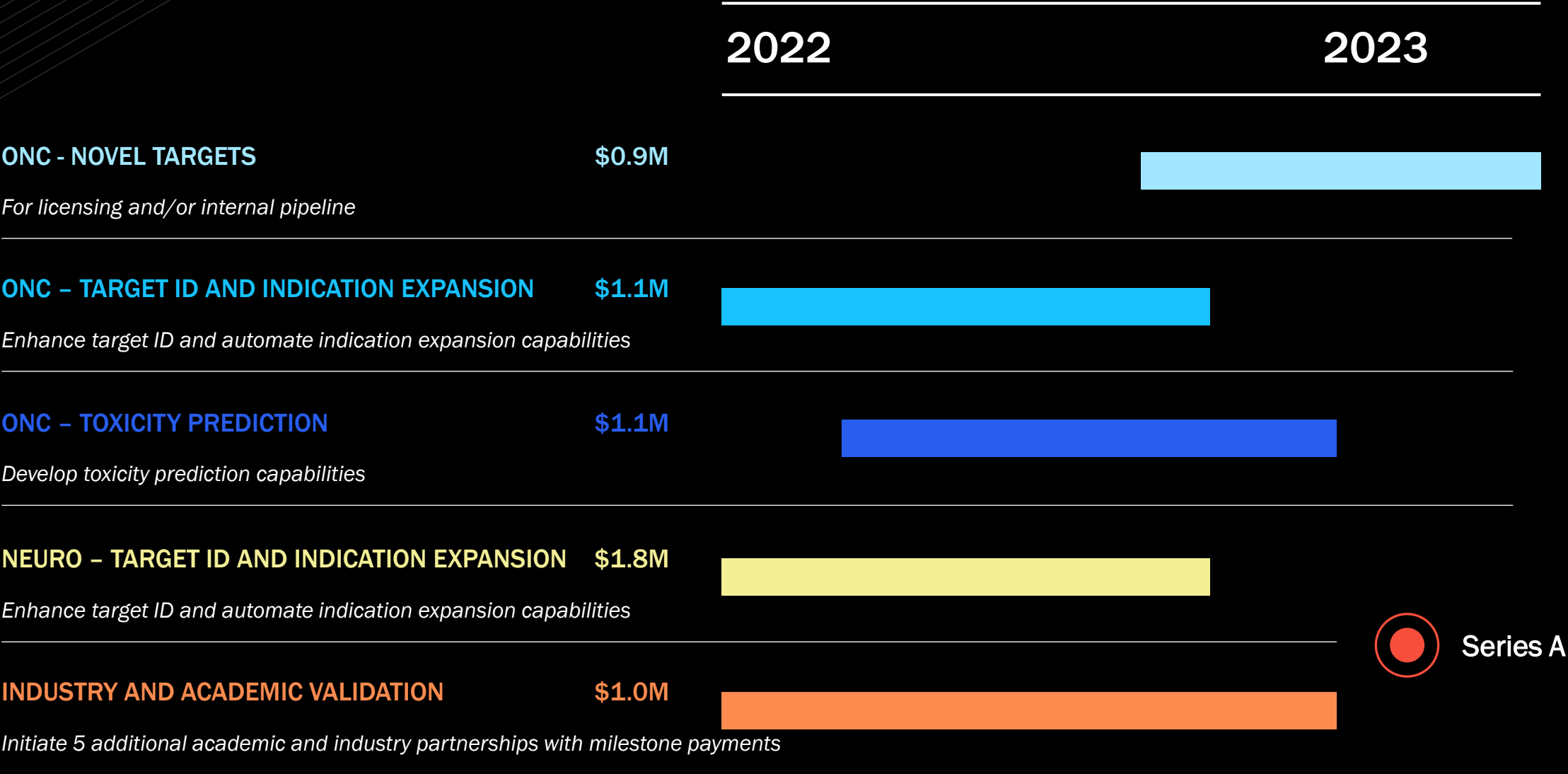
---

10 team  
members

---



# Raising \$6M; \$2M committed



 Series A



# Join us and deliver **real** impact in healthcare

## Inflammatory diseases

\$98B (2020) | 9.3% CAGR

3 out of 5 people worldwide die due to chronic inflammatory diseases.

## Oncology

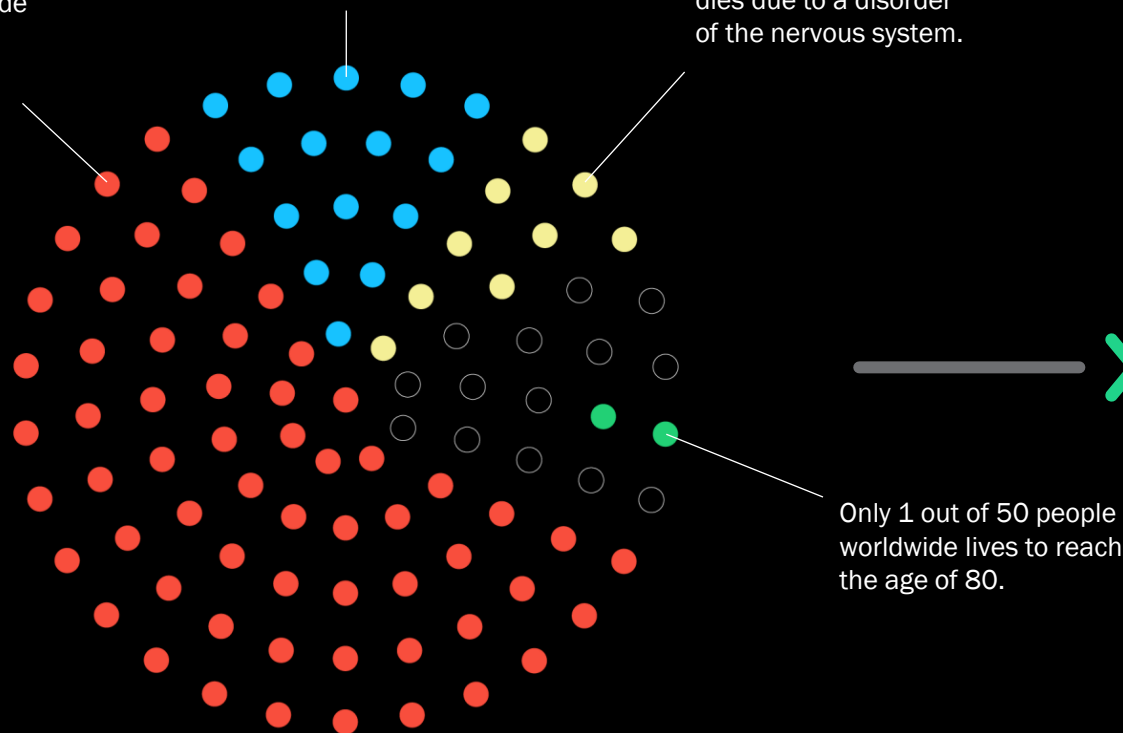
\$201B (2021) | 9.7% CAGR

1 out of 6 people worldwide dies due to cancer.

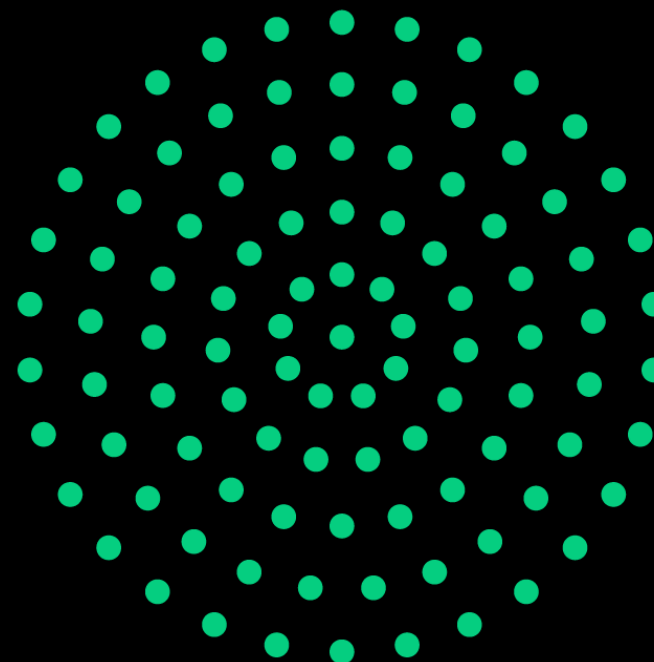
## Neurodegenerative

\$34B (2020) | 4.9% CAGR

1 out of 9 people worldwide dies due to a disorder of the nervous system.



Pepper Bio is working toward helping more patients live longer, fuller lives.







**Take part in advancing  
the future of drug discovery.**

CONNECT WITH PEPPER BIO

[jonhu@pepper.bio](mailto:jonhu@pepper.bio) | [www.pepper.bio](http://www.pepper.bio)