Proteograph XT

Seer Investor Presentation

November 2023

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Safe harbor disclosures

Certain statements in this presentation and the accompanying oral commentary are forward-looking statements within the meaning of the federal securities laws. These statements relate to future events or Seer, Inc. (the “Company”)’s future results and involve known and unknown risks, uncertainties and other factors that may cause the actual results, levels of activity, performance or achievements of the Company or its industry to be materially different from those expressed or implied by any forward-looking statements. In some cases, forward-looking statements can be identified by terminology such as “may,” “will,” “could,” “would,” “should,” “to,” “target,” “expect,” “plan,” “anticipate,” “intend,” “believe,” “estimate,” “predict,” “potential” or other comparable terminology.

All statements other than statements of historical fact could be deemed forward-looking. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including, among other things: any expectations regarding the Company's projections of market opportunities; statements regarding the Company’s business strategy, operations, results of operations, financial needs, and financial condition; statements regarding the Company’s long-term expectations; statements that may suggest trends for the Company’s business or industry, including expectations that may affect the unmet need and the size of the proteomics market and adjacent markets; statements about the Company’s collaborations, consortium arrangement, centers of excellence, enablement of future clinical validation, statements about the Company’s ability to successfully commercialize the Proteograph™ Product Suite, demand for the Proteograph Product Suite; the launch of any new or additional products, any expectations or statements regarding domestic or global markets, including but not limited to Europe and Asia; statements regarding customer adoption of new technologies domestically and globally; the Company’s ability to expand life sciences markets through the use of its technology; the discovery of new protein variants and novel biomarkers leading to therapeutic breakthroughs, the scope of protection the Company is able to successfully establish and maintain for intellectual property rights, including its Proteograph Product Suite, and the number of patents and claims issued, pending or granted; projections, assumptions, and estimates of the Company’s future performance, including but not limited to its financial performance, and the future performance of the markets in which it operates; the Company’s expectations regarding its gross margins, and operating income and expenses; any statements of the plans, strategies, and objectives of management for future operations; any statements of expectation or belief regarding future events, opportunities to drive future growth, and potential markets or market size, or technology developments.

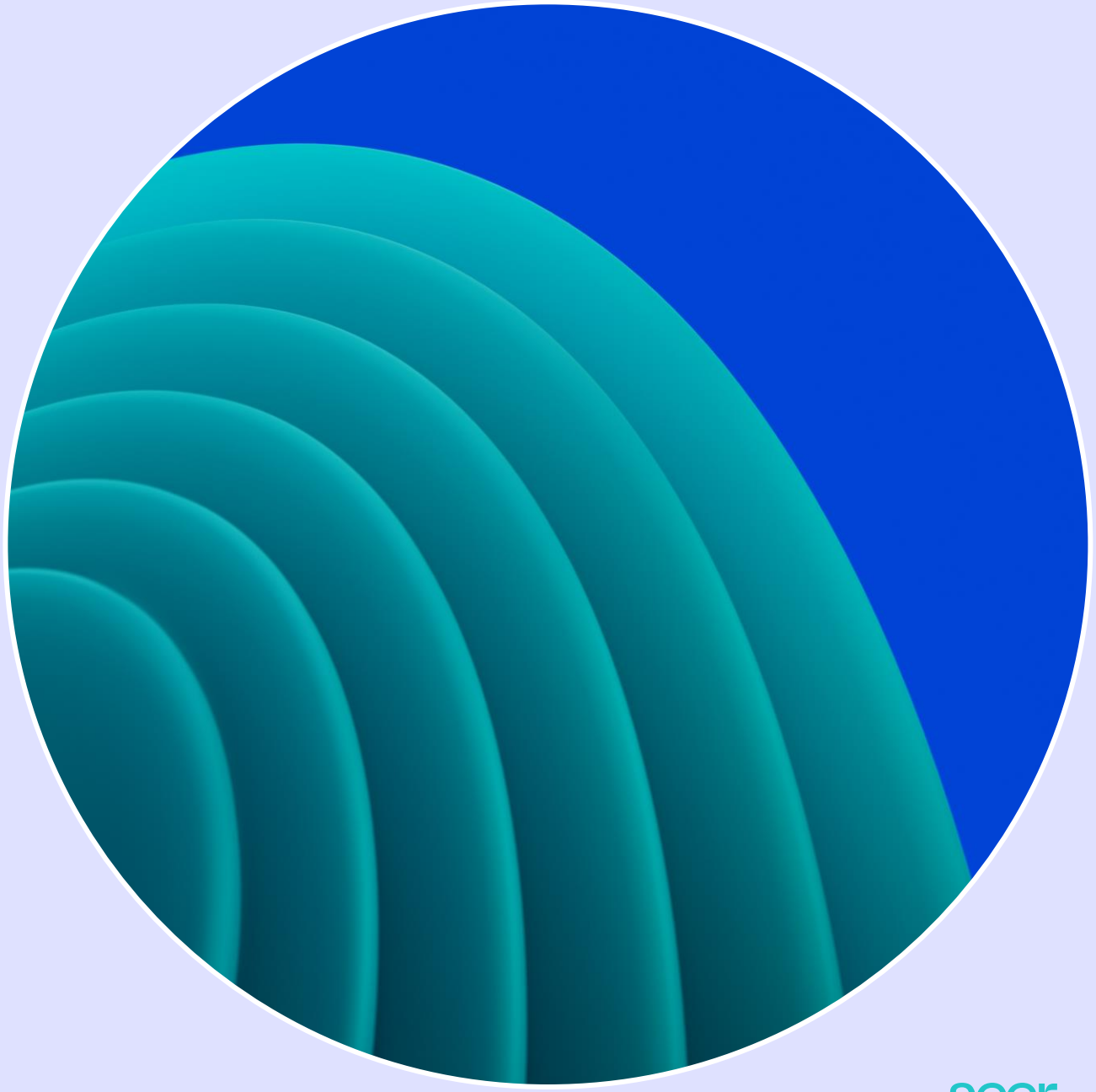
While the Company believes these expectations, assumptions, estimates and projections are reasonable, such forward-looking statements are only predictions and involve known and unknown risks and uncertainties, many of which are beyond the Company's control. These and other important factors may cause actual results, performance, or achievements to differ materially from those expressed or implied by these forward-looking statements. The forward-looking statements in this presentation are made only as of the date hereof. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to the business of the Company in general, are described more fully in the Company’s filings with the Securities and Exchange Commission (“SEC”) and other documents that the Company subsequently files with the SEC from time to time. The Company specifically disclaims any intention to update any forward-looking statements included in this presentation. If one or more of these statements is updated or corrected, investors and others should not conclude that additional updates or corrections will be made.

In light of the foregoing, investors are urged not to rely on any forward-looking statement in reaching any conclusion or making any investment decision about any securities of the Company.

We imagine and
pioneer new ways to

decode the secrets of the proteome

to improve human health



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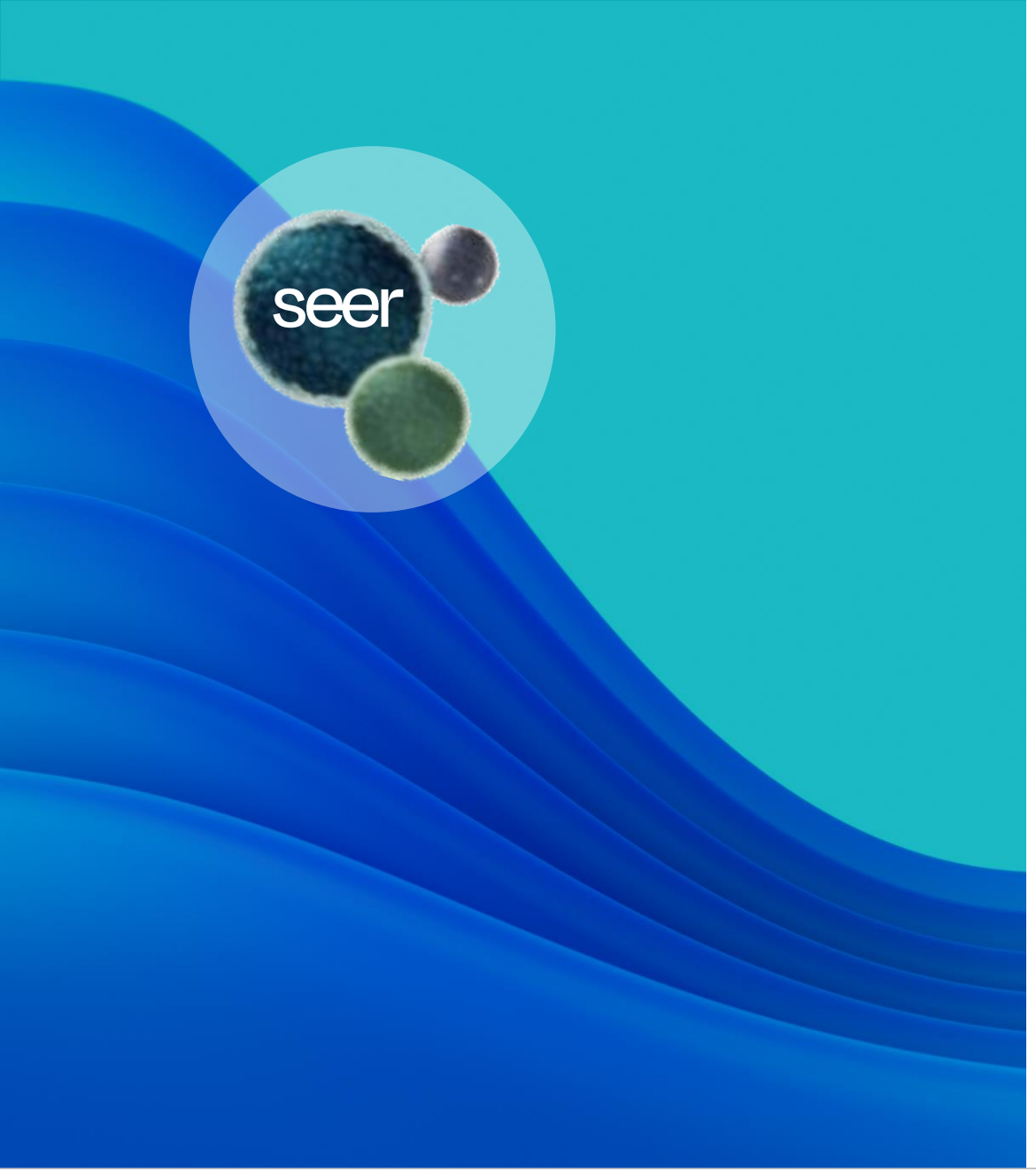

Changing the trajectory of deep, unbiased proteomics

Enabling customers to access deep, unbiased, rapid proteomics at scale

Broadly accessible and durably differentiated technology

Large potential market opportunity across proteomics, genomics and new end markets

Management team uniquely positioned to capitalize on proteomics

Opening a new frontier in biology

Expanding proteomics and genomics markets via unbiased, deep, and rapid proteomics at scale

Proteomics

~$24B

Genomics

~$26B

Unmet need for deep, unbiased proteomics at scale

- Academic
- Translational
- Commercial
- Pharma
- Applied

Sources: Allied Market Research, Technavio

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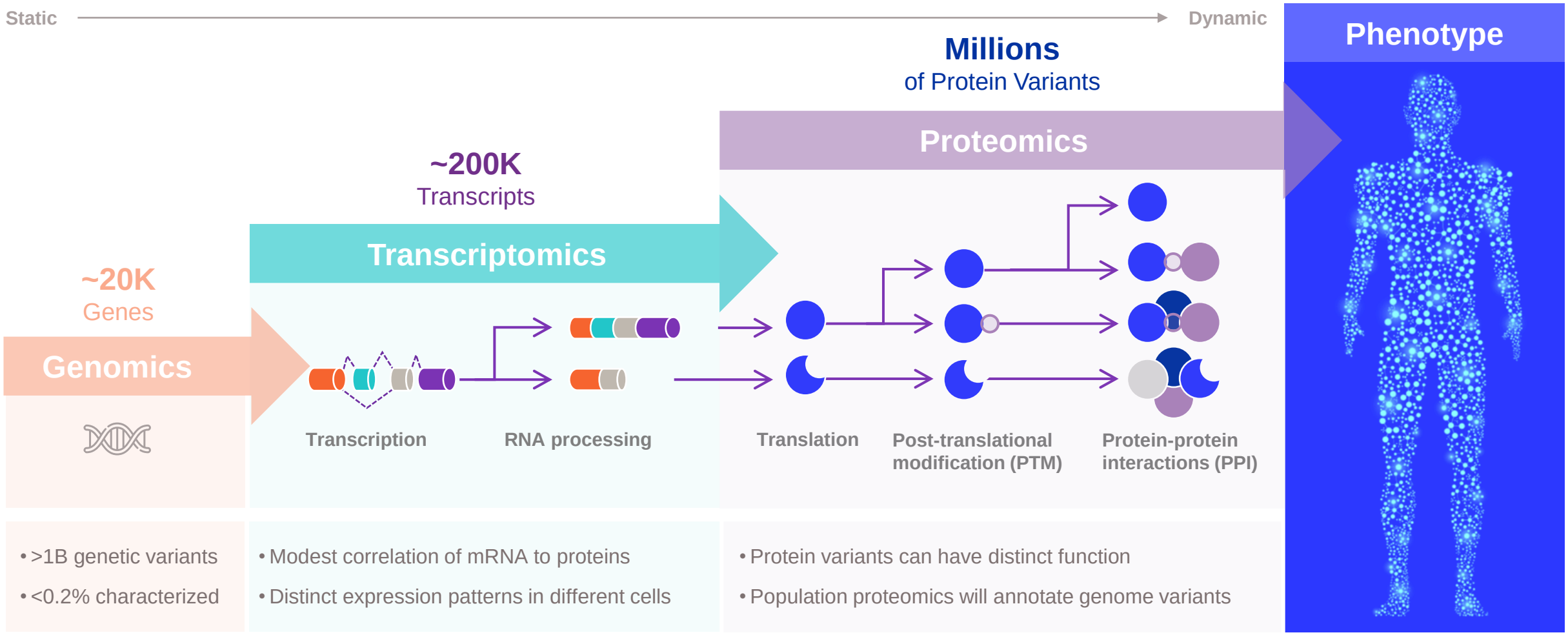
Full characterization of the proteome is essential



Source: Isabell Bludau et al. Proteomic and interactomic insights into the molecular basis of cell functional diversity. Nature Reviews Molecular Cell Biology (2020).

Functional understanding of protein variants across the population is key

UK Biobank study highlights the unmet need to understand how variation affects function

Population (~455,000 individuals)

All protein genetic variants	8,868,971
Potential deleterious variants	6,345,457
Protein loss of function	915,289
Change protein structure/binding	> 3 million

Single individual (~20,000 genes)

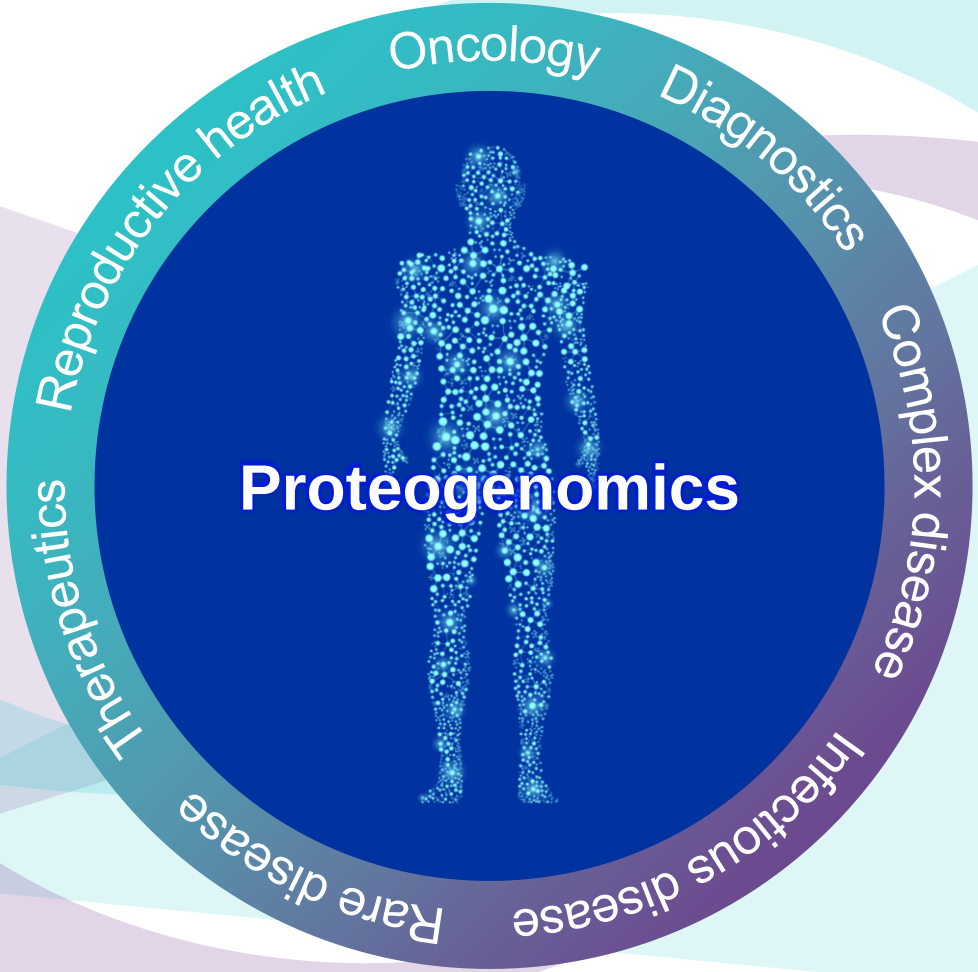
Protein variants per participant	9,506
Potential deleterious variants	2,945
Protein loss of function	214
Alternative splice forms	95% of genes

We have a lot more work to do and we are only at the beginning.

Source: Backman, J.D. et al. Exome sequencing and analysis of 454,787 UK Biobank participants. Nature 599, 628–634 (2021).

Deep, unbiased proteomics will accelerate our understanding of biology

Genomics
Accelerate functional characterization of genomic variants



Proteomics
Accelerate discovery of protein variants

Seer is positioned to lead the proteomics revolution

Establishing Seer as the premier provider in proteomics

Enabling unique applications and insights

Empowering at scale, first-of-their-kind studies

Making deep, unbiased proteomics accessible to more labs

Analyze **10,000** samples per year with 1 Proteograph XT and 1 leading mass spec system

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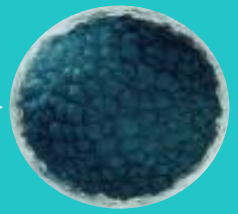
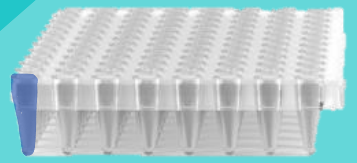
Seer enables unbiased, deep and rapid proteomic analysis at scale

Taking advantage of the way proteins interact



Lab on a nanoparticle



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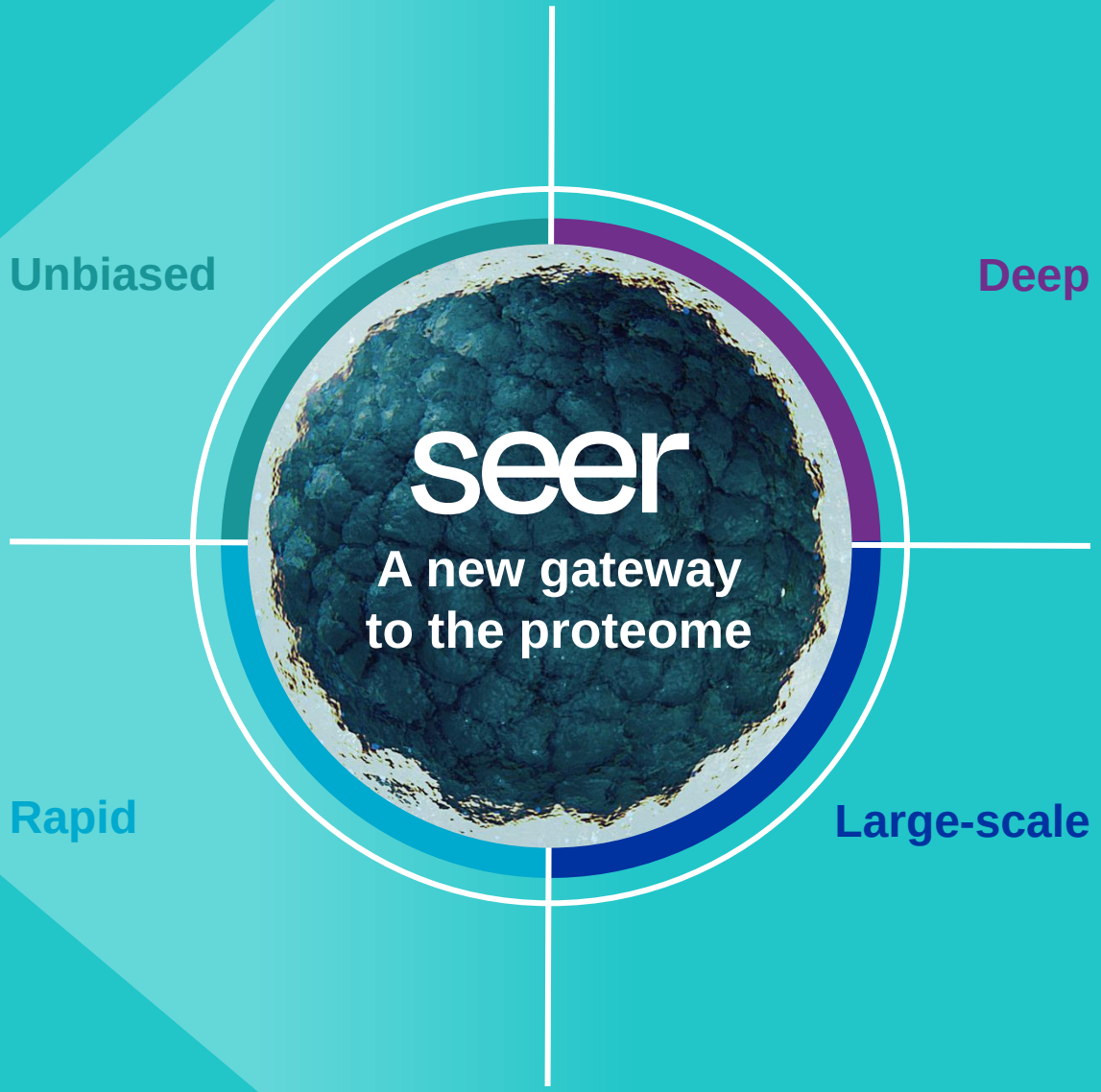


Delivering unique benefits

- High accuracy and reproducibility
- Quantitative measurement
- Broad dynamic range
- 1% False Discovery Rate (FDR)
- Wide range of sample types
- Species agnostic
- Novel biological insight

Changing the trajectory of deep, unbiased proteomics

Deep Unbiased
Study Size
(# samples)

10s of 1000s

1000

1999
1st PubMed mention of Human Proteome Project

2001
HUPO founded
HPPP launched

2015
Deepest study
(16 samples;
5,300 proteins)

2017
Seer founded

2019
Largest study
(48 samples;
1,835 proteins)

2020
Seer Study
(141 samples;
2,500 proteins)

2022
Multiple studies >1000 samples completed

Deepest customer study >6K proteins

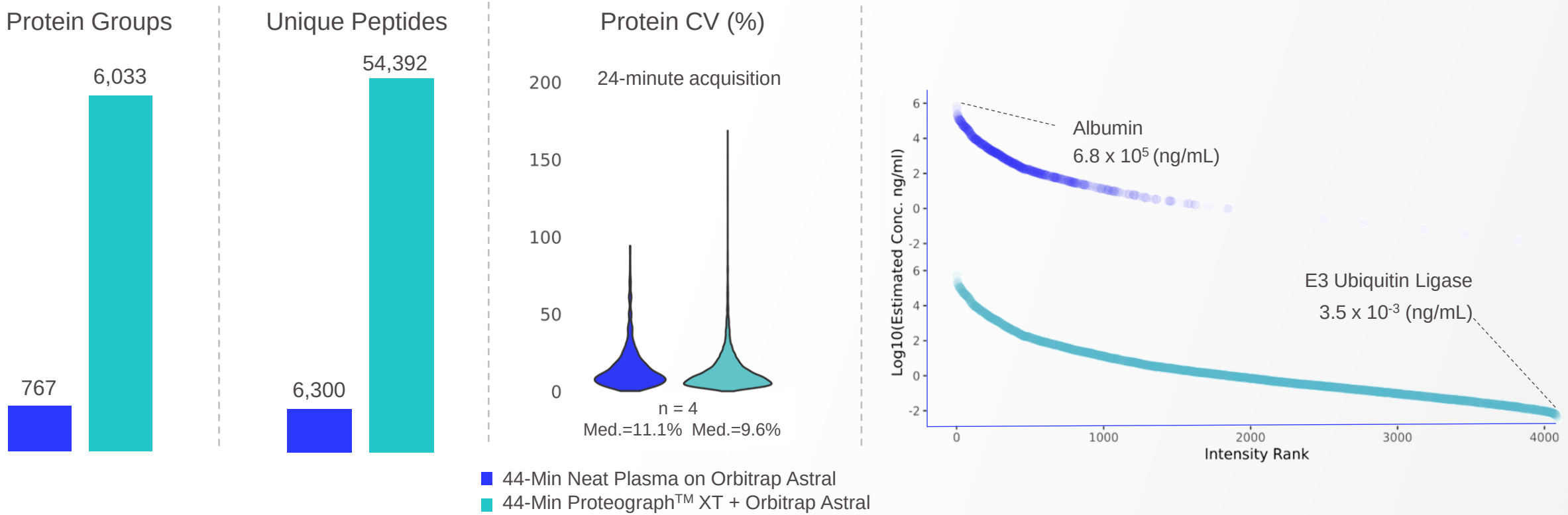
2023
PrognomiQ study 15,000 begins

Studies with 1000s of samples initiated

OPENING UP A NEW GATEWAY TO THE PROTEOME

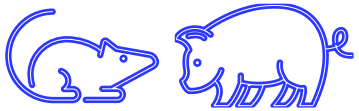
New Proteograph™ XT Assay improves the performance of the leading mass spectrometers

>6K protein groups, >54K unique peptides from a control pooled healthy human plasma in <1 hour with Orbitrap Astral



Enables more protein groups and peptides identifications with enhanced analysis throughput

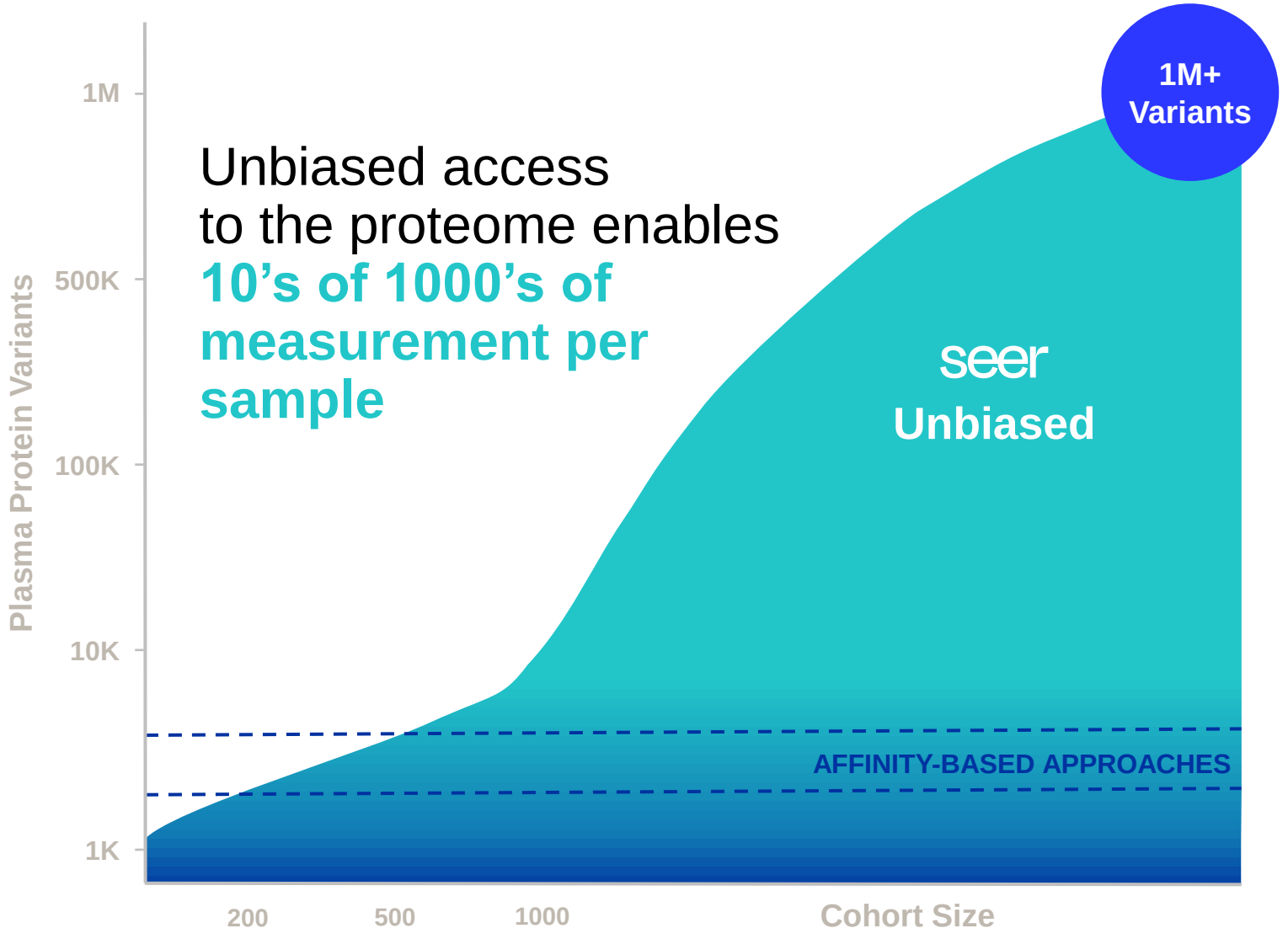
Enabling unbiased, deep proteomics across different sample types

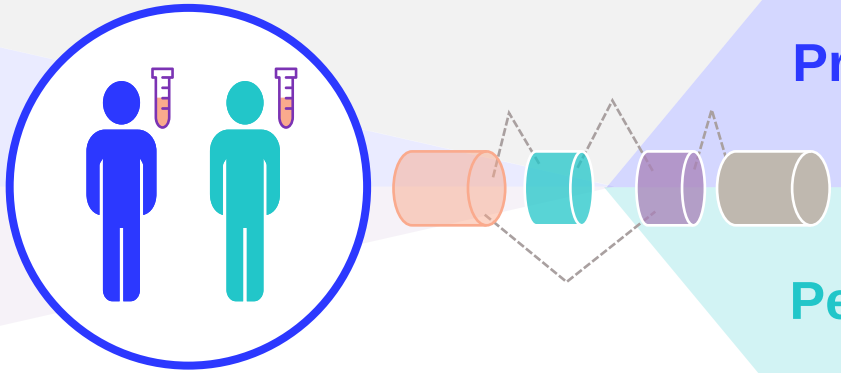

Sample type	Human plasma	Model organisms	Urine	CSF	Conditioned media
Improvement Seer vs. neat biofluids	4x	4x	1.5x	1.5x	8.6x

10s of 1000s of data points
1000s of proteins per sample

Discovery of novel protein variants requires an unbiased approach

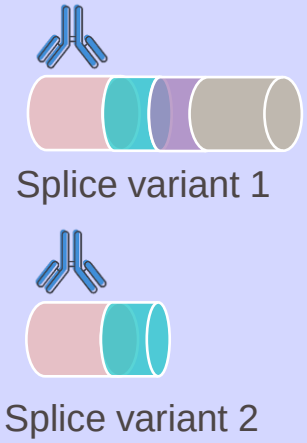


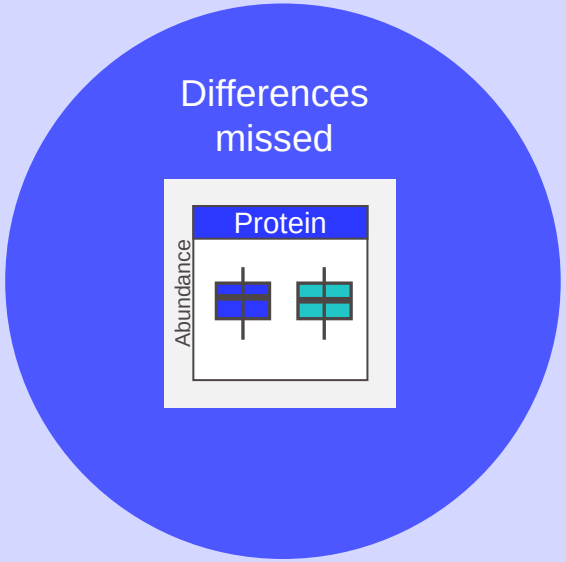
Peptide-level resolution enabled by Proteograph and LCMS may reveal biology missed with other proteome profiling approaches



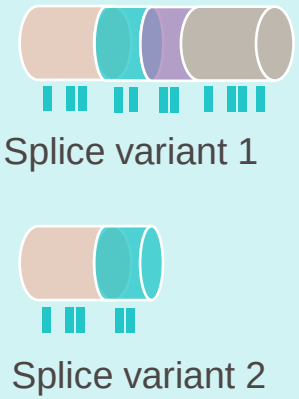
Multiple protein splice variants can arise from the same gene locus

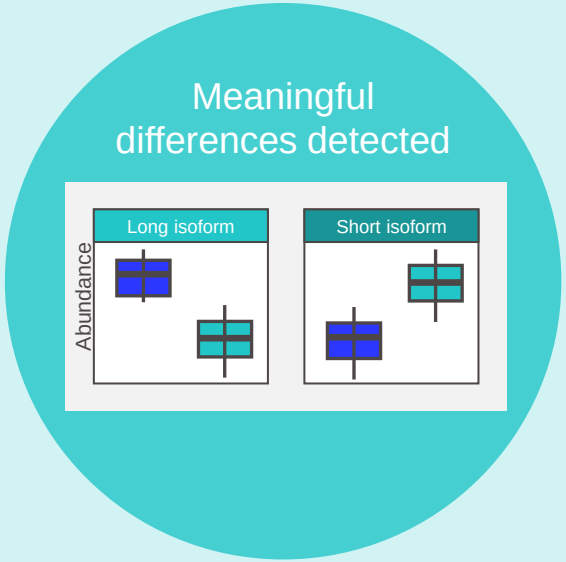
Protein Level





Peptide Level

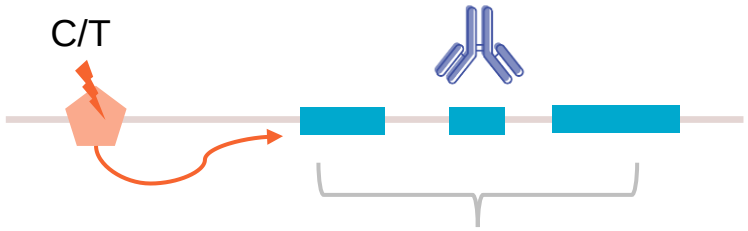




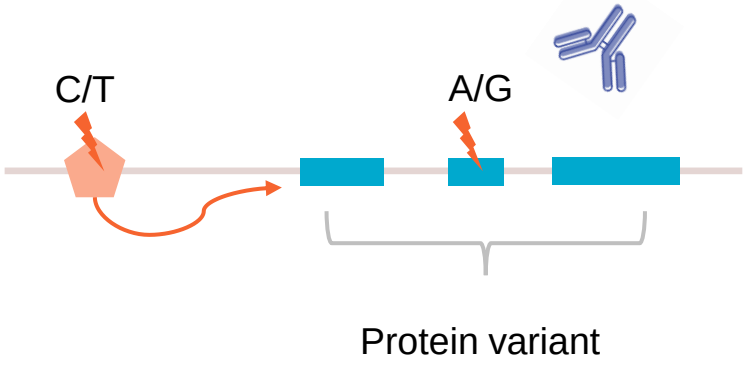
Accurate proteogenomics requires peptide-level resolution

Affinity-Based Approaches

True *cis*-pQTL



False *cis*-pQTL



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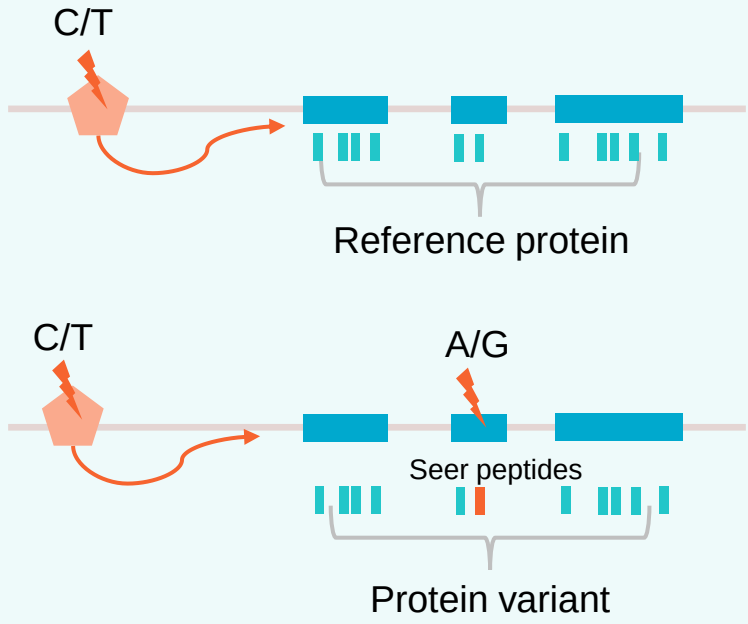
Accurate biological insight
True pQTLs



Protein variants cause false associations in affinity-based approaches

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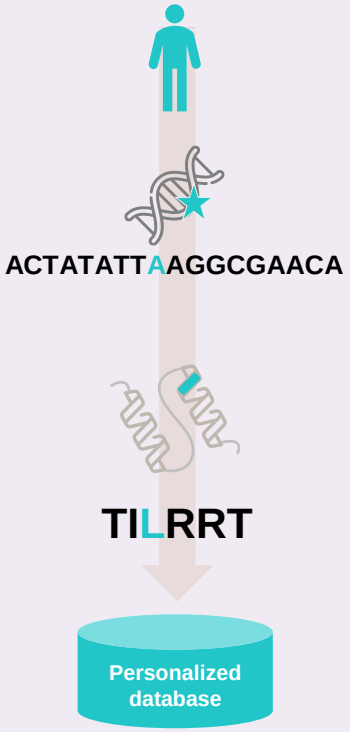
Proteograph Analysis Suite enables high-resolution proteogenomics at-scale

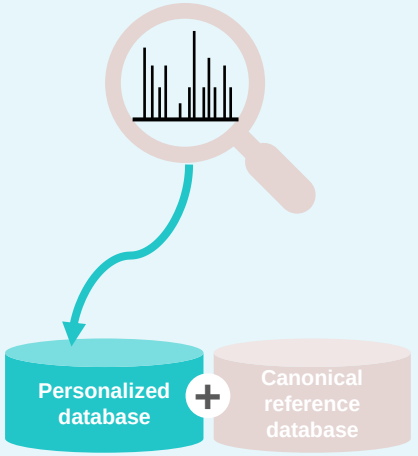
Step 1

Build custom database



Step 2

Search for variant peptides

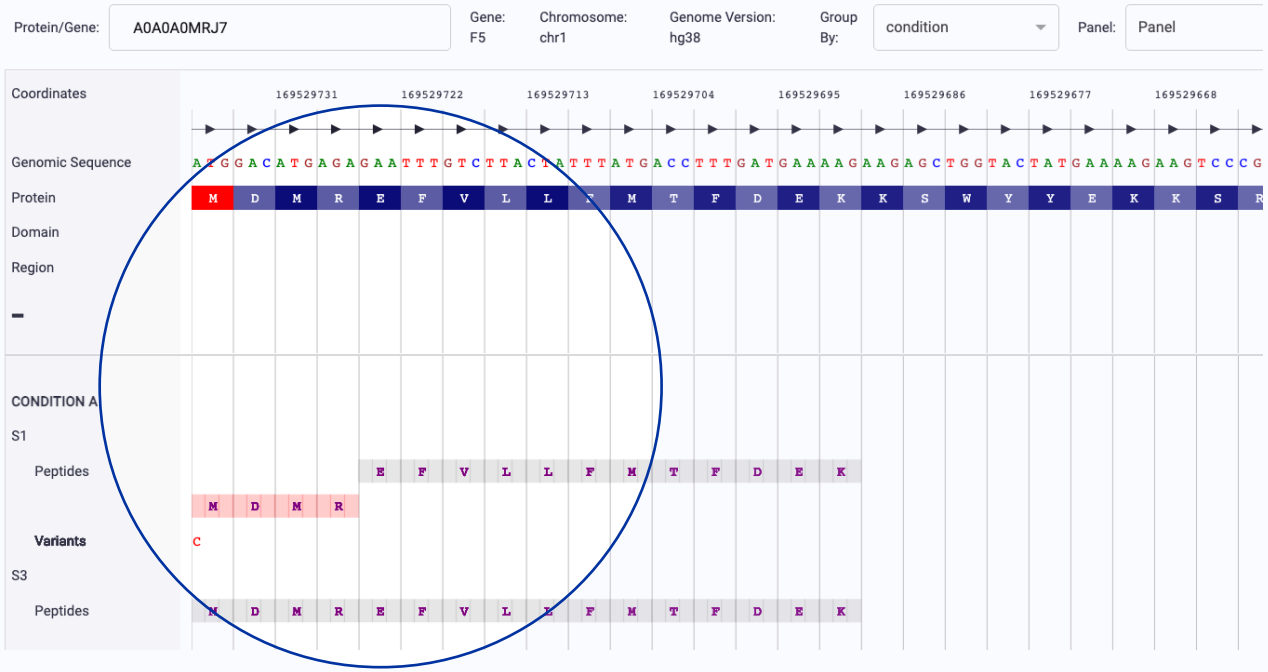


TILRRT

Undetected without proteogenomic workflow

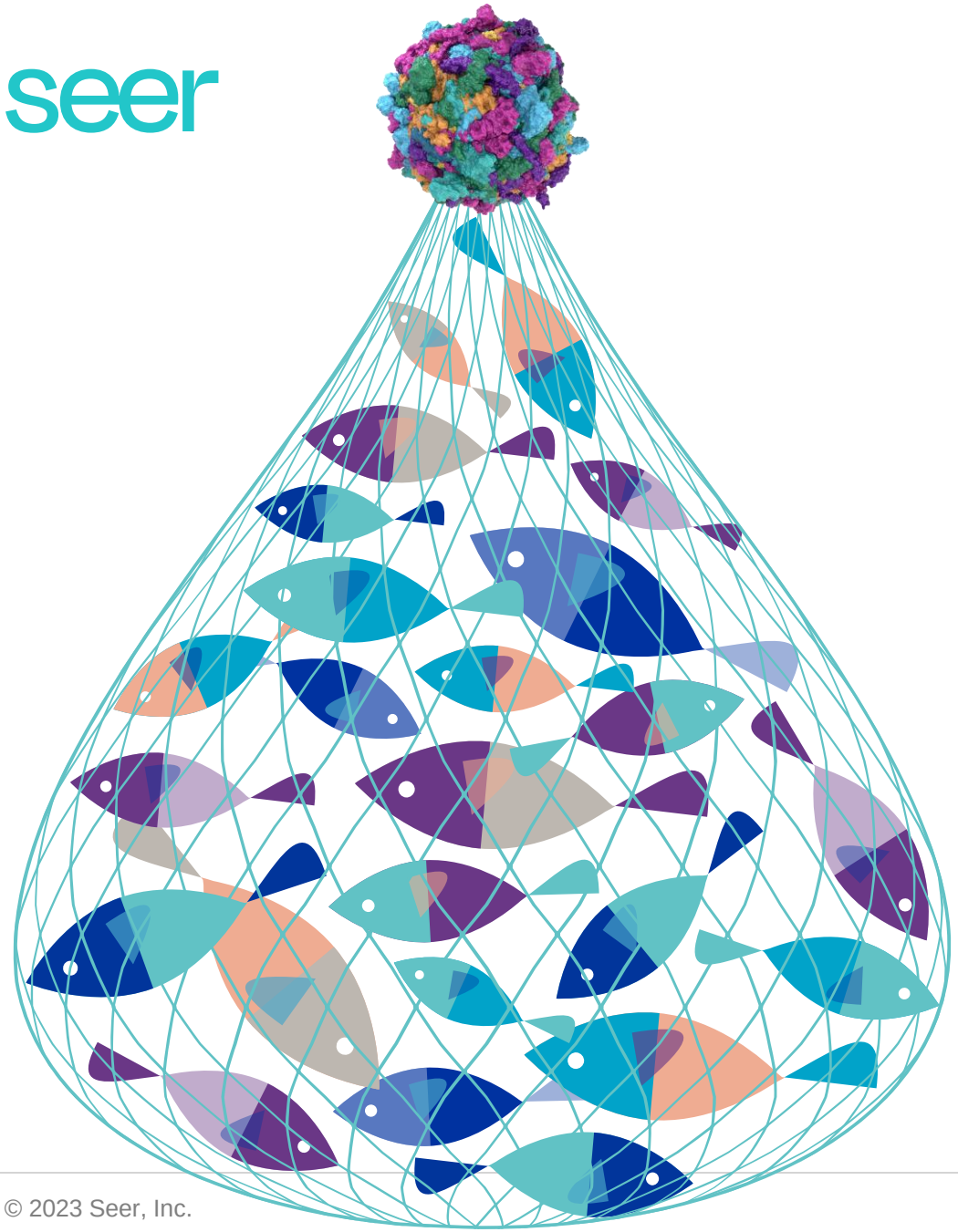
Step 3

Browse and explore proteogenomics data



The Proteogenomics workflow enables the discovery of novel, sample-specific variant peptides

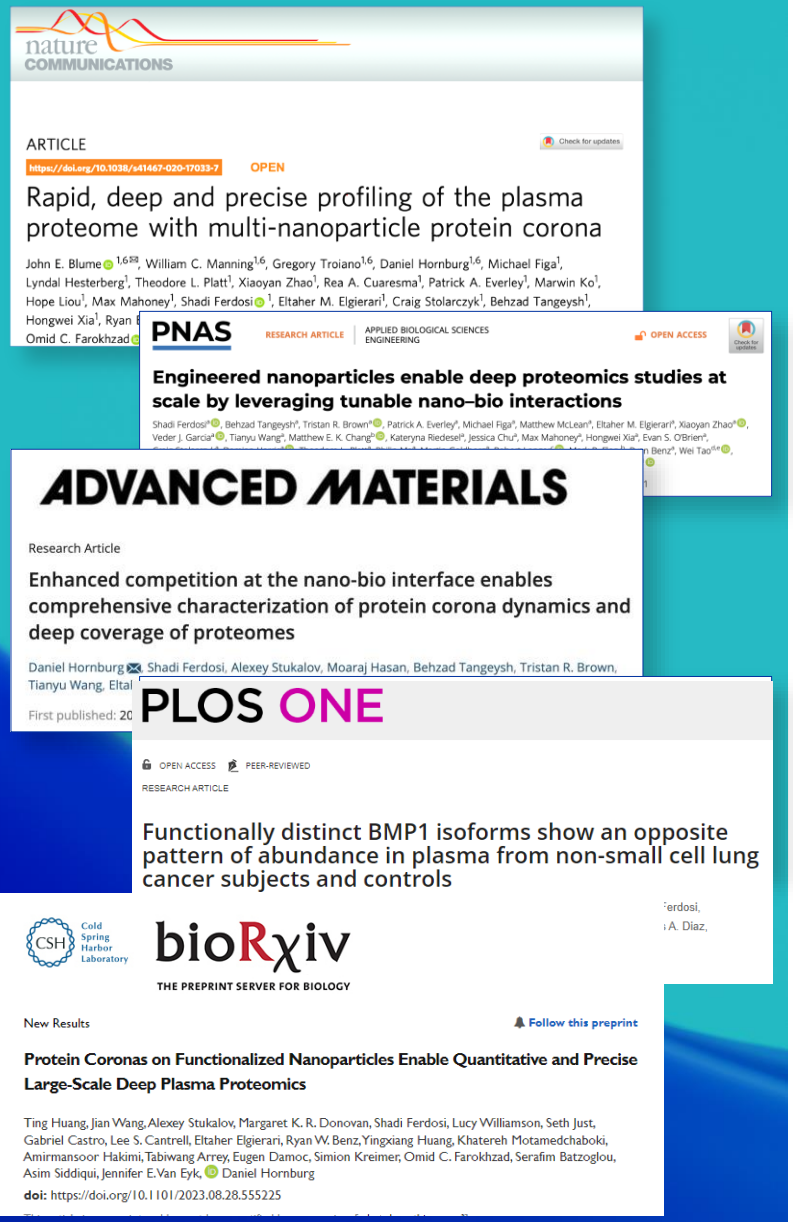
Affinity-based



Gaining momentum across customers and applications

	Cataloging protein diversity	Proteo-genomics	Interactome	Biomarker discovery	Target identification	Clinical studies	Multi-omics for cancer	Multi-omics for complex disease	Disease detection
Academic	●	●	●	●	●		●	●	
Translational	●	●		●	●		●	●	●
Commercial *(incl Service labs)*	●	●	●	●	●	●	●	●	●
Pharma	●	●	●	●	●	●	●	●	●
Applied				●	●				

● Customer projects using the Proteograph in progress or completed



Growing external validation of Seer technology

180
Public presentations to date

48
Posters and presentations by customers

6
Manuscripts in peer-review

BIOTECH BREAKTHROUGH AWARDS

Proteomics Solution of the Year from BioTech Breakthrough

500™ Technology Fast 500 2023 NORTH AMERICA Deloitte.

#5 on Deloitte Technology Fast 500

HUPO HUMAN PROTEOME ORGANIZATION

Science & Technology Award from HUPO

2022 WINNER TheScientist TOP10 INNOVATIONS

#4 on Top 10 Innovations of 2022 by The Scientist

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Value of deep, unbiased proteomics exemplified through increasing number of customer publications

Spaceflight Plasma Proteome

Chris Mason, Ph.D.
Weill Cornell Medicine

- Provides new opportunities to understand the molecular and cellular changes that occur in humans during space travel
- Multiple manuscripts in development

bioRxiv

Aging

Brigham and Women's Hospital, TruDiagnostic

- Developed a robust, predictive biological aging phenotype
- Generated two biomarkers providing opportunities to identify clinically relevant interconnections central to the aging process

bioRxiv

Skeletal Muscle

Auburn University

- Showcases the power and flexibility of the Proteograph Product Suite to analyze novel sample types beyond plasma or biofluid samples and provide differentiated insights
- Second manuscript submitted to bioRxiv in October

bioRxiv

Batten Disease

Jon Brudvig, Ph.D.
Sanford Research

- Transformative for multi-omics biomarker discovery initiative
- Enabled unbiased quantitative data and new biomarker signatures on the disease
- Presented at ASHG

bioRxiv

pQTL

Karsten Suhre, Ph.D.
Weill Cornell Medicine

- Demonstrates advantages of mass-spec based approaches
- Highlights the importance of peptide-level resolution to more deeply understand the proteome

Multiple late-stage studies expected to be published

Market development programs with XT

- Standard service projects
- Proof-of-principle studies
- Data and mass spec services for Proteograph users (XTM)

Seer Technology Access Center (STAC)

Programs & offerings designed to accelerate market adoption by removing friction points

ThermoFisher SCIENTIFIC

- Extend existing assays or apps
- Drive publications
- Explore application areas for R&D

Collaborators & KOLs

Key studies in partnership with key thought-leaders to drive publications

ThermoFisher SCIENTIFIC BRUKER SCIEX

- Generate marketing data
- Drive publications
- Expand apps with on-market kits

Applications Lab

Select studies to exemplify PPS or standardize protocols to drive adoption

ThermoFisher SCIENTIFIC BRUKER

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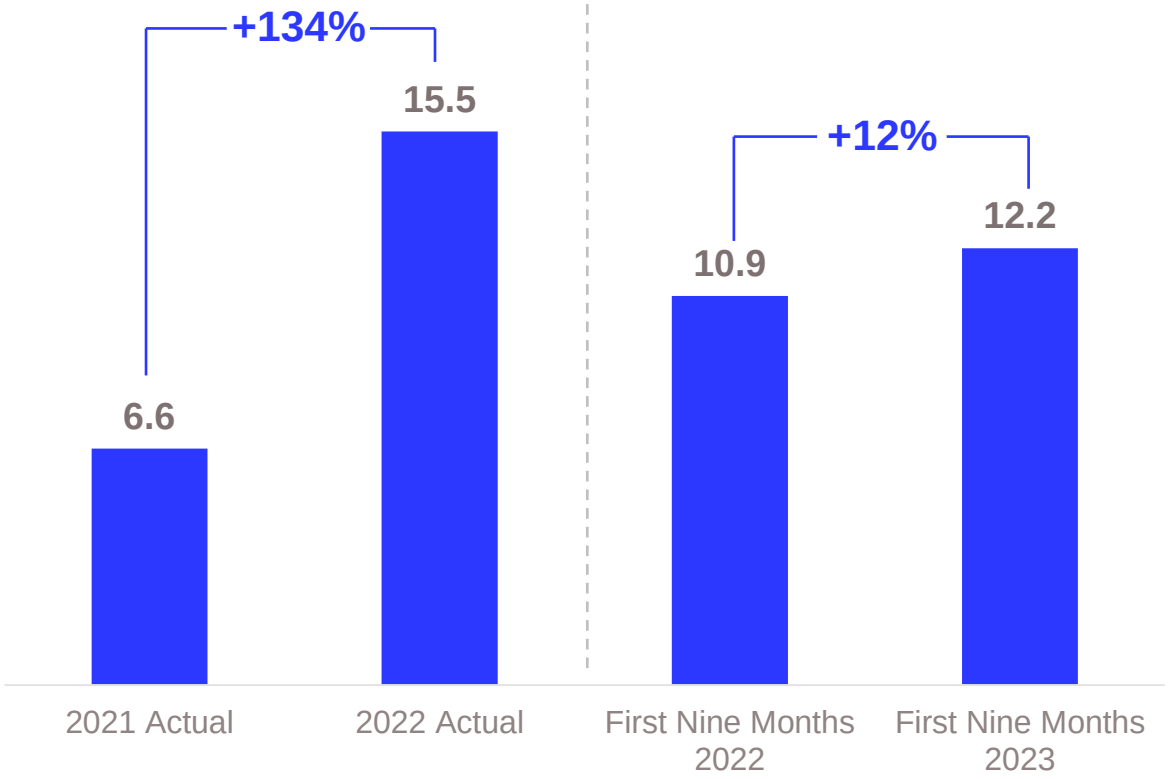
Strong revenue growth and balance sheet

Revenue
($ millions)



Strong Balance Sheet[1]

$381 million

Cash, Cash Equivalents and Investments

No Debt

1 Balance sheet information as of September 30, 2023

Looking ahead…

Enable breakthrough science

- Accelerate population-scale studies
- Empower customers to drive biological insight from decoding the proteome
- Expand installed base
- Continue to expand access through Center of Excellence partners

Demonstrate the power of the Proteograph Product Suite

- Execute against product roadmap with launch of new assay product
- Enhance PAS feature set for large-scale proteogenomics studies
- Increase presentations and peer-reviewed publications from customers

Catalyze new applications and markets

- Broadly enable proteogenomics
- Leverage unique capabilities in model organisms and animal science

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