



**Safeguarding
the Global Water Supply
against Chemical Pollutants**



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Problem: >350,000 Industrial Chemicals

Only 59 Chemical Pollutants Tested in the Water Supply
Under Current EPA Guidelines

Solution: 'Effects-Based' Monitoring

Desired by Europe and California Regulatory Authorities



**High Costs and Inefficiencies of Competitor Methods
Have Hindered System-Wide Adoption**

- Indigo BioSciences (US)
- BioDetection Systems (Netherlands)
- Het Waterlaboratorium (Netherlands)

Opportunity

XCellAssay Has Solved Adoption Hindrances

Technical Validation:

Improved Precision & Accuracy at 25-50x Cost Advantage

Beta Product Validated via SBIR Grant Funding

**Collaboration on Pilots by and High Interest from
California Regulatory Authorities**

Globally Expandable Public and Private Markets

Market Projections: \$900M EBITA (2035)

Capital Need: \$1.5M Pre-Seed SAFE

For Minor Update to Early-Adopter's Recent Target Definition
Market Validation, IP

What is Effects-Based Monitoring?

Measure Impact of All Chemicals in Water on Protein Activity

California and European Regulators Working Towards the 'Effects-Based' Concept Since 2015

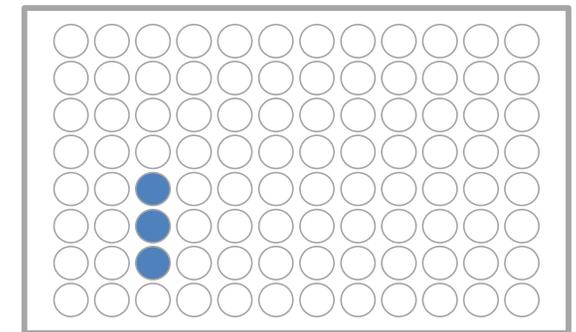
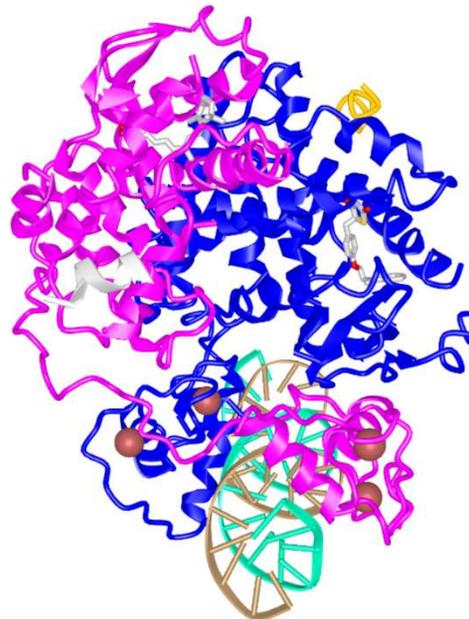
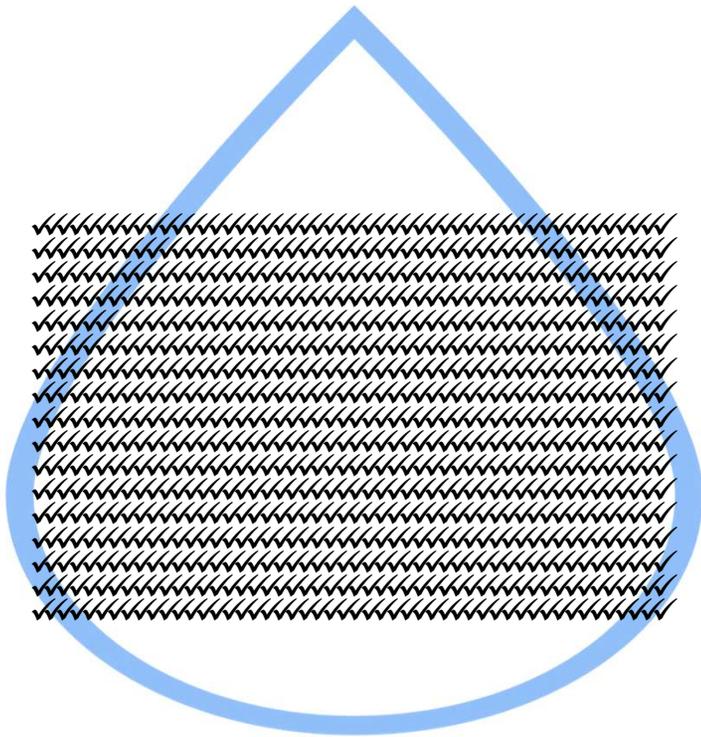
Example:

846 Chemicals Known with 'Androgenic (Testosterone-Like), Effects

Add Water, Measure 'Androgen Receptor' Activity

In Triplicate Wells of 96-Well Assay Plates

Contaminants Quantified Against Toxicologic Levels



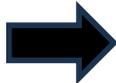
Challenge: Many Protein Activities to Measure

Current Technologies Must Measure Each Protein Separately
High Costs Limits Advanced Water Testing to Few Sites

1L Water Needed



Processing



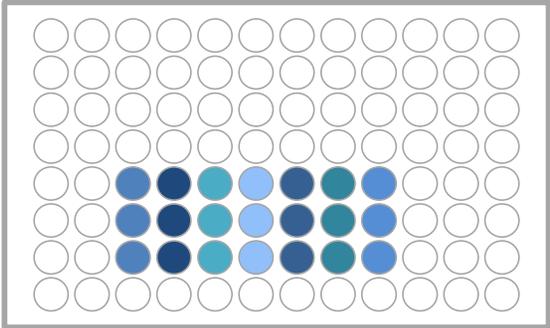
\$250/Sample

+

7 x \$350/Measurement

=

\$2,700/Sample



Chemical Activity Group A
Chemical Activity Group B
Chemical Activity Group C
Chemical Activity Group D
Chemical Activity Group E
Chemical Activity Group F
Chemical Activity Group G

Key Regulators Seek System-Wide Affordability

(CA State Water Resources Control Board)



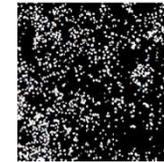
XCellAssay Measures Many Proteins at Once

One Measurement Using 'Just-Add-Water' Technologies
Dramatically Lowers Cost
to Permit System-Wide, Effects-Based Monitoring

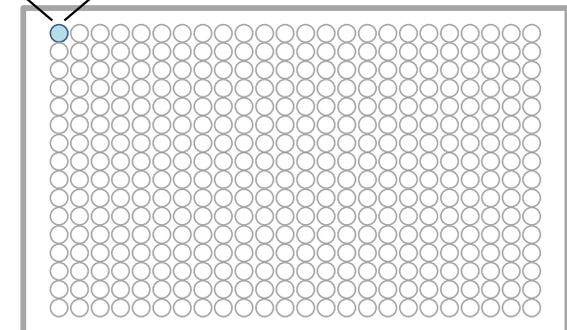
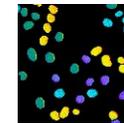

2 mLs Sample
Easily Mailed
to Lab

 
\$125-150/Sample
against
\$7 measurement cost
(all materials, personnel,
equipment, facilities)

1000's of
BioAssay
Cells/Well



with up to 25
'Bar-Coded'
BioAssays



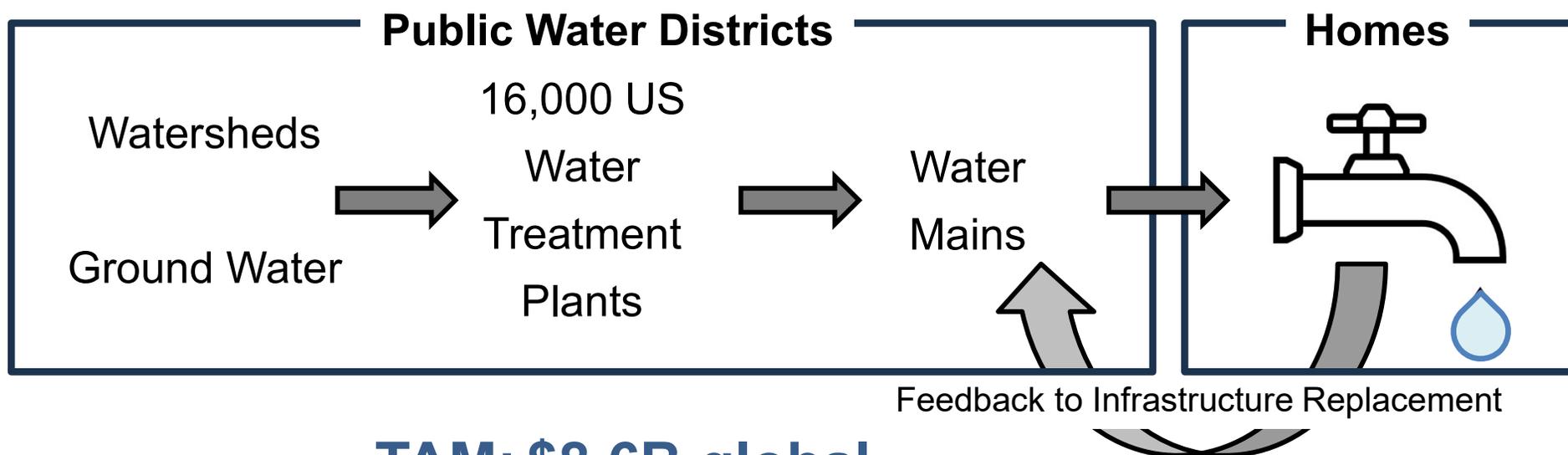
384-well Plates
Robotics-Compatible



Regulators, Water Districts & Private Customers

Vision: Markets

Affordability To Both Water Districts & Private Consumers Provides for Data Synergies By System-Wide Monitoring



TAM: \$8.6B global

Projected 2035 SOM: \$0.7B US/Europe Net
(Recurring Customers)

\$0.2B & Up

IP: Stable Reagent 'Standards' (Cell Lines)
Novel Patent covering Enhanced Sensitivity,
Multiplexing and Miniaturization

XCellAssay Pilot Studies Findings

- **Precision (CVs 3-10% vs 10-40% by competitors)**
Accuracy (Recovery 90-115% vs 25-100% by competitors)
Little Sample Processing & Far Lower Cost than Competitors
- **Found Need: Contamination seen in Public and Tap Water**
- **Some Seasonal Variation Uncovered**
- **Measured Contaminants Removed by Some Water Filters**
- **Ready to Expand to Measurement Target Update from California Regulators, then Beyond**

Minimally-Dilutive Financial Plan

\$1.5M Pre-Seed SAFE

\$1.375M in Grants & Co-Founders

1/2025

Completed SBIR Phase I

3-Receptor Validation

1/2026

Build to Updated CA 4-Receptor Set

1/2027

Initial CA Product Roll-Out

1/2028

For Market Intro Strategy, IP, Sales Infrastructure and Minor Recent Receptor Target Updates of CA Regulator

SBIR Phase II submitted; \$2.1M

Adding 15-Receptor Build & Validation

Expansion Within CA & Beyond

Related Phase I SBIR Ongoing

SBIR Phase II projected; \$2.1M

Modest Positive Cash Flow Planned from Pre-Seed Capital

A \$4.5M Priced Seed May Be Needed to Accelerate Expansion (end of 2027)
Depending on Success of up to \$4.2M, Non-Dilutive Small Business Grant Funding

XCellAssay Founding Team



Fred Schaufele, PhD

Co-Founder
CEO & Director, of
Scientific Operations

- Leading KOL Engagement
- Inventor of the Enabling Technology
- Prior Co-Led M&A Pitch for novel drug



Irina Krylova, PhD

Co-Founder
& Director of
Environmental Studies

- Environmental Sciences and Chemical Monitoring Expert
- Published Expert, Structure of Chemical Receptors
- >30 Years Experience in Academia & Biotechnology



HaiGuang Zhang, PhD

Co-Founder
& Director of
Technology

- >20 Years Experience with Measurement Platform
- Broad Marketing and Sales Experience with Platform
- Sat on GE Health Care Life Sci Start-Up Evaluation Panel
- Co-Founded Two Prior Start-Ups



Mei Ling, MD/PhD

Co-Founder
& Director of
Consumer IT

- SaaS/E-Commerce Product Development Expert
- Designed and Managed Office Depot E-Commerce System
- Finalist, 2018 Women in IT Awards Silicon Valley
- Senior E-Commerce Engineer for Multiple Start-Ups

Overview

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(Marketing, IP, Product to Early-Adopter's Updated Targets)