Akoya Disclaimer

Disclaimer

Akoya Biosciences, Inc. (the "Company") has filed a registration statement (including a preliminary prospectus supplement and an accompanying prospectus) with the Securities Exchange Commission ("SEC") for the offering to which this communication relates. Before you invest, you should read the prospectus in that registration statement, including the preliminary prospectus supplement, and other documents the Company has filed with the SEC for more complete information about the issuer and this offering. You may get these documents for free by visiting EDGAR on the SEC Web site at www.sec.gov. Alternatively, copies of the preliminary prospectus supplement and the accompanying prospectus may be obtained by contacting Morgan Stanley & Co. LLC, Attention: Prospectus Department, 180 Varick Street, 2nd Floor, New York, New York 10014, by phone at 1-866-718-1649 or by email at prospectus@morganstanley.com and Piper Sandler & Co., Attention: Prospectus Department, 800 Nicollet Mall J12503, Minneapolis, Minnesota 55402, by telephone at 1-800-747-3924 or by email at prospectus@psc.com. The registration statement relating to the securities discussed in this presentation has become effective. This presentation shall not constitute an offer to sell, nor shall there be any sale of these securities, in any state or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction.

Cautionary Note Regarding Forward-Looking Statements

This presentation includes express and implied “forward-looking statements.” In some cases, you can identify forward-looking statements by terms such as “anticipate,” “estimate,” “expect,” “intend,” “may,” “might,” “plan,” “project,” “will,” “would,” “should,” “could,” “can,” “predict,” “potential,” or the negative of these terms, and similar expressions intended to identify forward-looking statements. However, not all forward-looking statements contain these identifying words. These statements may relate to our strategic plans or objectives, revenues or earnings projections, or other financial items. By their nature, these statements are subject to numerous uncertainties, including factors beyond our control, that could cause actual results, performance or achievement to differ materially and adversely from those anticipated or implied in the statements. You should not rely upon forward-looking statements as predictions of future events. Although our management believes that the expectations reflected in our statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances described in the forward-looking statements will be achieved or occur. Moreover, neither we, nor any other person, assumes responsibility for the accuracy and completeness of these statements. Recipients are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date such statements are made and should not be construed as statements of fact. We undertake no obligation to update these forward-looking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of unanticipated events.

Market Industry Data

Projections, estimates, industry data and information contained in this presentation, including the Company’s general expectations and market position and market opportunity, are based on information from third-party sources and management estimates. Although the Company believes that its third-party sources are reliable, the Company cannot guarantee the accuracy or completeness of its sources. The Company’s estimates are derived from third-party sources, publicly available information, the Company’s knowledge of its industry and assumptions based on such information and knowledge. The Company’s estimates have not been verified by any independent source. All of the projections, estimates, market data and industry information used in this presentation involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such information. In addition, projections, estimates and assumptions relating to the Company’s and its industry’s future performance are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including, but not limited to, those described above, that could cause future performance to differ materially from the Company’s expressed projections, estimates and assumptions or those provided by third parties.
Akoya is Leading the Spatial Biology Revolution

Transforming Discovery to Diagnostics

Best-in-class platform requirements
Fastest, multiomic, single-cell imaging with subcellular resolution on whole slide

Complete end-to-end solutions
Instruments, reagents, software & services

Established market leader with largest installed base
>1,000 instruments installed worldwide

Greatest number of high-impact publications
>1,000 total publications
Driving Towards a Deeper Understanding of Biology

Advancing Next Generation Tissue Analysis

Understanding disease progression & response to therapy requires **UNBIASED** mapping of tissue architecture
Akoya is Transforming Tissue Analysis

Mapping Whole Tissue Unlocks an Understanding of Disease Progression & Response to Therapy

The **LOCATION** of key cell types, proteins & transcripts drives tumor activity & immune response
Meeting an Unmet Medical Need in Immunotherapy

JAMA Publication Highlights Spatial Phenotyping as a Superior Approach

Spatial phenotyping is poised to address the IO biomarker gap

What is next?

Ideal predictive power
Response to immunotherapy in solid tumors

High

Low

Low TMB

~20%

High TMB

~40%

Limited predictive power
Response to immunotherapy in solid tumors

PDL1 IHC

Limited predictive power
Response to immunotherapy in solid tumors

PDL1 +

~40%

PDL1 −

~13%

True Positive

False Negative

Sensitivity (True Positive Rate)

Specificity (False Positive Rate)


2 Diggs and Hsueh Biomarker Research (2017) 5:12;

3 Hendriks LE, et.al.. Transl Lung Cancer Res. 2018;7(6):647-660
Akoya Enables Complete End-to-End Spatial Solutions

Owing the Spatial Biomarker Journey – Discover, Validate & Deploy

Discovery  Translational  Clinical

RNA Menu  Protein Menu  CLIA Lab Services

PhenoCycler-Fusion  Biomarker Discovery  High multi-plex panels
PhenoImager Fusion  Biomarker Validation  Targeted panels
PhenoImager HT  Translational / Clinical Use  Large-scale studies

AKOYA BIOSCIENCES
Largest & Rapidly Growing Installed Base
Adoption Across Discovery, Translational & Clinical Markets

Installed base of 1000+ instruments

- 300 PhenoCyclers
- 181 PhenoImager Fusions
- 583 PhenoImager HTs, Mantras & Vectras

FY 2020: 550
FY 2021: 697
FY 2022: 934
1H 2023: 1064

~30% Y/Y growth
Akoya’s Accelerating & Market Leading Publication Volume

Spatial Biology is Driving Major Discoveries Across Multiple Therapeutic Areas

1,000+ total publications featuring Akoya’s platforms

FY 2020: 196
FY 2021: 493
FY 2022: 772
1H 2023: 988

~100% Y/Y growth

1,000th publication milestone achieved in July 2023
Immediate Opportunity in Discovery & Translational Markets With Clinical Rapidly Emerging

Estimated Total Addressable Market (TAM) ~ $14B

- Clinical $7B
  - Robustness and Utility
- Translational $4B
  - Speed
- Discovery $3B
  - Whole Slide

Akoya is meeting customer & market segment requirements to drive market expansion
Drivers of Spatial Biology Market Growth Over Next 5 Years

DeciBio Projects < 10% of TAM to be Realized by 2027*

- Spatial biology market will grow 30% annually in the next 5 years
- Translational & clinical research to make up the largest market segment
- Routine clinical dx expected to be the fastest growing market segment
- Multi-plex immunofluorescence (mIF) a key technology growth driver

Spatial Biology Market Trends

<table>
<thead>
<tr>
<th>Year</th>
<th>Basic Research</th>
<th>Translational &amp; Clinical Research</th>
<th>Routine Clinical Dx</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>$320M</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>2025</td>
<td>$730M</td>
<td>$360M</td>
<td>$370M</td>
</tr>
<tr>
<td>2027</td>
<td>$1,200M</td>
<td>$680M</td>
<td>$520M</td>
</tr>
</tbody>
</table>

CAGR:
- 30%
- >100%
- 24%
- 29%

Setting the Standard in Spatial Biology

Akoya Consistently Leads in Meeting Spatial Biology Market Requirements

- In Situ Imaging
  - Single-Cell Whole Slide

- Scalability
  - Fastest Spatial Biology System

- Simplicity
  - Accelerated Workflow & Application Expansion

2019-20

2021-22

2023+
Akoya’s Spatial Biology Workflow

Continuous Improvements in Simplicity & Scalability Drive Platform Utilization and Pull Through

**Rapid Menu Expansion**
- Ready-to-use panels & increasing plex
- New applications
- Consistent chemistries

**Improved Workflows**
- Continuous speed improvements
- Workflow simplification
- Consistent imaging methods

**Flexible Data Analysis**
- Proprietary data compression
- Solutions serve every user need
- Consistent image analysis methods
Introducing PhenoCode™ Panels
Delivering a Suite of Discovery & Translational Solutions Focused on Key Biological Questions

**Discovery**

**PhenoCode Discovery Panels**
- High-plex protein panels
- Focus on oncology, inflammatory disease & neurobiology markers
- Ready-to-use panels & modules
- High-plex panels enable unbiased & comprehensive discovery experiments
- *Increased pull through & accelerated time to answer*

**Translational**

**PhenoCode Signature Panels**
- Low to mid-plex targeted protein panels
- Core immuno-oncology markers
- Complete assay solution, automation ready, with ability to customize
- Reduction in time to design & validate panels by 3x
- *Increased pull through & accelerated time to answer*
PhenoCode™ Discovery Panels for Comprehensive Coverage

High-Plex Panels for Biomarker Discoveries Across Multiple Research Verticals

PhenoCode™ Discovery Panels
PhenoCode™ Signature Panels for Immuno-Oncology

5 Customizable Panels Focused on Key Clinical Questions
PhenoCycler-Fusion Journey

Enabling Higher Plex, Menu Expansion, Faster Workflows & Scaled Experiments

PhenoCycler-Fusion 1.0
- 50plex
- 2 samples / week
- Required 3rd party microscope

PhenoCycler-Fusion 2.0
- 100+plex & panel-based
- 20+ samples / week
- RNA and protein

2019-20
2021-22
2023

PhenoCode Discovery
Protein Panels
Throughout ‘23

RNA Enablement
2H ’23

PhenoCode

Multi-Slide Automation
Field upgrades in Q2 ’23
PhenoImager HT Journey

Translating Discoveries to the Clinic & Building the Foundations for Diagnostics

**Core Requirements**
- 6+ plex customer designed
- 300 samples / week
- ISO & quality systems

**First Mover Advantage**
- MITRE study published
- ABS launched
- CLIA certified

**Accelerating Adoption**
- 6+ plex ready-to-use
- Biopharma CDx partnerships
- Workflow ecosystem

**PhenoCode**

**HT System Upgrade**
_workflow improvements_

**PhenoCode IO**
_Signature Panels_ 
**Throughout ’23**

**Acrivon & Agilent Partnerships**
_Advancing clinical and CDx_
Data Analysis Ecosystem Across Akoya’s Workflows

Flexible Open Source
- QuPath

Machine Learning & AI
- PathAI
- VISIO PHARM
- indica labs
- HALO

Leading Analysis Service Providers
- OracleBio

Powerful High-Plex Analysis in the Cloud

Data standardization enables a growing software ecosystem

Accessibility to cutting-edge analysis

Software partnerships provide economical, flexible & COMPREHENSIVE data analysis solutions
Evolving to Realize Our Clinical Aspirations

- **Commercial**: From life sciences tools company to a medical company
- **Product**: From imaging platform to diagnostic platform
- **Market**: From scientist to clinician
OncoSignature® CDx - New Era of Precision Medicine

First-of-its-kind Spatial Signature CDx Assay to Identify Patients for a Targeted Oncology Agent

ACR-368 granted Fast Track Designation by the FDA for platinum-resistant ovarian cancer and endometrial cancer

Akoya & Acrivon will co-develop, validate & EXCLUSIVELY commercialize the OncoSignature® test
Partnering to Accelerate Clinical Spatial Biology Adoption

End-to-End Commercial Workflow - Reagents, Staining, Imaging, Analysis & Services

- **Combined strength** to catalyze deployment of multiplex tissue-based biomarkers for the benefit of biopharma and CROs to meet future diagnostic needs

- **Singular workflow** with products & services for development of mIHC & mIF assays

- IVD approved workflow
- Established market leader in I/O CDx
- Strong network of pharma partners

- Industry leading multi-plex imager
- Translational and clinical multiplexing expertise
- CLIA lab capabilities
Qualified CRO Service Provider Network

- To support and guide drug development programs, spatial phenotyping techniques using Akoya’s platforms can be accessed through our global network of qualified CRO service providers.
- Each provider has completed a qualification process designed for evaluating basic service provider proficiency in staining, imaging, & analysis.
Akoya’s Strategic Priorities
Driving Operational Leverage, Gross Margin Improvements and Advancing our Portfolio

Accelerate Pull Through
- Expand menu of applications
- Platform improvements drive throughput
- Streamline data analysis & time to answer

Accelerate Clinical Journey
- Drive translational adoption – leveraging CLIA lab & established regulatory standards
- Deliver on the Acrivon CDx
- Expand on high value partnerships
Financial Overview

Q2 '23 Revenue: $23.5 million, 31% y/y growth over Q2 '22

FY '23 Revenue Range Guidance: $95.0 – 98.0 million

Recurring revenue model
Recurring reagent revenue from global installed base
Expanding lab services with key biopharma partners

Consistent growth profile
Ahead of consensus every quarter since IPO
Increasing menu content, pull through & clinical partnerships

Well-capitalized to drive growth with path to profitability
Driving growth across discovery, translational & clinical markets
$93.3 million of cash & access to $11.3 million of debt
Catalyzing Discovery & Improving Patient Care