



CORPORATE PRESENTATION

April 2019

Notice to Investors

2

SeqLL Inc. (“SeqLL”) has filed a registration statement (including a prospectus) with the SEC for the offering to which this communication relates. Before you invest, you should read the prospectus in that registration statement and other documents SeqLL has filed with the SEC for more complete information about SeqLL and this offering. You may get these documents for free by visiting EDGAR on the SEC Web site at www.sec.gov. Alternatively, SeqLL, any underwriter or any dealer participating in the offering will arrange to send you the prospectus if you request it by emailing cap-mkts@wallachbeth.com.



Forward-Looking Statements and Disclaimer

3

This presentation contains forward-looking statements that are based on the beliefs and assumptions of the management team of SeqLL Inc. ("SeqLL"), and on information currently available to such management team. These forward-looking statements are subject to numerous risks and uncertainties, many of which are beyond SeqLL and its subsidiaries' and affiliates' control. All statements, other than statements of historical fact, contained in this presentation, including statements regarding future events, future financial performance, business strategy and plans, and objectives of SeqLL for future operations, are forward-looking statements. These statements are only predictions and involve known and unknown risks, uncertainties and other factors, which may cause the actual results, levels of activity, performance or achievements of SeqLL and SeqLL's industry to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. You should not place undue reliance on any forward-looking statement. SeqLL undertakes no obligation to update or revise publicly any of the forward-looking statements after the date hereof to conform the statements to actual results or changed expectations.

Unless otherwise indicated, information contained in this presentation concerning SeqLL's industry and the markets in which it operates, including its general expectations and market opportunity and market size, is based on information from various sources, including independent industry publications. In presenting this information, SeqLL has also made assumptions based on such data and other similar sources, and on SeqLL's knowledge of, and its experience to date in, the markets for its product candidates. This information involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. The industry in which SeqLL operates is subject to a high degree of uncertainty and risk due to a variety of factors. These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by SeqLL.

This presentation uses SeqLL's registered trademarks and trade names, as well as trademarks, trade names and service marks that are the property of other organizations. Solely for convenience, trademarks and trade names referred to in this presentation appear without the © and ™ symbols, but those references are not intended to indicate that SeqLL will not assert, to the fullest extent under applicable law, its rights, or that the applicable owner will not assert its rights, to these trademarks and trade names. SeqLL does not intend its use or display of other companies' trade names or trademarks to imply a relationship with, or endorsement or sponsorship of SeqLL by, any other companies.

Any offering of securities will only be made by means of a registration statement (including a prospectus) filed with the U.S. Securities and Exchange Commission ("SEC"), after such registration statement becomes effective. No such registration statement has become effective, as of the date of this presentation. This presentation shall not constitute an offer to sell or the solicitation of an offer to buy these securities, 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.



Opportunity

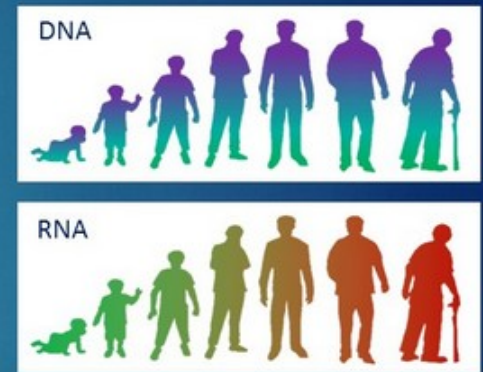
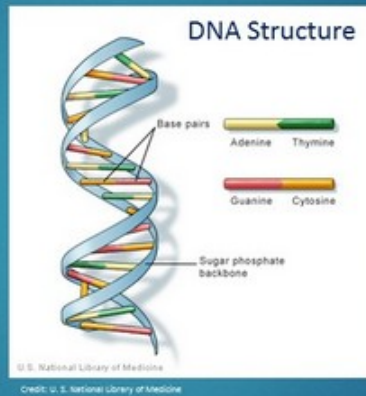
4

- ▶ Unique, proprietary sequencing platform (tSMS) for rapid growth billion dollar market
- ▶ \$5.3B addressable market for DNA and RNA sequencing by 2025
- ▶ Proven technology (10+ years R&D) across diverse genomic applications
- ▶ Currently engaged in multiple research projects for scientific discoveries
- ▶ Company primed for broad market commercialization

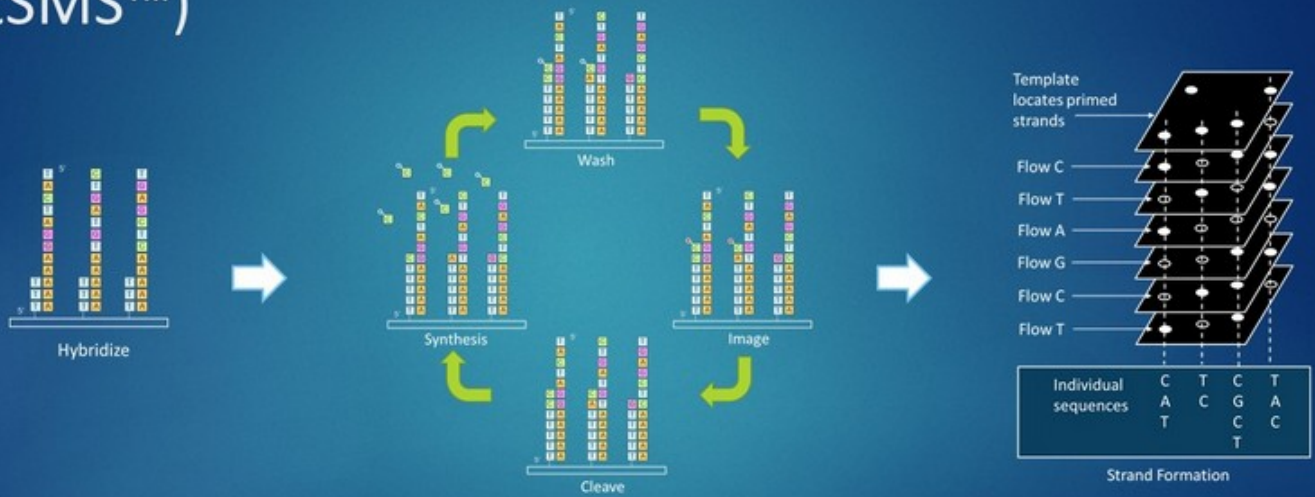
Next Generation Sequencing (NGS)

5

- ▶ DNA stores hereditary information, static in nature
 - ✓ May provide information about susceptibility to disease
- ▶ RNA stores cellular information, dynamic in nature
 - ✓ RNA sequencing delivers “real-time” information to advance the understanding of biology



SeqLL's True Single Molecule Sequencing (tSMS™)



Sample Preparation

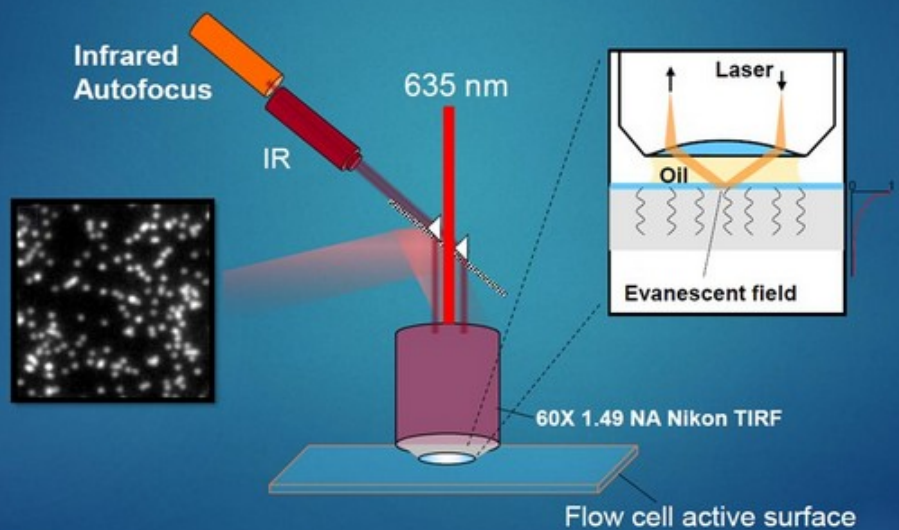
Sequencing-By-Synthesis

Image Analysis

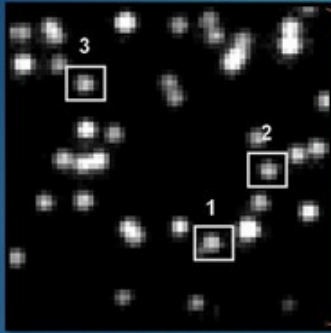
SEQ LL

TIRF Illumination Enables Single Molecule Resolution Imaging

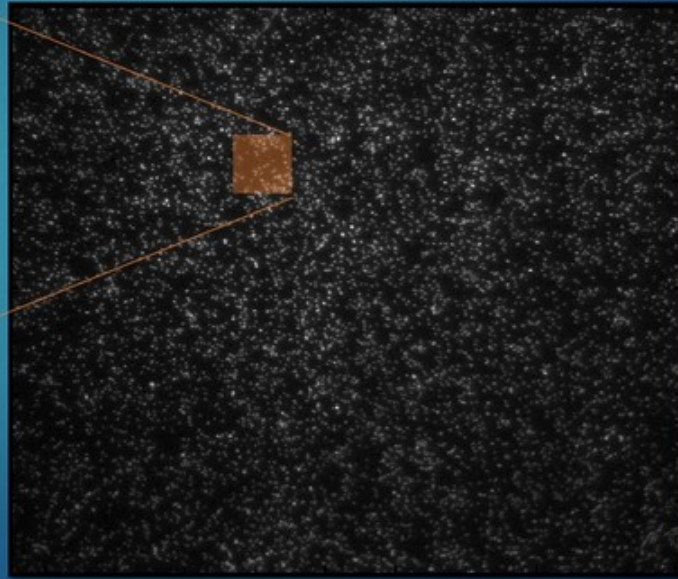
7



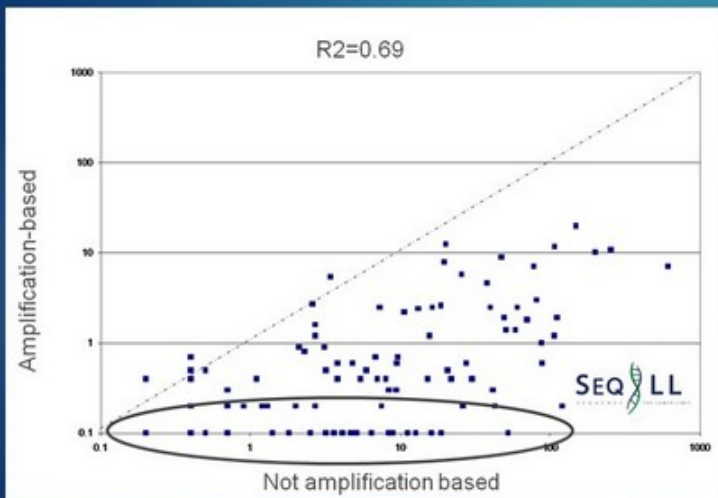
Massive Parallel Sequencing by Synthesis – a tSMS Advantage



Millions of individual molecules on the flow cell surface can be identified and resolved repeatedly through many rounds of nucleotide Incorporation to build the sequence of each strand.



tSMS Captures Data Lost by Other NGS Platforms

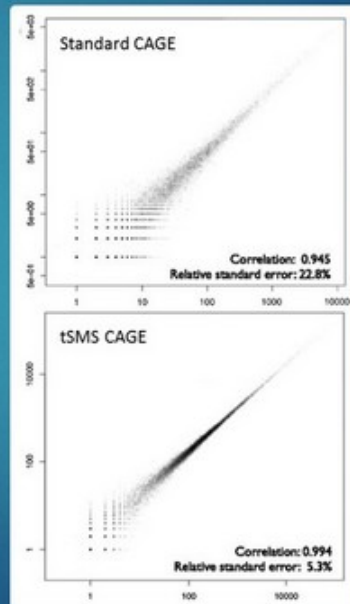


Amplified vs Non-amplified miRNAs

- ▶ SeqLL tSMS efficiently sequences molecules of any length
- ▶ Short or degraded DNA/RNA
 - miRNAs
 - FFPE material
 - Forensic samples
- ▶ Micro RNAs are challenging to sequence due to their short length
- ▶ More complete analysis and greater depth of coverage

tSMS Offers Superior Signal-to-Noise for Detection of Subtle Changes

- ▶ Cap Analysis of Gene Expression (CAGE) captures mature, capped RNA species
- ▶ SeqLL (tSMS CAGE) measures full transcriptome with **high accuracy, reproducibility** and **minimal bias**
- ▶ Greatly improved signal-to-noise ratio compared to standard CAGE protocol
- ▶ Unprecedented detection of low-fold changes in gene expression
- ▶ Ability to correlate subtle changes in gene expression with health status for **biomarker discovery, patient stratification** and **disease monitoring**

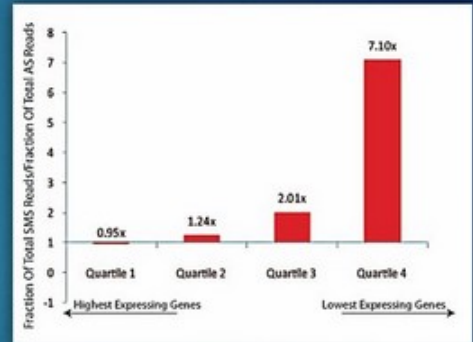
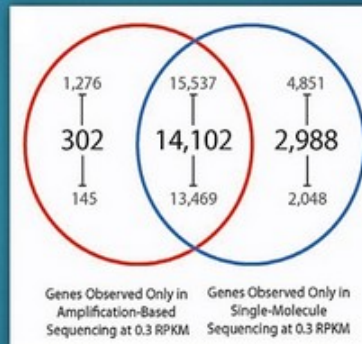


Direct comparison of SeqLL tSMS CAGE protocol to standard CAGE protocol demonstrates higher correlation and lower standard error on the SeqLL platform

Reference:
Kawaji, et al (2014) Genome Research (24)708-717

tSMS Yields Greater Sensitivity and More Information

- ▶ SeqLL tSMS™ identifies very low-expression transcripts **missed by the PCR-based method**
- ▶ **7-fold better detection** of low abundance transcripts
- ▶ 5-log linear dynamic range
- ▶ Superior tool for biomarker discovery and diagnosis



OPEN ACCESS Freely available online

PLoS one

A Comparison of Single Molecule and Amplification Based Sequencing of Cancer Transcriptomes

Lee T. Sam^{1,2,3}, Doron Lipson⁴, Tal Raz⁴, Xuhong Cao^{1,5,6}, John Thompson⁴, Patrice M. Milos⁴, Dan Robinson^{1,2}, Arul M. Chinnaiyan^{1,5,6,7,8}, Chandan Kumar-Sinha^{1,2}, Christopher A. Maher^{1,2,3}

SEQ LL

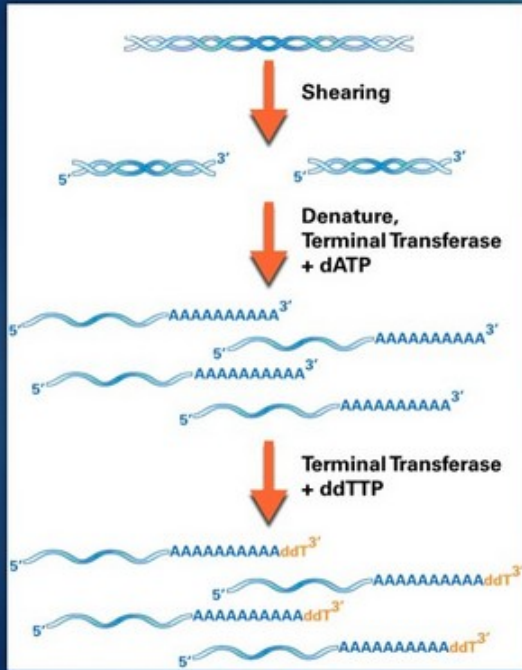
tSMS requires Simple Sample Preparation

12

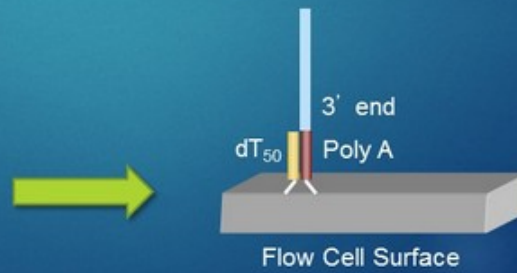
- ▶ Streamlines workflow to minimize manipulation bias and sample loss
 - ✓ Does not utilize PCR amplification
 - ✓ Avoids complex library prep
 - ✓ Less restrictive nucleic acid quality requirements and no spec for GC content
- ▶ Molecules of DNA or RNA are prepared for sequencing by:
 - ✓ Standard nucleic acid isolation from any sample type
 - ✓ Shearing/cleaving to appropriate length (20-500bp)
 - ✓ Addition of Poly-A tail
 - ✓ Hybridization to flow cell surface
 - ✓ Sequencing individual strands by synthesis

Simple Sample Preparation – DNA

13

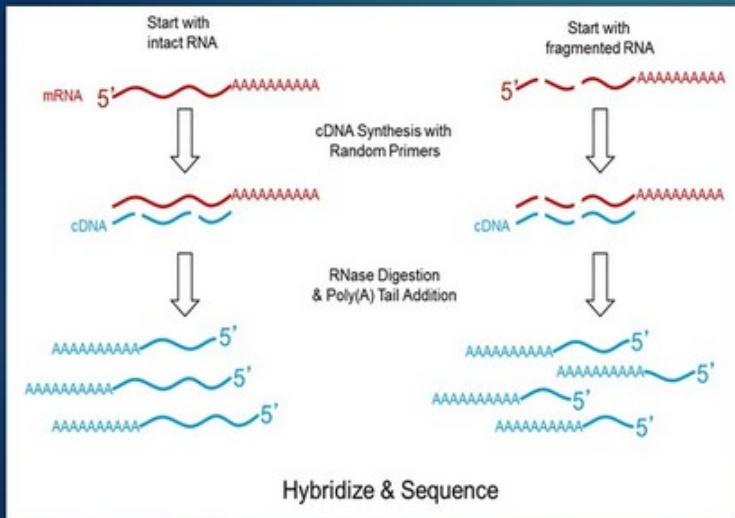


Hybridize to flow cell

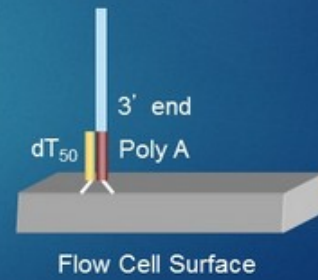


Simple Sample Preparation – RNA

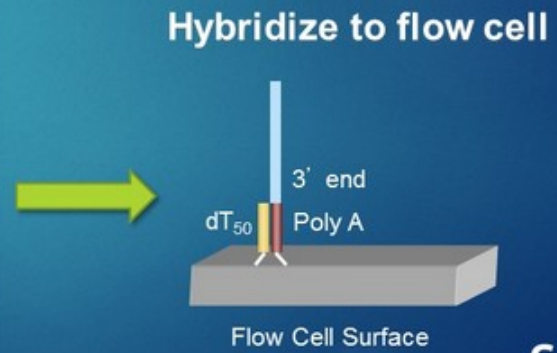
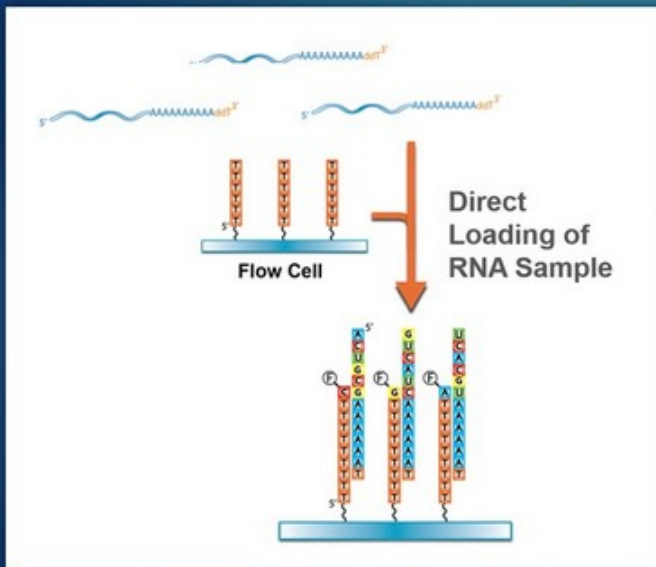
14



Hybridize to flow cell



Simple Sample Preparation – Direct RNA Sequencing (DRS[®])



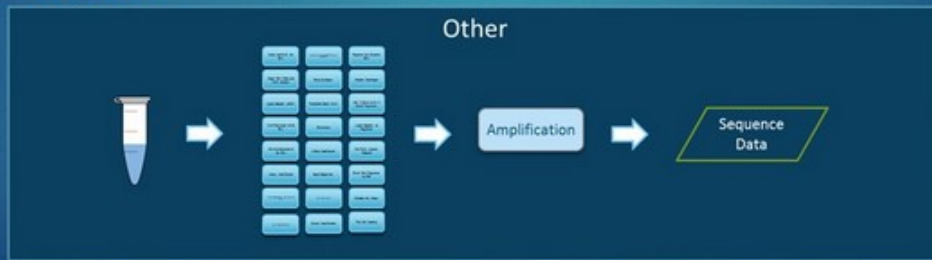
tSMS Requires Few Steps During Sample Prep

16

▶ SeqLL technology



▶ Other NGS Options

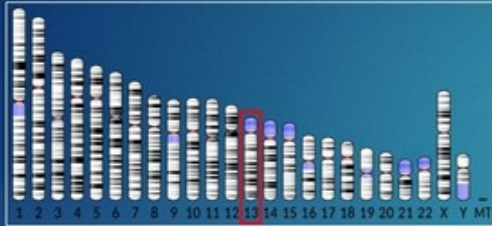


The tSMS Advantages – More Accurate, Sensitive & Cost-Effective

- ▶ **Rapid, scalable, low cost** sample preparation
- ▶ No amplification step means **higher accuracy, sensitivity** and **predictive value**
- ▶ **Picogram** DNA/RNA material yields millions of sequence reads
- ▶ **Direct RNA sequencing** is first developed on SeqLL platform
- ▶ **Direct capture** allows analysis of a set of target genes with minimal sample prep and high depth of coverage

tSMS Application Areas and Customers

18



Biomarker
Discovery



Drug
Discovery



Credit: National Institutes of Health

Precision
Medicine



NGS Market Opportunity

DNA



CAGR 21.7%

RNA



CAGR 20.4%

Addressable Market Opportunity



Representative NGS Market Landscape



Systems & Reagents

- Sequencing Systems
- Custom Solutions
- Consumables

Services

- Sequencing Services
- Custom Applications
- Bioinformatics Services

Collaborations

- R&D Grants
- Research Projects
- Strategic Partnerships

Management Team

22

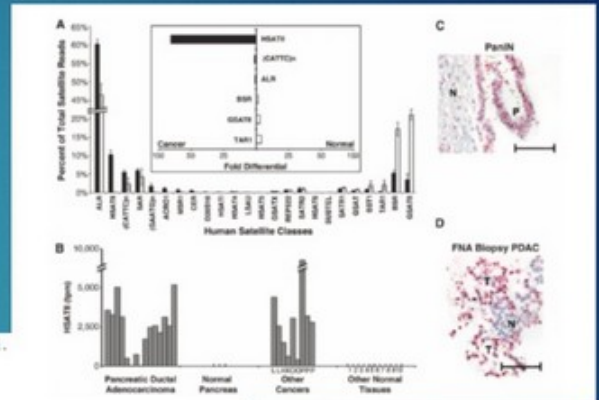
- ▶ **Daniel Jones – CEO, President & Co-Founder** – 15 years in biotechnology sector, including 7 years at Helicos BioSciences developing applications for the tSMS technology platform. Co-inventor of Direct RNA Sequencing (Nature, 2009) and Single-Molecule Decoding of Combinatorially Modified Nucleosomes (Science, 2016). Mr. Jones has worked at U.S. Genomics on the development of their Trilogy 2020 Single Molecule Analyzer and Direct miRNA assays and at Exact Sciences on ColoGuard, a non-invasive, FDA-approved molecular diagnostic for colorectal cancer. Mr. Jones serves on the Board of Directors.
- ▶ **John W. Kennedy, MBA – CFO** – Finance executive with 34 years experience in finance and management. Worked at The Federal Reserve Board, Peat Marwick Mitchell (KPMG), Morgan Stanley & Co., and D.H. Blair & Co. Extensive investment banking expertise especially in small-caps, including roles as CFO & COO, and Managing Principal for US Broker-Dealers.
- ▶ **Erik Volke – Director of Operations** – Expertise in Manufacturing, Quality Assurance, and R&D. He has over 16 years' experience in manufacturing biotechnology and medical device instrumentation at Affymetrix, Helicos Biosciences, Life Technologies and T2 Biosystems where he has held manufacturing and quality management positions at both start-up and established FDA regulated ISO 13485 environments.
- ▶ **Abhijeet Shinde, MS – Director of Engineering** – Brings over 12 years' experience in developing biotechnology and medical device instrumentation, and developing products from concept to commercialization in FDA regulated ISO 13485 environments. More than 7 years of direct experience with single molecule sequencing at Helicos Biosciences where he lead system integration efforts.
- ▶ **William St. Laurent, Chairman, Investor and Co-Founder** – Founder of numerous companies in diverse economic sectors. Mr. St. Laurent has over thirty years of experience in leading growth companies, developing and executing strategy, including building businesses from the ground up. Serves on the Board of Directors of the St. Laurent Institute and Genomic Diagnostic Technologies, both focusing on technologies in Systems Biology. Mr. St. Laurent is the Chairman of the Board of Directors.

- ▶ Identified biomarkers used as a gene panel for **pancreatic cancer screen test**
- ▶ Identified biomarkers used as a gene panel for **CAD Risk Assessment**
- ▶ Custom implementation of **BRCA1 mutation** detection and identification
- ▶ Effective information generation from **degraded FFPE** samples
- ▶ **Pathway changes** identified by high-sensitivity differential gene expression analysis

Case Study #1 – Screen Test for Pancreatic Cancer

24

- ▶ HSATII Satellite Overexpression for early detection of Pancreatic Cancer
- ▶ Discovered using tSMS technology
- ▶ Detectable **ONLY** with single molecule sequencing technology



PNAS

Pericentromeric satellite repeat expansions through RNA-derived DNA intermediates in cancer

Francesca Bersani¹, Eunjung Li¹, Olivia C. MacKenzie¹, Brian W. Shyamala Maheswaran^{1,2}, Dav

Science. 2011 February 4; 331(6017): 593–596. doi:10.1126/science.1200801.



Aberrant Overexpression of Satellite Repeats in Pancreatic and Other Epithelial Cancers

David T. Ting^{1,*}, Doron Lipson², Suchismita Paul¹, Brian W. Brannigan¹, Sara Akhavanfard¹, Erik J. Coffman¹, Gianmarco Contino¹, Vikram Deshpande¹, A. John Iafrate¹, Stan Letovsky², Miguel N. Rivera¹, Nabeel Bardeesy¹, Shyamala Maheswaran¹, and Daniel A. Haber^{1,†}

SEQ LL

Case Study #2 – Diagnosis of Coronary Artery Disease



Heart Attack?
Acid Reflux?
Pulmonary?
Neurological?
Muscular?



CT Angiogram or Nuclear Stress Test

\$\$\$

10%

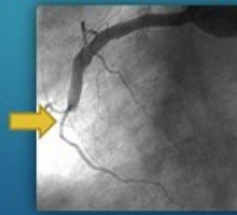
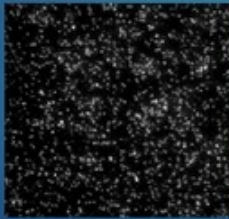
90%



Stent Placement or Coronary Bypass

Other diagnosis

Can we find gene expression changes that accurately predict CAD?



Blocked Artery

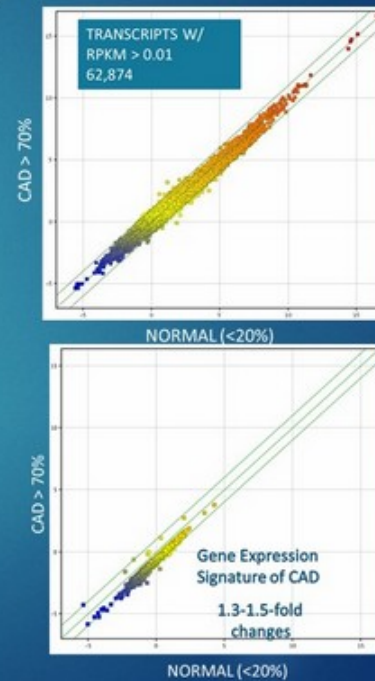


Open Artery

Discovery of Novel Biomarkers

Detect signals not resolved by other NGS platforms

- ▶ Genes with 1.3 to 1.5 fold change identified and investigated
- ▶ Panel of 7 transcripts identified as highly predictive risk markers
- ▶ Diagnostic assay for clinical use under development

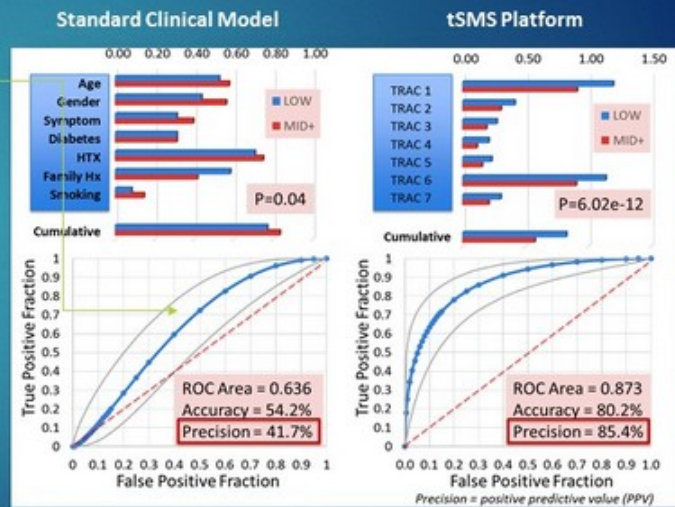


tSMS Outperforms the Clinical Model

27

► Standard of care clinical model based on 7 indicators has very low positive predictive value (**41.7%**)

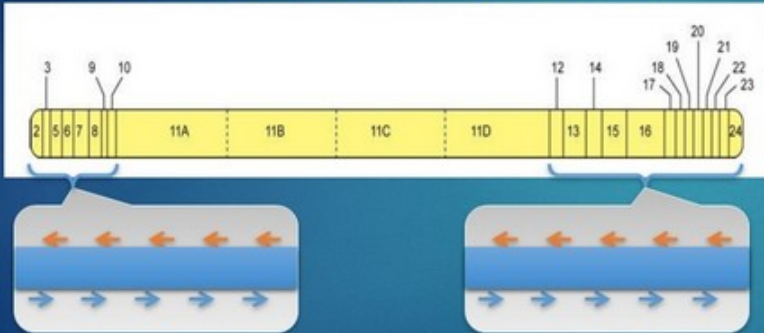
► tSMS platform based on 7 transcripts has a far superior positive predictive value (**85.4%**)



Graphs courtesy of Dr. Timothy A. McCaffrey, George Washington University

Case Study #3 – Direct Capture Sequencing (BRCA1)

Direct Capture Oligos Spanning BRCA1 Gene

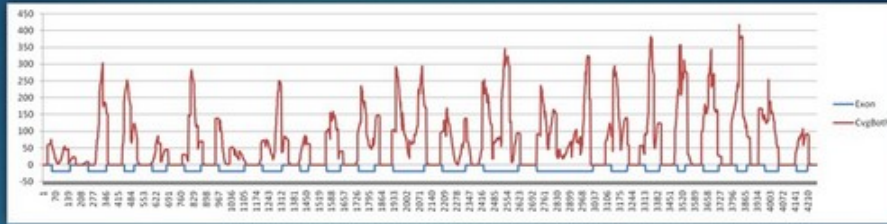


- ▶ Capture primers are designed to span regions of interest in one or more genes
- ▶ Primers are deposited onto flow cell surface
- ▶ Isolated DNA/RNA is loaded directly onto flow cell **without further manipulation**
- ▶ Captured sequences are sequenced by synthesis

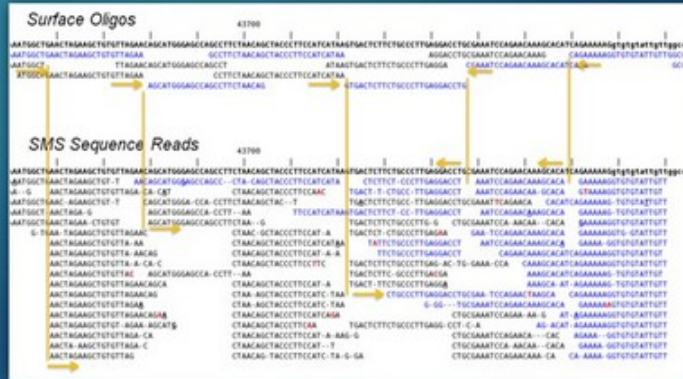
Direct Capture Sequencing – BRCA1

Deep Coverage of Targeted Regions

BRCA1



- ▶ Deep coverage achieved in target regions (exons)
- ▶ Absence of intronic reads demonstrates specificity of capture
- ▶ Depth of coverage allows unambiguous SNP calling



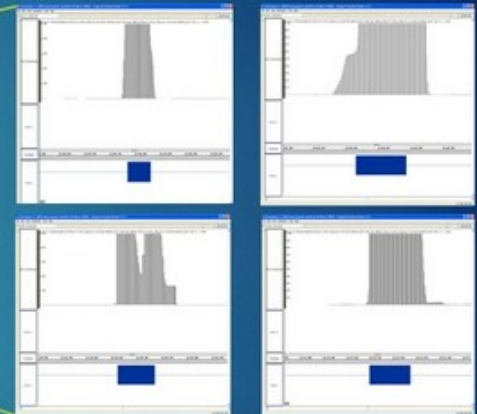
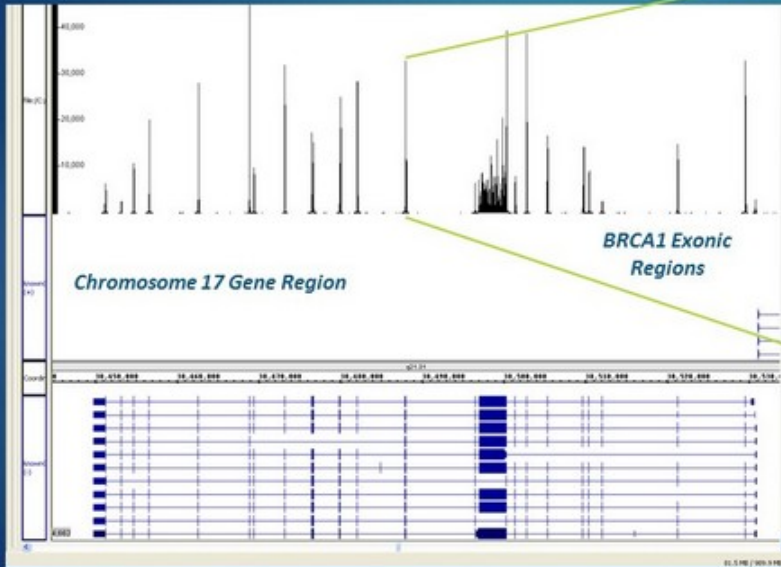
Oligos

Reads



Direct Capture Sequencing – BRCA1

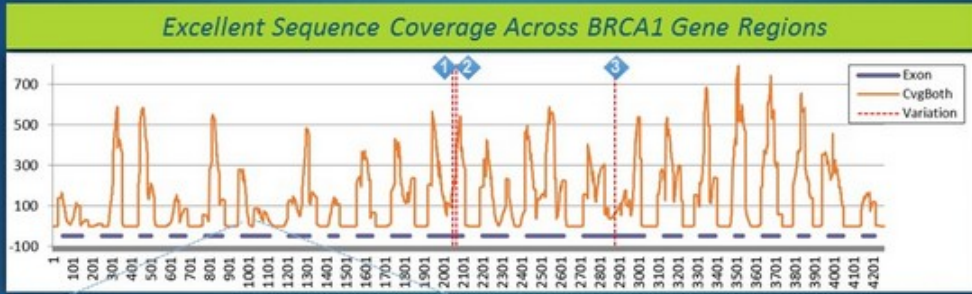
Target Enrichment from Genomic DNA



Targeted exonic regions are highly enriched from total genomic DNA by Direct Capture

Direct Capture Sequencing – BRCA1

Successful Proof-of-Principle

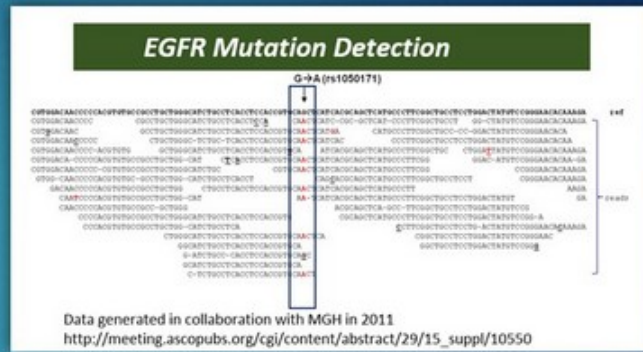
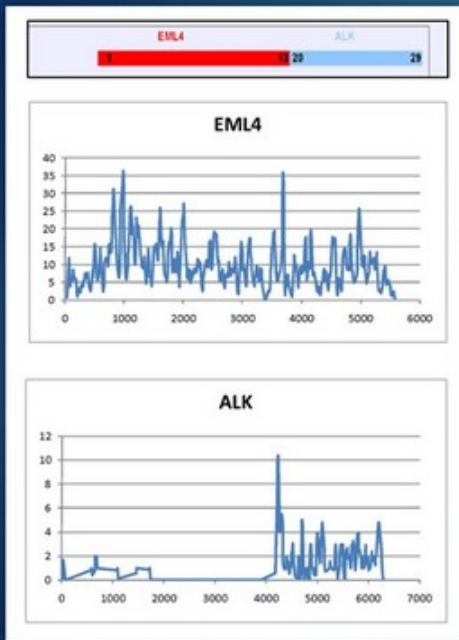


Accurate Sequence Readout
97% covered with 99.995% accuracy



Accurate Clinical Information

- 1 T → C Heterozygous Substitution
Known benign polymorphism
- 2 C → G BRCA1 Mutation
Known disease causing mutation
- 3 A → G Heterozygous Substitution
Known benign polymorphism

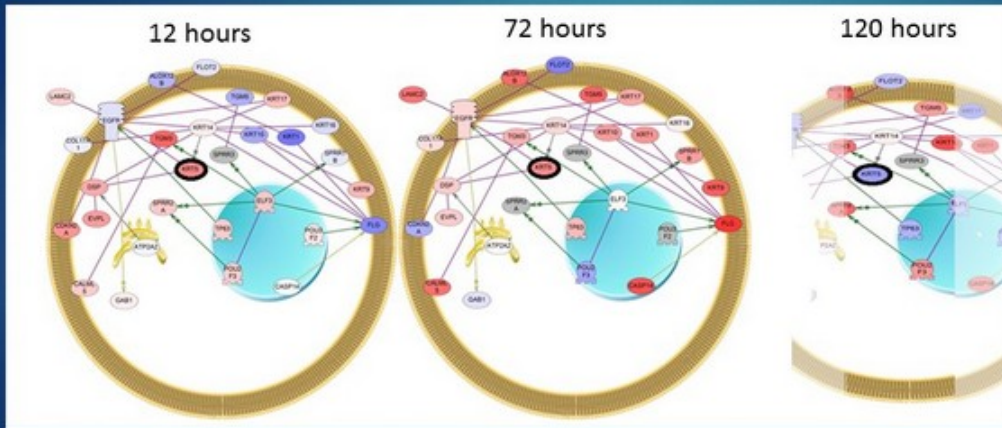


- ▶ RNA-Seq detects known gene fusions, SNPs, and mutations in NSCLC.
- ▶ SeqLL short read platform is optimal for sequencing of degraded FFPE samples.
- ▶ Potential to unlock 1000s of clinical specimens for R&D and future diagnostics.

Case Study #5 – Drug Mechanism of Action Analysis

33

Epidermis development gene subnetwork



- ▶ Transcriptome profiling identified drug activity on genes and pathway(s) related to wound healing
- ▶ Time course demonstrated that cell motility is increased by drug, which facilitates wound healing

Pharmacogenomics and Biomarker discovery

- ▶ Clinical Trial Screening Biomarkers
- ▶ Patient Stratification
- ▶ Companion Diagnostics

Microbial Analyses

- ▶ Microbiome Sequencing
- ▶ Antimicrobial Resistance Detection/Monitoring
- ▶ Food Safety Testing
- ▶ Forensics

Precision Medicine

- ▶ Early Disease Detection/Diagnosis
- ▶ Infection/Inflammation Differentiation
- ▶ Direct Capture Gene Sequencing
- ▶ FFPE Sample Analysis
- ▶ Cell-free DNA and RNA

- ▶ A superior tool for biomarker discovery, diagnostic development and sample analysis
- ▶ Unique features open up new capabilities not possible with other NGS technologies
 - Unsurpassed accuracy and reproducibility of molecule counting
 - Enhanced signal to noise allows identification of subtle gene expression signatures detectable on other systems
 - Lack of amplification and library prep produce the most unbiased read of the sample available in the industry today
 - Low sample prep costs and simplified workflow save time and money
 - Capable of generating data from short and degraded samples
- ▶ Applications in a wide range of human disease areas, microbiome analysis, safety testing, forensics, clinical trial patient stratification and more

Contact Info

36



WB

WallachBeth Capital LLC
Harborside Financial Center Plaza 5
185 Hudson Street, Suite 1410
Jersey City, NJ 07311

T: 646.998.7602

F: 212.495.0270

cap-mkts@wallachbeth.com



SeqLL Inc
317 New Boston St
Suite 210
Woburn MA 01801

T: 781.460.6016

dan@seqll.com

jwkennedy@seqll.com



SEQ LL