INVESTOR PRESENTATION

August 2022

FORWARD-LOOKING STATEMENTS

All statements in this presentation and the associated discussion, other than historical information, constitute forward-looking statements within the meaning of the federal securities laws. Forward-looking statements include, but are not limited to, statements regarding: (i) our ability to successfully develop, manufacture and commercialize the G4 in accordance with our timelines and objectives; (ii) our ability to successfully complete the development of and commercialize the PX in accordance with our timelines and objectives; (iii) our ability to achieve customer and scientific acceptance for the G4 and PX; and (iv) the ability of our product offerings to successfully compete with the existing and new products offered by our competitors. Any such forward-looking statements are based on our management's current expectations and are subject to a number of risks and uncertainties that could cause our actual future results to differ materially from our management's current expectations or those implied by the forward-looking statements. These risks and uncertainties include, but are not limited to: (i) we have incurred significant losses since inception, we expect to incur significant losses in the future and we may not be able to generate sufficient revenue to achieve and maintain profitability; (ii) we have very little history manufacturing and commercializing our products or technology; (iii) the life sciences technology market is highly competitive, and if we fail to compete effectively, our business and operating results will suffer; (iv) if we are sued for infringing, misappropriating or otherwise violating intellectual property rights of third parties, this litigation could be costly and time consuming and could prevent or delay us from developing or commercializing our product candidates; (v) if our products fail to achieve early customer and scientific acceptance, we may not be able to achieve broader market acceptance for our products, and our revenues and prospects may be harmed; (vi) we are highly dependent on revenue generated from the sale of the G4, and any delay or failure by us to successfully manufacture and commercialize the G4 could have a substantial adverse effect on our business and results of operations; and (vii) the COVID-19 pandemic and efforts to reduce its spread have adversely impacted, and may materially and adversely impact, our business, operations and product manufacturing and commercialization objectives. These and other risk factors that may affect our future results of operations are identified and described in more detail in our most recent filings on Forms 10-K and 10-Q and in other filings that we make with the SEC from time to time, including our Quarterly Report on Form 10-Q for the period ended June 30, 2022, filed with the SEC on August 9, 2022. Accordingly, you should not rely upon forward-looking statements as predictions of future events or our future performance. Except as required by applicable law, we undertake no obligation to update publicly or revise any forward-looking statements, whether as a result of any new information, future events, changed circumstances or otherwise.

This presentation also contains estimates and other statistical data made by independent parties and by us relating to market size and growth and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates.

The performance information in this presentation and the associated discussion regarding our G4 instrument and test kits are reported at target specifications, and the performance of third-party instruments are reported based on specifications publicly available on such third party's website.

This presentation contains references to our trade names, trademarks and service marks and to those belonging to other third parties. We do not intend our use or display of a third party's trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, such third party.

A NEW ERA OF NGS HAS ARRIVED

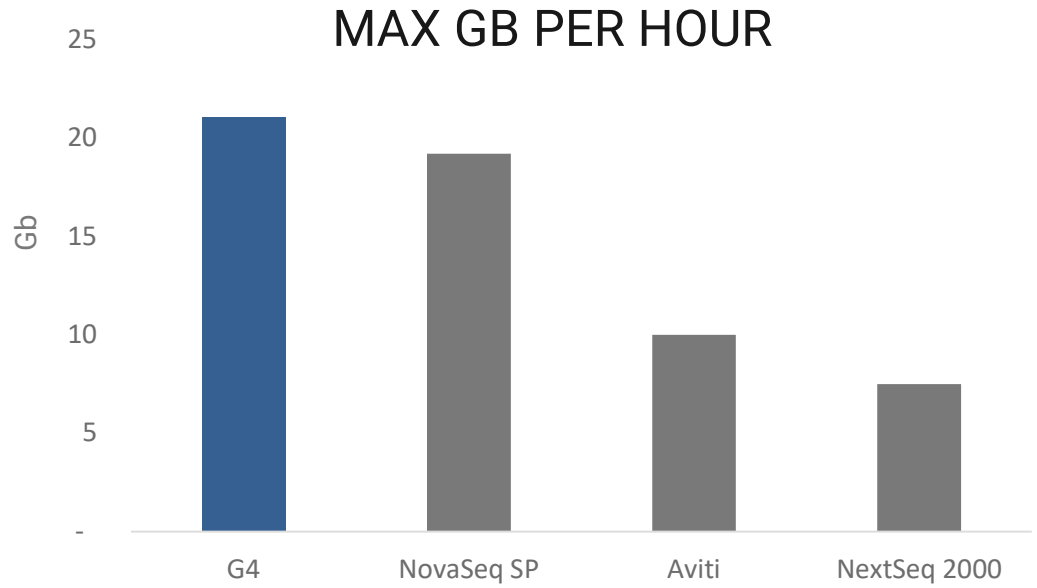
Setting a new benchmark in power, speed, flexibility and accuracy

THE G4: SUPERIOR PERFORMANCE IN A BENCHTOP SYSTEM

Power 15–400 Gb output range	More data per day than any other benchtop sequencer
Speed 6–19 hour run time	Industry leading run times
Flexibility 1–4 flow cells 16 lanes	Unparalleled operational efficiency
Accuracy 75%–90% bases ≥ Q30	State-of-the-art industry standard

POWER

MORE THAN 2X DATA OUTPUT RATE THAN OTHER BENCHTOP INSTRUMENTS*



15–400 Gb run modes

Up to 4 billion reads per run

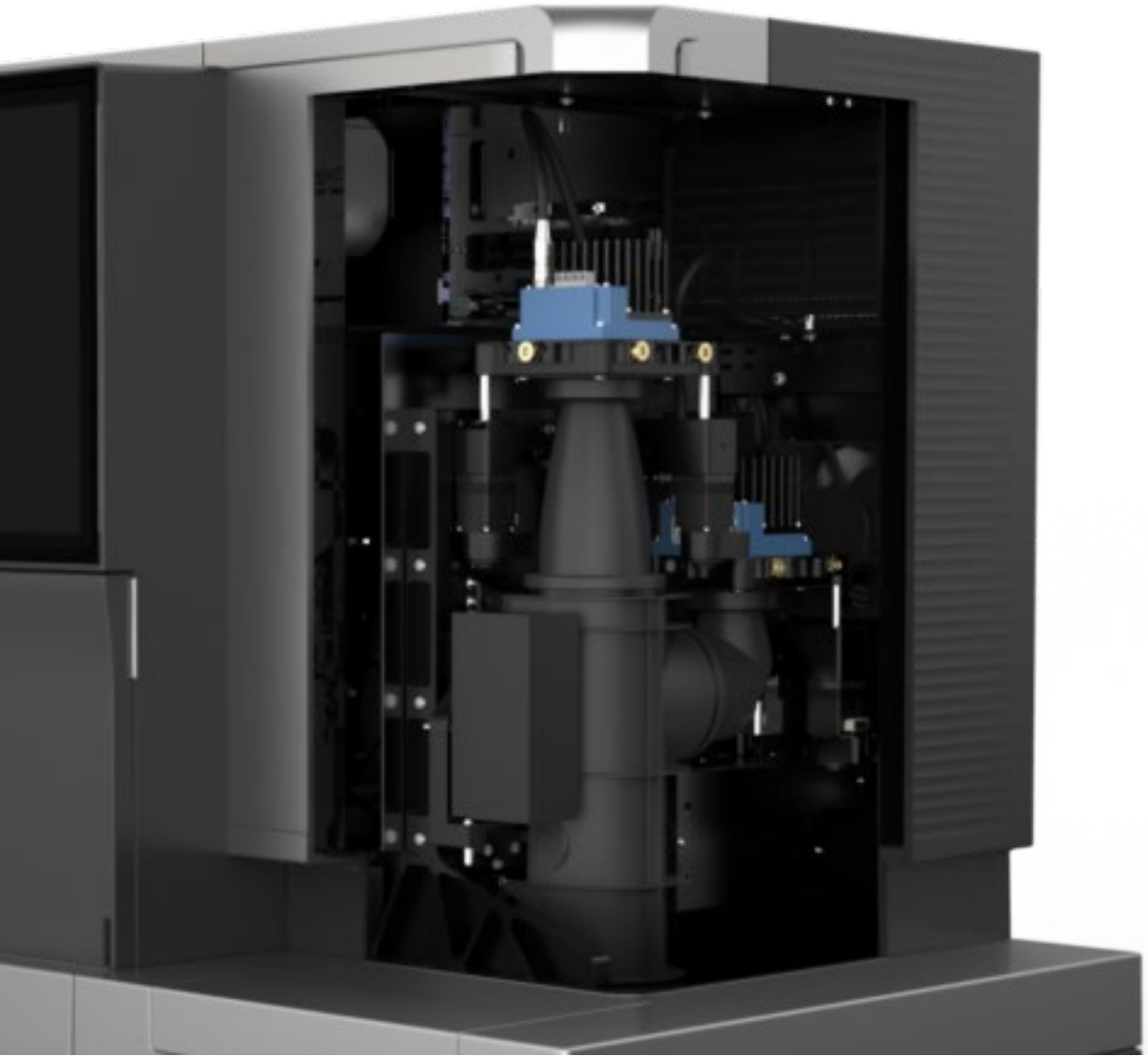
4 whole human genomes in 19 hours

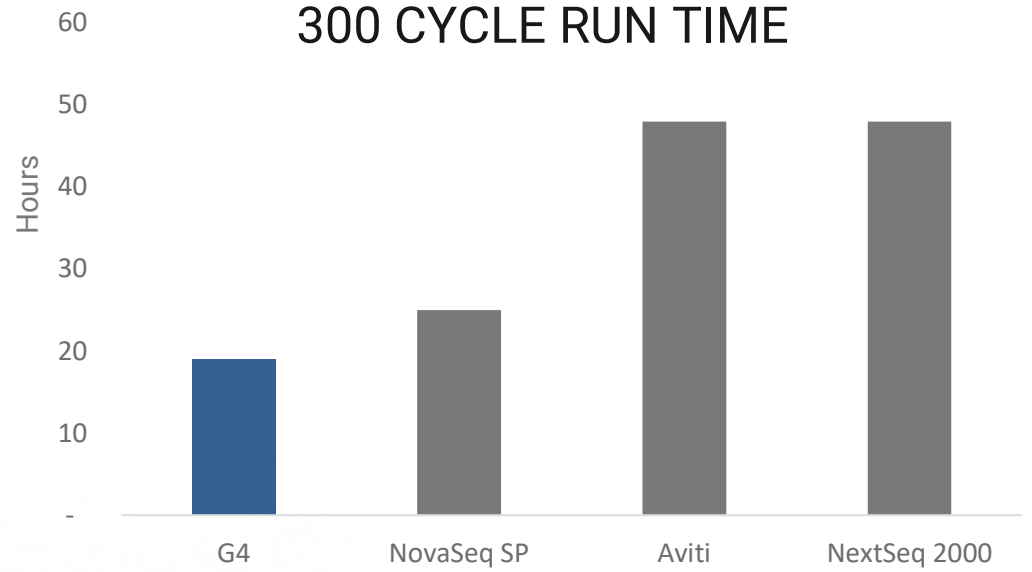
SINGULAR GENOMICS

* System comparison in data output per hour

SPEED

ENGINEERED FOR SUB 3-MINUTE CYCLE TIMES

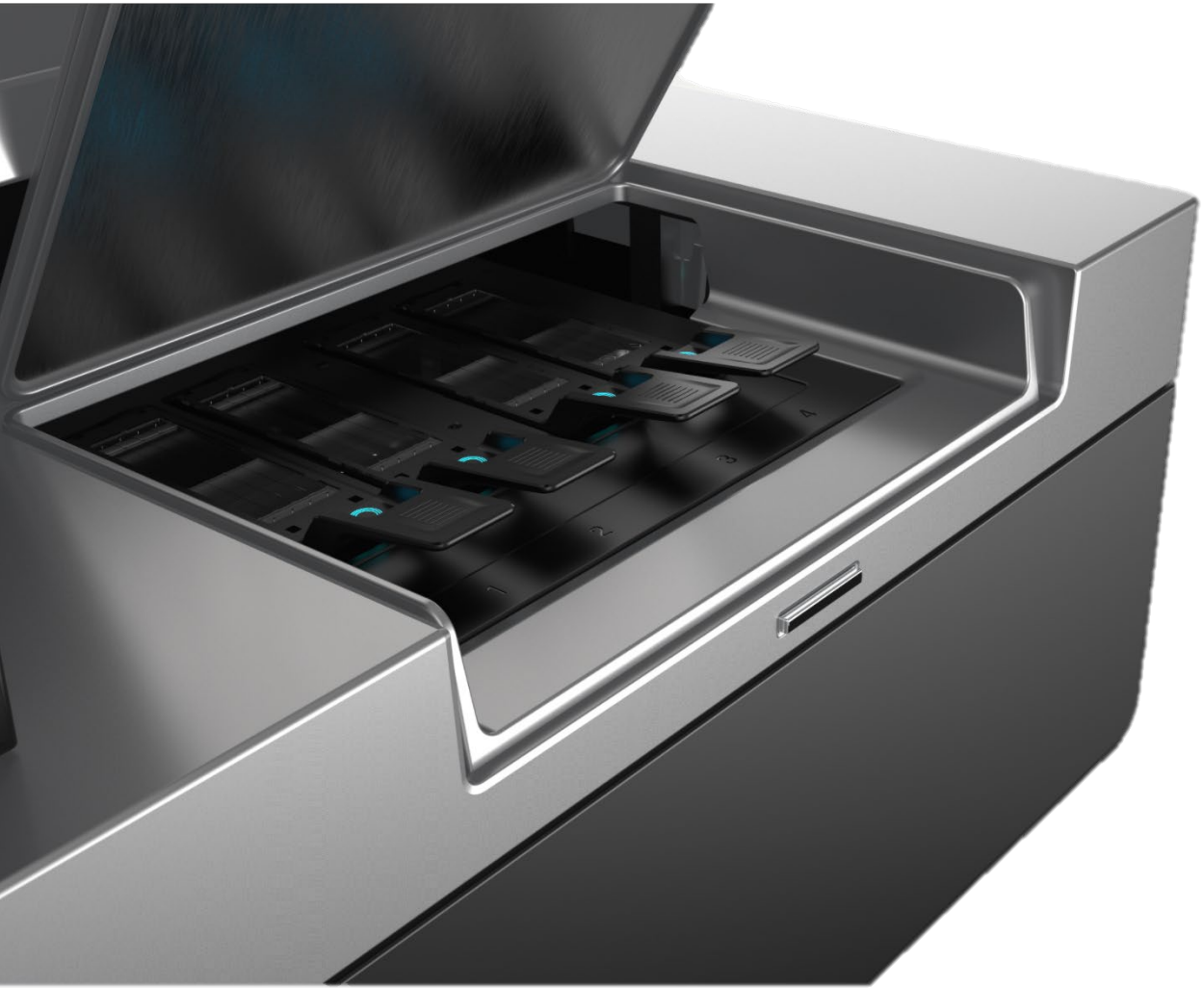


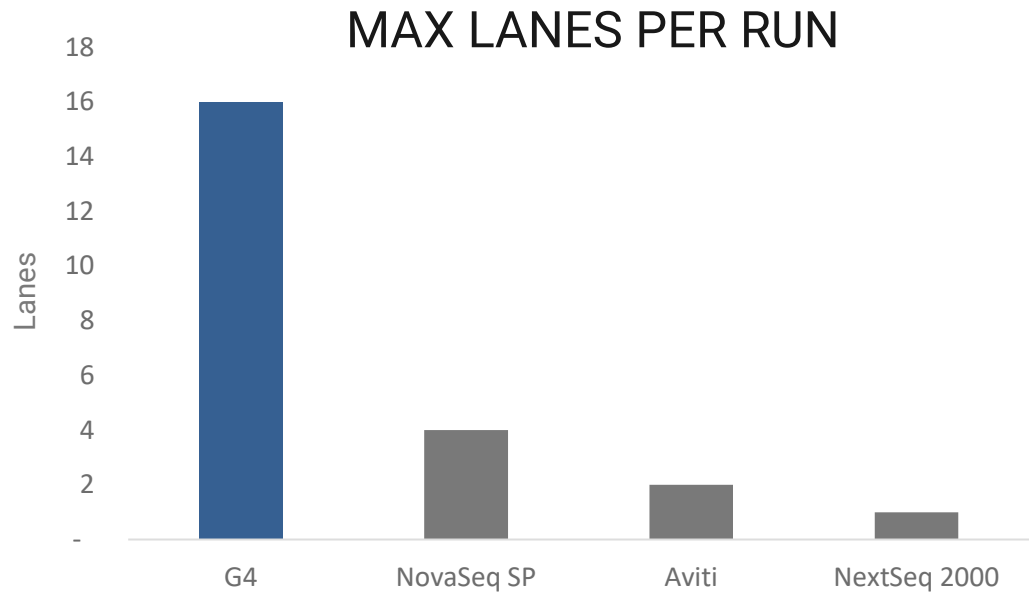


Rapid SBS chemistry built from the ground up

Run times 6–19 hours

FLEXIBILITY
OPERATIONAL AND COST-EFFECTIVE





Scale experiments up or down

Daily runs

4 independent flow cells

16 independent lanes (16 individual samples)

SINGULAR GENOMICS

ACCURACY

MATCHING INDUSTRY LEADING SPECIFICATIONS

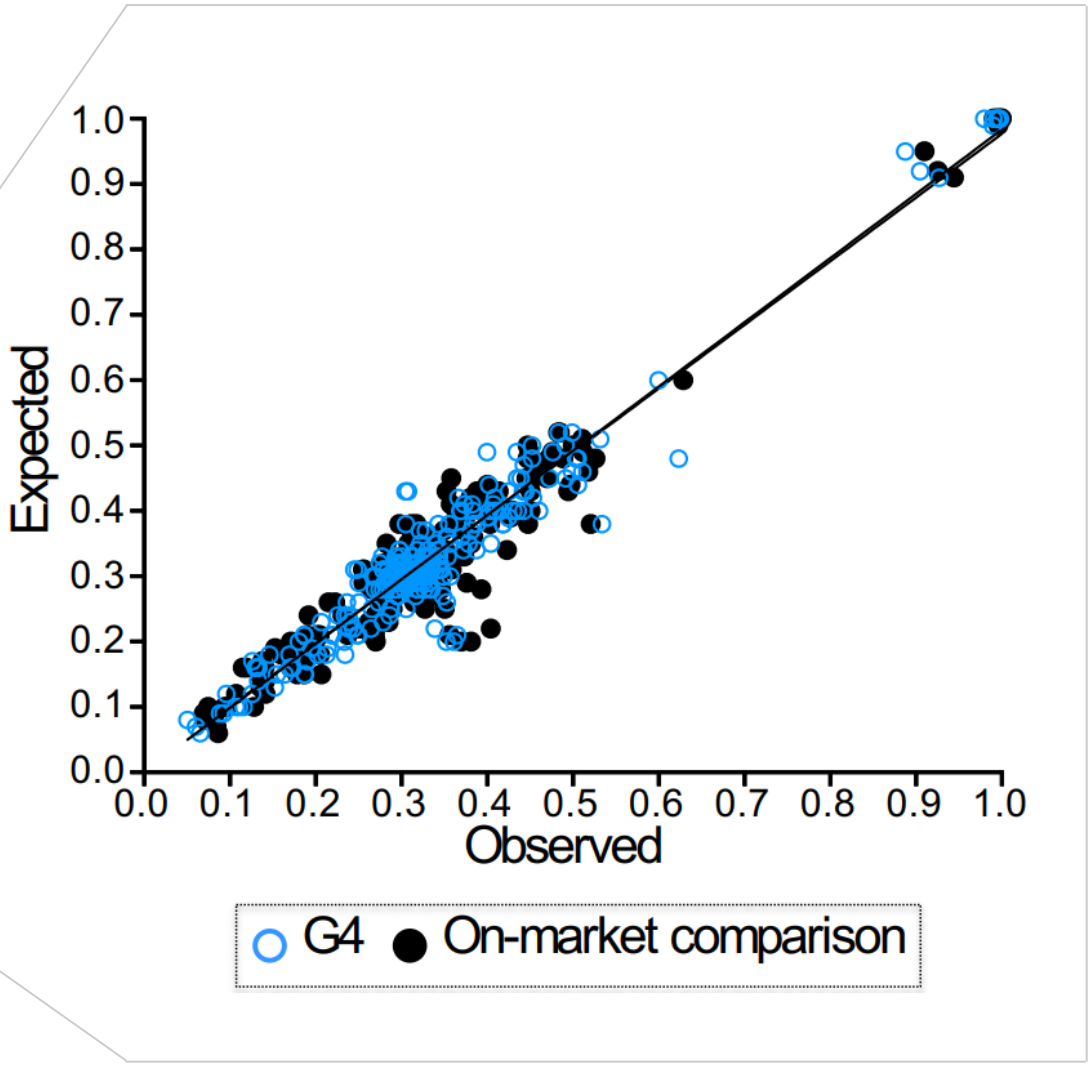
Proprietary 4-color SBS chemistry

Novel method of paired-read sequencing

75%–90% bases ≥ Q30 across all kits

Validated by 3rd parties

Enlarged images from technical report

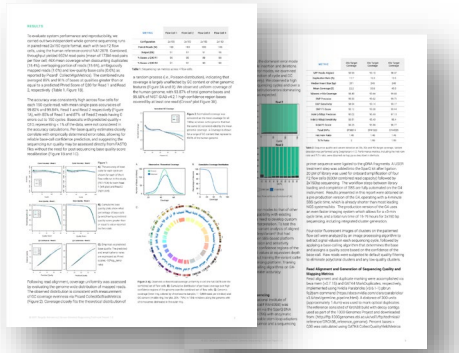


SINGULAR GENOMICS

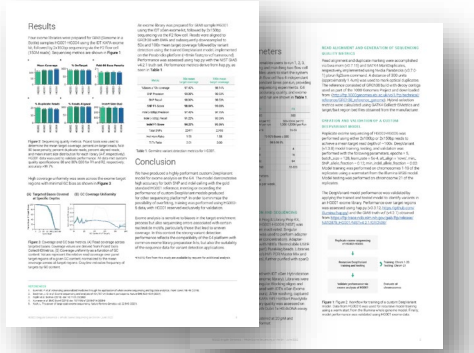
SYSTEM PERFORMANCE
DATA-DRIVEN VALIDATION

Across Key Applications

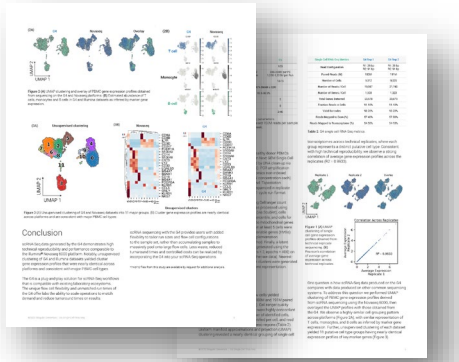
WGS



Exome



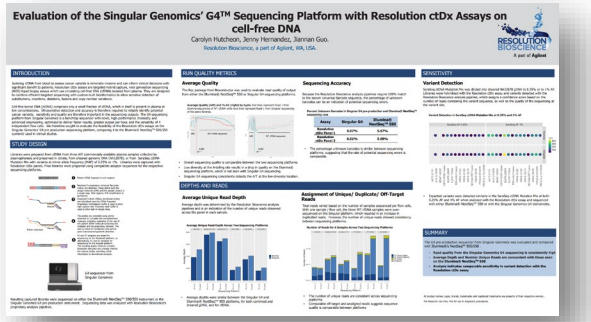
Single cell



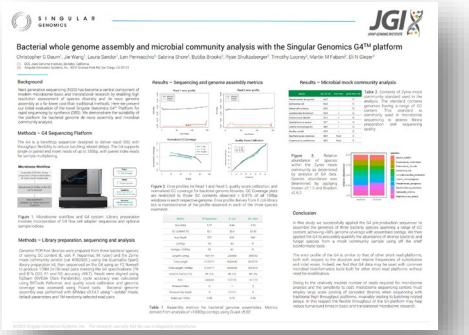
RNA-Seq

With 3rd Party Collaborators

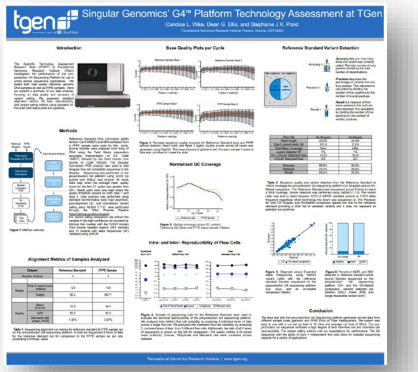
Resolution Bio



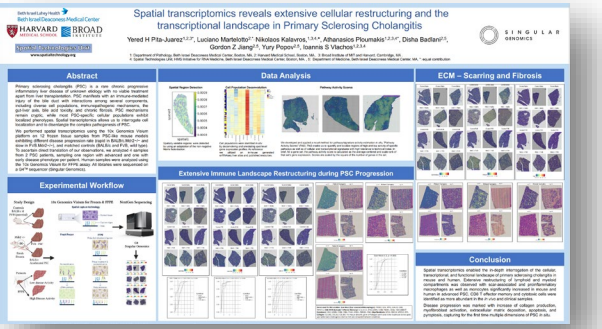
JGI



TGEN



Harvard

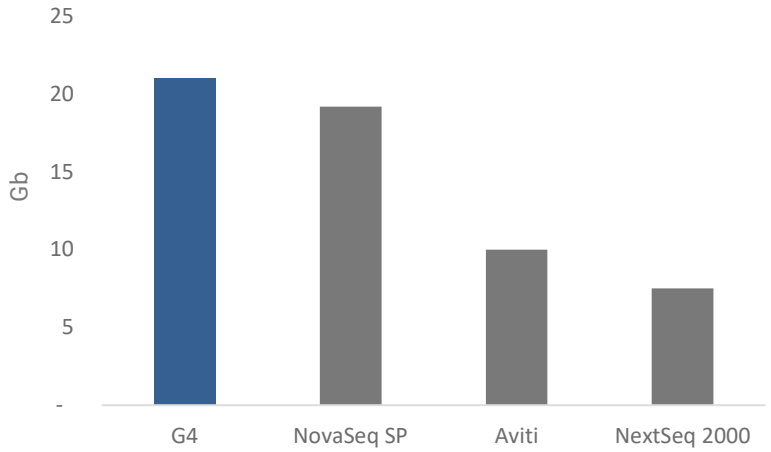


THIRD-PARTY PLACEMENTS
ACHIEVED TARGET PARAMETERS AND SECURED ORDERS

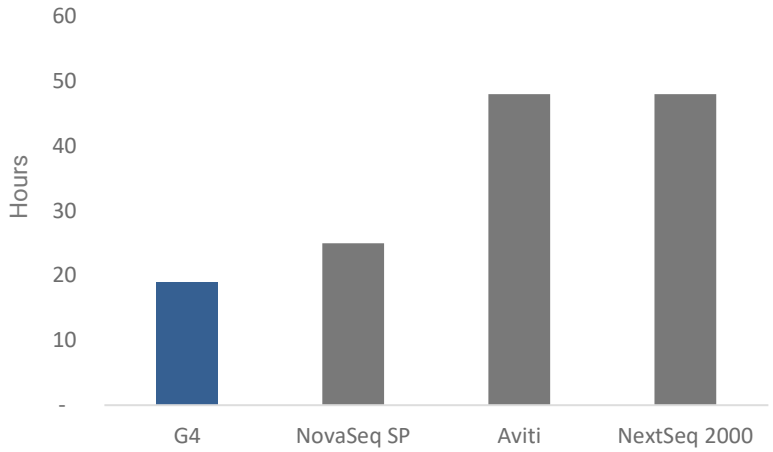
	Beta Sites		Early Access Program				
	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7
Partner	Sanford Burnham Prebys	Fate	Harvard	Adaptive	Exact	JGI	Resolution Bio
Lab Type	Academic core	Commercial clinical	Academic core	Commercial clinical	Commercial clinical	Government core	Commercial CRO
Application	RNA-Seq	Single cell RNA-Seq	Spatial transcriptomics	Targeted sequencing	Liquid biopsy	Microbial genome sequencing	Liquid biopsy
Reads Per Flow Cell	>150M	>100M	136M	>150M	167M	170M	>170M
Accuracy	Q30 for >70% of base calls	Q30 for >70% of base calls	99.6%–99.7% (>75% of bases ≥Q30)	99.6%–99.8% (>75% of bases ≥Q30)	99.7%–99.8% (>80% of bases ≥Q30)	99.7%–99.9% (>80% of bases ≥Q30)	99.8%–99.9% (>80% of bases ≥Q30)

CORE SEQUENCING COMPARISON
SUPERIOR KPIS ACROSS CORE METRICS

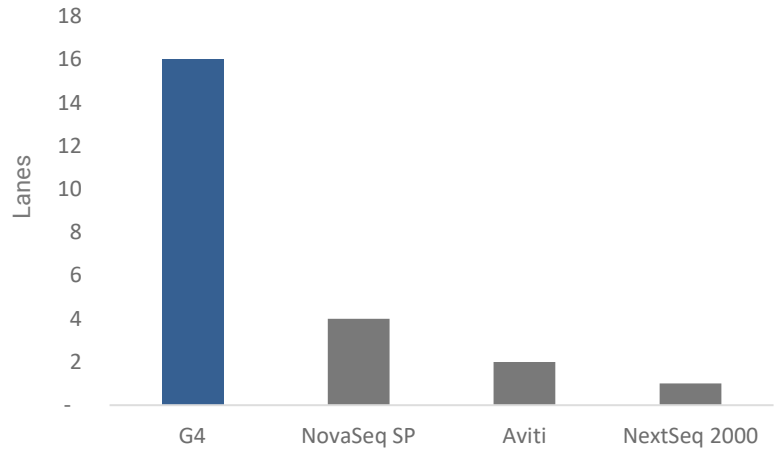
POWER
MAX GB PER HOUR



SPEED
300 CYCLE RUN TIME



FLEXIBILITY
MAX LANES PER RUN



Delivering industry "gold standard" accuracy levels of up to 99.9% or Q30 for 75%–90% of base reads

Sources:
https://singulargenomics.com/products/g4
https://www.illumina.com/systems/sequencing-platforms/nextseq-1000-2000/specifications.html
https://www.elementbiosciences.com/products/aviti

SINGULAR GENOMICS

SEAMLESS INTEGRATION INTO EXISTING WORKFLOWS

PARTNERING WITH LEADING PROVIDERS

Prepare

Simple run planning and library loading

Roche
Agilent
TWIST BIOSCIENCE
NEW ENGLAND BioLabs Inc.
Olink
QIAGEN
BIO-RAD
TWINSTRAND BIOSCIENCES
LEXOGEN
WATCHMAKER GENOMICS
Quantabio
Dovetail GENOMICS
TaKaRa
Parse BIOSCIENCES
IDT INTEGRATED DNA TECHNOLOGIES

Sequence

Integrated clustering and sequencing

Analyze

Rapid and accurate analysis

Terra
BROAD INSTITUTE
Microsoft
verily
aws
NVIDIA
Other Commercial Informatic Platforms

G4 KIT PERFORMANCE SPECIFICATIONS

READS AND OUTPUT PER FLOW CELL

		F2 FLOW CELL	F3 FLOW CELL
	Number of Reads (clusters)	150M–165M	300M–330M
Sequencing Output (Base Calls)	1x50 bp (50 cycles)	–	15–17 Gb
	2x50 bp (100 cycles)	15–17 Gb	30–33 Gb
	2x100 bp (200 cycles)	30–33 Gb	60–66 Gb
	2x150 bp (300 cycles)	45–50 Gb	90–100 Gb
Run Time	1x50 bp (50 cycles)	–	6–8 hrs
	2x50 bp (100 cycles)	8–10 hrs	8–10 hrs
	2x100 bp (200 cycles)	12–15 hrs	12–15 hrs
	2x150 bp (300 cycles)	16–19 hrs	16–19 hrs
Quality	75%–90% bases ≥ Q30 across all kits		
Accuracy	99.6%–99.9% across all kits		

F3 flow cell available in Q4 2022

APPLICATIONS
COVERING A WIDE RANGE OF CUSTOMER NEEDS

	F2 KITS (150M READS)				F3 KITS (300M READS)			
	Run Hours	Samples / Lane	Samples / FC	Samples / Run	Run Hours	Samples / Lane	Samples / FC	Samples / Run
RNA Gene Expression [1] (2x50 bp, 10M reads)	8–10	3.75	15	60	6–8	7.5	30	120
Single Cell RNA-Seq (130 cycles, 7,500 cells/sample and 20,000 reads/cell)	8–10	0.25	1	4	8–10	0.50	2	8
Total RNA-Seq (2x100 bp, 50M reads)	12–15	0.75	3	12	12–15	1.5	6	24
Exome (2x100 bp, 35 Mb at 100x coverage)	12–15	1.25	5	20	12–15	2.75	11	44
Target Enrichment (2x150 bp, 800 Kb at 4,000x coverage)	16–19	1.5	6	24	16–19	3	12	48
Human Whole Genome [2] (2x150 bp, 3 Gb at 30x coverage)	–	–	–	–	16–19	0.25	1	4

(1) F2 uses 100 cycle kit; 50 cycle available only on F3 and shows run hours for a 1x50 bp run

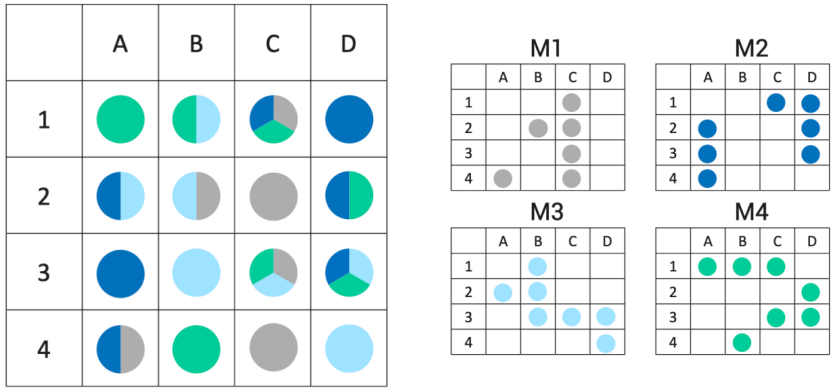
(2) F3 kits only for Human Whole Genome

SPECIALIZED APPLICATIONS
NOVEL KITS ENGINEERED TO DRIVE DISCOVERY

Max Reads

Higher output through pooling of multiple libraries with unique adapters

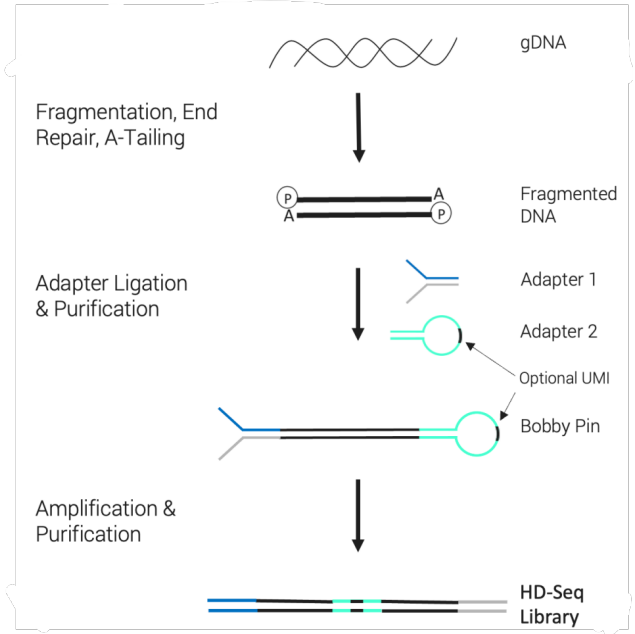
Applications: short reads and counting



HD-Seq

Q50 accuracy for rare variant detection

Applications: oncology



MAX READS
COMING IN Q4 2022

Small RNA-Seq ■ cfDNA Fragment Counting ■ Proteomics and Spatial Tagging
mRNA Gene Expression ■ CRISPR Screens ■ Single Cell RNA-Seq

Up to **4 Billion** Reads per Run

Delivering unparalleled cost and throughput for short reads with 3x more reads per run than any other benchtop sequencer.

Max Read Kit Details*

The Max Read Kits are purpose-built to maximize throughput in applications requiring less than 100 bp reads. Configurations include:

Configuration	Reads / FC	Reads / Run	Run Time
1x50 bp	1,000M	4,000M	~24 hrs
1x70 bp	750M	3,000M	~24 hrs
2x50 bp	600M^	2,400M	~24 hrs
QUALITY	75%–90% Bases > Q30		
ACCURACY	99.6%–99.9%		
COST	From $1.30 / M Reads		

* Details shown are projected and subject to change

^ Read pairs

SINGULAR GENOMICS

Strong value proposition for target customer segments

Academic and Core

RNA ■ Single Cell ■ Targeted Panels ■ Exomes ■ WGS

Clinical and Research Commercial

Targeted Panels ■ RNA ■ Exomes ■ Rapid WGS

Emerging Growth

RNA ■ Single Cell ■ Targeted Panels ■ Spatial ■ Proteomics

Initial products are for research use only (RUO)

COMPANY SNAPSHOT

DISCIPLINED INVESTMENT HAS DRIVEN CAPITAL EFFICIENCY

$450M	Cash raised	**~3**	Years of cash runway
$163M	Cash burn	**141**	Issued patents and patent applications
$287M	Cash and investments	**248**	Headcount as of June 30th

Above financial metrics as of June 30, 2022

ACCOMPLISHMENTS AND UPCOMING MILESTONES
PATTERN OF EXECUTION

Accomplishments

- ☑ **3rd party placements** | Beta sites, early access program
- ☑ **Executed workflow partnerships** | 15+ and growing
- ☑ **Orders taken**
- ☑ **Shipping G4, F2 kits available** | Q2 2022
- ☑ **Technical report** | Matching industry leading WGS data
- ☑ **Application notes** | RNA-Seq, single cell, exome
- ☑ **Publications & posters** | JGI, TGEN, ResBio, Harvard, HD-Seq, XR-Seq

Upcoming Milestones

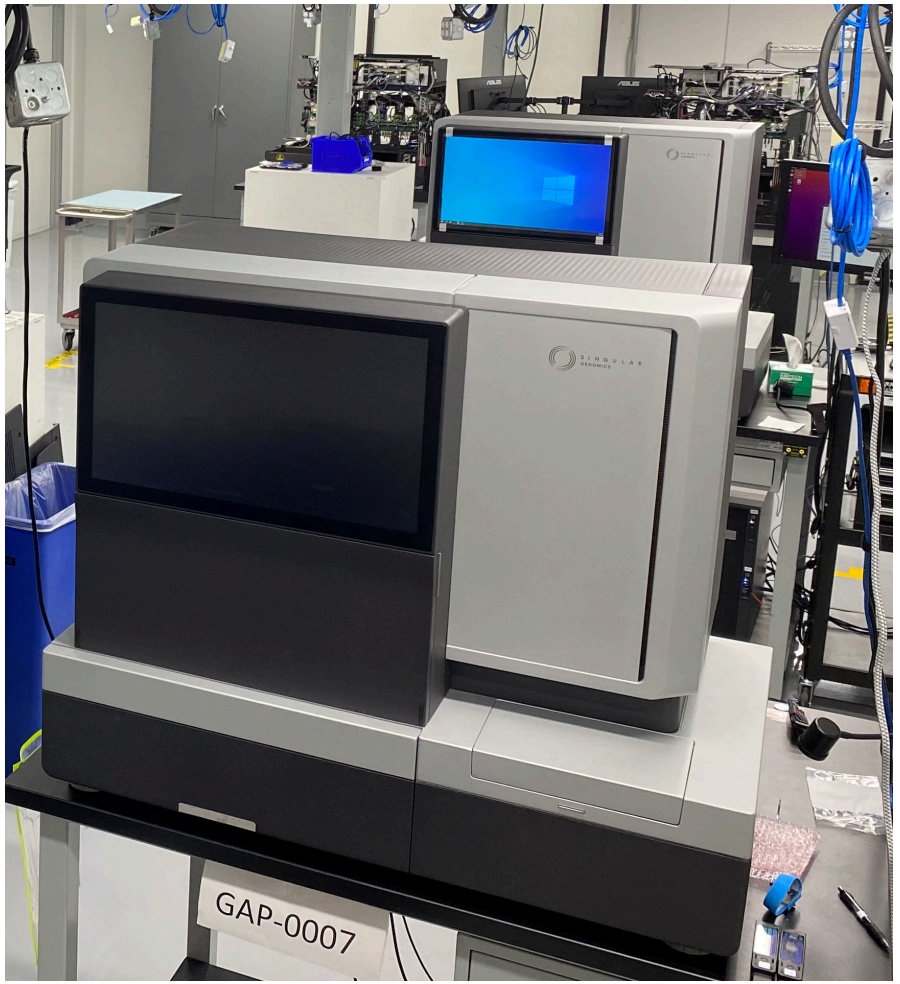
Expanded G4 kits | Q4 2022: F3, Max Read Kits

Publications & application notes | Continued in 2H 2022

PX Technology Access Program "TAP" | Initiating 2H 2022

PX launch | 2H 2023

G4 INSTRUMENT MANUFACTURING



MULTI-OMICS REIMAGINED

Harnessing the power of sequencing in single cell analysis and spatial profiling

We are busy in the lab…

SINGULAR GENOMICS