



# Novogene Corporation, Inc.

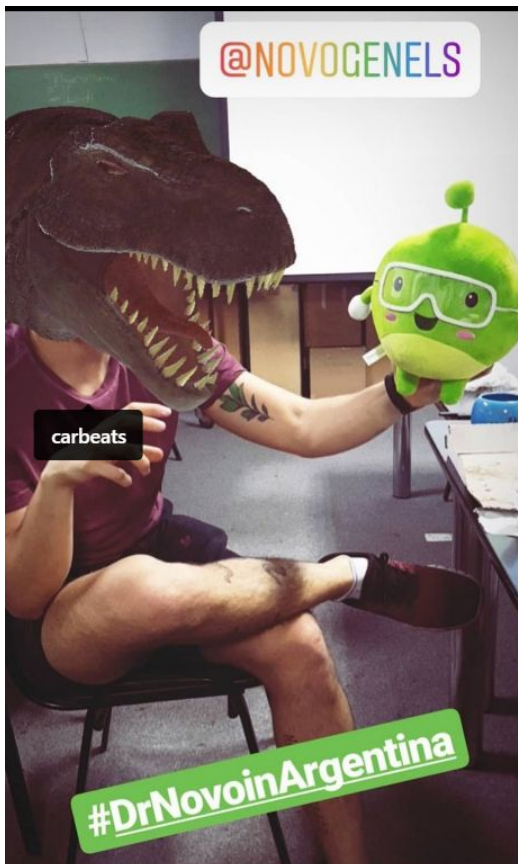
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Company Overview



# Etiqueta en Instagram!!!

## #drnovoinargentina



# About Novogene





## Novogene overview

Novogene

Novogene is committed to pioneering applications of cutting-edge molecular biology technology and high-performance, computing in the fields of life science research and human health. Our vision is to become the global leader in providing genomic services and solutions.

Science and Technology  
Innovation Board stock  
code: **688315**

**11**

years of careful work

**5**

central laboratories

**~70**

countries and regions

**2000+**

full-time employees

**400+**

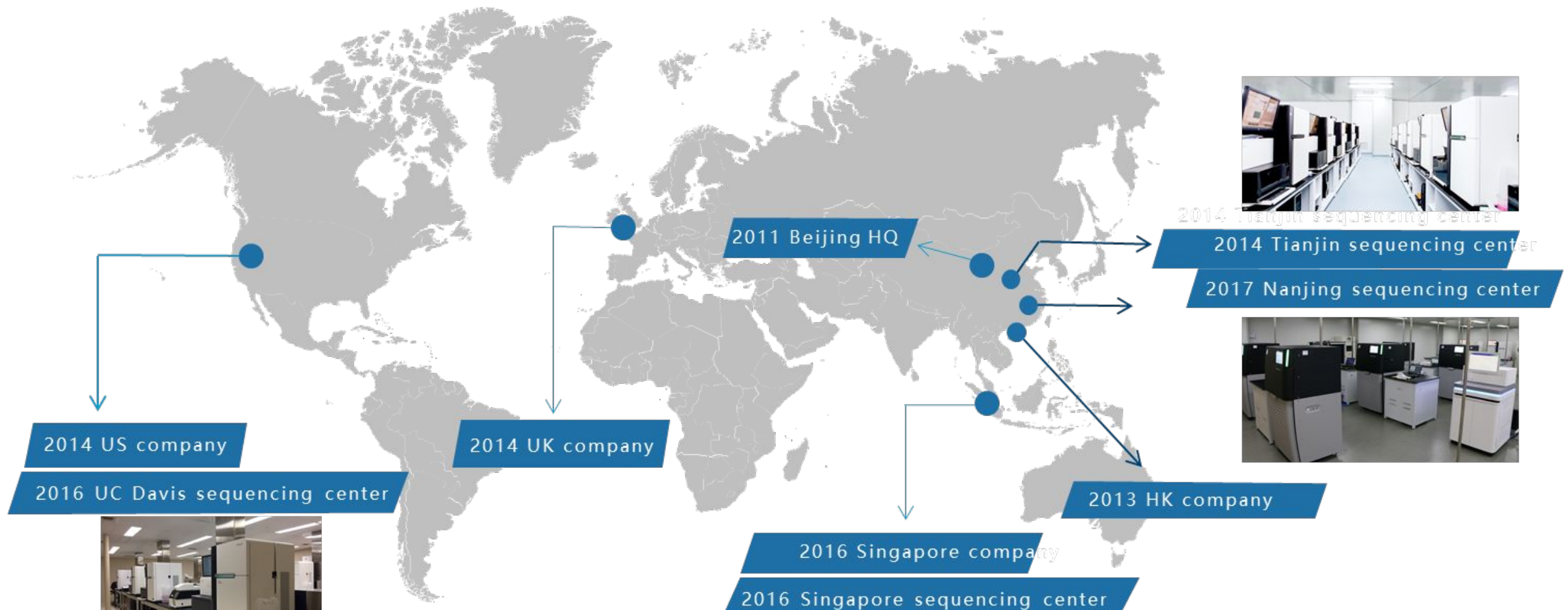
R&D personnel

**5900+**

global customers



# World-Wide Presence



2016 UC Davis sequencing center



2014 Tianjin sequencing center  
2014 Tianjin sequencing center  
2017 Nanjing sequencing center



2013 HK company

2016 Singapore company  
2016 Singapore sequencing center





# Mission and Vision

## Mission



Advancing Genomics,  
Improving Life

Leveraging on the genetic technologies and advancement, our mission is to improve the ecosystem of all living things through deciphering the code of life and improving health.

## Vision



To be the global leader  
in providing genomic  
services & solutions.

Encompassing the entire genomics value chain, we strive to become the global leader in providing advanced genomic services and solutions. We aim to continually enhance the values and expand the range of our services and solutions.

## Corporate value



Professionalism, Innovation,  
Integrity, Partnership

**Professionalism:** Be professional in our work, Build a professional team  
**Innovation:** We embrace change, We dare to make mistakes  
**Integrity:** Commitment to our colleagues, Commitment to our customers  
**Partnership:** Create a win-win situation with our external partners, Create a win-win situation with our internal partners



## Global customers

Novogene

Covers **99%** of the worlds top 100 scientific research institutions

Works with **9** of the top 10 global pharmaceutical companies

**3,150<sup>+</sup>**

research institutes and  
universities

**600<sup>+</sup>**

hospitals

**2,100<sup>+</sup>**

enterprises

University ranking source: Nature index 2020 annual tables

Pharmaceutical ranking source: Calculated by a third-party institution based on public financial data for 2020



# Research contributions



Nature Genetics  
藏猪基因组

Nature Communications  
天府基因组

The Plant Cell  
小麦基因组

**790+**  
SCI articles

Nature Ecology & Evolution  
扇贝基因组

PLoS Genetics  
枣树基因组

Genome Research  
欧亚猪基因组

**6,120+**  
cumulative impact factor

Scientific Reports  
大山雀群体进化

Genome Biology  
人脑全基因组甲基化

Science  
人单精子全基因组

“We’re very happy with the **excellent level of service** we’ve received from Novogene. Our research focuses on aging and its relation to genomic stability and we frequently use Novogene’s whole genome, RNA, and bisulfite sequencing services to support our research. We are always impressed with the **high quality data** they provide as well as their highly competitive prices. Their **turnaround times** are also much faster than other sequencing labs we have tried in the past. We have been extremely satisfied with Novogene and will continue to use their services in the future.”

—Jan Vijg, Ph.D.  
Professor and Department Chair,  
Department of Genetics, Albert Einstein College of Medicine,  
New York, USA

“I have been getting great results with Novogene NGS for **a wide variety of samples**, ranging from highly degraded, ancient animal DNA samples to longer, fresh human DNA samples. Their **rapid turn-around time** keeps our projects moving at a fast pace and they have **quick-to-respond**, expert support when required.”

—Tim Heupink, Ph.D.  
Research Fellow,  
Environmental Futures Research Institute, Griffith University,  
Brisbane, Australia

Note: As of Dec. 2021



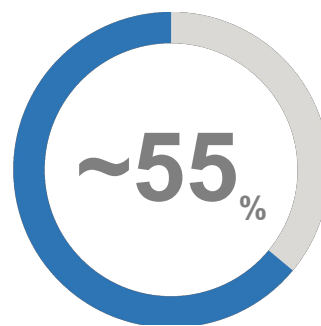


# Outstanding talent

Novogene



Average  
employee age



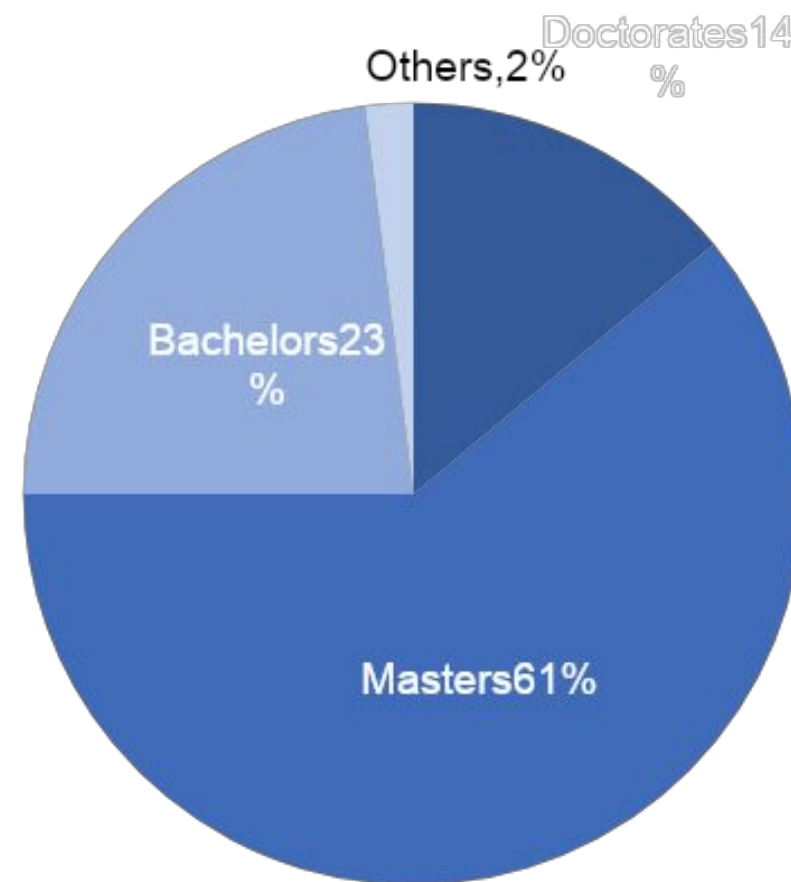
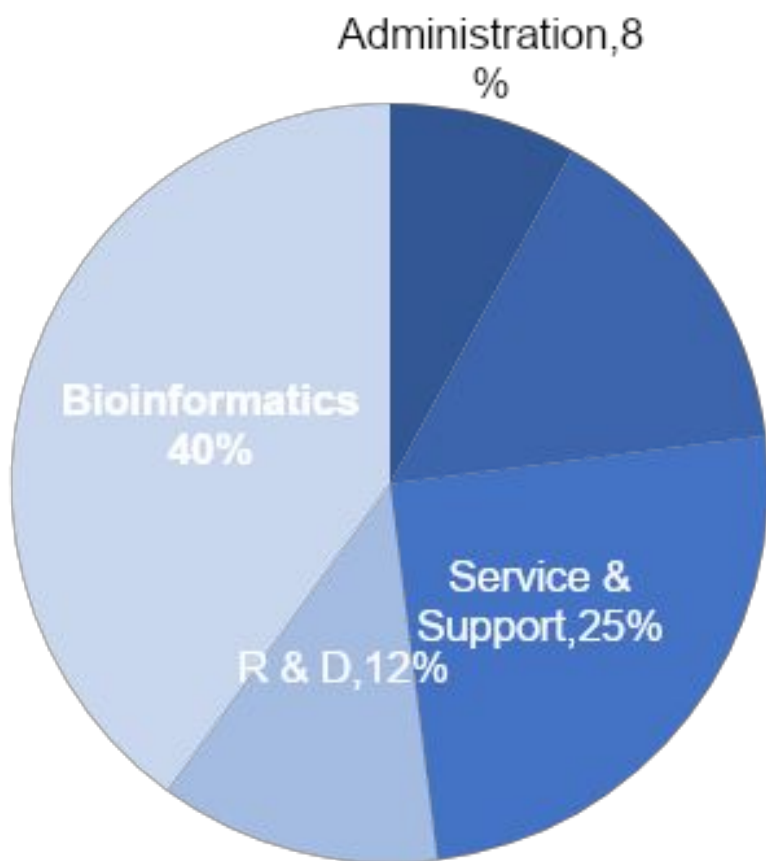
Employees with  
advanced degrees



Employee  
nationalities



# Outstanding talent



Our focus: High quality service and customer satisfaction 75% of our employees have advanced degrees.

# Technological Platforms and Capabilities





## Core services

Novogene

### Research Services

- Genome Sequencing
- Transcriptome Sequencing
- Epigenomics
- Metagenomics
- Pre-made Library Sequencing



### Clinical Diagnostics

- Clinical Whole Exome Sequencing
- Clinical Panels



### Biopharma Services

- Discovery and Pre Clinical | Translational and Clinical | Companion Diagnostics





Advanced and comprehensive technology platform for large-scale and diverse needs

Novogene

World's Largest Sequencing Capacity



NovaSeq6000



DA8600



PacBio Sequel II



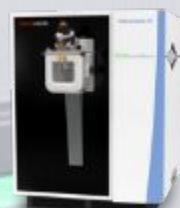
PacBio Sequel II e



Nanopore



QTRAP<sup>®</sup> 6500+



Orbitrap  
Exploris<sup>™</sup> 480



Q Exactive<sup>™</sup> HF-X



# Intelligent production center for efficient and stable delivery

Novogene

## FALCON fully automated, agile, and intelligent delivery system in operation 24/7



The world-leading intelligent and flexible production system in the NGS field

Novogene has developed a global intelligent and flexible production system to ensure a fast turnaround

**5** major standardized solutions, and more on the way

Delivery cycle reduced by

**60%**

**66** sophisticated devices, from sample extraction to information analysis  
End-to-end automation

Reduces labor costs by

**70%**



# Service Portfolio for Global Researchers

## Human Genome Sequencing

- Whole genome re-sequencing
  - Whole exome sequencing
- Single-cell DNA sequencing
  - Target region sequencing

## Transcriptome & Epigenome

- mRNA sequencing
  - Single-cell RNA sequencing
- lncRNA, circular & small RNA sequencing
  - Isoform sequencing (Iso-Seq)
- Whole genome bisulfite sequencing
  - Chip-Seq

## Animal & Plant Genome Sequencing

- Animal & Plant re-sequencing
  - Pan-genome sequencing
- Animal & Plant *de novo* sequencing

## Microbial Genome Sequencing

- Microbial genome re-sequencing
- Microbial *de novo* sequencing
  - Metagenomic sequencing
- 16S/18S/ITS amplicon sequencing



# Standardized and world-class laboratories around the world



## Science and technology service laboratories

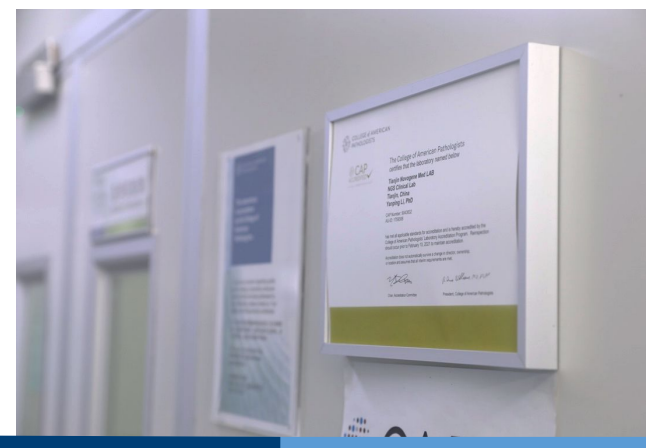
- ISO 9001
- Laboratory SOP

## Medical testing laboratories

- U.S. CLIA standards
- European ISO/IEC 17025
- CAP NGS certification

## Medical device production centers

- ISO 13485
- GMP Class 100,000 Cleanroom (ISO 8/Grade D)
- Medical device manufacturing license (Class I, II, and III)







# World-class data centers for fast, accurate, and secure data delivery

Over **180** bioinformatics engineers

+

**92**TB total RAM

**22.5**PB local storage

**100**PB cloud storage

Peak computing speed: **620**Tflops

# Novaseq X

Numerous technology innovations make this new level of sequencing possible.



- Ultrahigh-density patterned flow

cells **2X** **2X** **3X**  
**Faster cycle time** **Longer reads** **Accuracy increase**

- Ultrahigh-resolution imaging  
high-efficiency sequencing  
from 1.6 billion to 52 billion single reads  
per run

- Advanced base-calling algorithms

# Comparison – Throughput per Run

	NovaSeq X Plus	NovaSeq X	NovaSeq 6000
Maximum output per run	16 Tb	8 Tb	6 Tb
Maximum reads per run	52 billion single reads 104 billion paired-end reads	26 billion single reads 52 billion paired-end reads	20 billion single reads 40 billion paired-end reads

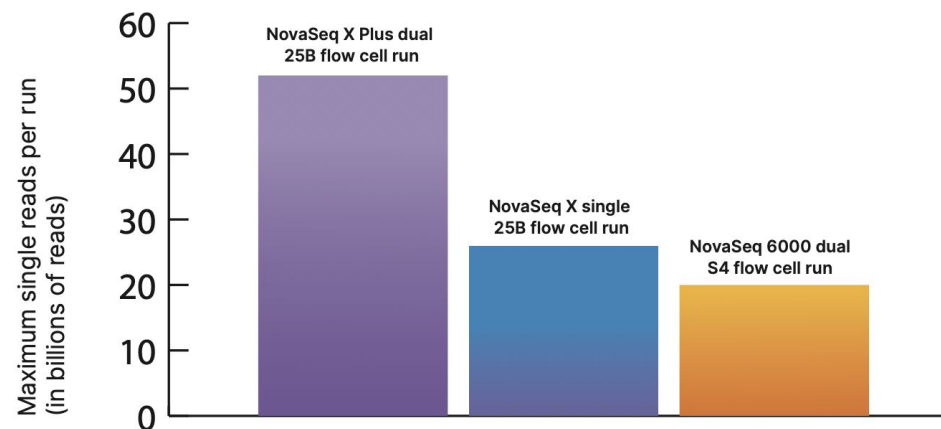


Figure 2: Maximize sequencing output with the NovaSeq X Plus system—Comparison of maximum output per single run in billions of reads for the NovaSeq X Plus system (dual 25B flow cell run), the NovaSeq X system (single 25B flow cell run), and the NovaSeq 6000 system (dual S4 flow cell run).<sup>1</sup>

# Comparison – Throughput per single FC per hr

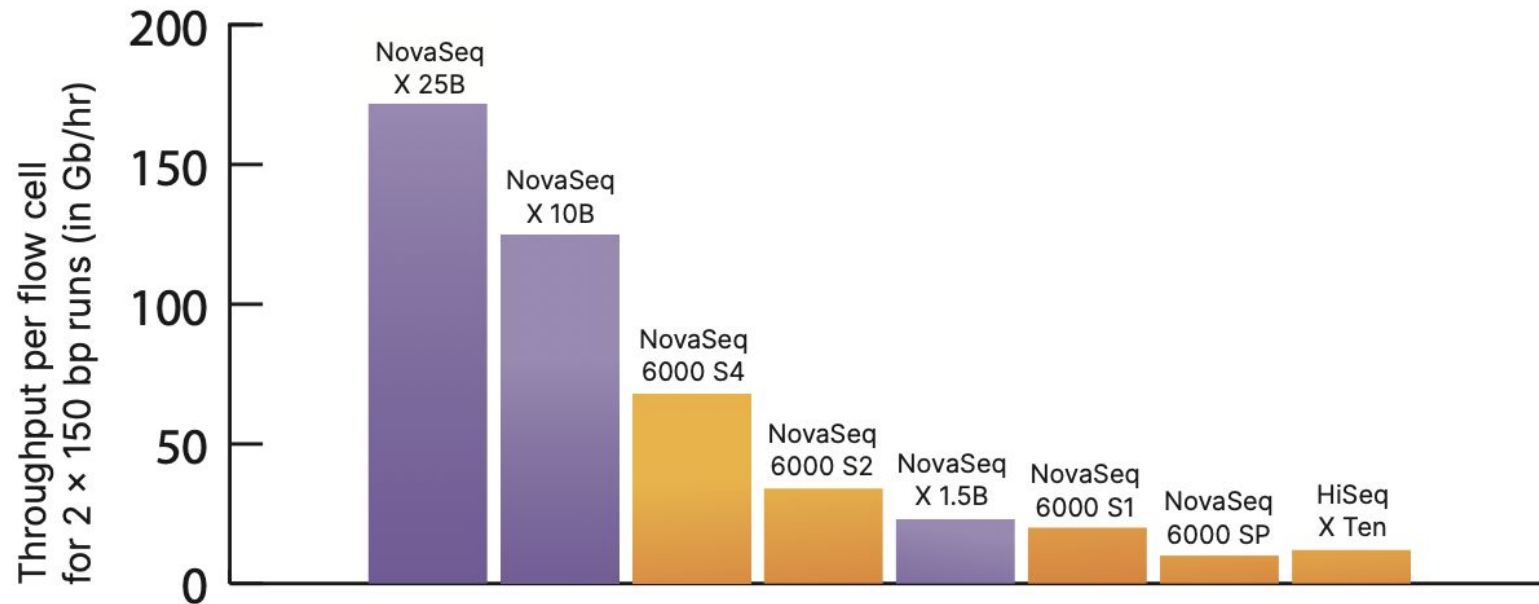


Figure 3: The NovaSeq X series offers maximum sequencing throughput—Comparison of output per single flow cell per hour for NovaSeq X series 1.5B, 10B, 25B flow cells, NovaSeq 6000 SP, S1, S2, S4 flow cells,<sup>1</sup> and the HiSeq X Ten.<sup>2</sup> From the first \$1000 genome to today, Illumina continues to transform the economics of high-throughput sequencing.

# Comparison – Sustainability

The NovaSeq X and NovaSeq X Plus systems were purposefully designed to reduce environmental impact. The improved robustness and stability of XLEAP-SBS reagents, including allows for shipping and storage in lyophilized form.

- Save time and money with a 90% reduction in packing weight and waste
- Over 50% reduction in cartridge volume to optimize freezer and storage space
- Save disposal costs with more recyclable plastics and no dry ice or ice packs
- Components such as a plant-based biopolymer cartridge add to sustainability
- Vast improvements in shipping and receivable consumables. Smaller footprint and ambient temperatures save time and space.



In comparison to NovaSeq 6000

A hand holding a glowing globe with the text 'THANK YOU' overlaid. The background is a warm, golden-brown gradient with a network of white lines and dots, suggesting a globe or a network. The text is in a bold, white, sans-serif font, centered on the globe.

THANK  
YOU