

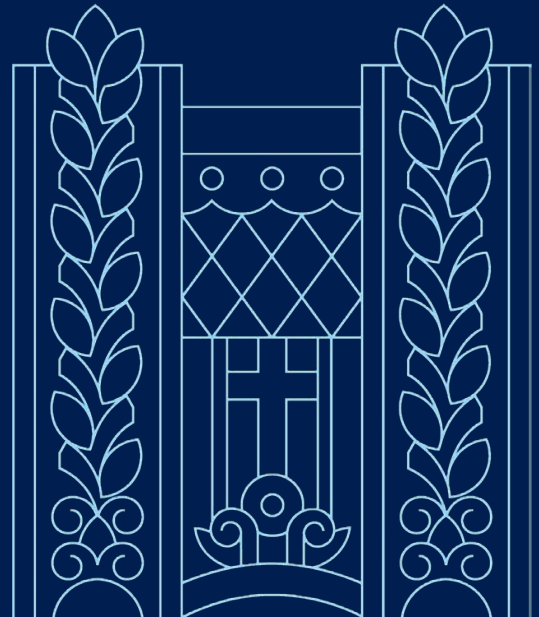
Innovative Genomics Core



Overview

1. IGC Mission
2. Services Provided
3. Current & Proposed Equipment
4. Equipment in Detail & Cost
5. Data Analysis

IGC Mission

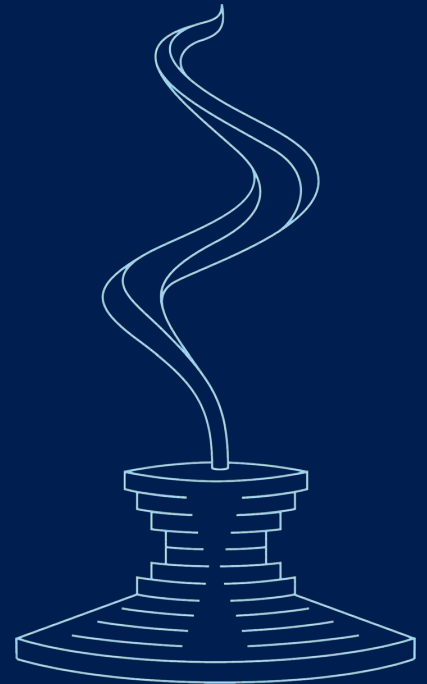


IGC Mission

Provide a total solution of genomics research from consultancy to experiments to data analysis.

Sample → Figure

Services Provided



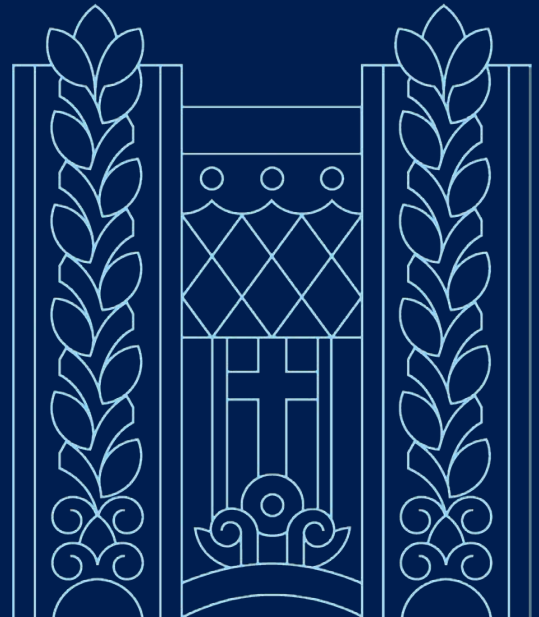
Services Provided

1. Sequencing

- a) Genome (WGS, exon, mutation detection, etc.)
- b) Transcriptome
- c) Epigenome (cut & run, cut & tag)
- d) Amplicon

2. Single Cell Genomics & RNA-Seq

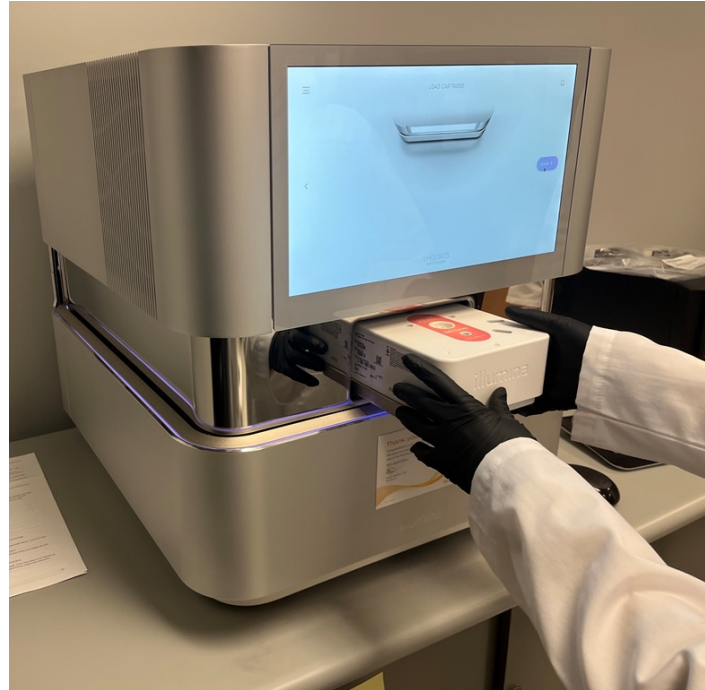
Current & Proposed Equipment



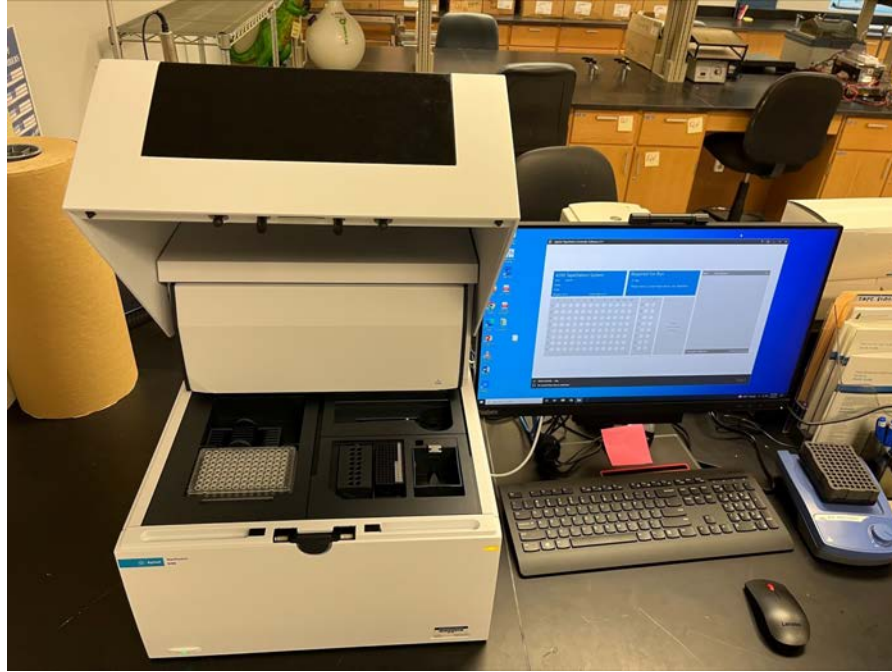
Current Equipment

- NextSeq2000
- TapeStation
- PCR Hood
- Qubit
- Multi-Channel/Electronic Pipets

NextSeq2000



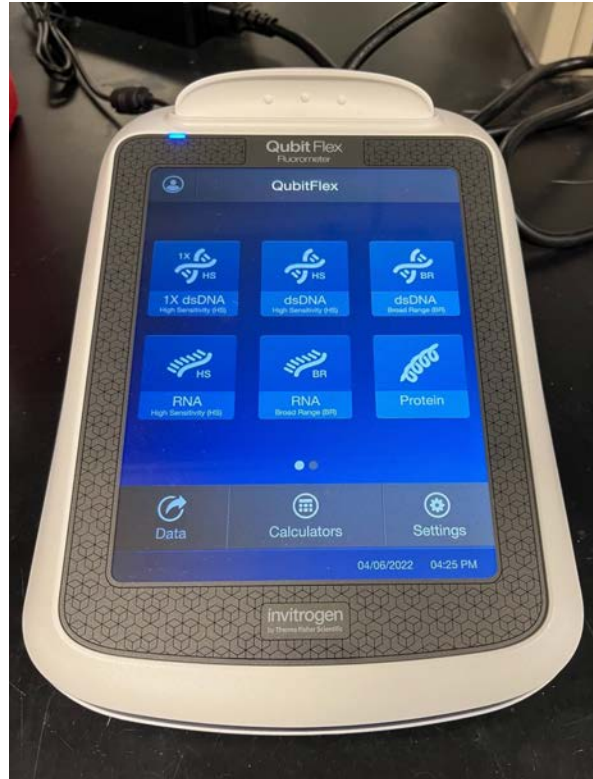
Tape Station



PCR Hood



Qubit



Multi-Channel/Electronic Pipets



Proposed Equipment

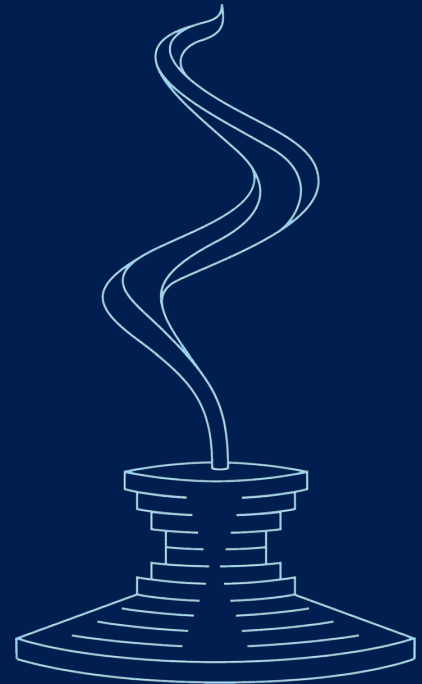
Introduction videos looping in front of the room



Namocell: Low input single cell sorter/dispenser

Chromium X: High-throughput single cell analysis

Equipment in Detail & Cost



NextSeq2000 Sequencer

Maximum Output	120 Gb (with P2 reagents) 360 Gb (with P3 reagents)
Maximum Reads per Run	Up to 400M single reads (with P2 reagents) Up to 1.2 billion single reads (with P3 reagents)
Nucleic Acid Type	RNA, DNA
Run time	11-48h

Sequencing Cost



Whole Run Cost

\$3,151

No wait time (1 day turnaround)



Sample Pooling & Collaborative Reduction of Expenses

\$50 / RNA-seq sample

Pooling by us (Wait time varies)

TapeStation Cost

- A fast, automated, and flexible solution for samples size and concentration quantification
- 1-96 samples, 1 min per sample
- DNA and RNA samples, 2 μ L input
- Detection of 35-60,000 bp as low as 5 pg/ μ L

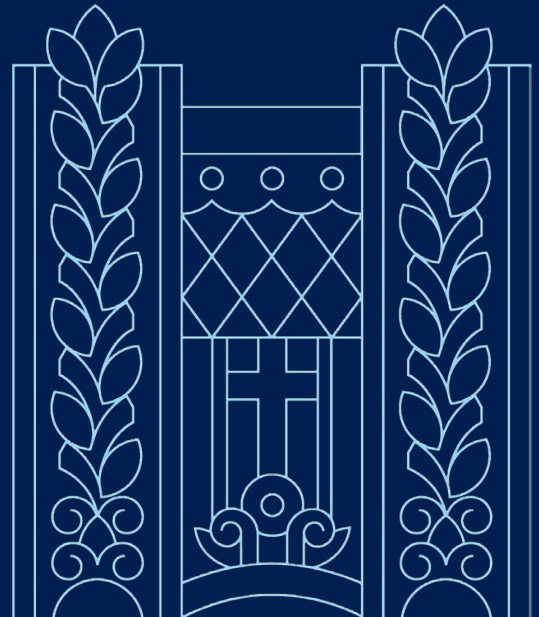
Cost Per Sample: \$4

10X Genomics High-Throughput Single-Cell RNA-seq

- Lead time: 2 weeks
- Minimal requirement:
- Cell/nuclei suspensions 1,000 cells/ μL $>20\mu\text{L}$
- 10,000 target cells per sample

Cost Per 10,000 Cells: \$1,878

Data Analysis



Data Analysis

- RNA-seq
- DNA-seq
- Cut & Run
- Cut & Tag
- Single-Cell RNA-seq
- Etc.

Contact us!

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Creighton
UNIVERSITY