



Laboratory for Biotechnology and Bioanalysis



Derek Pouchnik – Co-Director
Mark Wildung – Sr. Scientist
Wei Wei Du – Research Technician

Web Site:
<https://lbb.wsu.edu/>
509-335-1174





LBB Core Lab Key Services and Instrumentation

DNA Sequencing

- ★ Ion Torrent – Gene Studio S5**
- ★ Pacific Biosciences – PacBio Sequel I**
- ★ Sanger Sequencing – Applied Biosystems 3730 XL**



Ion GeneStudio S5

- 100-250bp+ read length
- Up 80,000,000 reads per run
- 2 ½ hour run time (2x/day)

Top Applications

- RNA Seq
- AmpliSeq
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Pacific Biosciences Sequel I

- Avg. read lengths 20kb+
- 400-500K reads per run
- Single Molecule Sequencing (SMRT)
- 10-20hr collection times

Top Applications

- de novo genome assembly
- Microbial community analysis (16S)
- Isoform sequencing of full length RNA
- HiFi sequencing for assembly



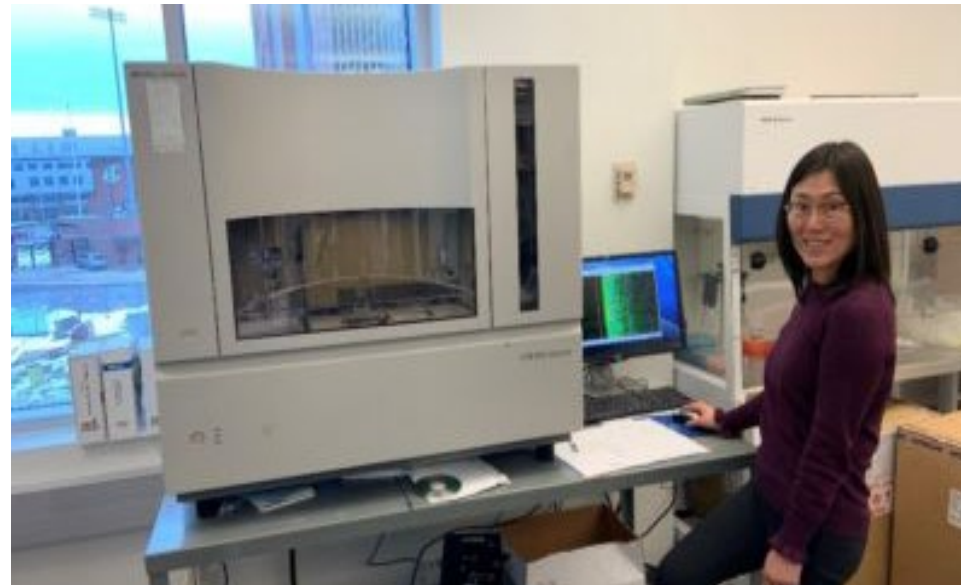


Applies Biosystems 3730XL DNA Analyzer

- 48 Capillary array std POP-7 Polymer/BigDye chemistry
- Process up to 10 - 96 well plates/day
- 600-700bp read lengths

Top Applications

- Sanger Sequencing
- Genotyping DNA sizing using LIZ size std





Molecular Biology

Instrumentation

Primary Use

★ Agilent 5200 Fragment Analyzer	RNA/DNA quality analysis
★ Applied Biosystems 7500 Fast qPCR	Real Time PCR
★ Diagenode Bioruptor 300	DNA Sonication
★ QuBit/Nanodrop	DNA/RNA Quantitation