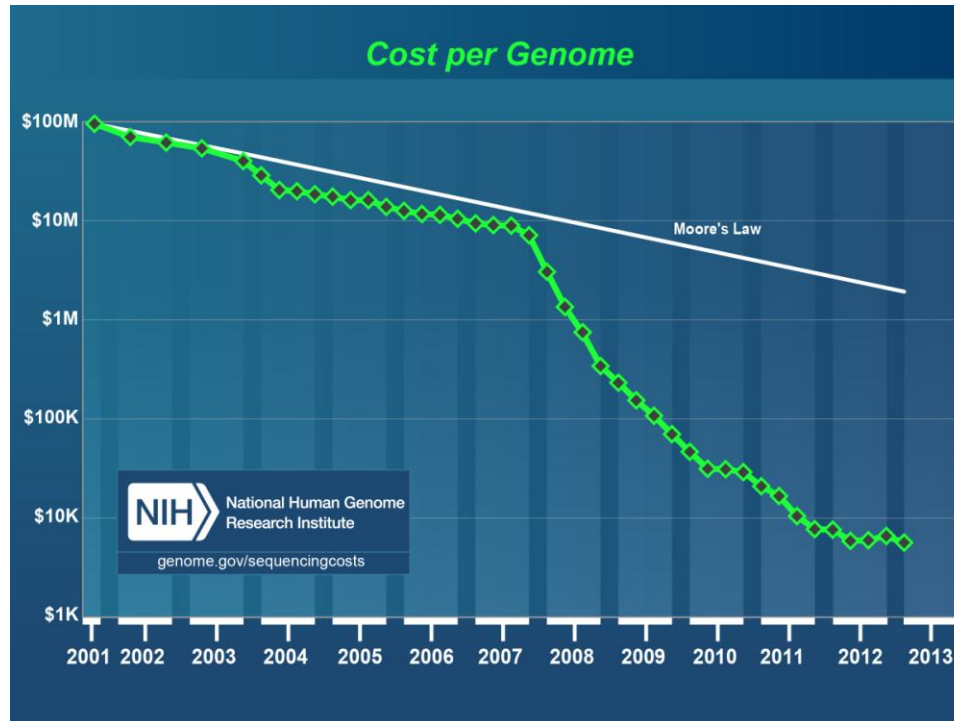


What is Genomics?



- The study of all of an organisms' genes (the genome), including interactions of those genes with each other and with the environment.

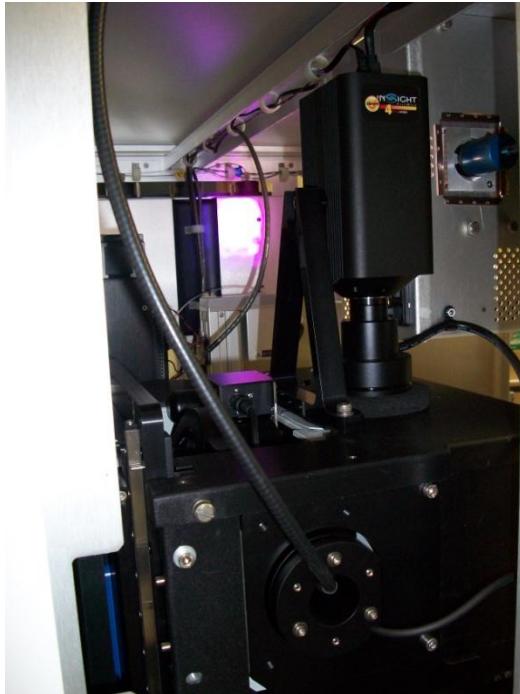
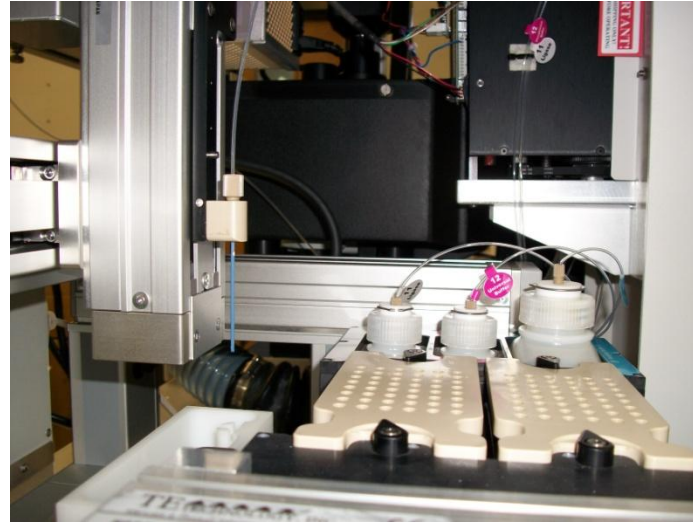


Why Study Genomics?



- Know About Sequencing
 - Technologies
 - Process
- Genomics and Medicine
 - Heart disease, diabetes, blindness, and cancer (The Cancer Genome Atlas)

Components of a Sequencer



BIOL 4903 Genomics



- Tuesday/Thursday
- Pre-requisite: Genetics (BIOL 3000K)
- Topics
 - Sequencing
 - Sequencing chemistry (Sanger & Next-generation)
 - Assembly
 - Annotation
 - Human
 - Genome
 - Microbiome (skin, GI track, oral, etc) - <http://commonfund.nih.gov/hmp/>
 - Cancer genomics
 - Genomic medicine
 - Pharmacogenomics
 - Metagenomics
 - Environmental samples
 - Chemical Genomics
 - Comparative Genomics
 - Functional Genomics