

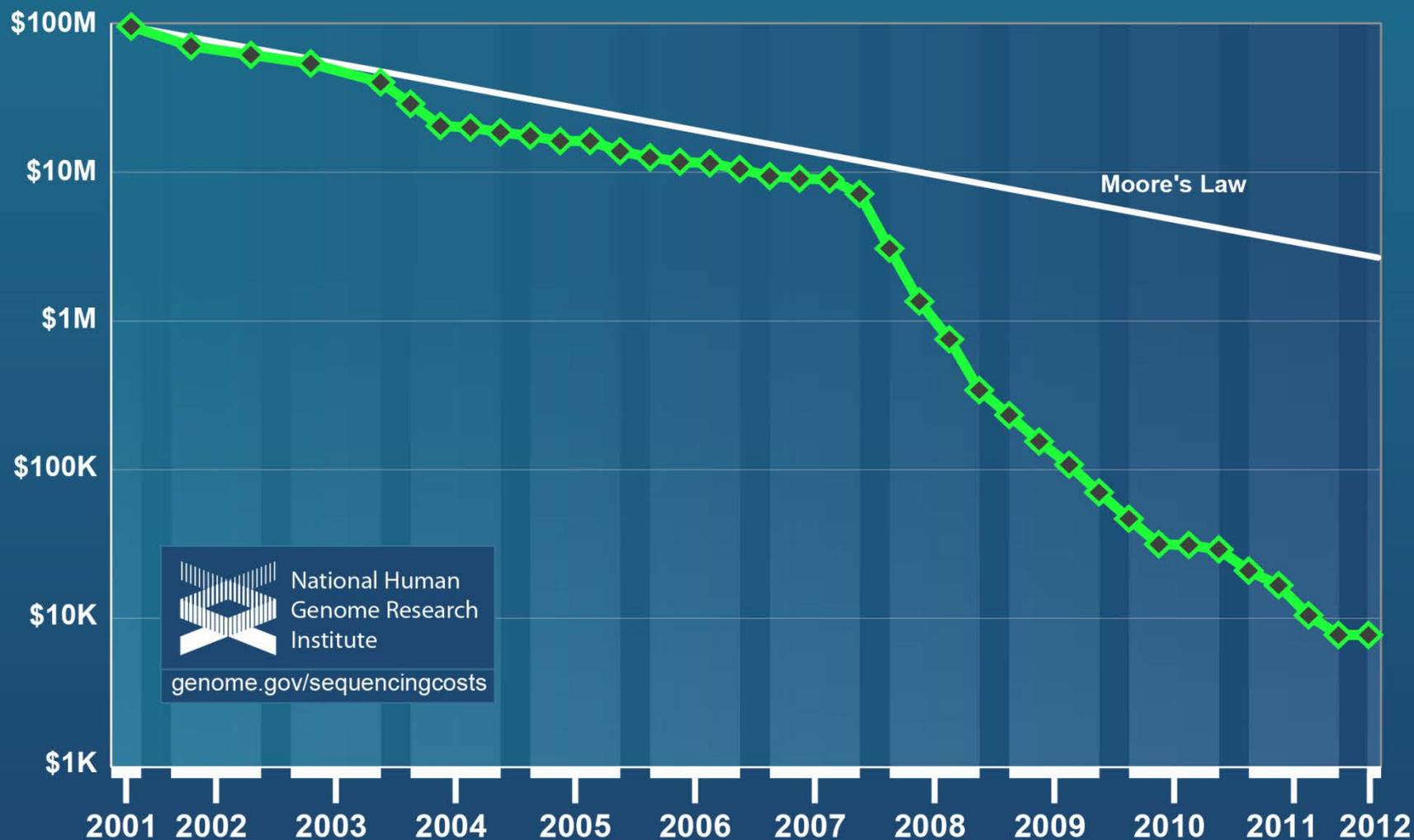
# Large Sample Sequencing and NHGRI Priorities

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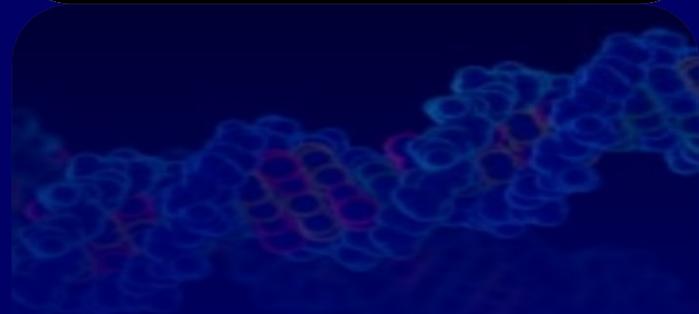
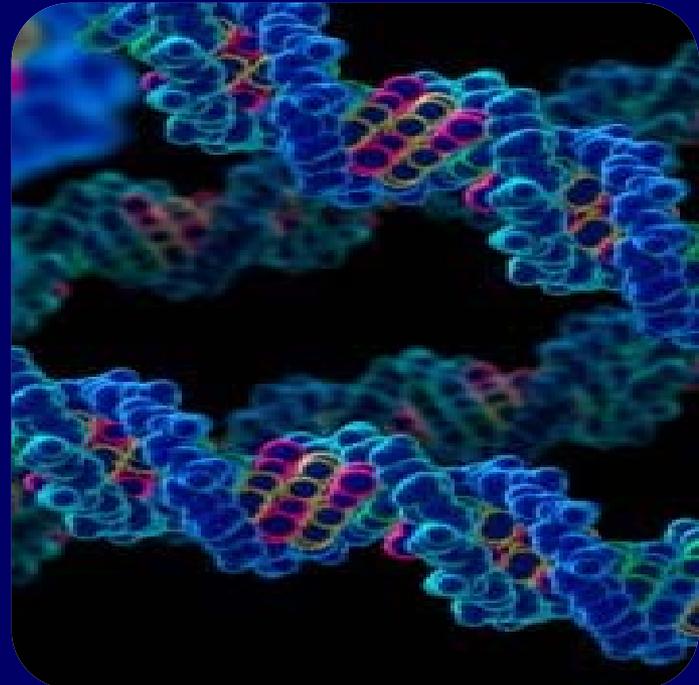
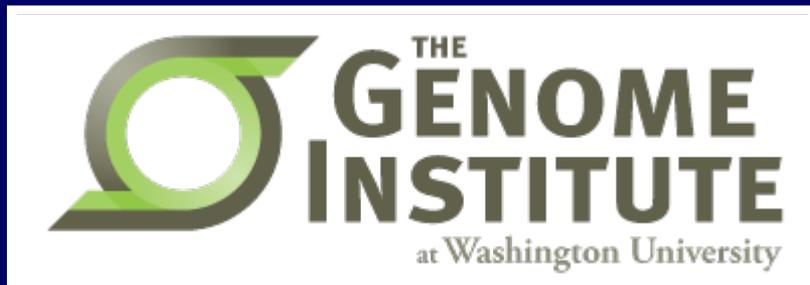
**Eric Green, M.D., Ph.D.**  
**Director, NHGRI**



# Cost per Sequenced Human Genome



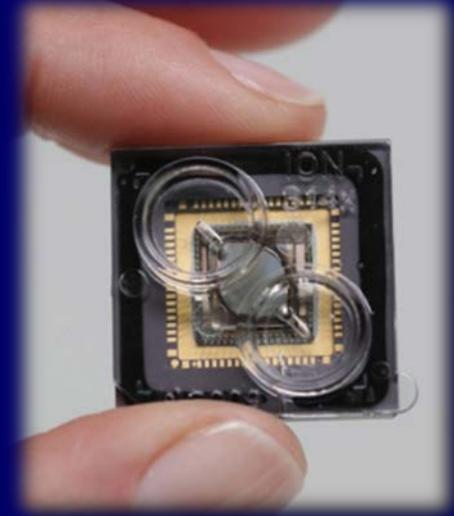
# NHGRI's Large-Scale Genome Sequencing Centers



# Dissemination of Genomics

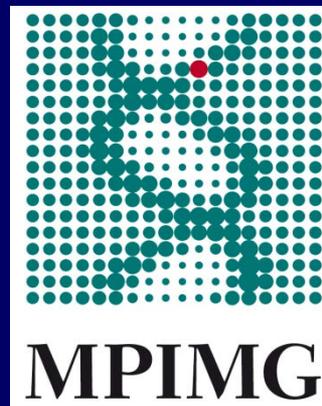


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# **'Genome Sequencing' @ NIH– Beyond NHGRI**

# Genome Sequencing Beyond the NIH





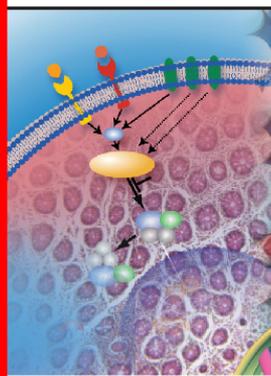
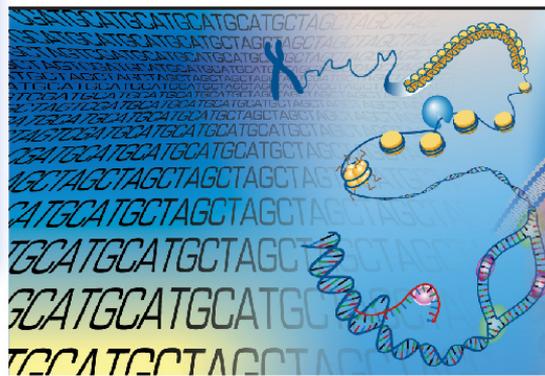
Understanding  
the Structure of  
Genomes

Understanding  
the Biology of  
Genomes

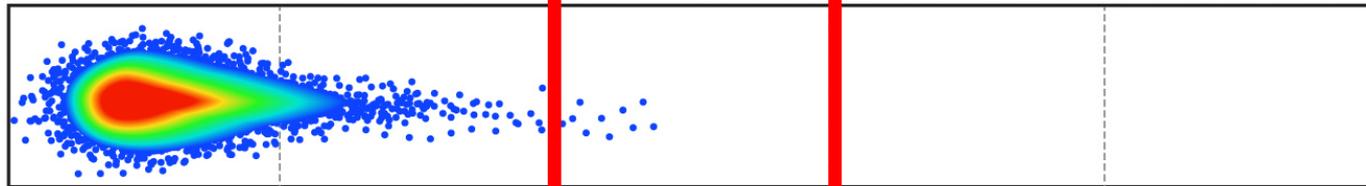
Understanding  
the Biology of  
Disease

Advancing  
the Science of  
Medicine

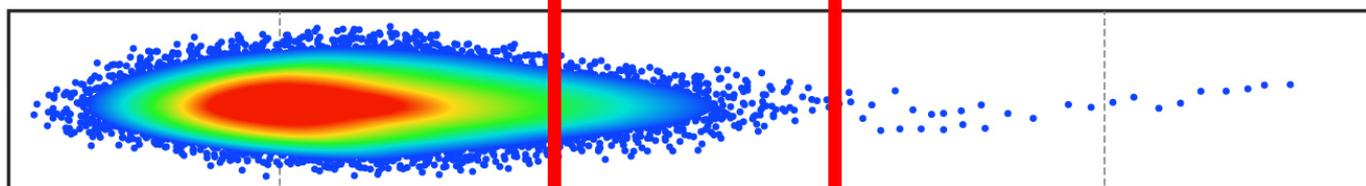
Improving the  
Effectiveness of  
Healthcare



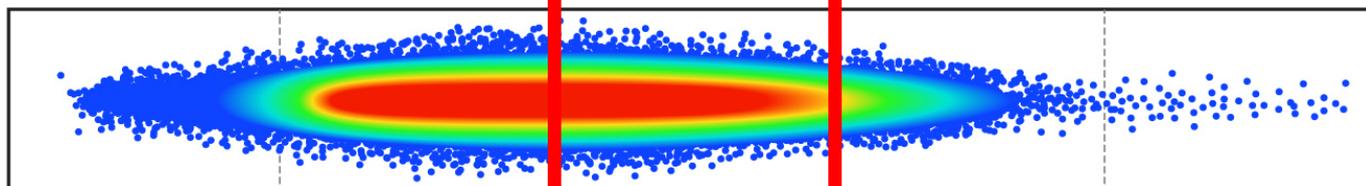
1990-2003  
Human Genome Project



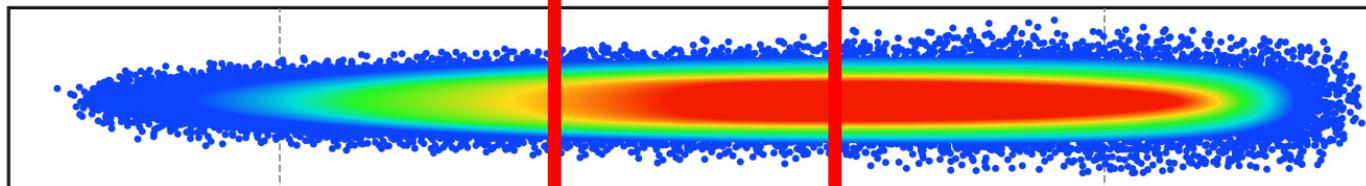
2004-2010



2011-2020



Beyond 2020



Green et al. (2011)



# NIH & NHGRI Aim to Learn



**DNA**

# The Many Issues, The Many Questions

- Power and sample size
- Genetic architecture of disease relative to study design
- Case-control vs. family vs. extreme designs
- Prospective vs. retrospective
- Whole-genome vs. whole-exome sequencing
- Data types beyond genomic data
- Validation strategies





[genome.gov](http://genome.gov)