

Bioinformatics Core in Human Genetics

Harnessing IT to Serve Research



Who Am I

- Manager of Research Informatics Core
 - 8 Developers
 - 6 Data Analysts
 - 3 Administrators (Linux, Windows, Database)
- 16 Years of Biology Research experience
 - 5 Years at the bench
 - 11 Years in Bioinformatics

What We Do

- Database - Store information collected by investigators
 - Demographic
 - Clinical
 - DNA Sample
 - Structural Variation
 - Genotype/SNP
 - Experiment
- Data Input/Output
 - Web Applications
 - Scripts
 - Client Software
 - Server Software
 - Data Transfers

Software Development

- Enterprise level web application development using Ruby on Rails and PHP.
- Data QC and analysis software development using C++
- We use Agile development methods with rapid development cycles.

What We Do (cont.)

- Provide Hardware

- Servers (Linux, Windows, Mac)
- Desktops (Windows, Mac)
- Email
- Websites
- Compute Cluster
- Networking Equipment

- Provide IT support

- Help end user
- Solve hardware/software problems
- Install software
- Solve Networking issues

What Else We Do

- Statistical Analysis of Genetic Data
 - 6 Full time Data Analysts
 - Full spectrum of software
- Sequence Analysis
 - Genome Analyzer II
 - Assembly of sequence
 - Custom analysis based on project

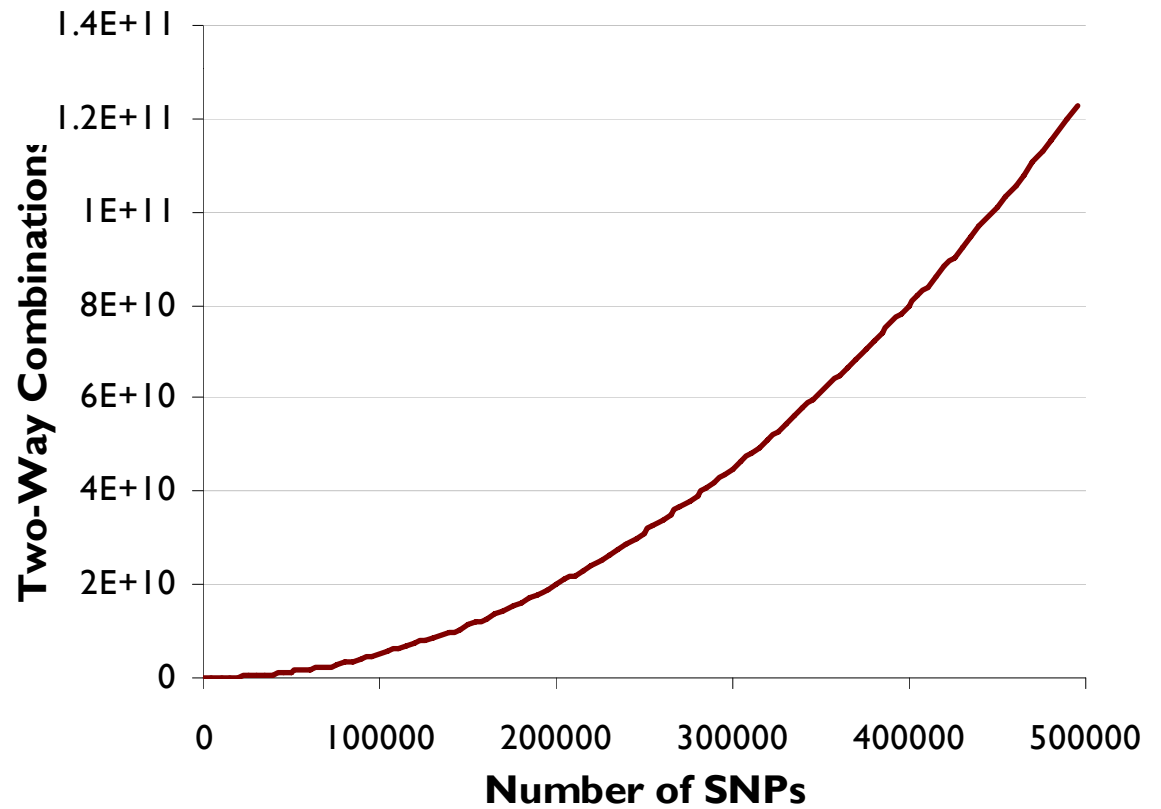
Advances in Genotyping



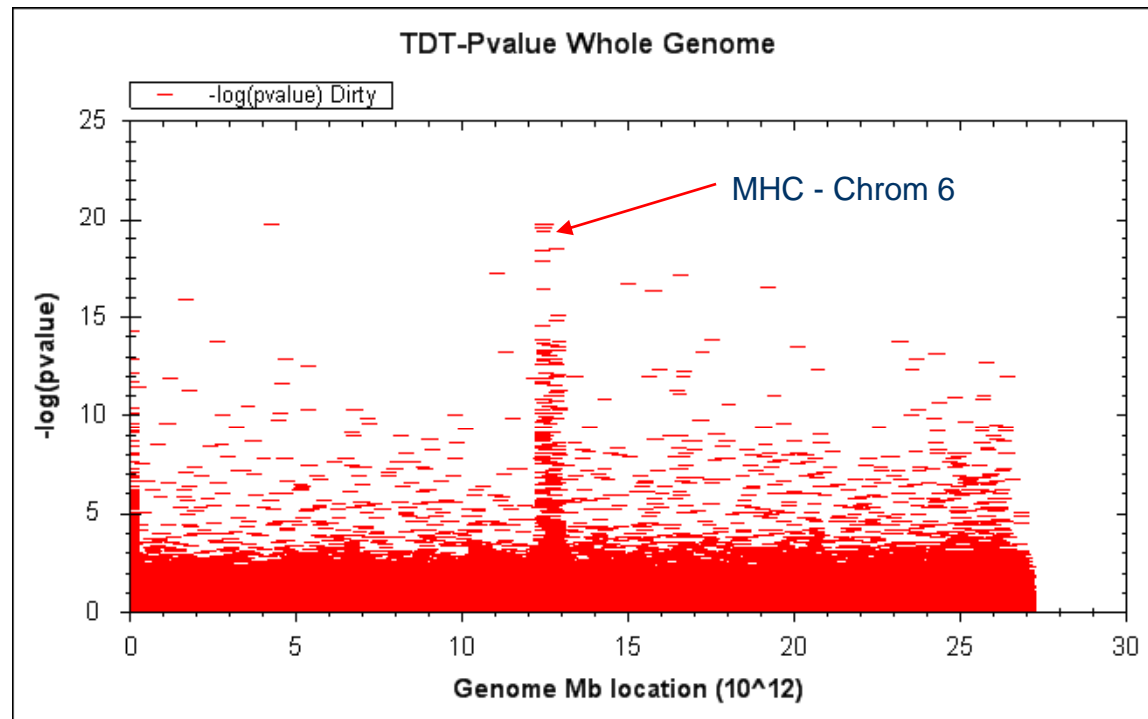
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1	2	1	2	2	0	2	0	1	1
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Genome Wide Association Studies



How Do We Function

- We are a Service Core Facility
 - We function as business within Vanderbilt
 - \$1.8 million budget
 - Grants Based
 - Service Level Agreements
 - Billing
 - Developers and Data Analysts are well compensated (Average Salary \$55-\$70K)