

G4G

Genetics for Genealogy

This page provides a platform to organize and distribute workshop and course materials on the genetics of genealogical relationships. Here you will find slide presentations from past events along with links to web pages containing detailed explanations of certain topics.

Source: Bryant McAllister, PhD

Overview: With a single mouse-click sophisticated genetic tests for human ancestry analysis are available directly to consumers at a relatively low cost. Advances in human genetics over the past 30 years have enabled the emergence and growth of this “recreational genetics” marketplace. My goal is to introduce the science underlying these tests, compare the products delivered by the companies that dominate the US marketplace (e.g., 23andMe, AncestryDNA, Family Tree DNA, MyHeritageDNA, and The Genographic Project), and demonstrate their utility. Personal genetic analysis provides a window into the past at different time scales, including genetic inferences of pre-genealogical ancestry along with the discovery of genetic relationships between cousins as a genealogical research tool. They also provide the means to glean information from your own DNA recipe.

Objectives

- Evaluate the products and deliverables of direct-to-consumer DNA tests
- Conceptualize the organization of the human genome and properties that contribute to its variability among individuals
- Build proficiency in the methods and interpretation of test results of human ancestry and biological relationships

Blog



Exponential Growth of the AncestryDNA Database

McAllister, Bryant F posted on Sep 15, 2017

I posted a few times in the summer of 2015 when 23andMe and AncestryDNA both reached the threshold of genotyping their first million customers. I'm consistently amazed at how popular these commercial DNA tests have become. In this year, 23andMe has grown to 2 million customers in the 10 years <https://mediacenter.23andme.com/about-us/> since launching the first version of their DNA testing service. AncestryDNA now has 5 million customers [https://www.ancestry....](https://www.ancestry...)

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Resources

[List of Resources](#)

[Guide to SNP Matching](#)

[Comparison of DTC Testing Companies](#)

Upcoming Events

March 2019 meeting of the **DNA Interest Group - Iowa City**

Ethical implications of recent genetic advancements

March 26, 6-7pm, Digital Media Lab, 2nd Floor, Iowa City Public Library

What is **bioethics**, and why is it important? What new ethical dilemmas arise with new scientific advancements? Where should the line be drawn with applications using Gene Therapy, Cloning, and CRISPR?

Complete this [interest form](#) if you would like to be notified by email of future classes and events.

Past Events & Materials

DNA Interest Group

[An introduction to epigenetics](#) - February 2019

[Thank You for Coming \(Film Screening\)](#) - November 2018

[Tips on getting more from an AncestryDNA test](#) - October 2018

[Predicting your traits](#) - September 2018 ([slides](#), [application](#))

[Inclusion improves medial genetics](#) - August 2018

[Who we are and how we got here](#) - a book discussion ([Table of Contents](#) and [links to reviews and materials](#)) - July 2018

[DNA: your partner in crime?](#) - June 2018

[Pharmacogenomics: How Genes Inform Drug Therapy](#) - May 2018

[The Human Genome](#) - April 2018

[Why the Y? \(and not the mtDNA\)](#) - March 2018

[What Are You? Race, Ethnicity and Genetic Testing](#) - February 2018

[Changes in the DNA Marketplace](#) - January 2018

[Doggy DNA](#) - November 2017

[Identifying and Predicting Relationships](#) - October 2017

[Reference Pedigree and Shared cM Summary](#)

[Family History Revealed: Part 2 - Finding](#) - September 2017

[Family History Revealed: Part 1 - Searching](#) - August 2017

[Saigon to Sioux City](#)

[Archaic Ancestry](#) - July 2017

[Genetic Communities™ at AncestryDNA](#) - June 2017

[DNA Mythbusters](#) - May 23, 2017

[DNA Day 2017 - Personalizing Genetics Education](#) - April 25, 2017

[Student Genetic Ancestry Testing](#) - Dr. Charles Aquadro, Cornell University

[Interpreting SNP Data](#) - March 28, 2017

[Ancestry Prediction](#) - February 24, 2017

[Exploring the DNA Marketplace](#) - January 24, 2017

Presentations

Genetics for Genealogy: navigating the DNA marketplace

Genealogical Society of Linn County Iowa, Cedar Rapids, IA - January 26, 2018

[Slides](#), [Summary](#), [Guide to SNP Matching](#)

DNA Connections and Digging for the Root of "Our" - M19 - McAllister Family Tree

Clan Mcallister of America Gathering, Memphis, TN - August 11, 2018

[Slides](#)

The Personal Genome: Navigating the DNA Marketplace

Triangle Club, Iowa City, IA - February 18, 2018

[Full pdf](#) [Slides ppt](#)

Using DNA in Genealogy: Navigating the DNA Marketplace

Franklin Avenue Library, Des Moines, IA - February 21, 2017

[Slides](#) [Handout](#)

The Personal Genome: The Past Revealed through Genetic Tests

UIAA Lifelong Learning - November 9, 2016, 6:30 pm

[Slides](#)

Courses - October 2016

Genetics for Genealogy: Hands-On Computer Workshops

Kirkwood Regional Center at The University of Iowa, Room 60

Getting to Know Your DNA Relatives - October 5 & 6, 2016

Guide - SNP Matching

Slides - Oct. 5

Slides - Oct. 6

Shared Matches Worksheets

Building DNA Families - October 12 & 13, 2016

Guide - SNP matching

DNA Family Worksheet

DNA Summary Spreadsheet

Slides - Oct. 12

Slides - Oct. 13

Courses - August 8-11, 2016

Genetics for Genealogy: Hands-On Computer Workshops

John and Mary Pappajohn Education Center, Des Moines, IA

Getting to Know Your DNA Relatives - August 8 & 9, 2016

Guide - SNP Matching

Concept map

Slides - Aug. 8

Slides - Aug. 9

Building DNA Families - August 10 & 11, 2016

Guide - SNP matching

DNA Family Worksheet

DNA Summary Spreadsheet

Slides - Aug. 10

Slides - Aug. 11

**2016 Spring Conference - Iowa Genealogical
Society**

DNA: Unlocking the Code (Syllabus)

April 9, 2016 - Des Moines, IA

Session 1 - Navigating the DNA Marketplace ([slides](#))

Session 2 - Connecting Cousins for Genetic Genealogy ([slides](#))

Session 3

- Option A - Getting More from Your SNP Data (Advanced - [slides](#))
- Option B - Small-Group Tutorials (Beginner)

Session 4 - Ancestry Analysis from DNA ([slides](#))

Spring 2016 Senior Course Schedule

**Genetics for Ancestry, Genealogy
and more**

Week 1, Feb. 4 - DNA and the Human Genome

DNA & Your Personal Genome

Potential Consequences of DNA Testing (written for a seminar course)

Comparison of DNA Testing Options

Week 2, Feb. 11 - Ancestry Analysis from DNA

Genealogy to Trees: Inheritance and Tracing Ancestry Near and Far

Mitochondrial Eve & Y-Chromosome Adam

Week 3, Feb. 18 - Connecting Cousins for Genetic Genealogy

Autosomal Inheritance

Genome Comparisons

Week 4, Feb. 25 - Recreational Genetics