Demystifying DNA: Getting Started with Genetic Genealogy
Class 3: Using DNA Tools

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DNA Platforms

- **Ancestry**
    - Custom Groups – used for filtering and identifying matches by a specified color. Recommend using ancestor's surnames.
- **FamilyTree DNA**
    - Linking DNA matches can help you perform maternal/paternal sorting by linking known genetic cousins in your uploaded GEDCOM file
- **MyHeritage**
    - AutoClusters groups together matches that likely descend from a common ancestor.

Third Party Tools

- **GEDMatch**
    - Allows DNA uploads from several testing companies – "fish in multiple ponds".
    - Tier 1 tools

DNA Applications:

- One-To-Many Beta - give it a try
- One-To-Many DNA Comparison Result
- One-to-One Autosomal DNA Comparison
- One-to-One X-DNA Comparison
- Admixture (heritage)
- Admixture / Oracle with Population Search
- People who match both, or 1 of 2 kits
- DNA File Diagnostic Utility
  Analyze DNA file upload for potential problems.
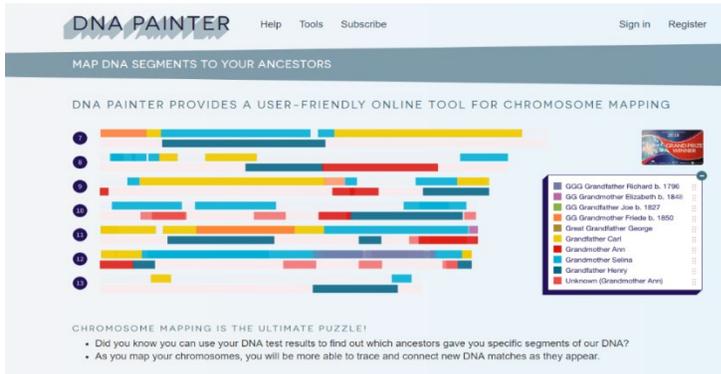- Are your parents related?
- 3-D Chromosome Browser

Tier 1 (0)

- Enhanced One-To-Many DNA Comparison
- Q-Matching Enhanced One-To-One
- Segment Search
- Phasing
- Triangulation
- Lazarus
- Multiple Kit Analysis
- My Evil Twin (Phasing)
- Combine multiple kits into 1 superkit
- Clusters, Single Kit input, Basic Version

Website: https://www.gedmatch.com

American Ancestors.
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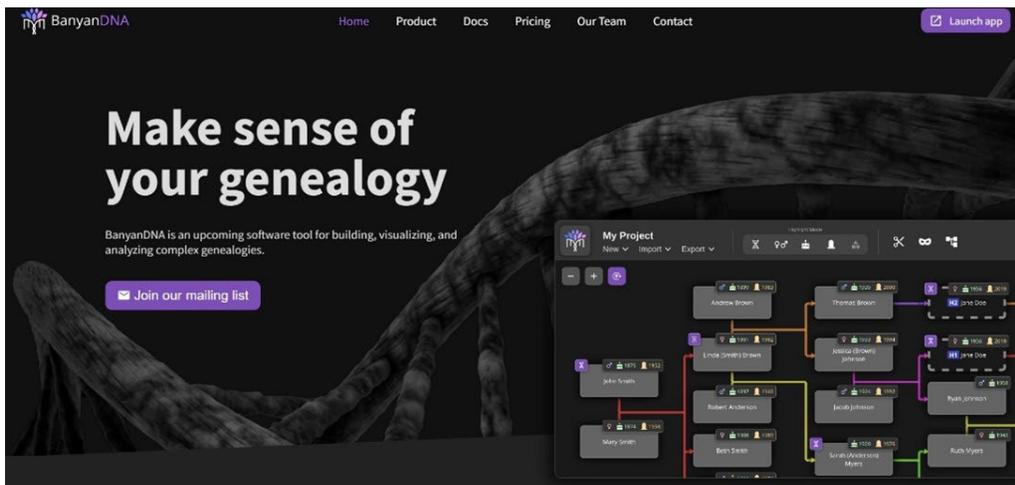
- **DNA Painter**
  - Use segment data to "paint" a visual representation of your chromosomes (recommended to use GEDMatch data).
  - What Are The Odds (WATO) - test hypotheses using manually created or uploaded trees

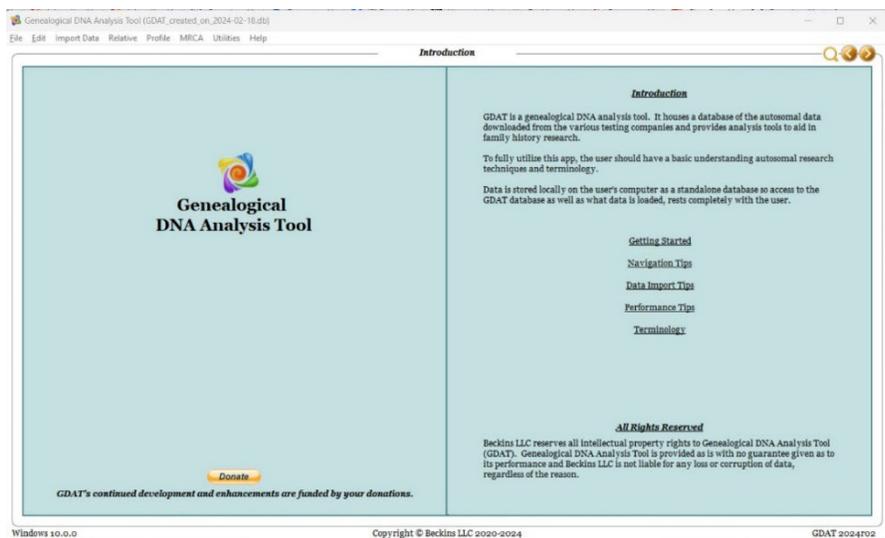**Website**: https://www.dnapainter.com

- **Banyan DNA**
  - Analyze complex relationships including double cousins and pedigree collapse
  - Run calculations within a few seconds to obtain statistical data on hypotheses
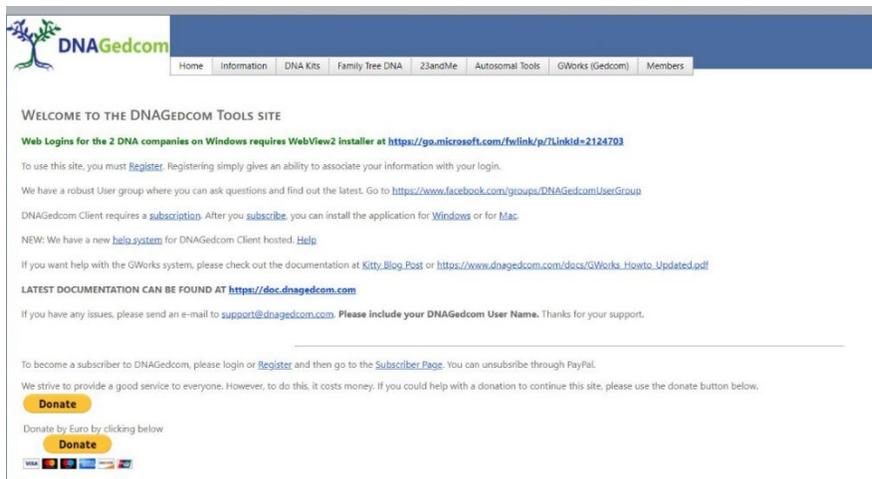 - Free and premium products available

Website: www.banyandna.com

- **Genealogical Data Analysis Tool (GDAT)**
  - DNA client you can download to your computer to manage and analyze DNA match data.
  - Import templates provided to upload from different DNA websites, as well as GEDMatch and DNA GEDCOM.
  - Available for PC, Macs, and Linux.

Website: https://sites.google.com/view/genealogical-dna-analysis-tool

- **DNA GEDCOM**
  - DNA client you can download to your computer to manage and analyze DNA match data.
  - Access your different DNA websites via web logins to pull data into program.
  - $ Subscription required to run program (PC and Mac versions available).

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Website: www.dnagedcom.com

- **AncesTREES**
    - Triangulation is more visual.
    - Upload DNA kit (recommended to use Tier 1 tools at GEDMatch for segment data).

Website: https://www.americanancestors.org/ancestrees

DNA Consultations
- DNA consultations can currently be arranged with a genealogist via telephone or online (Zoom)
- Work with you on a research plan for your brick wall
- Learn how to use one of the many third-party tools to manage and analyze DNA (including GEDMATCH)
- Request a 1-hour post-DNA results consultation at https://www.americanancestors.org/expert-help/consultations#form

Publications

Angie Bush, *Genetic Genealogy Basics*. (Baltimore, Maryland: Genealogical Publishing Company, 2016).

Blaine Bettinger, *The Family Tree Guide to DNA Testing and Genetic Genealogy (2nd Edition)*. (Cincinnati, Family Tree Books, 2019).

Christopher Challender Child, *Using DNA in Genealogy*. (Boston, New England Historic Genealogical Society, 2014).

Colleen Fitzpatrick, *DNA and Genealogy*. (Fountain Valley, CA, Rice Book Press, 2005).

Debbie Parker Wayne, *Advanced Genetic Genealogy: Techniques and Case Studies*. (Cushing, Texas, Wayne Research, 2019)

Diahan Southard*, Your DNA Guide the Book: Step-by-Step Plans to Connect You with Your Family Using Your DNA* (United States, Your DNA Guide, 2020).

Ian Watson, "*The origins of Aquila Ramsdell's given name: investigating the 17th century with mitochrondrial DNA*." American Ancestors (Boston, New England Historic Genealogical Society, 2017). Available online at https://www.americanancestors.org/DB405/i/53692/54/72531115

Tamar Weinberg, *The Adoptee's Guide to DNA Testing: How to Use Genetic Genealogy to Discover Your Long-Lost Family*. (Cincinnati, Family Tree Books, 2018).

Websites

- 23andMe https://www.23andme.com
- AncesTREES DNA Tools https://www.americanancestors.org/ancestrees
- Ancestry https://www.ancestry.com/dna
- Banyan DNA https://www.banyandna.com
- DNA GEDCOM https://www.dnagedcom.com
- DNA Painter https://www.dnapainter.com
- FamilyTree DNA https://www.familytreedna.com
- GEDMatch https://www.gedmatch.com
- Genealogical Data Analysis Tool (GDAT): https://sites.google.com/view/genealogical-dna-analysis-tool
- Genetic Genealogy Standards http://www.geneticgenealogystandards.com
- Genetic Genealogy Tips & Techniques Facebook Group https://www.facebook.com/groups/geneticgenealogytipsandtechniques
- International Society of Genetic Genealogy Wiki https://isogg.org/wiki
- LivingDNA https://www.livingdna.com
- MyHeritage https://www.myheritage.com

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