

References – Genes for the Genealogist – Michelle Bray Wilson 1Aug2014

Test Companies

- Ancestry DNA: <http://dna.ancestry.com> big database, no segment data / chromosome browser
- Family Tree DNA: <http://www.familytreedna.com> smaller database, good tools, Y & mito tests
- 23 and Me: <https://www.23andme.com> big database, must invite matches to share, decent tools

Information, Wiki & Links

- ISOGG: <http://www.isogg.org>
- The ISOGG Wiki http://www.isogg.org/wiki/Wiki_Welcome_Page
- And Wikipedia!

3rd Party Tools

- DNAGedCom: <http://dnagedcom.com> the ADSA tool is here (Autosomal DNA Segment Analyzer)
- DNAGedMatch: <http://v2.gedmatch.com> upload your Ancestry results here
- Mito Search: www.mitosearch.org/
- Y Search: www.ysearch.org
- DNAadoption: <http://www.dnaadoption.com/>
- Jeff Snavelly's Chrome Extension for Ancestry DNA:
<https://chrome.google.com/webstore/detail/ancestrydna-helper/hjflmfphflaeehpdiggobllgffelfee?hl=en-US>

Blogs

- Kitty Cooper "Kitty Cooper's Blog" <http://blog.kittycooper.com/>
- CeCe Moore "Your Genetic Genealogist" <http://www.yourgeneticgenealogist.com/>
- Blaine Bettinger "The Genetic Genealogist" <http://www.thegeneticgenealogist.com/>
- Roberta Estes "DNA Explained" <http://dna-explained.com/>
- Jim Bartlett "Segment-ology" <http://segmentology.org/> New!! Jim's the master of triangulation
- Karen Wheaton – Beginner's Guide to Genetic Genealogy
<https://sites.google.com/site/wheatonsurname/beginners-guide-to-genetic-genealogy>

Case Study

- NGS Quarterly – June 2015, "Too Few Sources to Solve a Family Mystery? Some Greenfields in Central and Western New York", Thomas W. Jones

How much DNA is Identical By Descent?

Relationship	#	Min	Median	Average	Max
1C	662	82.65	884.81	880.81	1559.00
1C1R	606	54.18	434	439.74	902.59
1C2R	134	26.90	244.76	239.72	412.74
2C	598	47	235.78	245.98	760.10
2C1R	590	0	131.22	139.66	465.99
2C2R	101	0	84.96	94.04	574.60
3C	517	0	83.41	89.40	334.06
3C1R	264	0	67.92	76.03	332.26
3C2R	36	16.4	53.41	51.90	121.66
Aunt/Uncle	722	121.34	1730.26	1703.44	2226.6
Aunt/Nephew	106	847	1724.14	1708.33	2175
Aunt/Niece	137	684.62	1722.3	1709.52	2226.6
Uncle/Nephew	67	739.71	1743.88	1723.71	2038.52
Uncle/Niece	101	892.5	1742	1704.56	2004
Aunt/Uncle	311	121.34	1730.13	1694.38	2192
Grandparent/Grandchild	195	875	1757.84	1759.54	2365.1
Great Aunt/Uncle	123	235.71	858.12	843.84	1301.1
Great Grandparent/Grandchild	25	547	862.64	855.66	1110.03
Half 1C	56	261.76	445.87	457.69	1194.37
Half 1C1R	33	99.27	218.92	222.61	517.6
Half 2C	44	17.2	118.39	123.31	264.19
Half Aunt/Uncle	43	540.1	906	892.17	1348
Half Siblings	125	787.15	1737.26	1731.05	2133.71

All numbers in cM except the # column, which is the number of respondents. Source: Blaine Bettinger, see <http://www.thegeneticgenealogist.com/2015/05/25/the-shared-cm-project-an-update/>

Autosomal "Family Finder" Tests

- Examines ~700,000 SNPs on the 22 autosomal chromosomes known to vary
- Persons with lots of identical *adjacent* SNP locations are likely relations
- Paper trails are needed to determine the specific relation – **start with best matches**
- **Long** shared segments indicate common ancestors

cM segment	% IBD	% IBS
10	99	1
9	80	20
8	50	50
7	30	70
6	20	80
5	5	95

Source: John Walden

Relationship	Actual							
Suggested	1st	2nd	3rd	4th	5th	6th	7th	8th
1 st cousin	97%	3%						
2 nd	5%	90%	5%					
3 rd		10%	70%	30%	10%	5%		
4 th		5%	10%	40%	30%	10%	5%	
5 th			5%	10%	30%	20%	10%	5%

Source: Maurice Gleeson