

Eller DNA Project



Status Report for Nashville EFA
Conference----July 25, 2009

Tom Eller, DNA Project Administrator

Eller DNA Project



This presentation used material from Family Tree DNA and from World Families Net with their permission.

Borrowed slides will show either their logo, or FTDNA or WFN in the center of the bottom of the slide.

Overview



- Refresher on use of DNA for Genealogy
- Goals of the Eller DNA Project
- Status of Testing
- Further Work

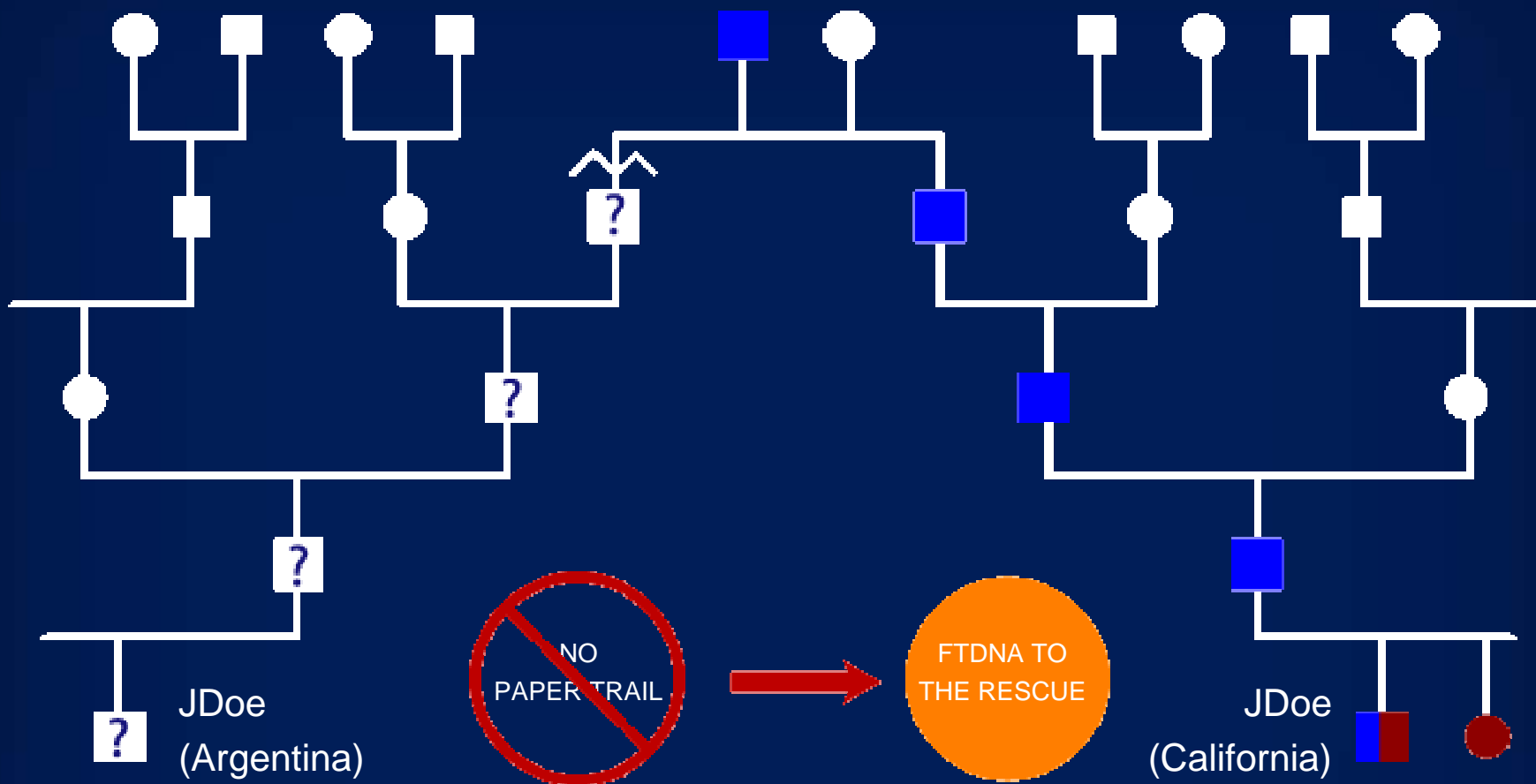
Family Tree DNA

Genetic Genealogy Started Here

With 251,000 samples in our DNA database (the largest of its kind in the world) your genealogical search could become even easier

What's special about FTDNA

- Determining Family Relationships
- Possible times to the MRCA
- Where did my Ancestors come from?
- Importance of the Database

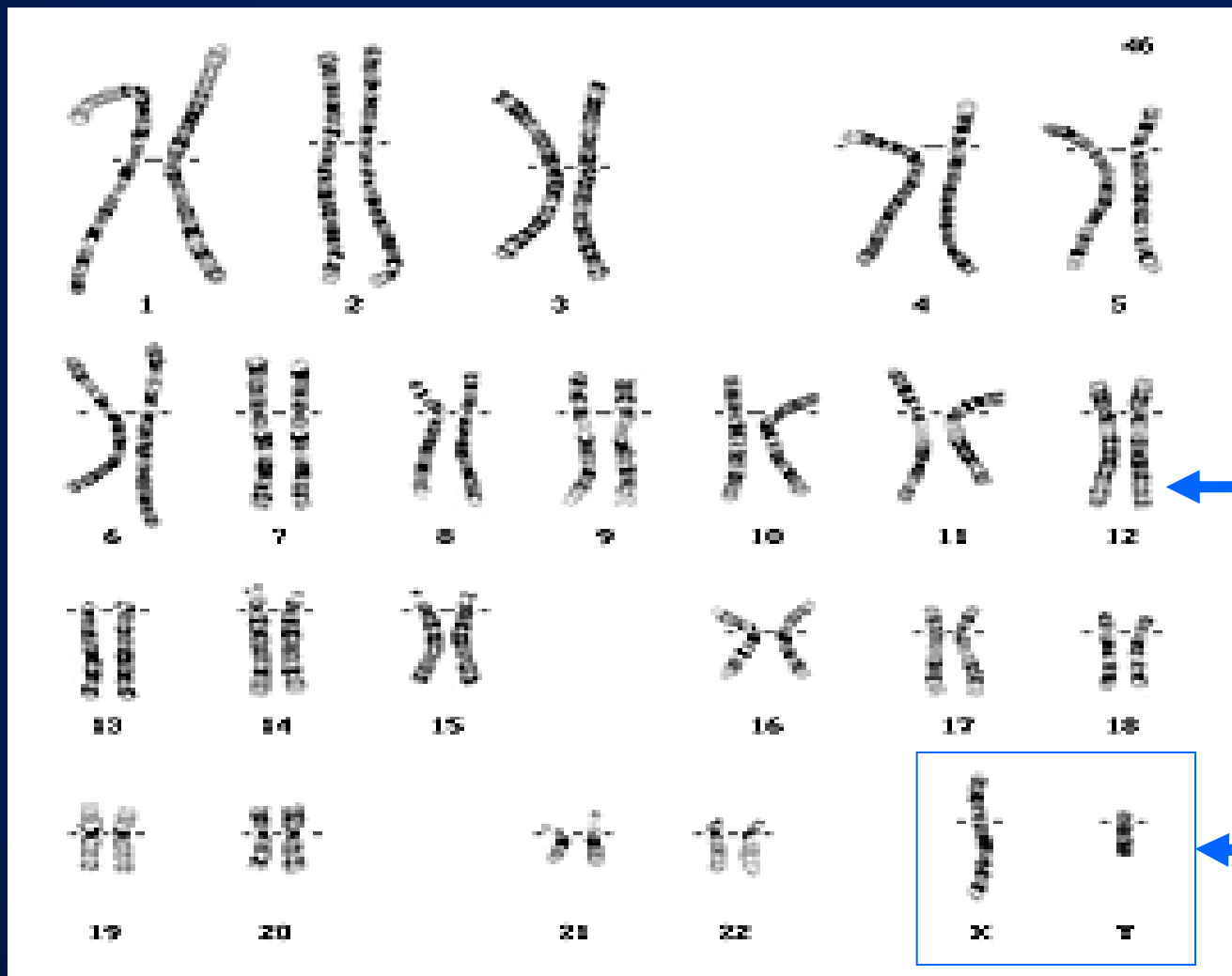


What is Genetic Genealogy

JDoe (Argentina) and JDoe (California) don't have a paper trail to connect them. Could they have shared a common male ancestor?
DNA can answer this question.

Your Chromosomes

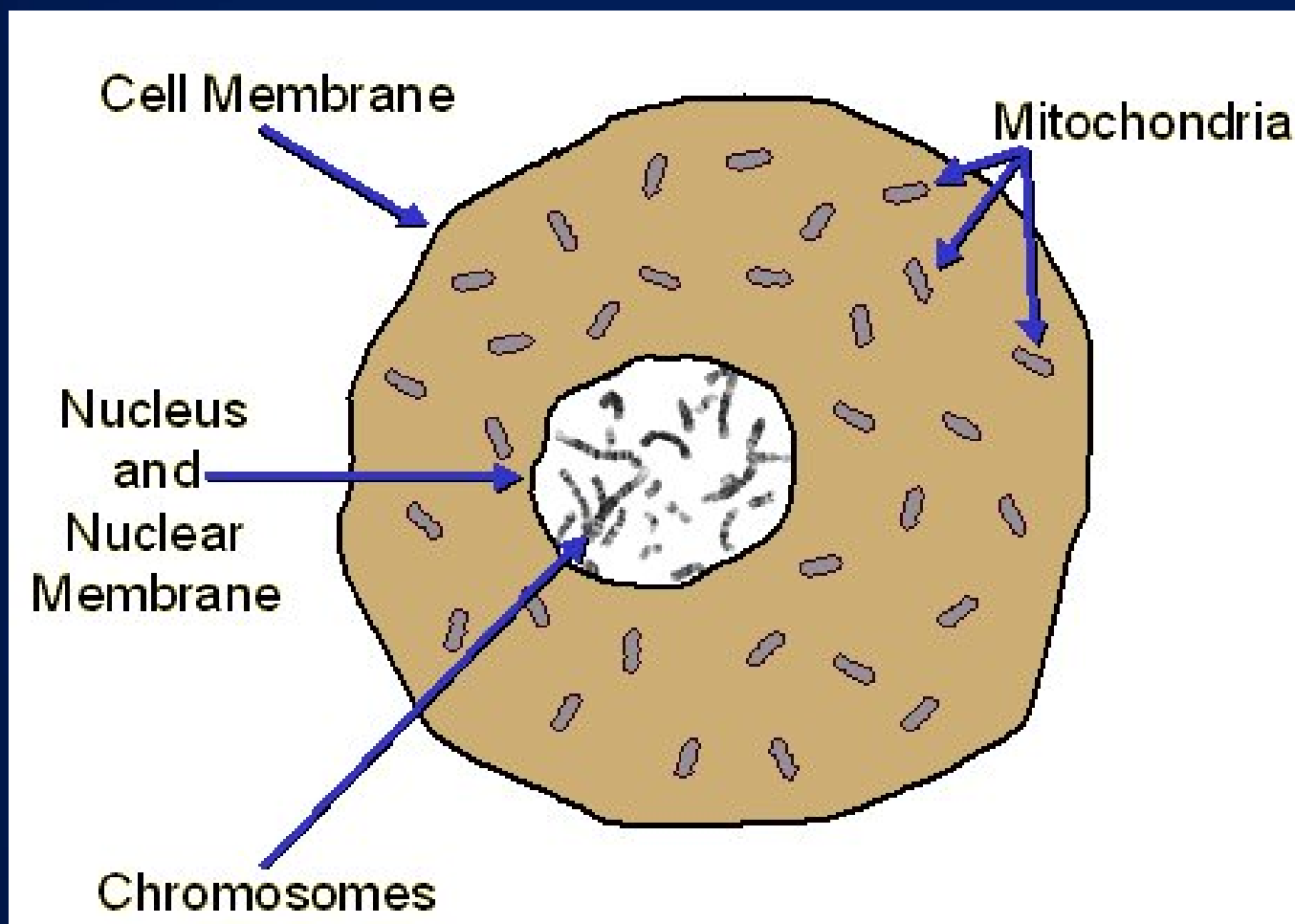
46 chromosomes - 23 from each parent



22 pairs of
autosomes

1 pair of sex
chromosomes

The Human Cell



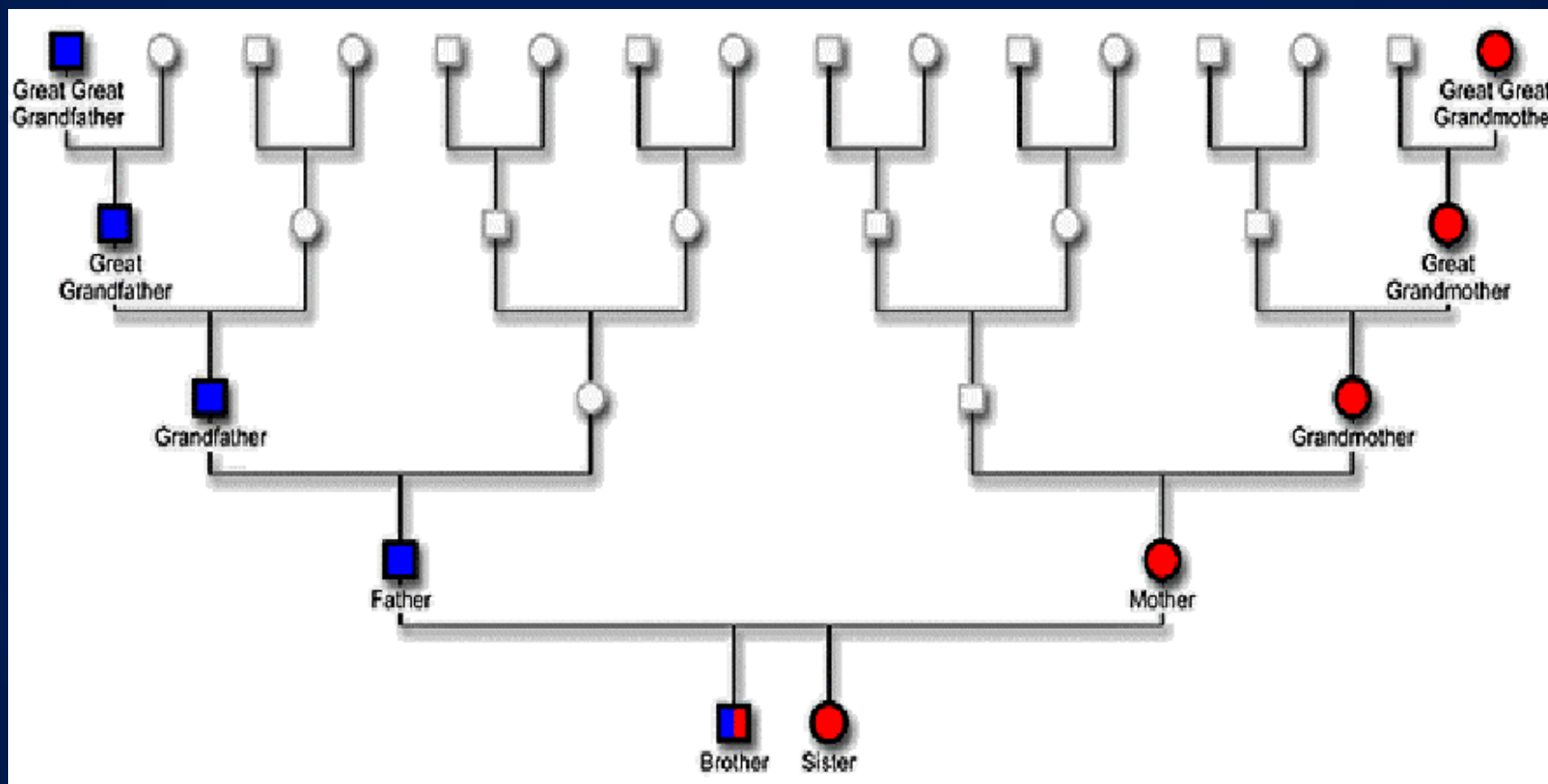
DNA Testing

DNA for genealogy focuses on the sex chromosomes and not the autosomal DNA

- Males receive both Y-DNA and mtDNA
- Females receive mtDNA

Since both the surname and the Y chromosome follow the male line, Surname Projects are performed by tracking and analyzing the Y-DNA

What we can trace and what we can't



All it takes is a swab!





Description of DNA Test

- A face cheek swab is used to collect the DNA—scrape the inside.
- The test uses the Y-chromosome
- This y-chromosome is passed from father to son.
- The y-chromosome is *usually identical* from father to son
- Occasionally, there is a “mutation”. Mutations may help us group branches

What is a DNA Test?

- The DNA strand is mapped into addresses called “Markers”.
- The genetic material arranges itself into repeating patterns at each Marker
- A count is made of the number of times the pattern repeats
- The marker is assigned this “count”

How is DNA Compared?



A DNA result is made up of counts at markers

The Eller primary test is 67 markers (Barton used 26)

Results are compared against each other

A good match is 37/37, 36/37, 35/37

With enough results, a “Haplotype” can be defined for the “Common Ancestor”

Comparisons are then made to the “Haplotype”

WFN

Comparisons...

No matter what anyone tells you.

No matter what you read.

It's ALL about the database!

Matches - Who am I related to? (& how closely)

Our system displays the names and email addresses of people that you match.

You can match against the entire database, specific projects, or both!

How closely are these people related?

FTDNATiP™ Report

In comparing 37 markers, the probability that Sandy JDoe and Maurice JDoe shared a common ancestor within the last..

| | | | | | |
|--|--|--|--|------------------------------------|--|
| 2 generations is 9.59% | 4 generations is 31.22% | 6 generations is 53.82% | 8 generations is 71.53% | 10 generations is 83.47% | 12 generations is 90.82% |
| 14 generations is 95.08% | 16 generations is 97.43% | 18 generations is 98.68% | 20 generations is 99.34% | 22 generations is 99.67% | 24 generations is 99.84% |

FTDNA Milestones

- Over 153,000 test kits sold since inception
- Collaboration with National Geographic
- 156,000 Y-DNA records in the database
- 90,000 mtDNA records in the database
- 285,000 kits sold by National Geographic

Comparisons...

No matter what anyone tells you.

No matter what you read.

It's ALL about the database,

And here is why...

An Email received by FTDNA

Being an avid genealogist, I joined the Aaaa yDNA project to locate a common ancestor, however the results excluded me and indicated a Bbbb lineage instead. On questioning my parents, and mentioning the Bbbb name they admitted I was adopted as an infant and my deceased father was a Bbbb. This revelation requires me to rethink some of my core concepts, as well as shelve about half of my genealogical research. My FTDNA kit number is nnnnn and I have a 25/25 match with at least five of your group's members. May I join?

Eller Project Goals



Identify the DNA of Eller lines by testing two male descendants of each

Understand which lines

Are related

Are not related

Connections to Germany, Estonia, Sweden, Brazil, Italy

Eventually, clarify the origins and relationships of all known lines

Eller Lines Test Plan



Pre-1800 Immigrant Ellers

George Michael Eller-----Tested
Henry Eller-----Not Tested
Christian Eller-----Not Tested
John Jacob Eller, Sr.-----Tested
John Melchior Eller, Sr.----Not Tested
Jacob Eller-----Not Tested

Eller Surname Tests



- E1 Thomas Eller
- E2 Bruce Ellerin
- E3 Walton Glenn Eller
- E4 Lynn Eugene Eller
- E5 Roger Foster Eller
- E6 James Maurice Eller
- E7 Richard Eugene Eller
- E9 Joe G Eller
- E10 Colon Eller

Kits Not Returned



Ordered in July 2008 by:

Jenna Louise Gardner

Calvin Eller

George Eller

Key Results



Tests that confirm traditional genealogy records give basis for trusting unexpected results.

- George Michael, Peter B, John, Peter, Ben Franklin, Do, Coy, **our Roger Eller.**
- George Michael, Peter B, John, Simon, Harvey, Thomas, Vernon, **our Lynn Eller**
- George Michael, Peter, John, John Jr, Jesse, Emery, Vance, **our Joe G Eller.**

More Good Results



James M Eller matches Walter Glenn Eller

But, Walter's ancestor in US came in mid -
1700s

James's ancestor in US came in mid-1800s

Believed related through 6th Eller son of
Casper who did NOT immigrate to US

Eller Haplogroups



Tom Eller---I2b1

James M Eller, Walter Glenn Eller---J2a2

Joe Rodney Eller---I1

Colon Eller---R1b1b2

Others: No report, email into FTDNA



Migrations, the R1b Haplogroup

R1b is the most common Haplogroup in Europe – average is 40%

R1b ancestors were Paleolithic hunter-gatherers who arrived in Europe before the last Ice Age, about 30 to 40,000 years ago

They took refuge in Iberia and southern France during the Ice Age

They seem to have walked the land bridge to the British Isles some 10,000 to 15,000 years ago

Along the way, at least some became known as Celtic, or Celts



What's Next?

More men tested in more families

Work on identifying branch markers

Continue “targeted sponsorships”

Test Ellers in Estonia, Brazil, Germany, and Italy

Scrutinize the anomalies

And ???

The End



▪

Test Results = Not Eller



Cccc matched closely with Jjjjj

Dddd, suspected of being a liiii

Eeee is an Eller after all

Ffff suspected of being Hhhhh

Gggg matches no one in the FTDNA
database