

Re: An integrated family web (was: A separate family tree for each human gene?)

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Source: <http://sci.tech--archive.net/Archive/sci.anthropology.paleo/2005-05/msg00084.html>

- *From:* Philip Deitiker <Donevenask@xxxxxxxxxxxxxxxx>
 - *Date:* Tue, 10 May 2005 04:02:59 GMT
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whopkins@xxxxxxxxxxxx says in
news:1115661840.375850.89450@xx:

- > whopkins@xxxxxxxxxxxx says in
- >> A general question: is there in-gene recombination from parent
- >> to child or are they each essentially inherited intact from one
- >> parent or the other?
- >
- > Philip Deitiker wrote:
- >> There are a number of lineage specific recombination sites, one
- >> study
- >
- >> found 50,000 of these on a single chromosome. Within or between
- >> these
- >
- >> sites it is possible to deduce the population history, some of
- >> these sites are 3000 nt in length, some of them are 100,000 nt
- >> in length.
- >
- > This brings up the next question: is there enough to combine all
- > the separate histories into an overall tapestry that essentially
- > reproduces the entire family web down to a complete list of who
- > mated with whom to produce how many offspring (with surviving
- > descendants)?

Eventually, with enough sequencing you will be able to recapitulate most of the evolution of human beings via the intersite sequences.

- > Also: are there any genetic markers of any kind (yet) known that
- > indicate within offspring, sharing a common parent, their order
- > of birth? For example, the mother's or father's DNA, itself,
- > may have an aperiodic variation of some sort whose snapshot gets
- > passed down to the offspring at the time of conception.

That is a longer scale problem, twice on each chromosome, at least, the mothers parental chromosome undergo recombination, where is not knowable, and the same on the paternal. In addition there is a region of Y chromosome that is not talked about, frequently, which undergoes

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recombination with X about 20 fold higher than other sites on X, this is believe to be a site of X Y common recognition for meiosis. In terms of offspring a parents DNA ages and gets damaged with age, if the children are from older parents, it is possible to see these increased changes in offspring born of women older than 35 and men older than 50. so large term differences could be detectable statistically, but the confidence interval would be so wide as not to be applicable. The current estimate is a single mutation per generation, this is probably 5 fold higher in females over the age of 42 or males over the age of 55.

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Philip

____Groups____

Mol Anthro <http://groups.yahoo.com/group/DNAanthro/>
Pal Anthro <http://groups.yahoo.com/group/Paleoanthro/>
Arch. Aux <http://groups.yahoo.com/group/sciarchauxilliary/>
Gliadin Sci <http://health.groups.yahoo.com/group/GliadinScience/>

____Sites____

Mol. Evol. Hominids <http://home.att.net/~DNAPaleoAnth/>
Evol. of Xchrom. <http://home.att.net/~DNAPaleoAnth/xlinked.htm>

• ***Follow-Ups:***

- ◆ ***Re: An integrated family web (was: A separate family tree for each human gene?)***
◇ From: rmacfarl

• ***References:***

- ◆ ***A separate family tree for each human gene?***
◇ From: whopkins
- ◆ ***Re: A separate family tree for each human gene?***
◇ From: Philip Deitiker
- ◆ ***An integrated family web (was: A separate family tree for each human gene?)***
◇ From: whopkins

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