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Logged 9/4/2008
 Reported 9/5/2008
 Case No. PL08-00000

Sample Paternity Report - Legal Test

Sample Information				
No.	Name	Relationship	Race/Ethnicity	Collected
1	*Rosalind Franklin	Mother	Caucasian	Date
2	**Fred Sanger	Child	-	Date
3	***Gregor Mendel	Alleged Father	Caucasian	Date

Genetic Marker	Mother		Child		Alleged Father		Paternity Index
	Allele A	Allele B	Allele A	Allele B	Allele A	Allele B	
D8S1179	13	15	13	14	13	14	2.01
D21S11	29	31	30	31	30		3.01
D7S820	11	13	8	13	8		9.98
CSF1PO	12		12		10	12	1.27
D3S1358	15	16	15		15	17	1.17
TH01	6	9	9		7	9	4.76
D13S317	9	12	11	12	11	13	2.45
D16S539	11	12	12		12		3.48
D2S1338	16	20	19	20	17	19	1.9
D19S433	15	15.2	14	15	14	15	1.55
vWA	16	18	16	20	18	20	33.9
TPOX	11		8	11	8		1.8
D18S51	12	16	12	17	15	17	3.57
AMEL	X		X		X	Y	1
D5S818	11	12	11	12	11		1.4
FGA	21	24	19	24	19	25	6.17
Combined Paternity Index					20,200,000		
Probability of Paternity					>99.999%		

The results indicate that the alleged father can not be excluded as the biological father of the child. The reported probability of paternity, as compared to an unrelated, untested man of the same race, is calculated assuming a prior probability of 0.5.

Chromosomal Laboratories, Inc. is an American Association of Blood Banks (AABB) Accredited Relationship Testing Facility.

*The images of DNA, captured by Rosalind Franklin, formed the basis for the discovery of it's double helical structure.

**The first scientist to sequence a full genome, Fred Sanger created the first DNA sequencing method, today called the Sanger Method.

***Gregor Mendel is often referred to as the Father of Modern Genetics. As a monk he studied pea plants and modes of inheritance.

Sample ONLY

Vince Miller, Ph.D. - Vice President & Chief Technical Officer

Stephanie Gidget Hudson, Ph.D. - Assistant Paternity Laboratory Director

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Relationship Testing - Case Narrative

Analytical Platform

Paternity test results and conclusions are founded in statistics and probabilities. The greater the number of genetic markers examined, the greater the strength of the genetic evidence and hence the greater the reliability of the final result. Chromosomal Laboratories tests a minimum of 16 DNA markers in routine relationship testing. The 16 marker technology can achieve a probability of identity of 1 in 40 quintillion, or 1 in 40,000,000,000,000,000,000. Paternity laws tend to vary from state to state. The following web link provides a nice synopsis for many states. <http://lawdigest.uslegal.com/paternity/general>

Extended Testing

For the majority of paternity cases, the 16 genetic marker panel is more than adequate. However, special circumstances can require extended testing to obtain a statistically desirable result. This typically occurs when there is a single genetic mutation or the mother is not included in the test. Extended testing options can include testing the mother, adding more autosomal genetic loci, or Y chromosome testing, if the child is a male. During case review our doctors may determine that extended testing is necessary or statistically useful, and will make recommendations for extended tests that are likely to be the most productive.

Motherless Testing

While motherless paternity testing is a relatively common practice, it can present a number of problems, ranging from inconclusive results, or in the case of incest or related alleged fathers, a false inclusion. DNA testing of the mother, even if maternity is not disputed, improves the chance of obtaining conclusive results and is a quality control check for both the scientific and legal community. In all relationship testing, every effort should be made to test the mother when she is available.

Y-Chromosome Testing in Relationship Studies

The Y chromosome is male specific and passes through generations unchanged from father to son. In circumstances where an alleged father is unavailable for testing or is deceased, a male child can be tested against any number of his male relatives including, but not limited to, other known male children, brothers and half brothers with the same father, uncles, a grandfather, and grandfather's brothers. Since the Y chromosome is only found in males, this type of testing is not useful for female offspring. This test is also not appropriate for paternity in circumstances where there are two related alleged fathers.

Genetic Inconsistencies (Mutations)

Genetic inconsistencies (mutations) are naturally occurring mismatches between a child and the alleged parent. The frequencies of these naturally occurring mismatches are factored into the final combined paternity index. Due to the nature of these calculations, the statistical value of the result is significantly reduced; therefore some degree of extended testing is required to obtain a conclusive result.

Result Interpretation - Relationship Studies

The results of siblingship, avuncular and grand paternity testing are generally reported as the likelihood in support of or against an alleged relationship. While interpretation of the strength of the statistical value can be variable, and should ultimately be considered in context with all case circumstances, the table below summarizes published interpretative criteria for use as a guide.

Combined Likelihood Ratio	Value of Evidence in Support of Hypothesis
<1	Genetic evidence does not support hypothesis
1	Neutral
1 to 10	Limited Support
10 to 100	Moderate support
100 to 1,000	Strong Support
1,000 and greater	Very Strong Support