

**Evaluation of DNA evidence
concerning the paternal origin of the
Battista Flori family in Corsica.**



Hypothesis concerning a Corsican Smith (Flori) family issued from

Thomas Christopher Laurence SMITH (1592-1638)
(BURNLEY, LANCASHIRE, ENGLAND)

PREFACE

The origin of the Battisa Flori family of Corsica and their link with the Stuarts of Corsica within a wider Jacobite context has been thoroughly researched by Desideriu Ramelet-Stuart over several years using traditional genealogical sources.

This report prepared by Desideriu takes the research forward significantly. Taking advantage of advances in DNA testing and analytical tools to evaluate linkage, Desideriu sought to use multiple testees from extant lines of the Flori and Stuarts families in order to establish the identity of their probable common ancestor.

Desideriu presents within this report genetic evidence that does indeed link multiple individual testees descended from an unknown Smith-Wright individual on Corsica, to individuals elsewhere in the world who descend from Thomas Christopher Laurence Smith (1592-1638) from Burnley, Lancashire, England.

His research based on currently available data is to be highly commended and reveals compelling evidence of the identity of the Battisa Flori family.

Alasdair Macdonald

Genealogist and historical researcher,

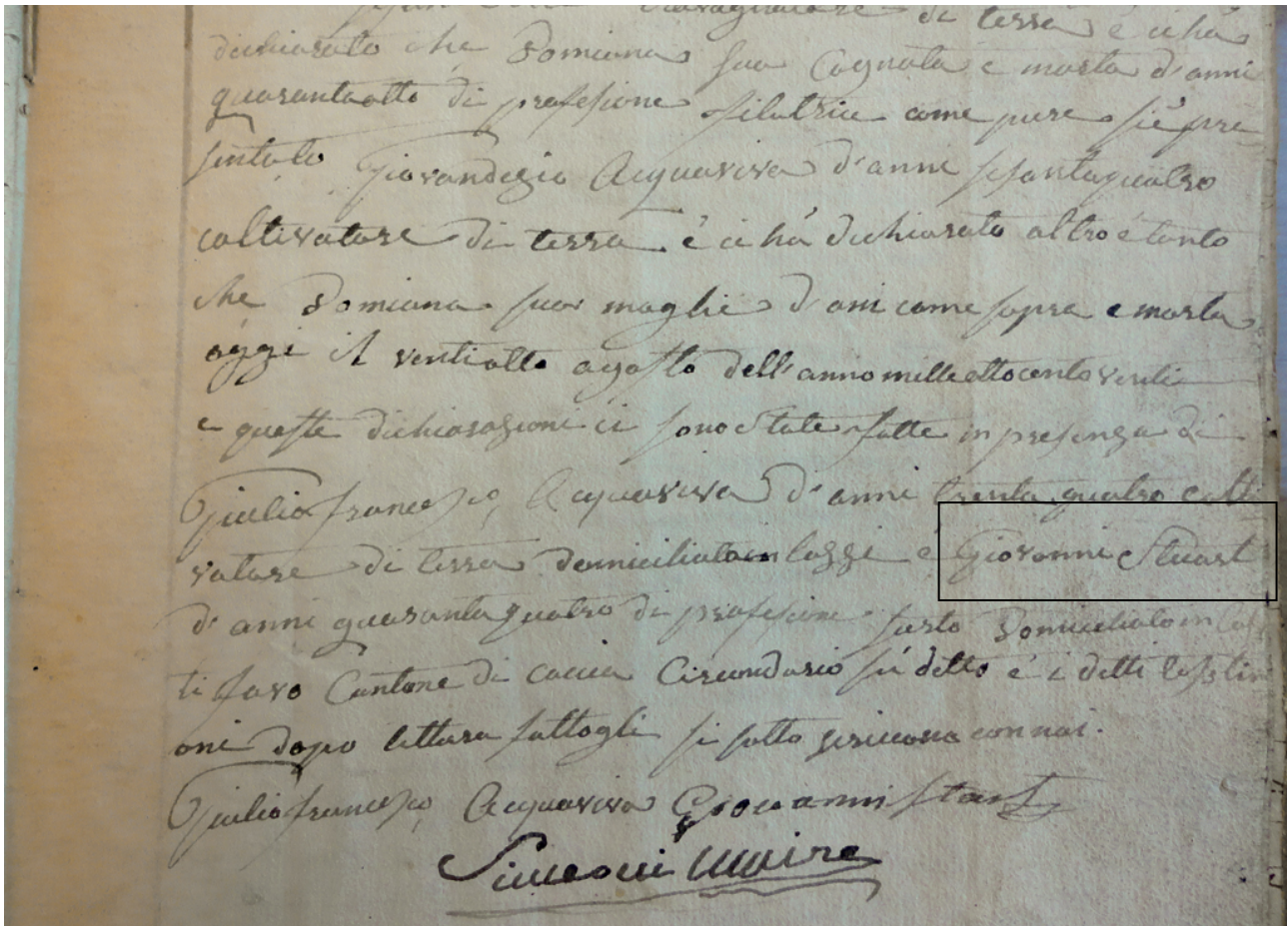
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Special Thanks to Ange François Flori and Angelise Flori.

INTRODUCTION

Based on oral tradition the **FLORI Family** located in Lozzi, Corsica may be issued from a North Atlantic Y-Chromosome lineage, but of unknown geographical origin.

Based on primary sources we know that the Flori family and Stuarts of Corsica had family links.



August 28th, 1820 : Giovanni Stuart present in Lozzi Parish as witness for one Flori burial.

The **STUART family** is issued from Manuel Stuart. He landed at Corsica Island in 1766. All his descendants lived in Castifau Parish, Corsica.

Based on various **autosomal DNA (atDNA)** comparisons between extant descendants of Battista Flori and Manuel Stuart it has been confirmed depending on their generation that **they are 4th to 6th cousins**.

We used 10 individual kits to perform DNA tests, all uploaded into **Gedmatch.com** :

Label	Sex
Kit STUART 1 (T262139)	M
Kit STUART 2 (T884737)	F
Kit STUART 3 (T423529)	F
Kit STUART 4 (T295816)	M
Kit STUART 5 (T612772)	M

Label	Sex
Kit FLORI 1 (T365987)	M
Kit FLORI 2 (T540924)	F
Kit FLORI 3 (T627496)	M
Kit FLORI 4 (T540509)	F
Kit FLORI 5 (T766787)	M

All individuals from the FLORI and STUART families who tested have their genealogies verified and no shared familial relationships between their extended families were discovered. Stuart individuals married people issued from Castifau Parish and Flori individuals married people issued from Lozzi Parish.

Corsican Parishes locations



Historical background concerning FLORI and STUART families in Corsica

In September 1718 a Jacobite naval squadron led by Rear-Admiral George Cammock took refuge in the island of Corsica. This event occurred during the War of the Quadruple Alliance (1718–1720) in which the supporters of the Stuart Pretenders, allied to Spain, were fighting the Royal Navy fleet in Mediterranean sea. Because the Spanish ports were bombarded by Royal Navy, about a hundred mariners, most of them from the British Isles, landed in Corsica. There is evidence of their presence on the island due to the existence of Non Paternity Events reported in the descendants of Corsican families. It may well be that the FLORI family have evidence of such an event in their ancestry, especially due to their cousinship with the STUART of Corsica family.

Into the year 1750 or 1751, Manuel Stuart left Belfast as apprentice in the Royal Navy. After cruising three years along the North American coasts, he escaped from his frigate in Italy because we wanted to go to Roma, residence of the Stuarts Pretenders. In 1754 he served as a soldier in the Neapolitan Army with Pasquale de Paoli (who became later head of the Corsican Nation) and was probably sent to Corsica in 1766 by George Keith, 10th Earl Marischal, a zealous supporter of the Corsican cause since 1729. As a Jacobite of great importance, Lord Marischal had also an intention to send the Prince Charles Edward Stuart to Corsica.

These facts are corroborated and verified within an academic report validated by the University of Corsica.¹

Due to this significant 'Jacobite' context on Corsica it is important to verify the potential links between the ancestors of present day Flori individuals and the House of Stuart.

¹ D. Ramelet Stuart (2017) The Last Stuarts and Corsica, Master 2 History and Anthropology, University of Corsica, 138 p.

**The purpose of this research was to identify the common ancestry
between the Flori and Stuart families of Corsica.**

Mr. Ange François FLORI (Kit FLORI 3) was BigY² tested at FTDNA (kit 558724). According to FTDNA, his terminal SNP is **R-BY3613**. 80% of other R-BY3613 men tested have paternal origins in the British Isles, which could confirm oral tradition about **the North Atlantic origin of the Flori family**.

Actually, Kit FLORI 1 terminal SNP identified is **R-M269**. We plan to order another BigY test in the future.

Mr. Henri STUART (Kit STUART 1) was BigY tested at FTDNA (kit E16164). According to FTDNA, his terminal SNP is **R-S781**.

Based on these two results, our first evidence is that **FLORI cousins are not issued from a STUART** patrilineal line.

Examining BigY test matches for Kit FLORI 3, the first match is a SMITH **R-BY3613**. There is also another SMITH match whose terminal SNP is **R-BY5702**. **He has a matrilineal WRIGHT ancestry** which is important with regard the investigation.

Terminal SNPs R-BY3613 and R-BY5702 are too ancient for identifying more a recent genealogical connection in the Y-line. Short Tandem Repeat markers (STR) have poor matching : SMITH R-BY3613 has a **GD of 8@25** with FLORI 3, and SMITH R-BY5702 has a **GD of 31@111** with FLORI 3.

SMITH matches on the Y chromosome seems to be coincidental.

The genetic distance on the Y chromosome is too distant and does not reveal linkage between the two SMITH men. Therefore a different approach must be taken to identify the common ancestry between the Flori and Stuart cousins.

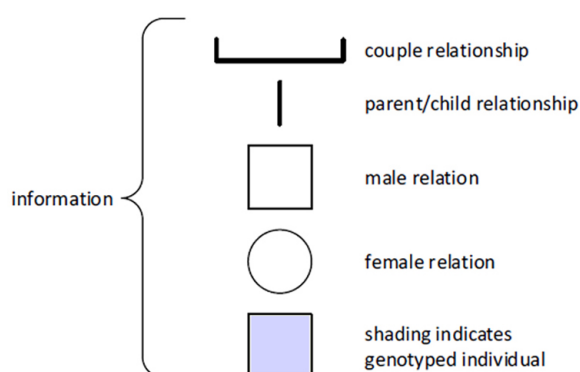
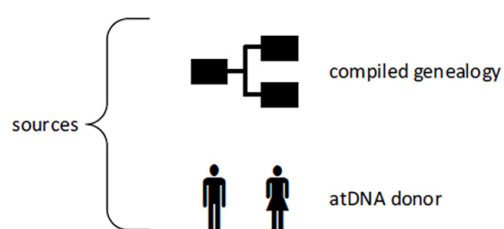
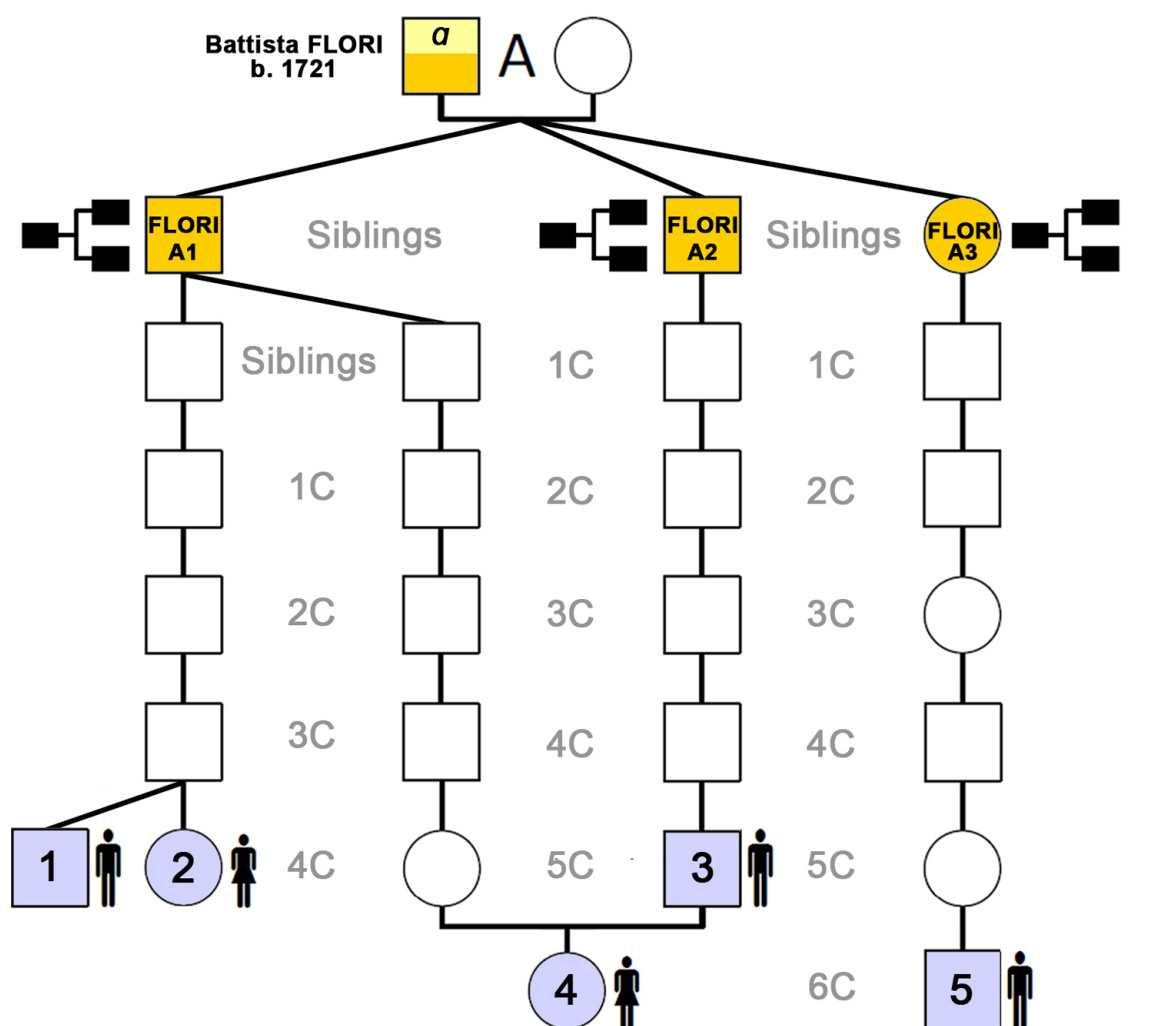
Autosomal DNA is a term used in genetic genealogy to describe DNA which is inherited from the autosomal chromosomes. Humans have 22 pairs of autosomes and one pair of sex chromosomes (the X chromosome and the Y chromosome). There is no established abbreviation for autosomal DNA but **atDNA is more common**.

There being no documentary evidence linking Flori and Stuart ancestry a methodology was developed to identify **matching atDNA segments (m)** inherited from a **common ancestor (a)**. DNA from all recent ancestors, is recombined DNA so mixed up segments of DNA from our grandparents, ggrandparents, etc...

First we need to compare sources and information available for both Flori and Stuart families for determining genealogical relationships between the individuals providing the samples and the common shared Flori/Stuart ancestor and the shared atDNA between each other.

² BigY Test is a New Generation Sequencing test based on the analyse of 14 millions bases paires into Chromosome Y.

FLORI FAMILY TREE



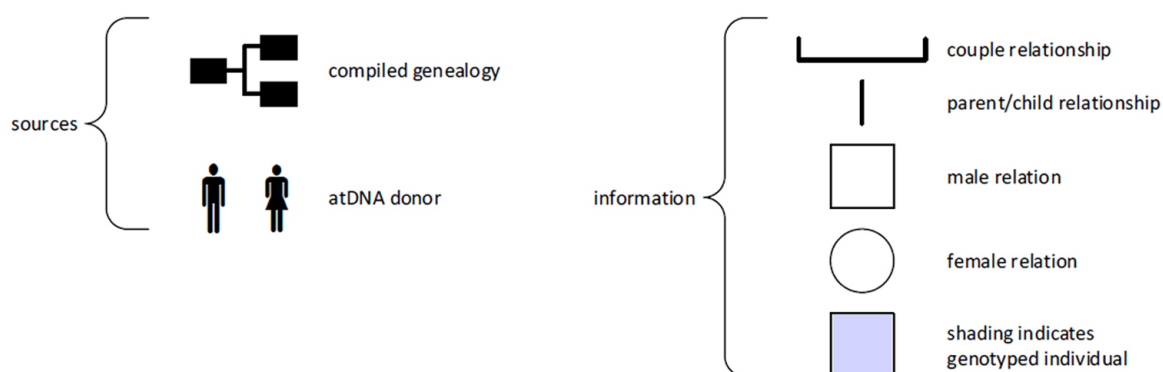
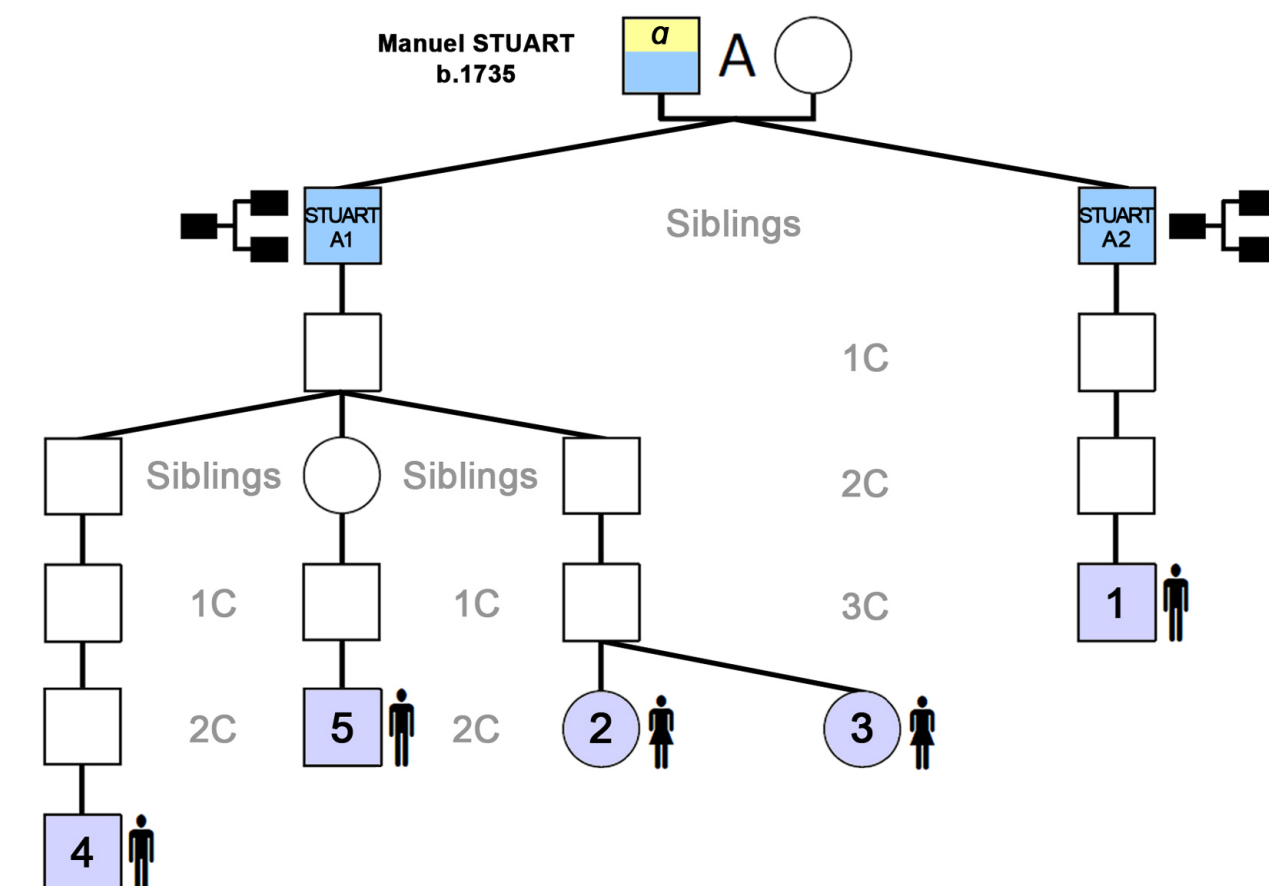
Independent lines with compiled genealogy
A1 / Giovanni Lucca FLORI (1747 - 1796)
A2 / Marcello FLORI (1753 - 1824)
A3 / BarbaMaria FLORI (1756 - 1794)

Genotyped individual Kits
Kit FLORI 1 (T365987)
Kit FLORI 2 (T540924)
Kit FLORI 3 (T627496)
Kit FLORI 4 (T540509)
Kit FLORI 5 (T766787)

N.B : Kit FLORI 4 is descended from both A1 and A2 lines.

As **FLORI 4 is endogemous**, the atDNA segment sizes in some comparisons will likely be greater than those for his father KIT FLORI 3 and other genotyped individuals.

STUART FAMILY TREE



Independent lines with compiled genealogy
A1 / Paolo STUART (1812 – 1873)
A2 / Emanuel STUART (1825 – 1869)

Genotyped individual Kits
Kit STUART 1 (T262139)
Kit STUART 2 (T884737)
Kit STUART 3 (T423529)
Kit STUART 4 (T295816)
Kit STUART 5 (T612772)

Evaluation of FLORI and STUART documentary evidence, suggests **they share a common ancestor who lived 8, 9 or 10 generations ago.**

In order to verify this linkage, atDNA comparisons will be used from genotyped individuals with recent FLORI and STUART ancestry (**a**) to identify one or more DNA segments (**m**) transmitted by their unidentified common ancestor.

atDNA researches methodology

We must take into consideration the technical limits for atDNA comparisons. The matching process must identify an atDNA segment (**m**) which must have been transmitted unchanged for 8-10 generations. Is it possible to find it ? In other words, how many generations of ancestors are detectable through atDNA comparisons?

According to Graham Coop the likelihood of having zero detectable atDNA from an ancestor will not rise significantly until the 8th generation.³

According to Speed, Doug and Balding the probability that two individuals share any genomic region Identical By Descent (IDB) from ancestor lived from 8 to 10 generations ago is from 0,001 to 0,015 percent. But **this percentage depends of the length of the region distributed by the common ancestor**. Sometimes it is possible for two cousins to share a segment with a common ancestor more than 10 generation away.⁴

It is therefore possible for atDNA segments to survive and be used for comparison and identification of a common Flori/Stuart ancestry.

We are looking for a contributor (**c**) who could match the genotyped individuals on both Stuart and Flori lineages. When considering a list of matches in a particular region of one chromosome, there are three possible matching scenarios for the contributor. The segment could match :

1. a sequence of alleles along the contributor **paternal haploid**
2. a sequence of alleles along the contributor **maternal haploid**
3. a mix of maternal and paternal contributor, making it a **false match**.

Without additional conclusions in place (like knowing one of the individuals is a paternal match), it is not possible to know which case is being encountered. Genotypes cannot be converted into genealogical information without knowing the individual source subjects and their pedigrees.

It is **very important to have contributor (**c**) pedigree and family links**.

However, a third comparison—a correlation comparison—will indicate whether or not the three individuals match each other in the same way.

Among atDNA matches for FLORI kits we have a common segment on Chromosome 15 with a lot of SMITH individuals. Here is a list of matches for shared segments > 5cM.

Table 1 : Genotypes Flori kits - matches on chromosome 15					
Kit 1	Kit 2	Start	End	cM	SNPs
Kit FLORI 3 (T627496) / A1	SMITH A. G. (T624021)	24,247,143	28,044,117	10.4 cM	835
Kit FLORI 3 (T627496) / A1	SMITH D. J. (T946476)	25,105,106	28,113,480	7.8 cM	583
Kit FLORI 3 (T627496) / A1	SMITH H. (A916563)	25,545,731	27,479,683	5.1 cM	239
Kit FLORI 3 (T627496) / A1	SMITH E. (A074861)	25,047,598	27,287,538	6.8 cM	382
Kit FLORI 3 (T627496) / A1	SMITH A. (A246267)	25,271,522	27,490,744	6.3 cM	399
Kit FLORI 4 (T540509) / A1 & A2	SMITH A. G. (T624021)	25,039,127	28,044,117	8.0 cM	596
Kit FLORI 4 (T540509) / A1 & A2	SMITH H. (A916563)	24,348,595	27,479,683	9.4 cM	500
Kit FLORI 4 (T540509) / A1 & A2	SMITH K. (A683256)	25,034,393	28,082,892	8.0 cM	601
Kit FLORI 4 (T540509) / A1 & A2	SMITH L. C. (A032834)	25,047,598	27,884,370	7.8 cM	530
Kit FLORI 4 (T540509) / A1 & A2	SMITH S. (T741387)	25,034,393	28,082,892	8.0 cM	601
Kit FLORI 4 (T540509) / A1 & A2	SMITH D. J. (T946476)	24,862,190	27,237,568	7.3 cM	445
Kit FLORI 4 (T540509) / A1 & A2	SMITH B. (T846561)	24,951,928	27,219,113	7.0 cM	404
Kit FLORI 5 (T766787) / A3	SMITH E. (A074861)	24,314,300	27,999,050	10.2 cM	787
Kit FLORI 5 (T766787) / A3	SMITH D. M. (A819390)	24,665,997	27,491,292	8.5 cM	558
Kit FLORI 5 (T766787) / A3	SMITH D.D. (T133328)	25,028,495	27,287,538	6.8 cM	405

* Values in bold indicates similar starting or ending DNA segment location.

³ Coop, Graham. How much of your genome do you inherit from a particular ancestor ?
<https://gcbias.org/2013/11/04/how-much-of-your-genome-do-you-inherit-from-a-particular-ancestor/> : accessed 4 February 2016.

⁴ Speed, Doug & Balding, David J. (2015) Relatedness in the post-genomic era: is it still useful ?
NatureReviews Genetics. 16 (1). pp. 33–44.

The number of matches are relevant, therefore it is necessary to verify if the Stuart kits match with the Smith kits on the same segments on Chromosome 15.

Table 2 : Genotypes Stuart kits - matches on chromosome 15					
Kit 1	Kit 2	Start	End	cM	SNPs
Kit STUART 1 (T262139) / A2	SMITH T. (T720058)	24,438,907	27,490,744	9.2 cM	645
Kit STUART 1 (T262139) / A2	SMITH E. (A074861)	25,046,620	29,125,017	9.1 cM	686
Kit STUART 1 (T262139) / A2	SMITH D.D. (T133328)	24,827,206	27,216,380	7.4 cM	449
Kit STUART 4 (T295816) / A1	SMITH A. (A246267)	25,716,027	29,206,058	6.5 cM	506
Kit STUART 4 (T295816) / A1	SMITH D (A349188)	25,850,002	29,039,073	5.9 cM	431
Kit STUART 4 (T295816) / A1	SMITH A. G. (T624021)	25,336,552	27,235,349	5.5 cM	325
Kit STUART 4 (T295816) / A1	SMITH D. J. (T946476)	25,602,033	27,684,950	5.2 cM	361
Kit STUART 4 (T295816) / A1	SMITH D.D. (T133328)	25,496,831	27,330,247	5.1 cM	299
Kit STUART 5 (T612772) / A1	SMITH J. E. (A463831)	25,556,292	27,775,958	5.5 cM	386
Kit STUART 5 (T612772) / A1	SMITH D (A349188)	25,047,598	27,729,600	7.5 cM	509
Kit STUART 5 (T612772) / A1	SMITH B. (A876518)	24,893,857	27,219,113	7.2 cM	407
Kit STUART 5 (T612772) / A1	SMITH L. C. (A032834)	25,496,831	28,148,879	6.2 cM	498
Kit STUART 5 (T612772) / A1	SMITH A. G. (T624021)	25,039,127	27,775,958	7.6 cM	535
Kit STUART 5 (T612772) / A1	SMITH A. (A246267)	25,375,509	27,479,683	5.8 cM	368
Kit STUART 5 (T612772) / A1	SMITH D.D. (T133328)	25,496,831	27,729,600	5.8 cM	421

For the Stuart kits too the number of matches is relevant.

At this point, due to the unstable segments shared and the possibility of false-matches, we must perform a lot of verifications.

One first step should be to **compare these SMITH individuals with both FLORI and STUART Lines.**

The methodology chosen was to undertake **multiple triangulations** by comparing :

- Distant FLORI Cousins Kit FLORI 3 (T627496) / A1 and Kit FLORI 5 (T766787) / A3
- Endogamous FLORI Kit 4 (T540509) / A1 & A2
- Distant STUART Cousins kit Stuart 1 (T262139) / A1 and Kit STUART 5 (T612722) / A2
- SMITH individual Kit matching with FLORI and/or STUART Lines.

These multiple triangulations will be performed on **Chromosome 15.**

The settings used on Gedmatch.com are :

- 1st pass / Minimum threshold size = 100 SNPs Minimum segment cM = 5.0 cM
- 2nd pass / Minimum threshold size = 100 SNPs Minimum segment cM = 4.0 cM
- 3rd pass / Minimum threshold size = 100 SNPs Minimum segment cM = 3.0 cM

For all Smith testees, the Most Distant Know Ancestor (**MDKA**) will be indicated.

I) COLLECTING atDNA COMPARISON DATA

Common shared atDNA segments on chr. 15 were identified with several testees who had Smith and Wright ancestry.

We'll perform triangulations with 20 SMITH testees.

Table 0 : SMITH individual kits used for triangulation on Chr. 15	
SMITH A. G. (T624021)	
SMITH D. J. (T946476)	
SMITH H. (A916563)	
SMITH J. E. (A463831)	
SMITH D.D. (T133328)	
SMITH D (A349188)	
SMITH D.M (A787957)	
SMITH A. (A246267)	
SMITH B. (A876518)	
SMITH R. (A125569)	
SMITH M. (A760403)	
SMITH N. (A100084)	
SMITH B. (T846561)	
SMITH L. C. (A032834)	
SMITH K. (A683256)	
SMITH S. (T741387)	
SMITH E. (A074861)	
SMITH D. (T881294)	
SMITH R.H. (A969384)	
SMITH L.A. (A853620)	

20 MULTIPLE TRIANGULATIONS ON CHR. 15

Multiple Triangulation Chr. 15 / FLORI-FLORI-STUART-STUART-SMITH N°1

Comparing Kit T627496 (françois flori) and T624021 (Albert George Smith)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 5.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
5	174,549,525	177,545,240	5.5	636
15	24,247,143	28,044,117	10.4	835

Largest segment = 10.4 cM

Total of segments > 5 cM = 15.9 cM

2 matching segments

665473 SNPs used for this comparison.

Example A1 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH A. G. (T624021)	M	24,247,143	28,044,117	10.4 cM	835
Kit FLORI 4 (T540509)	SMITH A. G. (T624021)	M	25,039,127	28,044,117	8.0 cM	596
Kit FLORI 5 (T766787)	SMITH A. G. (T624021)	M	25,602,719	27,216,380	4.3 cM	217
Kit STUART 1 (T262139)	SMITH A. G. (T624021)	M	25,554,316	27,237,568	4.6 cM	251
Kit STUART 5 (T612772)	SMITH A. G. (T624021)	M	25,039,127	27,775,958	7.6 cM	535
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225
MDKA : Albert George Smith, b 1805, Kentucky, USA						

The shared segment between all testees is from **25,685,246 to 27,216,380 location (3,8 cM)**

SMITH A.G (T624021) shares one starting segment at **25,039,127 location** with FLORI 4 and STUART 5. Considering the genetic mixing from generation to generation it is very important to find a common stable starting or ending segment with distant cousins.

VALUE	Shared segment location for all testees.
VALUE	Common starting or ending segment location found into other triangulations
VALUE	Common starting or ending segment for this Smith kit shared with both Flori and Stuart testees.
VALUE	Common starting or ending segment for this Smith kit shared with both Flori and Stuart testees found into other triangulations.

Multiple Triangulation Chr. 15 / FLORI-FLORI-FLORI-STUART-STUART-SMITH N°2

Comparing Kit T766787 (Kit Flori 5) and T612772 (Stuart of Corsica matrilineal Grandson kit1)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 5.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
1	72,017	2,873,718	6.9	403
7	43,526,064	50,888,563	8.3	1,728
7	127,737,040	131,509,935	6.9	866
15	24,814,166	27,287,538	7.6	467
17	51,005,719	56,706,945	8.6	1,226
18	2,697,619	4,440,775	6.5	611
19	8,037,240	9,800,831	5.6	440
20	57,749,586	58,969,136	5.8	412

Largest segment = 8.6 cM

Total of segments > 5 cM = 56.3 cM

8 matching segments

664559 SNPs used for this comparison.

Example A2 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH D. J. (T946476)	M	25,105,106	28,113,480	7.8 cM	583
Kit FLORI 4 (T540509)	SMITH D. J. (T946476)	M	24,862,190	27,237,568	7.3 cM	445
Kit FLORI 5 (T766787)	SMITH D. J. (T946476)	M	25,028,495	25,550,693	2.1 cM	138
			25,572,122	27,216,380	4.5 cM	229
Kit STUART 1 (T262139)	SMITH D. J. (T946476)	M	25,669,300	27,237,568	4.1 cM	201
Kit STUART 5 (T612772)	SMITH D. J. (T946476)	M	25,602,033	27,775,958	5.4 cM	382
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225
MDKA: John Smith, b. 1745, Kegworth, Leicestershire, England						

The shared segment between all testees is from **25,685,246 to 27,216,380 location (3,8 cM)**

SMITH D. J (T946476) shares one ending segment at **27,237,568 location** with FLORI 4 and STUART 1.

Multiple Triangulation Chr. 15 / FLORI-FLORI-FLORI-STUART-STUART-SMITH N°3

Comparing Kit A916563 (Helen Smith) and T540509 (*Angelise Flori)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 5.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
15	24,348,595	27,479,683	9.4	500
19	2,813,785	3,786,177	5.1	216
20	57,472,203	58,992,678	6.8	383

Largest segment = 9.4 cM

Total of segments > 5 cM = 21.3 cM

3 matching segments

404032 SNPs used for this comparison.

Example A3 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH H. (A916563)	F	25,545,731	27,479,683	5.1 cM	239
Kit FLORI 4 (T540509)	SMITH H. (A916563)	F	24,348,595	27,479,683	9.4 cM	500
Kit FLORI 5 (T766787)	SMITH H. (A916563)	F	25,007,748	25,517,776	2.1 cM	100
			25,602,033	27,216,380	4.3 cM	161
Kit STUART 1 (T262139)	SMITH H. (A916563)	F	25,602,033	27,479,683	4.9 cM	222
Kit STUART 5 (T612772)	SMITH H. (A916563)	F	25,602,033	27,479,683	4.9 cM	219
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225
MDKA: Roger Smith b. 1755 pemberton, Wigan, Lancashire, England						

The shared segment between all testees is from **25,685,246 to 27,216,380 location (3,8 cM)**

SMITH H. (A916953) shares one starting segment at **26,602,033 location** with FLORI 5, STUART 1 and STUART 5.

She shares one ending segment at **27,479,683 location** with FLORI 3, FLORI 4, STUART 1 and STUART 5.

She shares a **stable segment (25,602,033 to 27,479,683)** with STUART 1 and STUART 2.

Considering the time to the common ancestor this stability could not be coincidental. SMITH H. (A916563) is selected for genealogical comparison and works on correlation.

Multiple Triangulation Chr. 15 / FLORI-FLORI-FLORI-STUART-STUART-SMITH N°4

Comparing Kit T612772 (Stuart of Corsica matrilineal Grandson kit1) and A463831

(Elizabeth Jeanette Smith)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 5.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
15	25,556,292	27,775,958	5.5	386
17	70,610,348	72,996,376	5.3	613

Largest segment = 5.5 cM

Total of segments > 5 cM = 10.8 cM

2 matching segments

639156 SNPs used for this comparison.

Example A4 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH J. E. (A463831)	F	25,642,093	27,520,513	4.8 cM	297
Kit FLORI 4 (T540509)	SMITH J. E. (A463831)	F	25,642,093	27,254,897	4.3 cM	212
Kit FLORI 5 (T766787)	SMITH J. E. (A463831)	F	25,856,310	27,237,568	3.5 cM	141
Kit STUART 1 (T262139)	SMITH J. E. (A463831)	F	25,556,292	27,237,568	4.6 cM	240
Kit STUART 5 (T612772)	SMITH J. E. (A463831)	F	25,556,292	27,775,958	5.5 cM	386
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225
MDKA: Christopher Smythe b. 1592, Burnley, Lancashire, England d. 1638, Colne, Lancashire, England						

The shared segment between all testees is from **25,856,310 to 27,216,380 location (3,4 cM)**

SMITH J.E (A463831) shares one ending segment at **27,237,568 location** with FLORI 5 and STUART 1.

Multiple Triangulation Chr. 15 / FLORI-FLORI-FLORI-STUART-STUART-SMITH N°5

Comparing Kit T133328 (DD Berry Smith Salinas) and T262139 (Henri Stuart of Corsica)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 5.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
1	242,311,165	243,721,864	5.2	439
15	24,827,206	27,216,380	7.4	449
16	133,586	1,916,375	6.2	487

Largest segment = 7.4 cM

Total of segments > 5 cM = 18.8 cM

3 matching segments

668390 SNPs used for this comparison.

Example A5 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH D.D. (T133328)	M	25,288,771	27,216,380	5.7 cM	328
Kit FLORI 4 (T540509)	SMITH D.D. (T133328)	M	25,616,889	28,020,276	5.6 cM	422
Kit FLORI 5 (T766787)	SMITH D.D. (T133328)	M	25,028,495	27,287,538	6.8 cM	405
Kit STUART 1 (T262139)	SMITH D.D. (T133328)	M	24,827,206	27,216,380	7.4 cM	449
Kit STUART 5 (T612772)	SMITH D.D. (T133328)	M	25,496,831	27,729,600	5.8 cM	421
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225
MDKA : John Thomas Smith b. 1849, Georgia, U.S.A d. 1929, Crips, Georgia, U.S.A						

The shared segment between all testees is from **25,685,246 to 27,216,380 location (3,8 cM)**

Multiple Triangulation Chr. 15 / FLORI-FLORI-FLORI-STUART-STUART-SMITH N°6

Comparing Kit A349188 (Diana Smith) and T612772 (Stuart of Corsica matrilineal Grandson kit1)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 5.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
15	25,047,598	27,729,600	7.5	509

Largest segment = 7.5 cM

Total of segments > 5 cM = 7.5 cM

1 matching segments

650056 SNPs used for this comparison.

Example A6 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH D (A349188)	F	25,850,002	28,091,067	4.9 cM	368
Kit FLORI 4 (T540509)	SMITH D (A349188)	F	25,850,002	27,924,372	4.7 cM	315
Kit FLORI 5 (T766787)	SMITH D (A349188)	F	25,945,306	27,216,380	3.2 cM	112
Kit STUART 1 (T262139)	SMITH D (A349188)	F	25,850,002	27,744,477	4.5 cM	286
Kit STUART 5 (T612772)	SMITH D (A349188)	F	25,047,598	27,729,600	7.5 cM	509
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225
MDKA : David Smith, b. 1738, Leith, Midlothian, Scotland						
Union with Agnes Wallace						

The shared segment between all testees is from **25,685,246 to 27,216,380 location (3,8 cM)**

SMITH D (A349188) shares one ending segment at **25,850,002 location** with FLORI 3, FLORI4 and STUART 1.

Multiple Triangulation Chr. 15 / FLORI-FLORI-FLORI-STUART-STUART-SMITH N°7

Comparing Kit T720058 (Timothy Smith) and T262139 (Henri Stuart of Corsica)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 5.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
9	128,500,735	132,230,903	6.9	909
14	20,335,477	21,481,188	6.4	387
15	24,438,907	27,479,683	9.1	642
17	73,740,166	75,429,891	8.0	559

Largest segment = 9.1 cM

Total of segments > 5 cM = 30.4 cM

4 matching segments

665027 SNPs used for this comparison.

Example A7 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH D.M (A787957)	M	25,850,002	27,229,496	3.5 cM	139
Kit FLORI 4 (T540509)	SMITH D.M (A787957)	M	25,850,002	27,322,600	3.7 cM	161
Kit FLORI 5 (T766787)	SMITH D.M (A787957)	M	25,945,306	27,216,380	3.2 cM	112
Kit STUART 1 (T262139)	SMITH D.M (A787957)	M	25,850,002	27,229,496	3.5 cM	140
Kit STUART 5 (T612772)	SMITH D.M (A787957)	M	25,606,497	27,479,683	4.9 cM	294
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225

MDKA : James Albert Smith b. 1862, Guelph, Canada

d. 1944, Colorado

Union with Mary J Miller

The shared segment between all testees is from **25,850,002 to 27,216,380 location (3,3 cM)**

SMITH D.M (A787957) shares one starting segment at **25,850,002 location** with FLORI 3, FLORI 4 and STUART 1.

He shares one other ending segment at **27,229,496 location** with FLORI 3 and STUART 1.

He shares a **stable segment (25,850,002 to 27,229,496)** with FLORI 3 and STUART 1.

Considering the time to the common ancestor this stability could not be coincidental.

SMITH D.M (A787957) is selected for genealogical comparison and works on correlation.

Multiple Triangulation Chr. 15 / FLORI-FLORI-FLORI-STUART-STUART-SMITH N°8

Comparing Kit A246267 (Albert Smith) and T627496 (françois flori)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 5.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
4	48,635,663	56,782,365	5.9	796
15	25,271,522	27,479,683	6.7	396

Largest segment = 6.7 cM

Total of segments > 5 cM = 12.5 cM

2 matching segments

644311 SNPs used for this comparison.

Example A8 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH A. (A246267)	M	25,271,522	27,479,683	6.7 cM	396
Kit FLORI 4 (T540509)	SMITH A. (A246267)		25,669,108	27,479,683	4.6 cM	265
Kit FLORI 5 (T766787)	SMITH A. (A246267)	M	25,602,719	27,237,568	4.4 cM	220
Kit STUART 1 (T262139)	SMITH A. (A246267)	M	25,669,300	27,237,568	4.1 cM	194
Kit STUART 5 (T612772)	SMITH A. (A246267)	M	25,375,509	27,479,683	5.8 cM	368
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225
MDKA : Benjamin Smyth b.1815, Larne, Antrim, Northern Ireland d. Glynn, Antrim, Northern Ireland						

The shared segment between all testees is from **25,685,246 to 27,216,380 location (3,8 cM)**

SMITH A. (A246267) shares one ending segment at **27,479,683 location** with FLORI 3, FLORI4 and STUART 5. He shares one other ending segment at **27,237,568 location** with FLORI 5, and STUART 1.

SMITH D (A349188) is selected for genealogical comparisons and works on correlation.

Multiple Triangulation Chr. 15 / FLORI-FLORI-FLORI-STUART-STUART-SMITH N°9

Comparing Kit A876518 (Bud Smith) and T540509 (*Angelise Flori)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 4.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
1	884,436	2,013,924	4.1	188
11	288,316	2,559,602	7.3	620
14	30,412,922	32,253,709	4.7	400
15	25,669,108	27,684,950	5.0	324
16	20,191,533	23,774,158	5.1	602
20	18,944,125	20,441,157	4.1	574
22	20,770,829	22,191,112	4.1	209
22	46,316,555	47,118,306	4.6	376

Largest segment = 7.3 cM

Total of segments > 4 cM = 39.0 cM

8 matching segments

655186 SNPs used for this comparison.

Example A9 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH B. (A876518)	M	25,430,180	27,229,496	5.1 cM	289
Kit FLORI 4 (T540509)	SMITH B. (A876518)	M	25,140,278	25,642,093	2.1 cM	128
			25,669,108	27,684,950	5.0 cM	324
Kit FLORI 5 (T766787)	SMITH B. (A876518)	M	25,028,495	25,665,319	2.6 cM	186
			25,666,333	27,216,380	4.1 cM	191
Kit STUART 1 (T262139)	SMITH B. (A876518)	M	25,515,431	27,219,113	4.7 cM	260
Kit STUART 5 (T612772)	SMITH B. (A876518)	M	24,893,857	27,219,113	7.2 cM	407
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225

MDKA : Joseph Smith b. 1774, Delaware, U.S.A

d. Guernsey co, Ohio, U.S.A

Union with Mary Lyons

The shared segment between all testees is from **25,685,246 to 27,216,380 location (3,8 cM)**

Multiple Triangulation Chr. 15 / FLORI-FLORI-FLORI-STUART-STUART-SMITH N°10

Comparing Kit A125569 (Robert Smith) and T766787 (Kit Flori 5)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 4.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
15	25,554,316	27,216,380	4.5	236
18	7,101,648	8,144,369	4.9	315

Largest segment = 4.9 cM

Total of segments > 4 cM = 9.4 cM

2 matching segments

646429 SNPs used for this comparison.

Example A10 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH R. (A125569)	M	25,852,901	27,229,496	3.5 cM	135
Kit FLORI 4 (T540509)	SMITH R. (A125569)	M	25,769,916	27,219,113	3.7 cM	155
Kit FLORI 5 (T766787)	SMITH R. (A125569)	M	25,554,316	27,216,380	4.5 cM	236
Kit STUART 1 (T262139)	SMITH R. (A125569)	M	25,852,901	27,219,113	3.5 cM	134
Kit STUART 5 (T612772)	SMITH R. (A125569)	M	25,852,901	27,219,113	3.5 cM	132
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225
MDKA : Thomas Smith b. 1686, Blaris, Antrim, Northern Ireland d. 1743, Baltimore, Maryland, U.S.A						

The shared segment between all testees is from **25,852,901 to 27,216,380 location (3,2 cM)**

SMITH R. (A125569) shares one starting segment at **25,852,901 location** with FLORI 3, STUART 1 and STUART 5. He shares one other ending segment at **27,219,113 location** with FLORI 4, STUART 1 and STUART 5.

He shares a **stable segment (25,852,901 to 27,219,113)** with STUART 1 and STUART 5.

Considering the time to the common ancestor this stability could not be coincidental.

SMITH R. (A125569) is selected for genealogical comparisons and works on correlation.

Multiple Triangulation Chr. 15 / FLORI-FLORI-FLORI-STUART-STUART-SMITH N°11

Comparing Kit A760403 (Mick Smith) and T540509 (*Angelise Flori)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 4.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
13	36,034,909	39,129,915	5.2	897
14	103,735,418	106,317,891	4.2	271
15	25,651,374	27,287,538	4.3	213
16	985,385	2,681,813	4.2	402
19	2,964,374	4,061,492	5.1	263
20	57,465,169	58,606,725	4.7	367
21	35,322,046	36,974,923	4.2	458

Largest segment = 5.2 cM

Total of segments > 4 cM = 32.0 cM

7 matching segments

644994 SNPs used for this comparison.

Example A11 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH M. (A760403)	M	25,550,693	27,229,496	4.6 cM	240
Kit FLORI 4 (T540509)	SMITH M. (A760403)	M	25,651,374	27,287,538	4.3 cM	213
Kit FLORI 5 (T766787)	SMITH M. (A760403)	M	25,007,748	25,852,901	3.3 cM	241
			25,945,306	27,590,765	3.9 cM	220
Kit STUART 1 (T262139)	SMITH M. (A760403)	M	25,669,300	27,653,566	4.9 cM	307
Kit STUART 5 (T612772)	SMITH M. (A760403)	M	25,649,087	27,287,538	4.3 cM	213
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225
MDKA : Absalom Smith b. 1819, Clarksburg, Harrison, Virginia, U.S.A <div> <div>d. 1904, Draper, Salt Lake, Utah</div> <div>Union with Amy Emily Downs</div> </div>						

The shared segment between all testees is from **25,685,246 to 27,216,380 location (3,8 cM)**

SMITH M. (A760403) shares one ending segment at **27,287,538 location** with FLORI 4 and STUART 5.

Multiple Triangulation Chr. 15 / FLORI-FLORI-FLORI-STUART-STUART-SMITH N°12

Comparing Kit A100084 (Nancy Smith) and T612772 (Stuart of Corsica matrilineal Grandson kit1)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
2	15,182,961	17,046,312	4.7	474
3	183,294,929	185,492,924	4.1	512
4	183,351,008	184,738,669	4.6	409
6	166,895,380	168,200,650	4.6	394
9	136,420,760	137,035,175	4.2	232
15	25,753,962	27,458,511	4.3	230
22	19,791,017	22,260,279	5.9	361

Largest segment = 5.9 cM

Total of segments > 4 cM = 32.3 cM

7 matching segments

648358 SNPs used for this comparison.

Example A12 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH N. (A100084)	F	25,759,991	27,229,496	3.8 cM	162
Kit FLORI 4 (T540509)	SMITH N. (A100084)	F	25,856,310	27,458,511	3.9 cM	201
Kit FLORI 5 (T766787)	SMITH N. (A100084)	F	25,590,529	27,287,538	4.6 cM	235
Kit STUART 1 (T262139)	SMITH N. (A100084)	F	25,759,991	27,458,511	4.3 cM	230
Kit STUART 5 (T612772)	SMITH N. (A100084)	F	25,753,962	27,458,511	4.3 cM	230
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225
MDKA : James Smith b. 1719, County Armagh, Northern Ireland d. 1806, York, York County, Pennsylvania Union with Eleanor Armor						

The shared segment between all testees is from **25,856,310 to 27,216,380 location (3,4 cM)**

SMITH N. (A100084) shares one starting segment at **25,759,991 location** with FLORI 3 and STUART 1. She shares one other ending segment at **27,458,511 location** with FLORI 4, STUART 1 and STUART 5. SMITH N. (A100084) is selected for genealogical comparisons and works on correlation.

Multiple Triangulation Chr. 15 / FLORI-FLORI-FLORI-STUART-STUART-SMITH N°13

Comparing Kit T846561 (Barbara Smith) and T540509 (*Angelise Flori)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 5.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
12	51,377,943	55,855,745	5.5	1,108
15	24,951,928	27,219,113	7.0	404

Largest segment = 7.0 cM

Total of segments > 5 cM = 12.4 cM

2 matching segments

674211 SNPs used for this comparison.

Example A13 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH B. (T846561)	F	25,404,857	27,229,496	5.2 cM	299
Kit FLORI 4 (T540509)	SMITH B. (T846561)	F	24,951,928	27,219,113	7.0 cM	404
Kit FLORI 5 (T766787)	SMITH B. (T846561)	F	25,028,495	25,547,157	2.1 cM	136
			25,590,529	27,216,380	4.4 cM	220
Kit STUART 1 (T262139)	SMITH B. (T846561)	F	25,669,300	27,219,113	4.1 cM	193
Kit STUART 5 (T612772)	SMITH B. (T846561)	F	25,645,234	27,693,604	5.1 cM	347
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225
MDKA : William Smith b. 1848, Georgia, U.S.A						
Union with Matilda Jane Lett						

The shared segment between all testees is from **25,685,246 to 27,216,380 location (3,8 cM)**

SMITH B. (T84561) shares one ending segment at **27,219,113 location** with FLORI 3, STUART 1 and STUART 5.

Multiple Triangulation Chr. 15 / FLORI-FLORI-FLORI-STUART-STUART-SMITH N°14

Comparing Kit A032834 (Lisa Carol Smith) and T612772 (Stuart of Corsica matrilineal Grandson kit1)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 5.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
9	136,295,766	137,193,038	5.8	332
15	25,496,831	28,148,879	6.2	498
17	75,772,658	77,916,975	5.3	471
19	8,292,367	9,829,434	5.0	348
20	5,162,469	6,688,366	5.7	516

Largest segment = 6.2 cM

Total of segments > 5 cM = 28.0 cM

5 matching segments

639512 SNPs used for this comparison.

Example A14 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH L. C. (A032834)	F	25,515,431	25,830,854	1.2 cM	115
			25,844,723	27,216,380	3.5 cM	134
Kit FLORI 4 (T540509)	SMITH L. C. (A032834)	F	25,047,598	27,884,370	7.8 cM	530
Kit FLORI 5 (T766787)	SMITH L. C. (A032834)	F	25,028,495	25,496,831	1.9 cM	111
			25,522,899	27,491,292	5.2 cM	336
Kit STUART 1 (T262139)	SMITH L. C. (A032834)	F	25,844,723	27,216,380	3.5 cM	134
Kit STUART 5 (T612772)	SMITH L. C. (A032834)	F	25,496,831	28,148,879	6.2 cM	498
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225
MDKA : Dr. Barton Brooks Smith b. 1827, Larlinsville, Jackson, Alabama						
d. 1907 - Idem Union with Cidney B Carter						

The shared segment between all testees is from **25,844,723 to 27,216,380 location (3,5 cM)**

SMITH L. C. (A032834) shares a similar segment from **25,844,723 location to 27,216,380 location** with FLORI 3, and STUART 1.

He shares a **stable segment (25,844,723 to 27,216,380)** with FLORI 3 and STUART 1. Considering the time to the common ancestor this stability could not be coincidental.

SMITH L. C. (A032834) is selected for genealogical comparisons and works on correlation.

Multiple Triangulation Chr. 15 / FLORI-FLORI-FLORI-STUART-STUART-SMITH N°15

Comparing Kit A683256 (Karen Smith) and T627496 (françois flori)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 5.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
15	25,271,522	27,125,501	5.9	282

Largest segment = 5.9 cM

Total of segments > 5 cM = 5.9 cM

1 matching segments

649051 SNPs used for this comparison.

Example A15 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH K. (A683256)	F	25,271,522	27,125,501	5.9 cM	282
Kit FLORI 4 (T540509)	SMITH K. (A683256)	F	25,034,393	28,082,892	8.0 cM	601
Kit FLORI 5 (T766787)	SMITH K. (A683256)	F	25,590,529	27,287,538	4.6 cM	237
Kit STUART 1 (T262139)	SMITH K. (A683256)	F	25,602,033	27,125,501	4.1 cM	175
Kit STUART 5 (T612772)	SMITH K. (A683256)	F	25,602,033	27,775,958	5.4 cM	374
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225
MDKA : Joseph Smith b. 1740, Pennsylvania, U.S.A						

The shared segment between all testees is from **25,685,246 to 27,216,380 location (3,8 cM)**

SMITH K. (A683256) shares one ending segment at **27,125,501 location** with FLORI 1 and STUART 5.

Multiple Triangulation Chr. 15 / FLORI-FLORI-FLORI-STUART-STUART-SMITH N°16

Comparing Kit T741387 (*S Smith) and T540509 (*Angelise Flori)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 5.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
15	24,872,977	27,513,610	7.8	526
15	55,454,319	57,803,191	5.2	850

Largest segment = 7.8 cM

Total of segments > 5 cM = 13.1 cM

2 matching segments

674991 SNPs used for this comparison.

Example A16 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH S. (T741387)	F	25,852,901	27,229,496	3.5 cM	137
Kit FLORI 4 (T540509)	SMITH S. (T741387)	F	24,872,977	27,513,610	7.8 cM	526
Kit FLORI 5 (T766787)	SMITH S. (T741387)	F	25,554,316	27,491,292	5.1 cM	328
Kit STUART 1 (T262139)	SMITH S. (T741387)	F	25,856,310	27,229,496	3.5 cM	137
Kit STUART 5 (T612772)	SMITH S. (T741387)	F	25,852,901	27,513,610	4.1 cM	229
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225

**MDKA : John William Smith b. 1839, Dublin, Ireland
d. 1881, Nova Scotia, Canada**

The shared segment between all testees is from **25,685,246 to 27,216,380 location (3,8 cM)**

SMITH S. (T741387) shares one starting segment at **25,852,901 location** with FLORI 3 and STUART 5. She share one other ending segment at **27,513,610 location** with FLORI 4 and STUART 5. SMITH S. (T741387) is selected for genealogical comparisons and works on correlation.

Multiple Triangulation Chr. 15 / FLORI-FLORI-FLORI-STUART-STUART-SMITH N°17

Comparing Kit A074861 (Eileen Smith) and T766787 (Kit Flori 5)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 5.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
1	12,091,110	14,615,310	5.4	577
15	24,314,300	27,999,050	10.2	787

Largest segment = 10.2 cM

Total of segments > 5 cM = 15.6 cM

2 matching segments

650102 SNPs used for this comparison.

Example A17 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH E. (A074861)	F	25,047,598	27,287,538	6.8 cM	382
Kit FLORI 4 (T540509)	SMITH E. (A074861)	F	25,375,509	25,666,333	1.2 cM	110
			25,856,310	27,287,538	3.6 cM	150
Kit FLORI 5 (T766787)	SMITH E. (A074861)	F	24,314,300	27,999,050	10.2 cM	787
Kit STUART 1 (T262139)	SMITH E. (A074861)	F	25,046,620	29,125,017	9.1 cM	686
Kit STUART 5 (T612772)	SMITH E. (A074861)	F	25,695,098	27,287,538	4.2 cM	197
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225
MDKA : Moses Allen Smith b.1765, Taunton, Massachusetts, U.S.A						

The shared segment between all testees is from **25,685,246 to 27,216,380 location (3,8 cM)**

SMITH E. (A074861) shares one ending segment at **27,287,538 location** with FLORI 3, FLORI 4 and STUART 5. SMITH E. (A074861) is selected for genealogical comparisons and works on correlation.

Multiple Triangulation Chr. 15 / FLORI-FLORI-STUART-STUART-SMITH N°18

Comparing Kit T881294 (Donnie Smith) and T612772 (Stuart of Corsica matrilineal Grandson kit1)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 4.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
15	25,522,899	27,775,958	5.7	419
16	77,458,641	78,024,057	4.2	365
20	5,334,982	6,677,212	4.8	458
20	58,158,543	59,059,275	4.7	321

Largest segment = 5.7 cM

Total of segments > 4 cM = 19.4 cM

4 matching segments

665729 SNPs used for this comparison.

Example A18 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH D. (T881294)	F	25,404,857	27,219,057	5.2 cM	298
Kit FLORI 4 (T540509)	SMITH D. (T881294)	F	25,047,598	28,020,276	7.9 cM	580
Kit FLORI 5 (T766787)	SMITH D. (T881294)	F	25,430,180	28,998,154	7.4 cM	583
Kit STUART 1 (T262139)	SMITH D. (T881294)	F	25,669,300	27,219,057	4.1 cM	191
Kit STUART 5 (T612772)	SMITH D. (T881294)	F	25,522,899	27,775,958	5.7 cM	420
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225
MDKA : Joseph SMITH, b. 1695, newington, Kent, England						

The shared segment between all testees is from **25,685,246 to 27,216,380 location (3,8 cM)**

SMITH D. (T881294) shares one ending segment at **27,219,057 location** with FLORI 3 and STUART 1.

Multiple Triangulation Chr. 15 / FLORI-FLORI-STUART-STUART-SMITH N°19

Comparing Kit A969384 (Richard Harold Smith) and T262139 (Henri Stuart of Corsica)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 4.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
9	89,615,155	91,833,600	4.4	497
12	126,807,959	127,633,733	4.4	355
14	20,338,112	21,072,466	4.9	230
15	25,687,699	27,219,113	4.0	182
22	46,999,526	47,589,360	4.1	319

Largest segment = 4.9 cM

Total of segments > 4 cM = 21.8 cM

5 matching segments

652327 SNPs used for this comparison.

Example A19 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH R.H. (A969384)	M	25,687,699	27,229,496	4.0 cM	182
Kit FLORI 4 (T540509)	SMITH R.H. (A969384)	M	25,669,108	27,678,821	5.0 cM	317
Kit FLORI 5 (T766787)	SMITH R.H. (A969384)	M	25,687,699	27,216,380	4.0 cM	179
Kit STUART 1 (T262139)	SMITH R.H. (A969384)	M	25,687,699	27,219,113	4.0 cM	182
Kit STUART 5 (T612772)	SMITH R.H. (A969384)	M	25,687,699	27,125,794	3.8 cM	139
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225
MDKA : James Smith, b 1740, Middleton, Warwickshire, England d 1821, York District, South Carolina Union with Mary Henry						

The shared segment between all testees is from **25,687,689 to 27,125,794 location (3,5 cM)**

SMITH R.H. (A969384) shares one starting segment at **25,687,689 location** with FLORI 3, FLORI 5, STUART 1 and STUART 5.

Multiple Triangulation Chr. 15 / FLORI-FLORI-STUART-STUART-SMITH N°20

Comparing Kit A853620 (Larry A Smith) and T627496 (françois flori)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 4.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
1	12,172,416	14,231,811	4.1	395
10	130,529,288	131,488,850	4.1	315
14	87,834,619	89,607,370	4.5	425
15	25,404,857	27,125,501	5.0	250
20	5,796,517	8,363,399	6.5	800

Largest segment = 6.5 cM

Total of segments > 4 cM = 24.2 cM

5 matching segments

650398 SNPs used for this comparison.

Example A20 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH L.A. (A853620)	M	25,404,857	27,125,501	5.0 cM	250
Kit FLORI 4 (T540509)	SMITH L.A. (A853620)	M	24,876,499	26,057,856	4.5 cM	335
Kit FLORI 5 (T766787)	SMITH L.A. (A853620)	M	25,028,495	26,057,856	3.9 cM	294
Kit STUART 1 (T262139)	SMITH L.A. (A853620)	M	24,817,014	26,057,856	4.7 cM	359
Kit STUART 5 (T612772)	SMITH L.A. (A853620)	M	25,645,234	26,057,856	1.4 cM*	116
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225
MDKA : Lawrence SMITH, b 1629, stonirakes, Burnley Parish, Lancashire, England d 1700, Gloucester, Virginia Union with Mary Debman						

** For this specific comparison we found a very truncated segment from 24,893,857 location to 28,736,917 location (initially > 9 cM).*

The shared segment between all testees (except for STUART 5) is from **25,685,246 to 26,057,856 location (2,9 cM)**

SMITH L.A. (A853620) shares one ending segment at **26,057,856 location** with FLORI 4, FLORI5, STUART 1 and STUART 5.

Table 3 : Shared starting and ending segment with Flori and Stuart kits

Kit	Shared starting segment with Flori and Stuart kits	Shared ending segment with Flori and Stuart kits
SMITH A. G. (T624021)	25,039,127	None
SMITH D. J. (T946476)	None	27,237,568
SMITH H. (A916563)	25,602,033	27,479,683
SMITH J. E. (A463831)	None	27,237,568
SMITH D.D. (T133328)	None	None
SMITH D (A349188)	25,850,002	None
SMITH D.M (A787957)	25,850,002	27,229,496
SMITH A. (A246267)	None	27,237,568
		27,479,683
SMITH B. (A876518)	None	None
SMITH R. (A125569)	25,852,901	27,219,113
SMITH M. (A760403)	None	27,287,538
SMITH N. (A100084)	25,759,991	27,458,511
SMITH B. (T846561)	None	27,219,113
SMITH L. C. (A032834)	25,844,723	27,216,380
SMITH K. (A683256)	None	27,125,501
SMITH S. (T741387)	25,852,901	27,513,610
SMITH E. (A074861)	None	27,287,538
SMITH D. (T881294)	None	27,219,057
SMITH R.H. (A969384)	25,687,699	None
SMITH L.A. (A853620)	None	26,057,856

Colourized cells indicate SMITH kits who share same starting or ending segment with Flori and Stuart Lines.

The **green group (SMITH D. J. (T946476) - SMITH J. E. (A463831) - SMITH A. (A246267))** could be a priority group for additional analyses.

Table 4 : Shared starting and ending segment with kit Flori 5

Kit	Shared starting segment with kit Flori 5	Shared ending segment with kit Flori 5
SMITH A. G. (T624021)	None	27,216,380
SMITH D. J. (T946476)	25,028,495	27,216,380
SMITH H. (A916563)	None	27,216,380
SMITH J. E. (A463831)	None	None
SMITH D.D. (T133328)	25,028,495	27,216,380
SMITH D (A349188)	None	27,216,380
SMITH D.M (A787957)	None	None
SMITH A. (A246267)	None	None
SMITH B. (A876518)	25,028,495	27,216,380
SMITH R. (A125569)	None	27,216,380
SMITH M. (A760403)	None	None
SMITH N. (A100084)	None	None
SMITH B. (T846561)	25,028,495	27,216,380
SMITH L. C. (A032834)	25,028,495	None
SMITH K. (A683256)	None	None
SMITH S. (T741387)	None	None
SMITH E. (A074861)	None	None
SMITH D. (T881294)	None	None
SMITH R.H. (A969384)	None	27,216,380
SMITH L.A. (A853620)	25,028,495	None

The four SMITH individuals (SMITH D. J. (T946476) - SMITH D.D. (T133328) - SMITH B. (A876518) - SMITH B. (T846561)) share a common **stable segment (25,028,495 to 27,216,480)** with kit FLORI 5.

We need to triangulate all the identified SMITH individuals who share this stable segment to confirm a correlation between all SMITH kits and FLORI 5.

Table 5 : triangulations for SMITH who share a full stable segment with Flori 5					
Kit 1	Kit 2	Start	End	cM	SNPs
SMITH D. J. (T946476)	SMITH D.D. (T133328)	25,602,719	27,216,380	4.3 cM	217
SMITH D. J. (T946476)	SMITH B. (A876518)	25,669,108	27,684,950	5.0 cM	331
SMITH D. J. (T946476)	SMITH B. (T846561)	25,375,485	27,377,074	5.7 cM	353
SMITH D.D. (T133328)	SMITH B. (A876518)	25,288,771	27,216,380	5.7 cM	320
SMITH D.D. (T133328)	SMITH B. (T846561)	25,602,033	27,216,380	4.3 cM	218
SMITH B. (A876518)	SMITH B. (T846561)	25,666,333	27,377,074	4.4 cM	238

SMITH D.D. (T133328) shares with the other SMITH individuals a **stable ending segment at 27,216,380 location**. The triangulation between all these SMITH and FLORI 5 is confirmed.

Because DNA matching segment (*m*) inherited from the common ancestor (*a*) is ancient, the probability of a stable segment starting and ending at the same locations is less likely due to recombination.

Therefore the existence of such stable segments enables segment triangulation to be undertaken.

Examining Table 4, all nine SMITH individuals share a common segment with FLORI 5 **ending at the same location 27,216,380**.

We need to triangulate all the identified SMITH individuals who share this stable ending segment to confirm a correlation between all kits SMITH and Flori 5.

Table 6 : triangulations for SMITH who share 27,216,380 ending segment with Flori 5					
Kit 1	Kit 2	Start	End	cM	SNPs
SMITH A. G. (T624021)	SMITH D. J. (T946476)	25,052,647	27,333,625	6.8 cM	402
SMITH A. G. (T624021)	SMITH H. (A916563)	25,052,647	27,084,142	6.3 cM	232
SMITH A. G. (T624021)	SMITH D.D. (T133328)	25,451,346	27,084,142	4.7 cM	233
SMITH A. G. (T624021)	SMITH D (A349188)	25,850,002	28,084,300	4.8 cM	365
SMITH A. G. (T624021)	SMITH B. (A876518)	25,034,393	27,235,349	6.7 cM	388
SMITH A. G. (T624021)	SMITH R. (A125569)	24,951,928	28,445,244	8.7 cM	630
SMITH A. G. (T624021)	SMITH B. (T846561)	25,052,647	27,333,625	6.8 cM	390
SMITH A. G. (T624021)	SMITH R.H. (A969384)	25,687,699	27,125,794	3.8 cM	141
SMITH D. J. (T946476)	SMITH H. (A916563)	25,545,731	27,171,654	4.5 cM	167
SMITH D. J. (T946476)	SMITH D.D. (T133328)	25,602,719	27,216,380	4.3 cM	217
SMITH D. J. (T946476)	SMITH D (A349188)	25,850,002	28,082,892	4.8 cM	362
SMITH D. J. (T946476)	SMITH B. (A876518)	25,669,108	27,684,950	5.0 cM	331
SMITH D. J. (T946476)	SMITH R. (A125569)	25,515,431	28,082,892	6.1 cM	482
SMITH D. J. (T946476)	SMITH B. (T846561)	25,375,485	27,377,074	5.7 cM	353
SMITH D. J. (T946476)	SMITH R.H. (A969384)	25,687,699	27,125,794	3.8 cM	141
SMITH H. (A916563)	SMITH D.D. (T133328)	25,602,742	26,761,172	3.4 cM	105
SMITH H. (A916563)	SMITH D (A349188)	<i>Triangulation failed</i>			
SMITH H. (A916563)	SMITH B. (A876518)	25,661,583	27,171,654	4.0 cM	130
SMITH H. (A916563)	SMITH R. (A125569)	24,667,811	27,171,654	7.9 cM	339
SMITH H. (A916563)	SMITH B. (T846561)	24,974,470	26,761,172	6.0 cM	243
SMITH H. (A916563)	SMITH R.H. (A969384)	25,687,699	27,490,744	4.6 cM	194
SMITH D.D. (T133328)	SMITH D (A349188)	25,850,002	27,216,380	3.5 cM	135
SMITH D.D. (T133328)	SMITH B. (A876518)	25,288,771	27,216,380	5.7 cM	320
SMITH D.D. (T133328)	SMITH R. (A125569)	25,853,198	27,216,380	3.5 cM	131
SMITH D.D. (T133328)	SMITH B. (T846561)	25,602,033	27,216,380	4.3 cM	218
SMITH D.D. (T133328)	SMITH R.H. (A969384)	25,687,699	27,216,380	4.0 cM	178
SMITH D (A349188)	SMITH B. (A876518)	<i>Triangulation failed</i>			
SMITH D (A349188)	SMITH R. (A125569)	25,852,901	28,966,826	5.7 cM	409
SMITH D (A349188)	SMITH B. (T846561)	25,850,002	27,693,604	4.4 cM	275
SMITH D (A349188)	SMITH R.H. (A969384)	<i>Triangulation failed</i>			
SMITH B. (A876518)	SMITH R. (A125569)	25,687,195	27,684,950	4.9 cM	318
SMITH B. (A876518)	SMITH B. (T846561)	25,666,333	27,377,074	4.4 cM	238
SMITH B. (A876518)	SMITH R.H. (A969384)	25,668,326	27,125,794	3.9 cM	155
SMITH R. (A125569)	SMITH B. (T846561)	25,375,509	27,693,604	6.2 cM	434
SMITH R. (A125569)	SMITH R.H. (A969384)	<i>25,028,495 <- - Truncated -> 27,679,734</i>			
SMITH R.H. (A969384)	SMITH B. (T846561)	25,687,699	27,125,794	3.8 cM	140

SMITH R.H. (A969384) shares with both SMITH A. G. (T624021) SMITH D. J. (T946476) and SMITH B. (T846561) a **very stable segment from 25,687,699 to 27,125,794 location (3.8 cM)**. Considering time to their MDKA that can't be coincidental and confirm they share a common ancestor.

SMITH A. G. (T624021) shares with both SMITH D. J. (T946476) and SMITH B. (T846561) a **very stable segment from 25,687,699 to 27,125,794 location (3.8 cM)**. Considering time to their MDKA that can't be coincidental and confirm one more time they share a common ancestor.

SMITH D.D. (T133328) shares with both SMITH D. J. (T946476), SMITH D (A349188), SMITH B. (A876518), SMITH R. (A125569), SMITH B. (T846561) and SMITH R.H. (A969384) a **very stable ending segment at 27,216,380 we were investigated**. Considering time to their MDKA that can't be coincidental and confirm they share a common ancestor.

SMITH D (A349188) did not triangulate with both SMITH H. (A916563), SMITH B. (A876518) and SMITH R.H. (A969384). He have no one 1 cM segment in common with them. SMITH D (A349188) could be a false match and we can remove him from future comparisons.

Table 7 : SMITH R.H. (A969384) global triangulation for verification

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH R.H. (A969384)	M	25,687,699	27,229,496	4.0 cM	182
Kit FLORI 4 (T540509)	SMITH R.H. (A969384)	M	25,669,108	27,678,821	5.0 cM	317
Kit FLORI 5 (T766787)	SMITH R.H. (A969384)	M	25,687,699	27,216,380	4.0 cM	179
Kit STUART 1 (T262139)	SMITH R.H. (A969384)	M	25,687,699	27,219,113	4.0 cM	182
Kit STUART 5 (T612772)	SMITH R.H. (A969384)	M	25,687,699	27,125,794	3.8 cM	139
SMITH A. G. (T624021)	SMITH R.H. (A969384)	M	25,687,699	27,125,794	3.8 cM	141
SMITH D. J. (T946476)	SMITH R.H. (A969384)	M	25,687,699	27,125,794	3.8 cM	141
SMITH B. (T846561)	SMITH R.H. (A969384)	M	25,687,699	27,125,794	3.8 cM	140
Kit FLORI 3 (T627496)	SMITH A. G. (T624021)	M	24,247,143	28,044,117	10.4 cM	835
Kit FLORI 4 (T540509)	SMITH A. G. (T624021)	M	25,039,127	28,044,117	8.0 cM	596
Kit FLORI 5 (T766787)	SMITH A. G. (T624021)	M	25,602,719	27,216,380	4.3 cM	217
Kit STUART 1 (T262139)	SMITH A. G. (T624021)	M	25,554,316	27,237,568	4.6 cM	251
Kit STUART 5 (T612772)	SMITH A. G. (T624021)	M	25,039,127	27,775,958	7.6 cM	535
Kit FLORI 3 (T627496)	SMITH D. J. (T946476)	M	25,105,106	28,113,480	7.8 cM	583
Kit FLORI 4 (T540509)	SMITH D. J. (T946476)	M	24,862,190	27,237,568	7.3 cM	445
Kit FLORI 5 (T766787)	SMITH D. J. (T946476)	M	25,028,495	25,550,693	2.1 cM	138
			25,572,122	27,216,380	4.5 cM	229
Kit STUART 1 (T262139)	SMITH D. J. (T946476)	M	25,669,300	27,237,568	4.1 cM	201
Kit STUART 5 (T612772)	SMITH D. J. (T946476)	M	25,602,033	27,775,958	5.4 cM	382
Kit FLORI 3 (T627496)	SMITH B. (T846561)	F	25,404,857	27,229,496	5.2 cM	299
Kit FLORI 4 (T540509)	SMITH B. (T846561)	F	24,951,928	27,219,113	7.0 cM	404
Kit FLORI 5 (T766787)	SMITH B. (T846561)	F	25,028,495	25,547,157	2.1 CM	136
			25,590,529	27,216,380	4.4 cM	220
Kit STUART 1 (T262139)	SMITH B. (T846561)	F	25,669,300	27,219,113	4.1 cM	193
Kit STUART 5 (T612772)	SMITH B. (T846561)	F	25,645,234	27,693,604	5.1 cM	347
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135

From the triangulations we can see that the common SMITH ancestor transmitted the matching segment (m) from **24,247,143 to 28,044,117 location (10.4 cM)** which has been preserved in the FLORI A2 family.

SMITH R.H. (A969384) still shares a **stable segment from 25,687,699 to 27,125,794 location (3.8 cM)** preserved during multiple recombination events and inherited by present day testes of both FLORI A1, A2 and A3 lines, STUART A1 and A2 lines and SMITH A. G. (T624021), SMITH D. J. (T946476) and SMITH B. (T846561).

We believe that the unique ancestor (U_α) bewteen SMITH R.H. (A969384), SMITH A. G. (T624021), SMITH D. J. (T946476) and SMITH B. (T846561) could be the contributor (e) of the common FLORI / STUART ancestor (α) which is the focus of this research.

For confirming this hypothesis we use the following theorem for a test of correlation :

If (t) = Cor (m , U_α) then (U_α) is a contributor (e)

Where (t) is a two individuals testing and (U_α) is the unique ancestor of (t).

In other words matching segments must be correlated to crossing genealogies information for identifying a common unique ancestor.

We'll use this methodology for all consistent atDNA results and interpretation (see Part II).

ADDITIONAL atDNA COMPARISON FOR SMITH J.E (A463831)

Smith J. E. (A463831) belong to the green group (see p 31.) and has an ancient well documented pedigree.

Triangulation Chr. X / SMITH J. E. (A463831) Line – STUART A1 Line – FLORI A1-A2 Line

Kit 1	Kit 2	Start	End	cM	SNPs
Kit FLORI 4 (T540509)	kit STUART 2 (T884737)	45,611,715 47,283,760	46,828,482 51,048,324	2.3 cM 4.2 cM	138 385
Kit FLORI 4 (T540509)	Smith J. E. (A463831)	45,550,550 48,048,049	48,002,707 54,748,884	4.6 cM 4.8 cM	304 481
kit STUART 2 (T884737)	Smith J. E. (A463831)	45,547,988	66,678,658	10.7 cM	1,113

According to geneticists “only segments longer than 5 cM have a negligible number of false positives”.⁵ For this reason we must identify all the segments > 5cM shared between SMITH J. E. (A463831) and FLORI and STUART lines.

Table 8 : SMITH J. E. (A463831) Shared Segments > 5 cM

Kit 1	Kit 2	ICW		Low values for ICW		
		Start	End	cM	SNPs	Chr
Kit FLORI 1 (T365987)	SMITH J. E. (A463831)	11,734,714	14,349,077	5.9	597	1
Kit FLORI 1 (T365987)	SMITH J. E. (A463831)	127,433,877	129,768,842	6.1	722	8
Kit FLORI 1 (T365987)	SMITH J. E. (A463831)	19,498,360	21,219,036	5.3	725	11
Kit FLORI 1 (T365987)	SMITH J. E. (A463831)	73,360,294	74,637,844	5.5	382	17
Kit FLORI 2 (T766787)	SMITH J. E. (A463831)	10,731,174	12,594,290	5.0	497	1
Kit FLORI 3 (T627496)	SMITH J. E. (A463831)	10,857,482	14,266,812	7.8	777	1
Kit FLORI 4 (T766787)	SMITH J. E. (A463831)	10,731,174	12,594,290	5.0	497	1
Kit FLORI 5 (T766787)	SMITH J. E. (A463831)	6,732,895	9,885,185	4.8	696	8
Kit FLORI 5 (T766787)	SMITH J. E. (A463831)	73,152,091	74,514,952	5.5	435	17
Kit STUART 1 (T262139)	SMITH J. E. (A463831)	12,691,826	14,725,884	4.1	473	1
Kit STUART 2 (T884737)	SMITH J. E. (A463831)	11,734,714	13,747,440	4.4	368	1
Kit STUART 2 (T884737)	SMITH J. E. (A463831)	3,897,541	6,407,132	7.9	798	5
Kit STUART 3 (T423529)	SMITH J. E. (A463831)	128,751,553	133,112,649	5.8	745	2
Kit STUART 4 (T295816)	SMITH J. E. (A463831)	11,783,767	13,780,081	5.0	520	8
Kit STUART 4 (T295816)	SMITH J. E. (A463831)	117,939,450	120,165,795	4.8	656	10
Kit STUART 5 (T612772)	SMITH J. E. (A463831)	27,239,711	29,534,867	4.5	692	8

Triangulations Chr. 1 / SMITH J. E. (A463831) Line – STUART A1 and A2 Lines – FLORI A1 et A2

Kit 1	Kit 2	Start	End	cM	SNPs
Kit FLORI 1 (T365987)	SMITH J. E. (A463831)	11,734,714	14,349,077	5.9 cM	597
Kit FLORI 3 (T627496)	SMITH J. E. (A463831)	10,857,482	14,266,812	7.8 cM	777
Kit STUART 1 (T262139)	SMITH J. E. (A463831)	12,691,826	14,725,884	4.1 cM	473
Kit STUART 2 (T884737)	SMITH J. E. (A463831)	11,734,714	13,747,440	4.4 cM	368
Kit STUART 1 (T262139)	Kit FLORI 1 (T365987)	12,390,207	13,702,006	2.4 cM	159
Kit STUART 1 (T262139)	Kit FLORI 3 (T627496)	10,802,312 11,864,071	11,858,911 13,702,006	2.7 cM 3.9 cM	318 288
Kit STUART 2 (T884737)	Kit FLORI 1 (T365987)	11,849,643	13,747,440	4.1 cM	317
Kit STUART 2 (T884737)	Kit FLORI 3 (T627496)	11,633,148	13,996,697	5.2 cM	493

Due to these **very consistent atDNA matches between both FLORI and STUART with SMITH J. E. (A463831) Line**, we need to perform other verification on atDNA matches with :

- **Double triangulations methodology** by comparing further both two FLORI Lines A1 and A2, SMITH J. E. (A463831) and one other SMITH individual.
These double triangulations we'll be performed on **Chr. 1**.

⁵ Durand EY, Eriksson N, McLean CY. [Reducing pervasive false positive identical-by-descent segments detected by large-scale pedigree analysis](#). *Molecular Biology and Evolution* advance access publication online 30 April 2014.

12 DOUBLE TRIANGULATIONS FLORI-FLORI-SMITH-SMITH ON CHR. 1

Double Triangulations on Chr. 1 / SMITH J. E. (A463831)-SMITH-FLORI-FLORI N°1

Kit 1	Kit 2	Start	End	cM	SNPs
Kit FLORI 1 (T365987)	SMITH J. E. (A463831)	11,734,714	14,349,077	5.9 cM	597
Kit FLORI 3 (T627496)	SMITH J. E. (A463831)	10,857,482	14,266,812	7.8 cM	777
SMITH L. (M680943)	SMITH J. E. (A463831)	9,710,095	14,034,610	8.8 cM	424
		14,070,694	14,783,507	2.0 cM	149
SMITH L. (M680943)	Kit FLORI 1 (T365987)	9,844,832	11,295,225	2.5 cM	124
		12,359,485	13,996,697	3.0 cM	116
SMITH L. (M680943)	Kit FLORI 3 (T627496)	12,191,158	15,577,659	7.9 cM	458

Double Triangulations on Chr. 1 / SMITH J. E. (A463831)-SMITH-FLORI-FLORI N°2

Kit 1	Kit 2	Start	End	cM	SNPs
Kit FLORI 1 (T365987)	SMITH J. E. (A463831)	11,734,714	14,349,077	5.9 cM	597
Kit FLORI 3 (T627496)	SMITH J. E. (A463831)	10,857,482	14,266,812	7.8 cM	777
SMITH J. (A724556)	SMITH J. E. (A463831)	10,814,087	14,020,997	7.2 cM	670
SMITH J. (A724556)	Kit FLORI 1 (T365987)	11,262,929	14,011,400	6.2 cM	574
SMITH J. (A724556)	Kit FLORI 3 (T627496)	10,802,312	14,011,400	7.3 cM	668

Double Triangulations on Chr. 1 / SMITH J. E. (A463831)-SMITH-FLORI-FLORI N°3

Kit 1	Kit 2	Start	End	cM	SNPs
Kit FLORI 1 (T365987)	SMITH J. E. (A463831)	11,734,714	14,349,077	5.9 cM	597
Kit FLORI 3 (T627496)	SMITH J. E. (A463831)	10,857,482	14,266,812	7.8 cM	777
SMITH M. (A154193)	SMITH J. E. (A463831)	10,679,786	11,733,261	2.5 cM	260
		11,901,385	14,042,647	4.5 cM	380
SMITH M. (A154193)	Kit FLORI 1 (T365987)	11,903,036	13,865,433	4.1 cM	333
SMITH M. (A154193)	Kit FLORI 3 (T627496)	10,858,010	14,124,675	7,4 cM	709

Double Triangulations on Chr. 1 / SMITH J. E. (A463831)-SMITH-FLORI-FLORI N°4

Kit 1	Kit 2	Start	End	cM	SNPs
Kit FLORI 1 (T365987)	SMITH J. E. (A463831)	11,734,714	14,349,077	5.9 cM	597
Kit FLORI 3 (T627496)	SMITH J. E. (A463831)	10,857,482	14,266,812	7.8 cM	777
SMITH J. (A114365)	SMITH J. E. (A463831)	10,900,903	11,734,714	2.1 cM	201
		11,746,890	14,107,531	5.1 cM	494
SMITH J. (A114365)	Kit FLORI 1 (T365987)	10,857,482	11,746,720	2.2 cM	213
		11,849,643	12,708,081	2.5 cM	215
		12,752,379	14,105,516	2.2 cM	181
SMITH J. (A114365)	Kit FLORI 3 (T627496)	10,881,522	14,107,531	7,3 cM	689

Double Triangulations on Chr. 1 / SMITH J. E. (A463831)-SMITH-FLORI-FLORI N°5

Kit 1	Kit 2	Start	End	cM	SNPs
Kit FLORI 1 (T365987)	SMITH J. E. (A463831)	11,734,714	14,349,077	5.9 cM	597
Kit FLORI 3 (T627496)	SMITH J. E. (A463831)	10,857,482	14,266,812	7.8 cM	777
SMITH B. (T753624)	SMITH J. E. (A463831)	10,985,630	13,748,197	6.4 cM	539
SMITH B. (T753624)	Kit FLORI 1 (T365987)	11,317,870	11,697,543	1.0 cM	114
		12,175,542	13,678,626	2.9 cM	188
SMITH B. (T753624)	Kit FLORI 3 (T627496)	10,757,478	13,678,626	6,7 cM	605

Double Triangulations on Chr. 1 / SMITH J. E. (A463831)-SMITH-FLORI-FLORI N°6

Kit 1	Kit 2	Start	End	cM	SNPs
Kit FLORI 1 (T365987)	SMITH J. E. (A463831)	11,734,714	14,349,077	5.9 cM	597
Kit FLORI 3 (T627496)	SMITH J. E. (A463831)	10,857,482	14,266,812	7.8 cM	777
SMITH D. (T825557)	SMITH J. E. (A463831)	10,985,630	13,748,197	6.4 cM	539
SMITH D. (T825557)	Kit FLORI 1 (T365987)	11,317,870	11,836,344	1.4 cM	196
		12,001,361	13,996,697	4.1 cM	342
SMITH D. (T825557)	Kit FLORI 3 (T627496)	10,791,639	14,012,413	7,3 cM	697

Double Triangulations on Chr. 1 / SMITH J. E. (A463831)-SMITH-FLORI-FLORI N°7

Kit 1	Kit 2	Start	End	cM	SNPs
Kit FLORI 1 (T365987)	SMITH J. E. (A463831)	11,734,714	14,349,077	5.9 cM	597
Kit FLORI 3 (T627496)	SMITH J. E. (A463831)	10,857,482	14,266,812	7.8 cM	777
SMITH D. (A007415)	SMITH J. E. (A463831)	10,679,786	14,062,915	7.6 cM	730
SMITH D. (A007415)	Kit FLORI 1 (T365987)	9,635,973	13,820,492	8.5 cM	888
SMITH D. (A007415)	Kit FLORI 3 (T627496)	10,791,639	11,851,482	2.7 cM	305
		12,172,416	13,820,492	3.1 cM	240

Double Triangulations on Chr. 1 / SMITH J. E. (A463831)-SMITH-FLORI-FLORI N°8

Kit 1	Kit 2	Start	End	cM	SNPs
Kit FLORI 1 (T365987)	SMITH J. E. (A463831)	11,734,714	14,349,077	5.9 cM	597
Kit FLORI 3 (T627496)	SMITH J. E. (A463831)	10,857,482	14,266,812	7.8 cM	777
SMITH R. (A094859)	SMITH J. E. (A463831)	10,771,286	12,621,924	5.0 cM	496
		12,633,469	14,158,425	2.7 cM	262
SMITH R. (A094859)	Kit FLORI 1 (T365987)	10,919,778	13,808,254	6.6 cM	591
SMITH R. (A094859)	Kit FLORI 3 (T627496)	10,811,378	12,105,832	3.5 cM	361
		12,633,469	14,158,425	2.7 cM	262

Double Triangulations on Chr. 1 / SMITH J. E. (A463831)-SMITH-FLORI-FLORI N°9

Kit 1	Kit 2	Start	End	cM	SNPs
Kit FLORI 1 (T365987)	SMITH J. E. (A463831)	11,734,714	14,349,077	5.9 cM	597
Kit FLORI 3 (T627496)	SMITH J. E. (A463831)	10,857,482	14,266,812	7.8 cM	777
SMITH C. (A116960)	SMITH J. E. (A463831)	10,918,969	14,209,601	7.6 cM	733
SMITH C. (A116960)	Kit FLORI 1 (T365987)	11,424,018	13,809,868	5.4 cM	493
SMITH C. (A116960)	Kit FLORI 3 (T627496)	12,001,361	14,209,601	4.6 cM	435
		14,313,971	14,998,286	2.0 cM	229

Double Triangulations on Chr. 1 / SMITH J. E. (A463831)-SMITH-FLORI-FLORI N°10

Kit 1	Kit 2	Start	End	cM	SNPs
Kit FLORI 1 (T365987)	SMITH J. E. (A463831)	11,734,714	14,349,077	5.9 cM	597
Kit FLORI 3 (T627496)	SMITH J. E. (A463831)	10,857,482	14,266,812	7.8 cM	777
SMITH L. (A798045)	SMITH J. E. (A463831)	9,381,380	13,748,197	8.7 cM	899
SMITH L. (A798045)	Kit FLORI 1 (T365987)	10,929,746	13,747,440	6.5 cM	560
SMITH L. (A798045)	Kit FLORI 3 (T627496)	9,588,951	11,858,911	4.4 cM	557
		12,114,840	14,169,807	4.1 cM	388
		14,172,679	14,552,188	1.0 cM	158

Double Triangulations on Chr. 1 / SMITH J. E. (A463831)-SMITH-FLORI-FLORI N°11

Kit 1	Kit 2	Start	End	cM	SNPs
Kit FLORI 1 (T365987)	SMITH J. E. (A463831)	11,734,714	14,349,077	5.9 cM	597
Kit FLORI 3 (T627496)	SMITH J. E. (A463831)	10,857,482	14,266,812	7.8 cM	777
SMITH M. (A058902)	SMITH J. E. (A463831)	10,565,093	14,032,799	7.8 cM	751
SMITH M. (A058902)	Kit FLORI 1 (T365987)	11,454,505	11,841,858	1.1 cM	155
		11,849,643	13,703,402	4.0 cM	286
SMITH M. (A058902)	Kit FLORI 3 (T627496)	10,881,522	13,703,402	6.5 cM	553

Double Triangulations on Chr. 1 / SMITH J. E. (A463831)-SMITH-FLORI-FLORI N°12

Kit 1	Kit 2	Start	End	cM	SNPs
Kit FLORI 1 (T365987)	SMITH J. E. (A463831)	11,734,714	14,349,077	5.9 cM	597
Kit FLORI 3 (T627496)	SMITH J. E. (A463831)	10,857,482	14,266,812	7.8 cM	777
SMITH A. (G507430)	SMITH J. E. (A463831)	10,930,928	11,659,187	1.9 cM	127
		11,683,839	14,143,718	5.4 cM	361
SMITH A. (G507430)	Kit FLORI 1 (T365987)	10,930,928	11,646,107	1.8 cM	125
		11,683,839	13,819,173	4.7 cM	292
SMITH A. (G507430)	Kit FLORI 3 (T627496)	10,755,448	11,659,187	2.2 cM	161
		11,864,071	14,124,675	4.8 cM	281

As there are so many matching segments it is important to take into consideration the genealogical pedigree of testee SMITH J.E (A463831) when comparing and correlating triangulations (see Part II).

We can notice on triangulation N°8 that SMITH R. (A094859) shares a smaller stable segment from 12,633,469 to 14,158,425 (2,7 cM) with both SMITH J.E (A463831) and FLORI 3.

This small segment is a truncated part of the original larger segment. We have no information concerning the pedigree of SMITH R. (A094859). If our theory is correct he should have a good triangulation on Chr 15 with both FLORI and STUART lines.
We must verify this point.

Multiple Triangulation Chr. 15 / FLORI-FLORI-STUART-STUART-SMITH N°21

Comparing Kit A094859 (Ryan Smith) and T766787 (Kit Flori 5)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 5.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
15	24,665,997	27,216,380	8.0	471
21	41,537,875	42,676,236	5.6	635

Largest segment = 8.0 cM

Total of segments > 5 cM = 13.6 cM

2 matching segments

651879 SNPs used for this comparison.

Example A21 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH R. (A094859)	M	25,404,857	27,322,600	5.4 cM	316
Kit FLORI 4 (T540509)	SMITH R. (A094859)	M	25,685,246	27,237,568	4.1 cM	192
Kit FLORI 5 (T766787)	SMITH R. (A094859)	M	24,665,997	27,216,380	8.0 cM	471
Kit STUART 1 (T262139)	SMITH R. (A094859)	M	24,929,952	27,479,972	7.6 cM	483
Kit STUART 5 (T612772)	SMITH R. (A094859)	M	25,541,265	27,729,600	5.5 cM	392
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225

The triangulation expected is confirmed.

According to these results SMITH J.E (A463831) seems to highlight specific SMITH candidate for future atDNA triangulations.

ADDITIONAL atDNA COMPARISON FOR ONE SUPPOSED WRIGHT ANCESTRY

We found a single triangulation with three Wright distant cousins and Stuart A1 Line on chr. 2.

Miss Janet WRIGHT recent ancestor immigrated to Australia at the beginning of the XIX century.
Mr. CONELLY ancestor immigrated to North American Colonies at the end of the XVII century.
Despite their distant cousinship, their matching segment is very significant and semi-stable.
Miss JONES is descended from BROWN ancestry.

Kit 1 compared	Kit 2 compared	Start	End	Shared	SNPs
KIT STUART 1 (T262139)	JONES L. (T516598)	113,661,805	123,351,299	9,5 cM	1 968
KIT STUART 1 (T262139)	CONELLY W. E. (Private)	113,766,586	134,020,217	19,75 cM	4 359
KIT STUART 1 (T262139)	Janet WRIGHT (T438154)	113,766,586	129,958,970	14,78 cM	3 590
Janet WRIGHT (T438154)	CONELLY W. E. (Private)	111,673,544	129,958,970	16,27 cM	4 090
JONES L. (T516598)	Janet WRIGHT (T438154)	112,439,588	123,133,079	9,91 cM	2 390
JONES L. (T516598)	CONELLY W. E. (Private)	106,254,302	123,515,886	15,12 cM	3 559

This semi-stable DNA matching segment (**m**) starting at **113,766,586** location and ending at **129,958,970** location indicate that Miss Janet WRIGHT could have a common ancestor (**a**) with Mr. CONELLY and STUART 1.

And if we take in consideration that 134,020, 217 and 111,673,544 overlap the two semi stable segments, **the DNA matching segment (**m**) starting at 113,766,586 location and ending at 129,958,970 location (14,78 cM) is one stable segment shared between the WRIGHT and STUART A1 Line.**

Considering the importance of triangulations made on Chr 15, it is useful to compare both FLORI, STUART and Miss Janet WRIGHT for verifying an hypothetical family link.

Verification shows that all Stuart and Flori Kits have numerous atDNA triangulations on chr. 15 with Janet WRIGHT (T438154) like this one :

Kit 1	Kit 2	Start	End	cM	SNPs
Janet WRIGHT (T438154)	Kit FLORI 3 (T627496)	25,430,180	27,322,600	5.3 cM	317
Janet WRIGHT (T438154)	Kit STUART 1 (T262139)	25,669,300	27,358,718	4.4 cM	235
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)	25,515,431	27,330,247	5.0 cM	291
Kit FLORI 3 (T627496)	D. J. BROWN (A233385)	25,658,793	27,229,949	4,2 cM	200
Janet WRIGHT (T438154)	D. J. BROWN (A233385)	25,006,309	27,212,047	6.7 cM	384
Kit STUART 1 (T262139)	D. J. BROWN (A233385)	24,683,233	27,479,972	8,4 cM	551

in this comparison have not been passed down with clear cut start or end points due to recombination, however they are all further evidence regarding genealogical linkage.

Mr. CONELLY is directly issued by his mother from George BROWN Sr. who married MERCY WRIGHT in 1679, DELAWARE. They descend from well documented Brown families from the USA which makes their matching important. In this series of triangulations the Brown individuals tested confirm the DNA matching segment (**m**) inherited from Mercy WRIGHT.

Miss Jones is issued from George BROWN Jr. (1690-1747) who has extant descendants living in Texas.

At this point we can demonstrate by correlation between Flori and Stuarts testees and Wright ancestry. (see part II).

II) COLLECTING GENEALOGICAL DATA AND CORRELATION

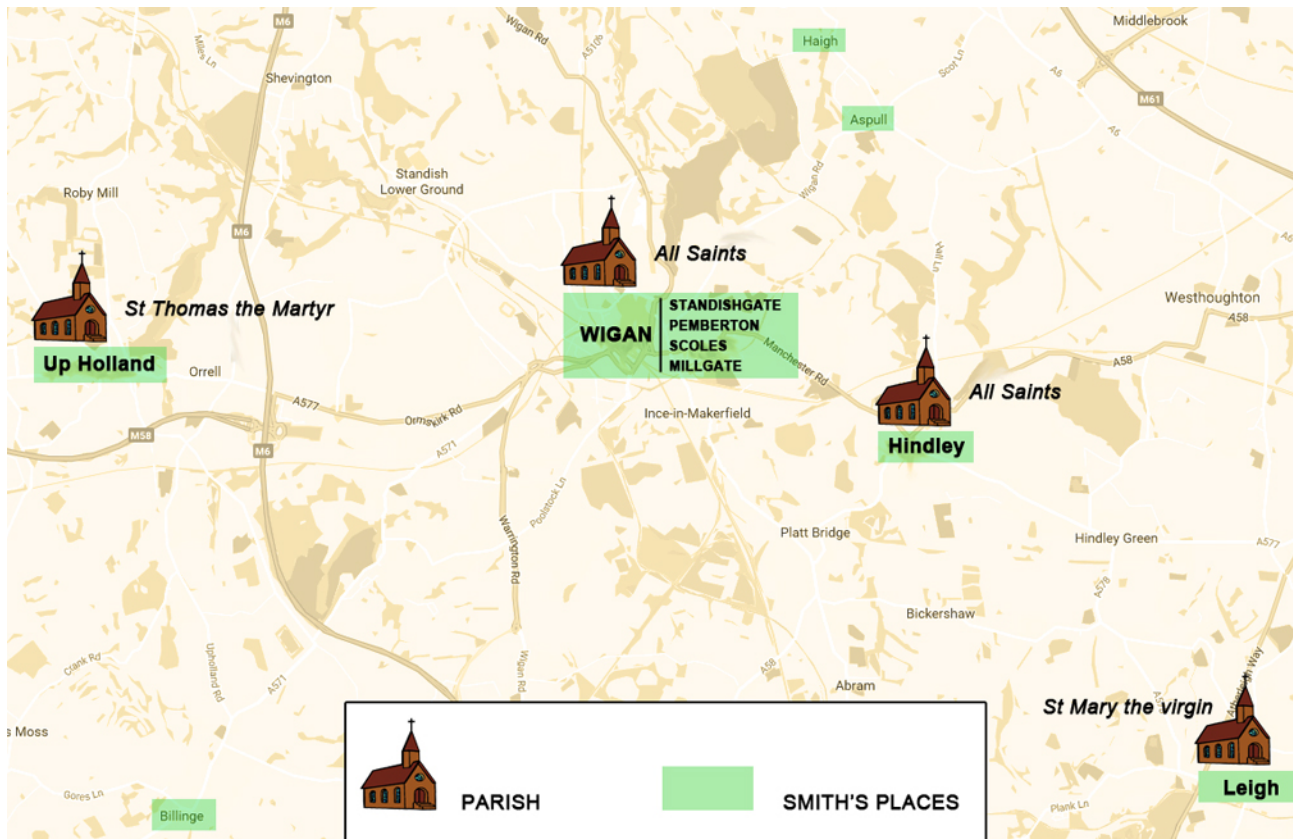
SMITH J. E. (A463831) and SMITH H. (A916563) pedigree and test of correlation

SMITH J.E (A463831) MDKA was born in Burnley (Lancashire) in 1592 and SMITH H. (A91563) MDKA was born in Wigan (Lancashire) in 1755.

Burnley and Wigan parishes are located 23 miles distant from one another.

We must find a family link between Roger Smith born in Wigan in 1755 and Christopher Smith born in Burnley in 1592. All church registers from the County of Lancashire are available via the OnLine Parish Clerk (<http://www.lan-opc.org.uk/>).

We didn't find any Roger Smith born in 1755 at Pemberton district of Wigan Parish. We have identified 3 other parishes closer to Wigan.



We have identified one Roger Smith born between 1750 and 1760 :

Day	Month	Year	Name	Father's Name	Parish
21	May	1750	Roger	Roger	LEIGH, St Mary

His father is identified :

Baptism: 12 May 1704 St Mary the Virgin, Leigh, Lancs. / Roger Smith - Son of John Smith

Register: Baptisms 1700 - 1723, Page 8, Entry 33 / Source: LDS Film 1885656

We have no other sources to determine who is John Smith because two options are possible :

Marriage: 24 Sep 1696 St Mary the Virgin, Leigh, Lancs. / John Smith

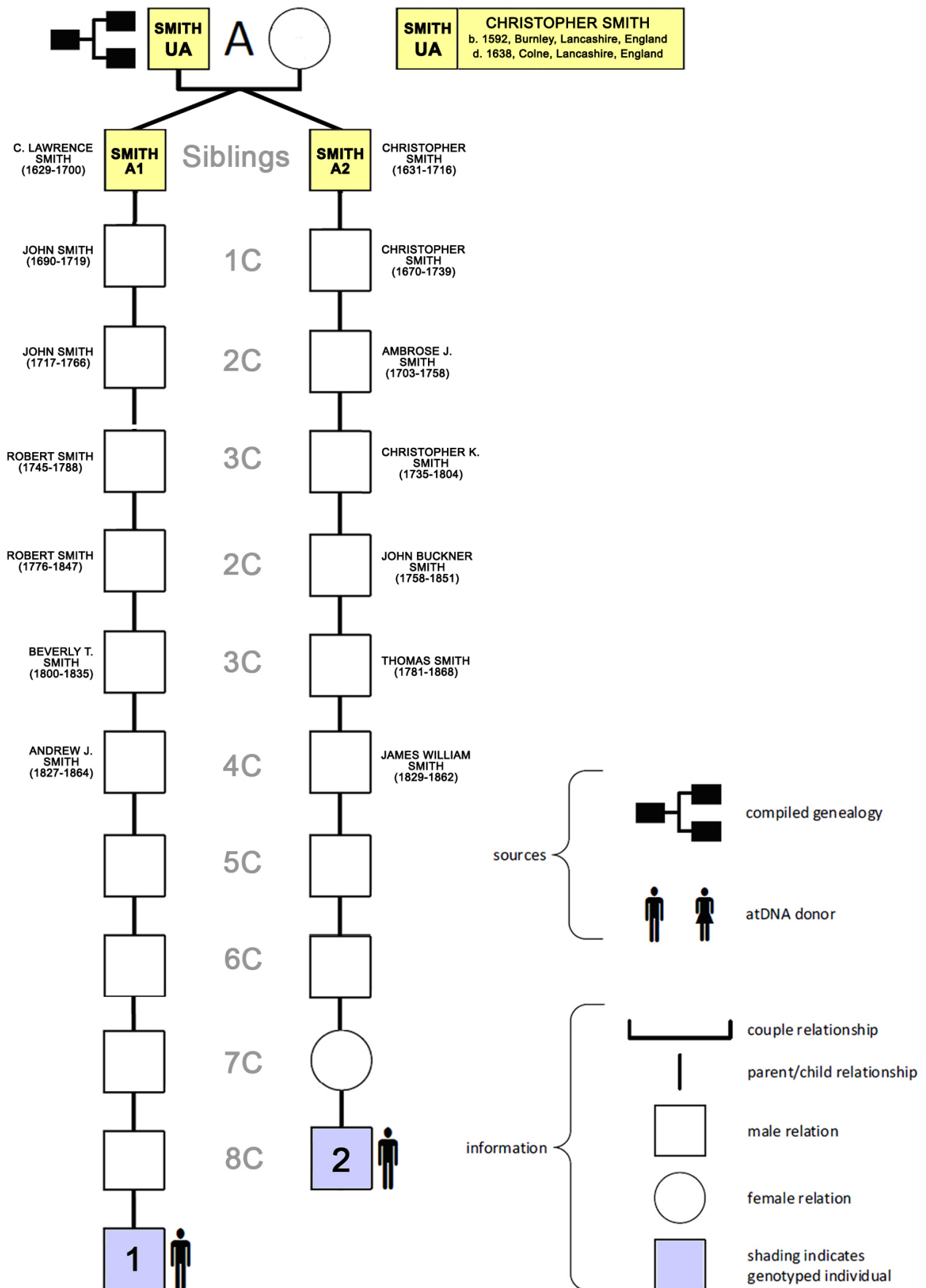
Margrett Cooke - Hindley

Marriage: 10 Dec 1702 St Mary the Virgin, Leigh, Lancs. / John Smith

Hanah Guest - of Eccles Parish

At this moment we can't perform a test of correlation including SMITH H. (A916563) data.

SMITH J. E. (A463831) and SMITH L. A. (A853620) pedigree and test of correlation



Independent lines with compiled genealogy
SMITH A1 / C. Lawrence SMITH (1629 -1700)
SMITH A2 / Christopher SMITH (1631-1716)

Genotyped individual Kits
Kit 1 – SMITH L. A. (A853620)
Kit 2 – SMITH J. E. (A463831)

We must have confirmation that SMITH J. E. (A463831) and SMITH L. A. (A853620) share a common segment on Chr. 15.

Comparing Kit A463831 (Elizabeth Jeanette Smith) and A853620 (Larry A Smith)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 4.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
5	4,991,915	6,300,401	4.0	465
9	2,290,565	3,965,129	4.5	638
15	25,617,842	27,377,074	4.6	254
15	64,878,086	67,756,409	4.8	662
17	50,330,891	52,327,400	4.0	541

Largest segment = 4.8 cM

Total of segments > 4 cM = 21.9 cM

5 matching segments

647368 SNPs used for this comparison.

Example A22 : atDNA comparisons used for this triangulation with Gedmatch.com

As expected we have a **matching segment from 25,617,842 to 27,377,074 location (4.6 cM)** on Chr. 15.

Test of correlation N°1 / SMITH J. E. (A463831) and SMITH L. A. (A853620)

If (t) = Cor (m , \mathcal{U}_α) then (\mathcal{U}_α) is a contributor (e)

(t) = SMITH J. E. (A463831) and SMITH L. A. (A853620)

(m) = CHR 15. / 25,617,842 to 27,377,074 (4,8 cM)

(α) = C. Lawrence SMITH (1629 -1700) and Christopher SMITH (1631-1716)

(\mathcal{U}_α) = Christopher SMITH (1592-1638)

The two (α) are issued from one (\mathcal{U}_α), **correlation test is positive.**

Based on this result we can support the hypothesis that Christopher SMITH (1592-1638) from Lancashire could share a common SMITH ancestry with FLORI and STUART families in Corsica.

After many investigations into Gedmatch.com database, we have identified another kit SMITH (M420724) issued from **SMITH C.Lawrence (1629-1700) line**. The importance of SMITH D. (M420724) is that he matches with another Stuart of Corsica man, STUART 4 (T295816).

We choose to perform a combined atDNA comparison all three FLORI kit, three STUART kits and SMITH J. E. (A463831).

Combined atDNA comparison on Chr. 15 for SMITH D. (M420724)

Comparing Kit M420724 (David Smith) and T540509 (*Angelise Flori)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 5.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
5	34,094,312	38,386,400	5.3	483
15	25,028,495	27,287,538	6.8	202
16	977,036	3,982,450	6.3	324
22	20,884,577	23,612,572	6.6	225

Largest segment = 6.8 cM

Total of segments > 5 cM = 25.0 cM

4 matching segments

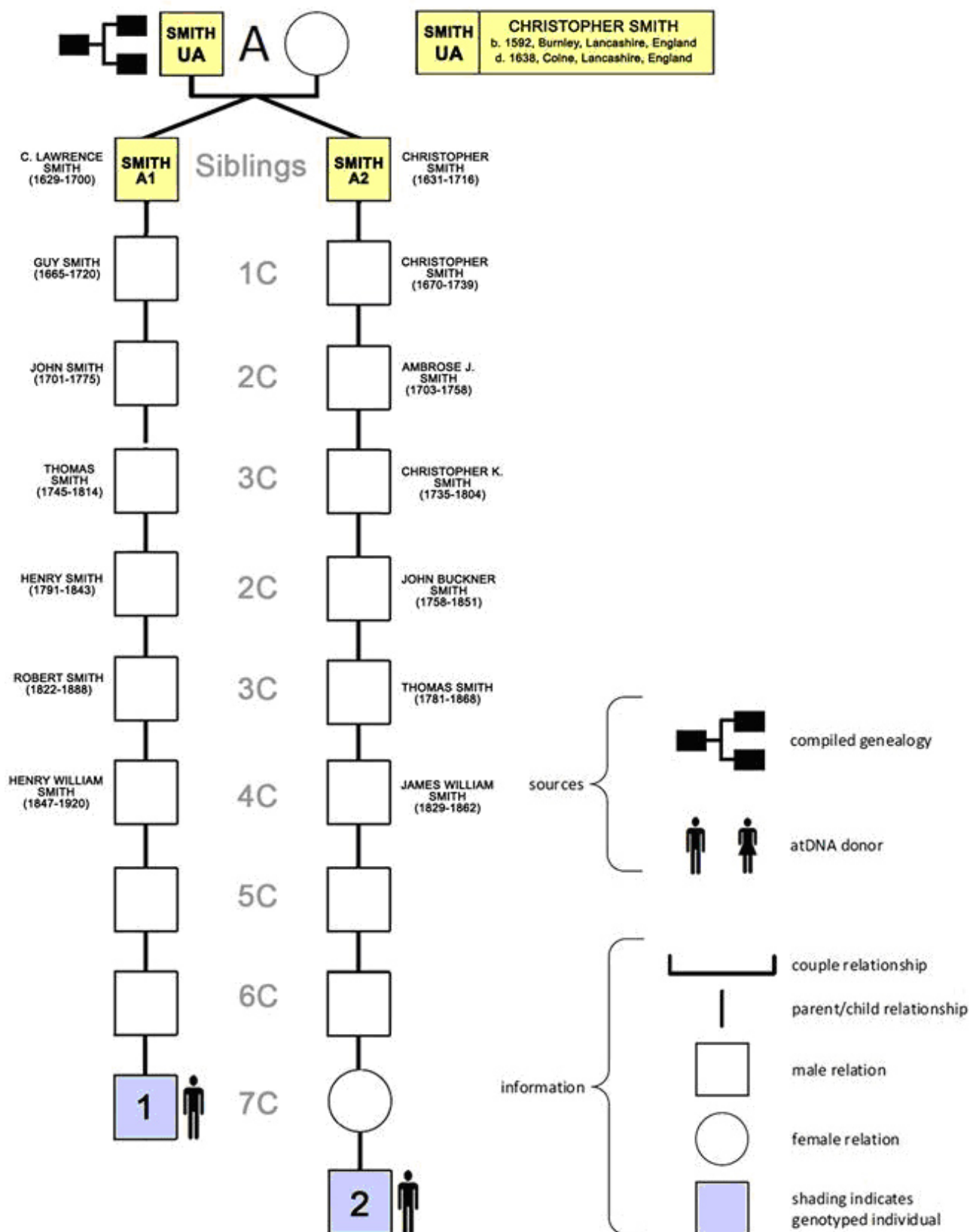
299556 SNPs used for this comparison.

Example A22 : atDNA comparisons used for this combined triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 4 (T295816)		25,716,027	27,229,496	3.9 cM	175
Kit FLORI 4 (T540509)	Kit STUART 4 (T295816)		25,856,310	27,237,568	3.5 cM	146
Kit FLORI 5 (T766787)	Kit STUART 4 (T295816)		25,553,892	27,235,349	4.6 cM	254
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH D. (M420724)	M	25,105,106	27,229,496	6.4 cM	168
Kit FLORI 4 (T540509)	SMITH D. (M420724)	M	25,028,495	27,287,538	6.8 cM	202
Kit FLORI 5 (T766787)	SMITH D. (M420724)	M	25,555,431	28,068,397	5.9 cM	229
Kit STUART 1 (T262139)	SMITH D. (M420724)	M	25,687,195	27,642,703	4.8 cM	138
Kit STUART 4 (T295816)	SMITH D. (M420724)	M	25,618,918	27,684,347	5.2 cM	162
Kit STUART 5 (T612772)	SMITH D. (M420724)	M	25,645,234	27,771,982	5.2 cM	172
Kit FLORI 3 (T627496)	SMITH J. E. (A463831)	F	25,642,093	27,520,513	4.8 cM	297
Kit FLORI 4 (T540509)	SMITH J. E. (A463831)	F	25,642,093	27,254,897	4.3 cM	212
Kit FLORI 5 (T766787)	SMITH J. E. (A463831)	F	25,856,310	27,237,568	3.5 cM	141
Kit STUART 1 (T262139)	SMITH J. E. (A463831)	F	25,556,292	27,237,568	4.6 cM	240
Kit STUART 4 (T295816)	SMITH J. E. (A463831)	F	25,856,310	27,491,292	4.0 cM	216
Kit STUART 5 (T612772)	SMITH J. E. (A463831)	F	25,556,292	27,775,958	5.5 cM	386
SMITH D. (M420724)	SMITH J. E. (A463831)	F	25,687,195	28,074,024	5.4 cM	201
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 1 (T262139)	Kit STUART 4 (T295816)		25,716,027	27,684,950	4.8 cM	314
Kit STUART 1 (T262139)	Kit STUART 5 (T612772)		25,685,246	27,349,932	4.3 cM	225
Kit STUART 4 (T295816)	Kit STUART 5 (T612772)		25,716,027	27,684,950	4.8 cM	314

Values in red colour indicate that initially the segment was similar

SMITH J. E. (A463831) and SMITH D. (M420724) pedigree and test of correlation



Independent lines with compiled genealogy
SMITH A1 / C. Lawrence SMITH (1629 -1700)
SMITH A2 / Christopher SMITH (1631-1716)

Genotyped individual Kits
Kit 1 – SMITH D. (M420724)
Kit 2 – SMITH J. E. (A463831)

Test of correlation N°2 / SMITH J. E. (A463831) and SMITH D. (M420724)

If (t) = Cor (m , Ua) then (Ua) is a contributor (e)

(t) = SMITH J. E. (A463831) and SMITH D. (M420724)

(m) = CHR 15. / 25,687,195 to 28,074,024 (5.4 cM)

(a) = C. Lawrence SMITH (1629 -1700) and Christopher SMITH (1631-1716)

(Ua) = Christopher SMITH (1592-1638)

The two (a) are issued from one (Ua), correlation test is positive.

We have a second positive test to confirm Christopher SMITH (1592-1638) from Lancashire could share a common SMITH ancestry with FLORI and STUART families in Corsica.

We must take into consideration another result. Comparing SMITH J. E. (A463831) and SMITH D. (M420724) atDNA on Chr 1, we found this common segment :

Chr	Start Location	End Location	cM	SNPs
1	10,566,416	14,496,057	9.0 cM	458

The comparison suggests that 10 generations ago, Christopher SMITH transmitted to some of his descendants a very important segment localised into Chr 1. This helps us understand why we found a shared segment at the same location with two FLORI lines (See P.36). That's a good example to support Speed, Doug & Balding, David J works concerning atDNA segmentology (See p 8.)

We know that SMITH J. E. (A463831) and SMITH A. (A246267) belong to the green group (see p 29.). SMITH A. (A246267) MDKA is Benjamin Smyth, b.1815, Larne, Antrim, Northern Ireland. He has a very interesting atDNA profile because of the numerous ending segments he shares both with FLORI and STUART lines. Of most importance and relevance with this comparison is that he shares the same ending segment with SMITH J. E. (A463831) too.

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
SMITH J. E. (A463831)	SMITH A. (A246267)	M	25,856,310	27,479,683	4.0 cM	216
Kit FLORI 3 (T627496)	SMITH A. (A246267)	M	25,271,522	27,479,683	6.7 cM	396
Kit FLORI 4 (T540509)	SMITH A. (A246267)	M	25,669,108	27,479,683	4.6 cM	265
Kit FLORI 5 (T766787)	SMITH A. (A246267)	M	25,602,719	27,237,568	4.4 cM	220
Kit STUART 1 (T262139)	SMITH A. (A246267)	M	25,669,300	27,237,568	4.1 cM	194
Kit STUART 5 (T612772)	SMITH A. (A246267)	M	25,375,509	27,479,683	5.8 cM	368

After so many atDNA recombination events generation after generation, the probability to have **the same ending segment at 27,479,683 location** with both FLORI, STUART and SMITH distant cousins is low. This result is relevant.

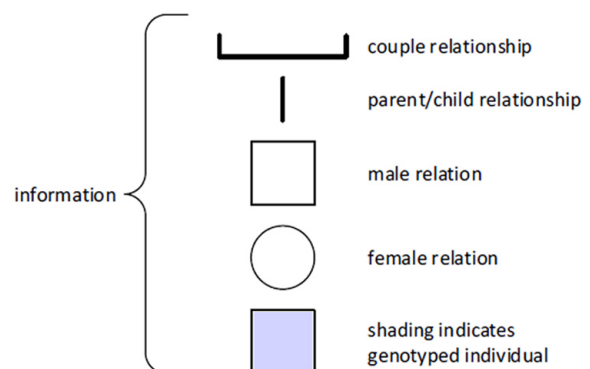
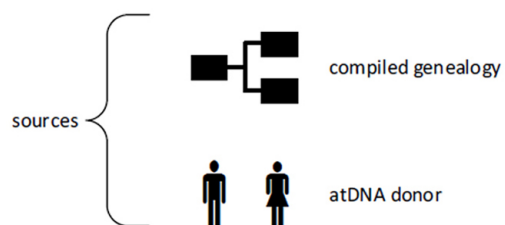
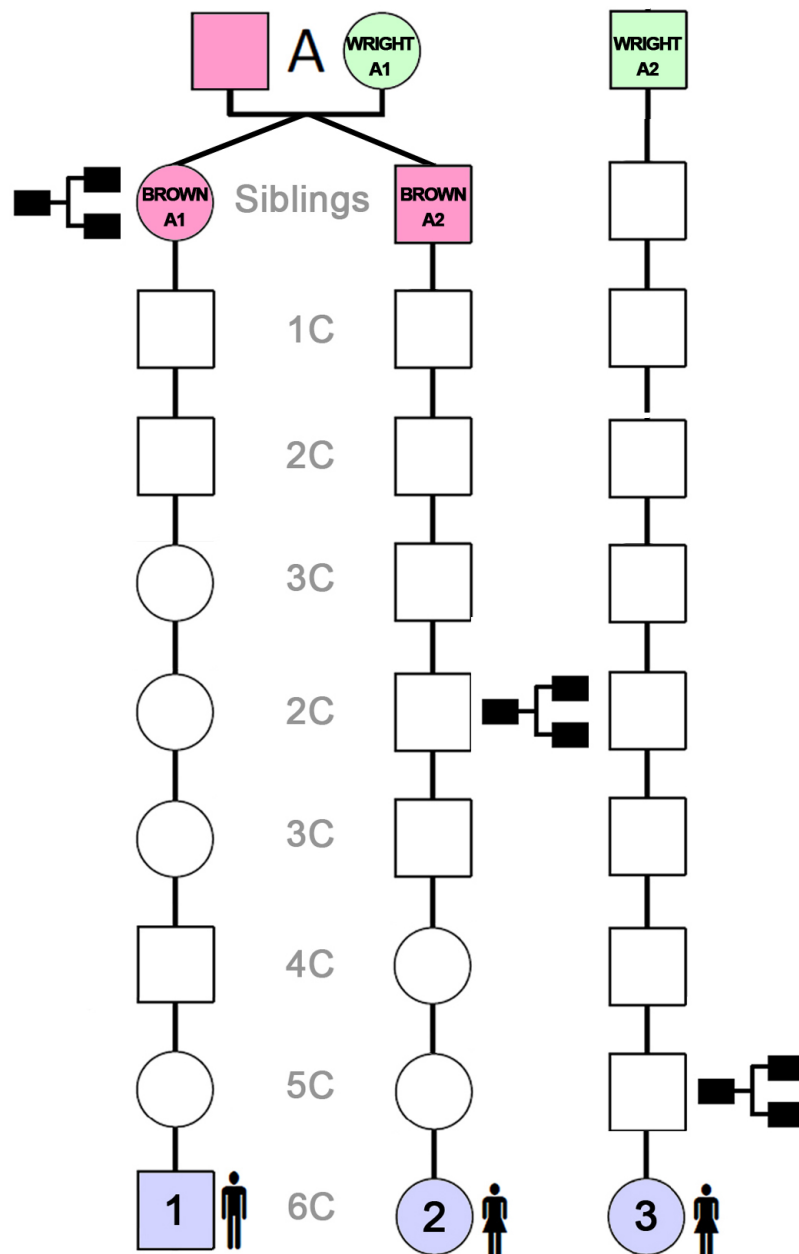
Unfortunately we did not link the two SMITH pedigrees for a test of correlation, because of the missing records in Ulster, but we must take into consideration other arguments.

Manuel STUART wrote he was from Antrim County and he left Belfast in the year 1750 or 51.

Larne is 25 miles away from Belfast. County Antrim could be the place where the Stuart of Corsica ancestor initially had a family link with the SMITH family who came originally from Lancashire.

You will find on p 47. additional information concerning SMITH A. (A246267).

WRIGHTJ. (T438154) and Distant Cousins pedigree and test of correlation



Independent lines with compiled genealogy
BROWN A1 / Rachel BROWN (1708 -1756)
BROWN A2 / George BROWN (1690-1747)
WRIGHTA1 / Mercy WRIGHT (1660 – 1726)

Genotyped individual Kits
Kit 1 – CONELLY W. E. (Private)
Kit 2 – JONES L. (T516598).
Kit 3 – WRIGHT J.(T438154)

Test of correlation N°3 WRIGHT / BROWN

If (t) = Cor (m , Ua) then (Ua) is a contributor (e)

(t) = Mr. CONNELLY and Miss JONES

(m) = CHR 2. / 113,766,586 to 129,958,970

(a) = Rachel BROWN and George BROWN (b.1690)

The two (a) are issued from one (Ua), correlation test is positive.

- Hypothesis 1 : George BROWN (b. 1643) is (Ua) and he is the contributor (e)
- Hypothesis 2 : Mercy WRIGHT (b.1660) is (Ua) and she is the contributor (e)

Because of the triangulation with Janet WRIGHT, Hypothesis 2 is retained.

We need to confirm that Janet WRIGHT's segment is shared by her WRIGHT distant cousins and not only BROWN cousins. If not, it could be issued from a matrilineal BROWN ancestry. We made many atDNA comparison between Janet WRIGHT and other WRIGHT cousins randomly selected from the Gedmatch.com database.

Kit 1	Kit 2	Start	End	cM	SNPs
WRIGHT J. (T438154)	WRIGHT K. (A435580)	24,833,656	25,703,085	3.4	270
		25,759,991	27,125,794	3.5	121
WRIGHT J. (T438154)	WRIGHT J. (T515293)	24,983,839	25,645,650	2.7	192
		25,714,352	27,280,446	4.1	193
WRIGHT J. (T438154)	WRIGHT M. S. (A237729)	25,565,282	27,280,446	4.6	248
		27,764,808	28,957,241	1.3	122
WRIGHT J. (T438154)	WRIGHT O. (T678874)	25,887,445	27,280,446	3.5	141
		27,764,808	28,982,155	1.3	130
WRIGHT J. (T438154)	WRIGHT M (M127456)	25,651,374	27,125,794	3.9	161
		27,678,175	28,927,992	1.4	148
WRIGHT J. (T438154)	WRIGHT T. (A617747)	24,876,109	27,125,794	7.0	290
WRIGHT J. (T438154)	WRIGHT D. (T751604)	24,873,952	25,554,316	2.7	189
		25,602,033	27,280,446	4.5	241
WRIGHT J. (T438154)	WRIGHT D (A210985)	25,400,122	27,515,695	5.8	284
WRIGHT J. (T438154)	WRIGHT S (A058612)	24,866,713	27,491,292	7.8	387
WRIGHT J. (T438154)	WRIGHT J. L. (T143724)	25,602,033	27,280,446	4.5	233
WRIGHT J. (T438154)	WRIGHT H.S (T602148)	25,602,033	27,119,190	4.1	180
WRIGHT J. (T438154)	WRIGHT C. (A141486)	25,602,033	27,540,576	5.0	319
WRIGHT J. (T438154)	WRIGHT W. (A260879)	25,315,772	27,280,446	5.7	335
WRIGHT J. (T438154)	WRIGHT E.(A502922)	25,318,817	27,280,446	5.7	334

We have the confirmation Janet WRIGHT segment is from WRIGHT origin.

HYPOTHESIS ABOUT A FLORI / STUART / WRIGHT / SMITH FAMILY LINK

Considering FLORI / STUART / SMITH Triangulations on chromosome 15, if MERCY WRIGHT (b. 1660), Leicestershire is issued from a maternal SMITH ancestry, we would expect to find multiple matches on chromosome 15 included various SMITH lines who have tested at present and in the Gedmatch database.

We choose to perform combined atDNA comparisons including the following testees :

- Two SMITH Individuals Lines selected for test of correlation
- Distant FLORI Cousins Kit FLORI 3 (T627496) / A1 and Kit FLORI 5 (T766787) / A3
- Endogamic FLORI Kit 4 (T540509) / A1 & A2
- Distant STUART Cousins kit Stuart 1 (T262139) / A1 and Kit STUART 5 (T612722) / A2
- Miss Janet WRIGHT (T438154)

Combined atDNA comparison on CHR. 15 n°1

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH H. (A916563)	F	25,545,731	27,479,683	5.1 cM	239
Kit FLORI 4 (T540509)	SMITH H. (A916563)	F	24,348,595	27,479,683	9.4 cM	500
Kit FLORI 5 (T766787)	SMITH H. (A916563)	F	25,007,748	25,517,776	2.1 cM	100
			25,602,033	27,216,380	4.3 cM	161
Kit STUART 1 (T262139)	SMITH H. (A916563)	F	25,602,033	27,479,683	4.9 cM	222
Kit STUART 5 (T612772)	SMITH H. (A916563)	F	25,602,033	27,479,683	4.9 cM	219
Kit FLORI 3 (T627496)	SMITH D. J. (T946476)	M	25,105,106	28,113,480	7.8 cM	583
Kit FLORI 4 (T540509)	SMITH D. J. (T946476)	M	24,862,190	27,237,568	7.3 cM	445
Kit FLORI 5 (T766787)	SMITH D. J. (T946476)	M	25,028,495	25,550,693	2.1 cM	138
			25,572,122	27,216,380	4.5 cM	229
Kit STUART 1 (T262139)	SMITH D. J. (T946476)	M	25,669,300	27,237,568	4.1 cM	201
Kit STUART 5 (T612772)	SMITH D. J. (T946476)	M	25,602,033	27,775,958	5.4 cM	382
Kit FLORI 3 (T627496)	WRIGHT J. (T438154)	F	25,430,180	27,280,446	5.2 cM	309
Kit FLORI 4 (T540509)	WRIGHT J. (T438154)	F	25,325,327	27,280,446	5.7 cM	341
Kit FLORI 5 (T766787)	WRIGHT J. (T438154)	F	25,325,327	27,216,380	5.5 cM	321
Kit STUART 1 (T262139)	WRIGHT J. (T438154)	F	25,669,300	27,349,932	4.4 cM	234
Kit STUART 5 (T612772)	WRIGHT J. (T438154)	F	25,496,831	27,647,359	5.6 cM	400
SMITH H. (A916563)	WRIGHT J. (T438154)	F	25,602,033	27,171,654	4.3 cM	145
SMITH D. J. (T946476)	WRIGHT J. (T438154)	F	25,602,033	27,491,292	4.9 cM	307
SMITH H. (A916563)	SMITH D. J. (T946476)		25,545,731	27,171,654	4.5 cM	168
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,219,057	5.1 cM	294
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,933,458	3.5 cM	268
			25,945,306	27,312,436	3.4 cM	138
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		24,893,857	25,675,453	3.1 cM	229
			25,685,246	27,358,718	4.3 cM	227

In this comparison we have a **stable starting segment at 25,602,033 location.**

Every lines share a similar segment from 25,669,300 to 27,171,654 (4,1 cM).

That cannot be coincidental in any way.

We then performed another atDNA comparison for verification with Miss Jones L. (T516598) data.

Simple atDNA comparisons with SMITH Individuals on Chr. 15

Kit 1	Kit 2	Start	End	cM	SNPs
Jones L. (T516598)	SMITH A. G. (T624021)	25,047,004	27,322,600	6.8 cM	405
Jones L. (T516598)	SMITH N. (A100084)	25,047,004	25,554,316	2.1 cM	130
		25,759,991	27,458,511	4.3 cM	237
Jones L. (T516598)	SMITH K. (A683256)	25,047,004	25,554,316	2.1 cM	129
		25,602,033	27,322,600	4.6 cM	244
		27,333,625	28,053,179	1.1 cM	187
Jones L. (T516598)	SMITH M. (A760403)	25,047,004	25,522,899	1.9 cM	112
		25,649,087	27,679,734	5.0 cM	332
Jones L. (T516598)	SMITH B. (A876518)	25,047,004	27,479,683	7.1 cM	457

We have here a stable starting segment at **25,047,004 location.**

Combined atDNA comparison on CHR. 15 n°2

Comparing Kit T516598 (Lolita Lolli Jones) and A246267 (Albert Smith)

Minimum threshold size to be included in total = 100 SNPs

Mismatch-bunching Limit = 50 SNPs

Minimum segment cM to be included in total = 5.0 cM

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
15	25,273,220	29,022,273	8.1	600

Largest segment = 8.1 cM

Total of segments > 5 cM = 8.1 cM

1 matching segments

644546 SNPs used for this comparison.

Example A23 : atDNA comparisons used for this triangulation with Gedmatch.com

Kit 1	Kit 2	Sex	Start	End	cM	SNPs
Kit FLORI 3 (T627496)	Kit STUART 1 (T262139)		25,515,431	27,322,600	5.0 cM	289
Kit FLORI 4 (T540509)	Kit STUART 1 (T262139)		25,685,246	27,322,600	4.3 cM	212
Kit FLORI 5 (T766787)	Kit STUART 1 (T262139)		25,669,300	27,216,380	4.1 cM	190
Kit FLORI 3 (T627496)	Kit STUART 5 (T612772)		25,430,180	27,729,600	6.0 cM	439
Kit FLORI 4 (T540509)	Kit STUART 5 (T612772)		24,863,590	27,729,600	8.2 cM	586
Kit FLORI 5 (T766787)	Kit STUART 5 (T612772)		24,814,166	27,287,538	7.6 cM	467
Kit FLORI 3 (T627496)	SMITH A. (A246267)	M	25,271,522	27,479,683	6.7 cM	396
Kit FLORI 4 (T540509)	SMITH A. (A246267)		25,669,108	27,479,683	4.6 cM	265
Kit FLORI 5 (T766787)	SMITH A. (A246267)	M	25,602,719	27,237,568	4.4 cM	220
Kit STUART 1 (T262139)	SMITH A. (A246267)	M	25,669,300	27,237,568	4.1 cM	194
Kit STUART 5 (T612772)	SMITH A. (A246267)	M	25,375,509	27,479,683	5.8 cM	368
Kit FLORI 3 (T627496)	Jones L. (T516598)	F	27,333,625	28,038,303	1.1 cM	189
			25,305,450	27,229,496	5.6 cM	330
Kit FLORI 4 (T540509)	Jones L. (T516598)	F	24,483,603	24,859,981	1.2 cM	101
			25,669,108	27,237,568	4.1 cM	203
Kit FLORI 5 (T766787)	Jones L. (T516598)	F	25,602,719	27,479,683	4.9 cM	304
Kit STUART 1 (T262139)	Jones L. (T516598)	F	25,553,892	27,229,496	4.6 cM	249
Kit STUART 5 (T612772)	Jones L. (T516598)	F	25,375,509	27,775,958	6.3 cM	468
SMITH A. (A246267)	Jones L. (T516598)	F	25,273,220	29,022,273	8.1 cM	600
Kit FLORI 3 (T627496)	Kit FLORI 5 (T766787)		25,430,180	27,216,380	5.1 cM	292
Kit FLORI 4 (T540509)	Kit FLORI 5 (T766787)		25,028,495	25,852,901	3.2 cM	248
			25,945,306	27,287,538	3.3 cM	135
Kit STUART 5 (T612772)	Kit STUART 1 (T262139)		25,685,246	27,349,932	4.3 cM	225

These last results are more conclusive for verification and confirm that the Wright lineage ancestor shares a common SMITH ancestry with both FLORI and STUART Lines.

We must now include into our evaluation a SMITH-WRIGHT pedigree which was previously unidentified.

The fact Jones L. (T516598) shares his longest segment with both STUART 5 and SMITH A. (A246267) could point to County Antrim in Ulster as the place where a Stuart married a SMITH, a WRIGHT or a SMITH/WRIGHT woman.

III) INTERPRETATION AND HISTORICAL BACKGROUND

AN EARLY SMITH ANCESTRY

The two positive correlation tests concerning SMITH J. E. (A463831), SMITH L.A (A853620) and SMITH D. (M480724) are relevant. We can now support a serious hypothesis about the fact that FLORI and STUART of Corsica families share a common ancestor who is Lieutenant Thomas Christopher Laurence SMITH. He was born in March 1592, Stonirakes, Burnley Parish, Lancashire, England. He died on April 16th, 1638, Stonehedge, Colne, Burnley Parish, Lancashire, England.

We are looking for one of his descendants who could have travelled to Corsica during September 1718 with the Jacobite White Squadron, under the command of Counter-Admiral George Cammock. Considering this historical background, we must verify whether this SMITH family had a link with the modern royal house of STUART.

The father of this common ancestor was Sir Thomas SMITH (Smythe). On 13 May 1603, after the accession of James I, Smythe was knighted. After one of his sons married into the aristocracy, Smythe became part of the "court faction". In June 1604, Thomas Smythe was named Special Ambassador to the Russian Tsar Boris Godunov. In spite of commercial scandal, Thomas Smythe retained the king's support and protection during twenty years.

The fact the SMITH family was royalist and under the Stuart protection adds cohesion to what is known regarding the Jacobite profile of the SMITH descendant who landed in Corsica.



Sir Thomas SMITH (Smythe) (1558-1625)

A MODERN SMITH-WRIGHT ANCESTRY

The results of atDNA comparison evaluation provides significant evidence concerning a SMITH/WRIGHT pedigree linked to the FLORI and STUART families. If we take into consideration that the WRIGHT DNA segment inherited especially by the STUART side on Chromosome 2 is important, this SMITH/WRIGHT link occurred during the modern period. It is difficult to establish where this union occurred, maybe in Lancashire, in Leicestershire or in County Antrim (Ulster).

An investigation of the WRIGHT pedigree linked to a SMITH was undertaken. The best candidate is Mercy Wright, born in 1660 in Leicester (See P 37.). We did not find any records concerning his father Thomas Wright (died in Delaware, USA).

We found a very important person by the name of WRIGHT, who lived in Leicester during the XVII century, Sir Nathan WRIGHT.

Initially he is known to have supported king Charles II but in later years he was appointed Lord Keeper and Sworn of the Privy Council on 21 May 1700 by King William III of Orange.

In 1684 Charles II strongly urged the Earl of Huntingdon that, should he become Recorder of Leicester, he would be well-advised to keep Nathan Wright as his deputy, for Wright was a loyal person, of great weight in the town. The Wright family, well-respected amongst Tories, were removed from municipal elections during the great revolution. They were reinstated in 1692.



Sir Nathan Wright, (1654–1721), Lord Keeper of the Great Seal.

We can notice that Dr. Robert WRIGHT was one of the King James III's doctors. He was also a member of the Tobosan Order initiated by George Keith, 10th Earl Marischal, a person of great importance in Corsican affairs and a supporter of Corsican General Paoli.

Although we have limited information about Mercy WRIGHT, that for her husband George BROWN is of better recorded and of interest.

Focus on George Brown (1643-1726)

George Brown was born in Leicester in the year 1643. He was christened on April 7th, 1644 at Kirkham, Lancashire.

Kirkham is 25.8 miles away from Burnley.

It is important to notice that the English Civil War started in Lancashire in September 1642. In fact, George Brown's family left Leicester, a parliamentary stronghold, and reached the Earl of Derby's troops in Kirkham, who were zealous supporters of King Charles I Stuart.

After the restoration of Charles II Stuart, George was, by occupation, a gentleman of leisure in a quiet agricultural area.

In 1676, he travelled to America, to serve in the militia in King's Phillip war.

The story goes that he had been courting Mercy Wright's sister in Leicestershire, but that when she refused to accompany him to America, he asked Mercy to accompany him. **An Ann Wright (supposed sister of Mercy) married one Richard Smith some months after.**

In 1679, Mercy Wright went to Delaware with George Brown and married him upon landing. They settled on the banks of the river Delaware, near Biles Creek, Bucks County, Pennsylvania.

George Brown received land from Sir Edmund Andros. Sir Edmund Andros, Anglican and firm supporter of the royal House of Stuart, was the Duke of York's (Future King James II Stuart) agent in North America.

The Upland Court convened on June 8, 1680, and the new commission for magistrates was publicly read. Here is the copy of the commission.

"Sir Edmund Andros, Knight, Lieutenant and Governor-General and vice-admiral under his Royal Highness James Duke of York and Albany etc. in America. By virtue of the authority derived unto me I do hereby in his majesty's name constitute, appoint and authorize you Mr. Otto Ernest Cock, Mr. Israel Helme, Mr. Henry Jones, Mr. Lasse Cock and Mr. Geo. Brown to be Justices of the Peace in the Jurisdiction of Upland Court or County in Delaware River and dependencies and any three or more of you to be a Court of Judicature giving you and every one of you full power to act in the said employment according to law and the trust reposed in you, of which all persons are to take notice, and give you the due respect and obedience belonging to your places in discharging of your duties.

"This commission to be of force for the space of one year from the date hereof or till further order. Given under my hand and seal of the Province in New York this 28th day of May Anno Domini 1680.

E. Andros."

This Brown family were supporters of both King Charles I and James II Stuart.

In conclusion, the SMITH and WRIGHT ancestry indicated by several atDNA comparisons and triangulations have a familial and political background compatible with the unknown Jacobite SMITH who landed at Corsica in 1718, and his closer cousin Manuel STUART (1735-1780) who served the interest of last Stuarts Pretenders.

Lieutenant Thomas Christopher Laurence SMITH from evaluation of documentary and atDNA evidence could be considered as one of the common ancestors of both FLORI and STUART of Corsica families.