►

SNPs R-L21, R-FGC3218, R-L459, R-Z260 and R-Z290

SNPs R-DF13, R-CTS8221/Z2542

STRs Estimated ancestral haplotype for R-DF13 (values at CDYa and DYS 533 uncertain)

FTDNA Panel 1

393	390	19 / 394	391	385a	385b	426	388	439	389-1	392	389-2
13	**24**	**14**	**11**	**11**	**14**	**12**	**12**	**12**	**13**	**13**	**29**

FTDNA Panel 2

458	459a	459b	455	454	447	437	448	449	464a	464b	464c	464d
17	**9**	**10**	**11**	**11**	**25**	**15**	**19**	**29**	**15**	**15**	**17**	**17**

FTDNA Panel 3

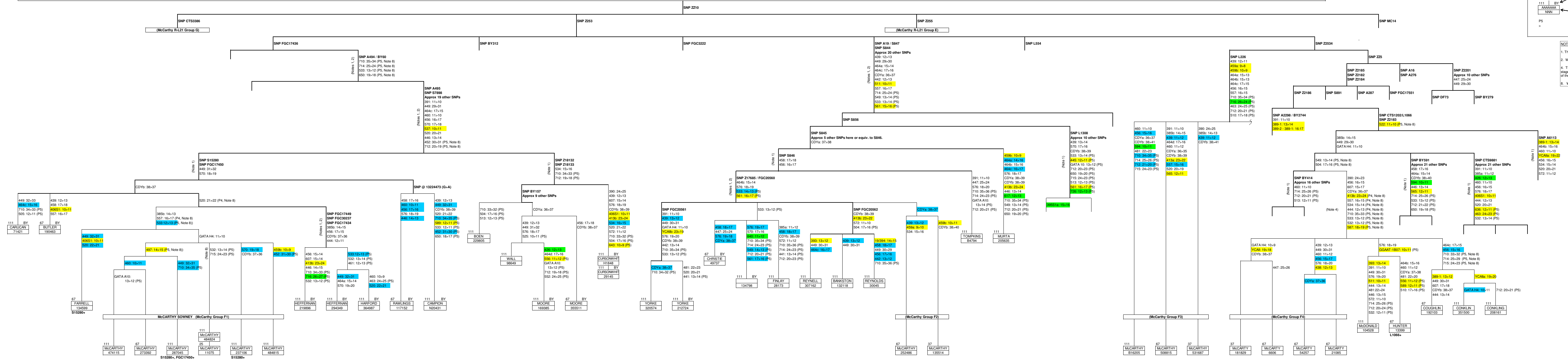
460	GATA H4	YCA IIa	YCA IIb	456	607	576	570	CDYa	CDYb	442	438
11	**11**	**19**	**23**	**16**	**15**	**18**	**17**	**36/37**	**38**	**12**	**12**
							Value assumed:	**36**			

FTDNA Panel 4

531	578	395S1a	395S1b	590	537	641	472	406S1	511	425	413a	413b	557	594	436	490	534	450	444	481	520	446	617	568	487	572	640	492	565
11	**9**	**15**	**16**	**8**	**10**	**10**	**8**	**10**	**10**	**12**	**23**	**23**	**16**	**10**	**12**	**12**	**15**	**8**	**12**	**22**	**20**	**13**	**12**	**11**	**13**	**11**	**11**	**12**	**12**

FTDNA Panel 5

710	485	632	495	540	714	716	717	505	556	549	589	522	494	533	636	575	638	462	452	445	GATA A10	463	441	GGAAT	525	712	593	650	532	715	504	513	561	552	726	635	587	643	497	510	434	461	435
35	**15**	**9**	**16**	**12**	**25**	**26**	**19**	**12**	**11**	**13**	**12**	**11**	**9**	**12/13**	**12**	**10**	**11**	**11**	**30**	**12**	**13**	**24**	**13**	**10**	**10**	**20**	**15**	**19**	**13**	**24**	**17**	**12**	**15**	**24**	**12**	**23**	**18**	**10**	**14**	**17**	**9**	**12**	**11**
													Value assumed:	**13**																													



LEGEND

STR Mutations:

"Very slow moving" STR markers (very low mutation rates) or rare multi-step mutation
"Slow moving" STR markers (low mutation rates)
Postulated STR back-mutation

Participant kit number and testing details:
No. of STR markers for which results have been published
Has taken BigY test (BY Results not yet available)
or YE, YP, FO = Has taken Y Elite or Y Prime test with FGC, or other "full" Y-genome test elsewhere (FO). (YE, YP, FO Results not yet available)
Participant ancestral surname / kit no.
111 BY
AAAAAAA
NNN

P5 STR marker in FTDNA Panel 5 (68th - 111th markers in FTDNA sequence).
\> Following a DYS number denotes a STR mutation, e.g 576: 18>17 indicates a mutation from 18 to 17 at DYS 576.

NOTES:

1. These SNP and STR mutations could have occurred in any order.
2. When the tree is more developed some of these STR mutations may be moved up a level (or two).
4. The association of McCarthy Group F4 with the early lineage of the BY414 subclade is merely conjecture at this stage and requires SNP testing of its members. A similar case can be made for association with the early lineage of the BY591 or CTS9881 subclades, or it may be an entirely independent lineage under SNP L1066.
8. Where tested

McCARTHY (Y-DNA) SURNAME STUDY
POSTULATED PHYLOGENETIC TREE FOR SNP R-Z253 McCARTHYS
(McCARTHY R-L21 GROUP 'F')

N McCarthy - 07 December 2016

This tree combines postulated relationships based on STR testing with firm definition afforded by SNP testing. Thanks are due to Alex Williamson for his detailed analysis of Z253 NGS data (Big Y and FGC) and to all contributors to the ISOGG tree for input to the high level SNP stucture shown under Z253.

The intent of the tree is to show the probable pathway from the time of SNP R-L21 for McCarthys in R-L21 Group F, and their most recent common ancestry with those of other surnames. The overall structure of the tree has been taken from ISOGG's master tree and the Z253 section of Alex Williamson's *The Big Tree at various times* and is subject to ongoing updating. STR data for specific haplotypes has been taken from publicly available spreadsheets pertaining to the appropriate surname projects or the R-Z253 Project. Any errors in interpretation or transcription are my own!

The sets of STR mutations associated with the various subclades are subject to amendment (moving up or down the tree, and /or postulation of further back-mutations) as more data becomes available.

© COPYRIGHT NIGEL McCARTHY 2016