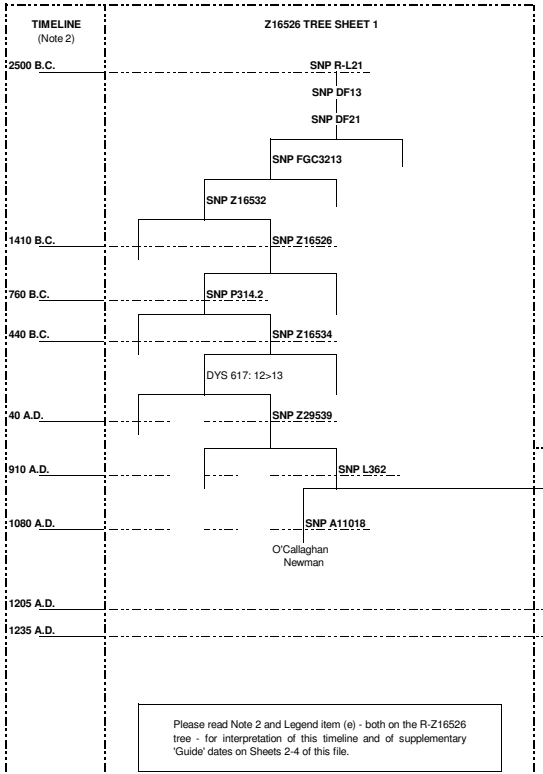
LAYOUT OF THIS DOCUMENT BY MAJOR SUBCLADES, WITH ESTIMATED TIMELINE



IMPORTANT NOTICES

1. **The genetic data used to construct this tree comes principally from Family Tree DNA (FTDNA). Some data has come from testing at YSEQ. Any substantial SNP testing elsewhere will be as indicated by Legend item (b).**

2. **This tree is a subset of one constructed for the R Z16526 and Subclades Project and serves only McCarthy R-L21 Group B in the McCarthy Surname Study. Analysis has shown that SNP R-ZS4606 heralds the progeny of Cárthach, i.e the M(a)cCarthy kings of Cashel and Desmond. The phylogeny of their ancestry back though the first millenium CE and beyond to SNP Z16526 (and thence to DF21 and L21) is continued on Sheet 3 of the R-Z16526 tree. A small amount of data has been mined from the following projects displaying it in the public domain where their members do not also belong to the McCarthy Surname Study: Carty & McCarty PA, Carter, R Z16526 and Subclades. In this respect, thanks are due to the haploytpe owners and their project administrators for making their data available in the spirit of 'citizen science' for the mutual benefit of all concerned. Participant identities abide by the criteria of (5) below.**

3. **(Not used)**

4. **The tree combines relationships based on STR testing with firm definition afforded by SNP testing. Only McCarthy test results for 37 Y-STR markers or more have normally been considered for inclusion on the tree. Where configurations are not confirmed by SNP testing, different permutations are possible. The reliability can only be improved by more participants testing STRs to 111 or 125 markers and Next Generation Sequence (NGS) testing such as FGC's Elite 2.1 and FTDNA's Big Y-700, identifying SNPs which give firm definition to the branches and twigs (subclades) of the tree.**

5. **The 'pseudonymised' format of FTDNA kit no. plus Most Distant Known Paternal Ancestor (MDKA) surname (or where the latter is not available the tester's surname or simply the kit no.) has been used for tester identity where the participant or his kit manager**

   (a) has opted in to allowing publication of his "pseudonymized DNA results and ancestor information in the public results pages" (and for data taken from other projects, where the project has allowed to publicly display its FTDNA Y-DNA Results spreadsheet)* OR

   (b) has e-mailed to a McCarthy Surname Study analyst permission to display the output from the analyis of data from any source in the tree (see (6) and (7) below) OR

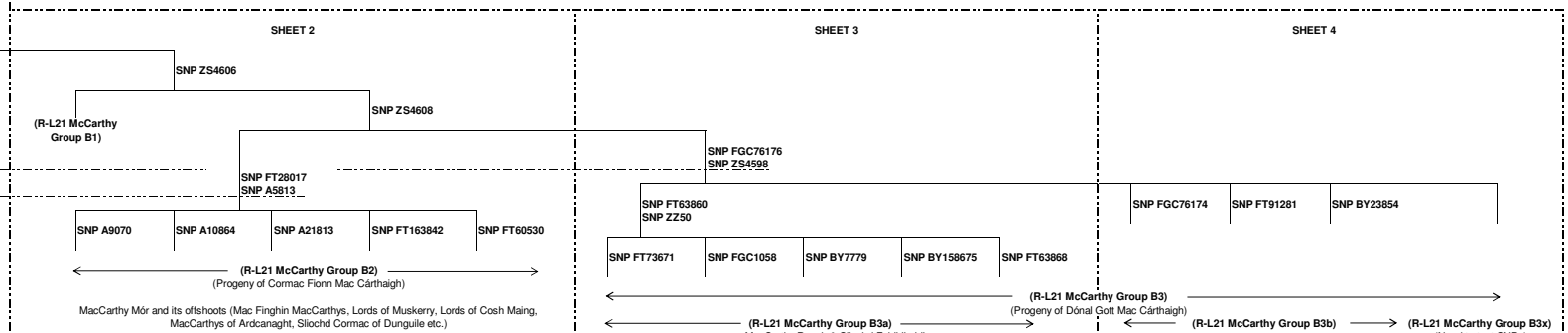
   (c) has made results available to others (e.g. depositions in the 'Y-DNA Warehouse') in the knowledge their analyses, identifiable with surname and / or kit number, would be placed in the public domain.

   Otherwise identities of testers will be 'totally anonymised' with an 'XB' series 'dummy' reference number known only to the McCarthy Surname Study analysts.

   * **Status of a participant's FTDNA privacy setting has been determined in a one-off exercise in or since 2018 (or for recent additions at the time a kit has been added to the tree). Should a participant / kit manager wish the tree respect a subsequent alteration to the setting or indeed have a kit removed altogether and any back-up records held by the McCarthy Study analysts expunged, will he / she please request this by e-mail. (See (7)).**

6. **'Despite the option at 5 (a) having been selected in a participant's FTDNA Project Preferences, certain data to which the McCarthy Surname Study analysts may have access, e.g. FTDNA Panels 6 and 7 STRs extracted from Big Y testing, results of testing elsewhere, may not be available, or readily available, in the public domain. Inclusion of output from analysis of such data on the tree requires e-mailed authorisation using an appropriate form of words which can be supplied to the participant or his kit manager. See (7) for contact details.**

7. **For the identity and contact details of the McCarthy Surname Study analysts responsible for this tree please go to https://www.familytreedna.com/groups/mccarthy-surname-study/about.**



NOTES and LEGEND:

Please see Sheet 1 of the R Z16526 and Subclades tree, of which this R-ZS4606 tree is a subset.

McCARTHY (Y-DNA) SURNAME STUDY

PHYLOGENETIC TREE FOR SNP R-ZS4606 M(a)cCARTHYS (McCARTHY R-L21 GROUP 'B')

Sheet 1 of 4

Last updated: 12 October 2021

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McCARTHY (Y-DNA) SURNAME STUDY

PHYLOGENETIC TREE FOR SNP R-Z54606 M(a)cCARTHYS (McCARTHY R-L21 GROUP 'B')

Sheet 2 of 4

For Revision date, Legend, Notes and other information, see sheet 1

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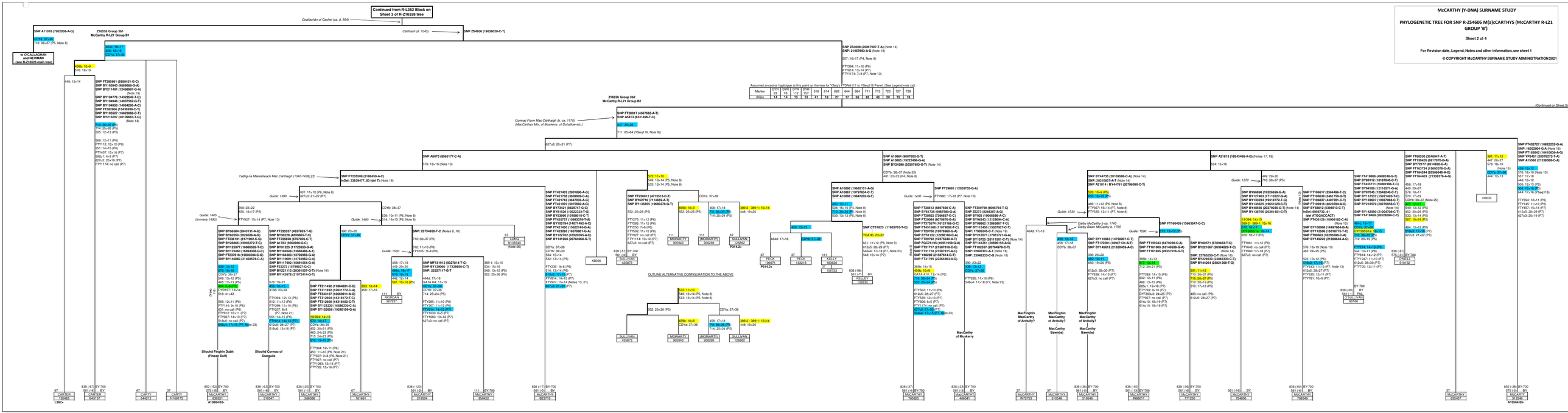
Continued from R-L362 Block on Sheet 3 of R-Z16526 tree
Ceallachán of Cashel (ca. d. 954)
Cárthach (d. 1045)
SNP Z54606 (19636026-C-T)
SNP A11018 (7952006-A-G)
CDYb: 37-38
710: 36-37 (P5, Note 8)
to O'CALLAGHAN and NEWMAN (see R-Z16526 main tree)
Z16526 Group 3b1
McCarthy R-L21 Group B1
456b: 10-9
576: 18-19
446: 13-14
SNP Z54608 (20067907-T-A) (Note 14)
SNP: 21957893-A-G (Note 18)
557: 16-17 (P4, Note 8)
FTY394: 11-12 (P6)
FTY614: 13-14 (P7)
FTY1174: 7-8 (P7, Note 13)
Assumed ancestral haplotype at this point on the tree for YSeq's / TDNA111 to YSeq's16 Panel. (See Legend note (a))
Marker | 33 | 36 | 12 | 13 | 41 | 18 | 27 | 17 | 58 | 65 | 43 | 20 | 15 | 18
DYR 389 I | DYR 389 II | DYR 390 | DYR 391 | DYR 392 | DYR 393 | DYR 394 | DYR 385 a | DYR 385 b | DYR 426 | DYR 388 | DYR 439 | DYR 389 I-II | DYR 390-391 | DYR 392-393 | DYR 394-426
Aliza | 14 | 14 | 13 | 13 | 11 | 18 | 27 | 17 | 11 | 14 | 14 | 11 | 29 | 15 | 18
Z16526 Group 3b2
McCarthy R-L21 Group B2
Cormac Fiorm Mac Cárthaigh (b. ca. 1170) (MacCarthy Mór, of Muskerry, of Dunallow etc.)
SNP FT28017 (4567685-A-T)
SNP A8013 (8331486-T-C)
487: 25-26
711: 65-o64 (YSeq116, Note 8))
627a3: 20-21 (P7)
SNP A9070 (8565177-C-A)
576: 18-19 (Note 13)
Taithg na Mainistreach Mac Cárthaigh (1340-1428) [7]
SNP FT235508 (5188459-A-C)
InDel: 23839477..83 (del T) (Note 18)
631: 11-12 (P6, Note 8)
627a3: 21-22 (P7)
Guide: 1390
390: 23-22
650: 18-17 (P5)
FTY927: 15-14 (P7, Note 13)
Guide: 1465 (formerly 1460)
SNP B16584 (2943131-A-G)
SNP B16250 (19285986-A-G)
SNP FT28161 (8331272-C-G)
SNP FT235507 (5188455-T-C)
SNP B13257 (11689553-T-C)
SNP B12546 (10894308-C-G)
SNP FT237618 (19093044-C-G)
SNP B14660 (21465578-C-A)
439: 13-12
576: 19-18
CDYb: 38-37
548: 13-12 (P5)
445: 12-13 (P5)
Guide: 1480
390: 23-22
CDYb: 37-38
CDYb: 38-37
539: 10-11 (P6, Note 8)
614: 16-15 (P6, Note 8)
SNP FT235537 (4537853-T-G)
SNP B15828 (4699865-T-C)
SNP FT235538 (5187024-C-T)
SNP B15827 (4699861-T-C)
SNP B19128 (11723255-G-A)
SNP B10494 (13684846-A-T)
SNP B10493 (13685969-G-A)
SNP B11669 (14754982-G-A)
SNP B11782 (15891554-G-A)
SNP Z2272 (15789927-G-C)
SNP B13257 (20393137-G-T) (Note 14)
SNP B14387B (21724143-G-T)
576: 19-21
Guide: 1530
SNP Z37349207-T-C (Notes 8, 18)
710: 36-37 (P5)
512: 11-10 (P6)
FTY235: 9-8 (P6)
458: 17-18
449: 29-30
464c: 16-17
576: 19-18
442: 12-14
581: 15-16 (P5)
SNP B13191[2] (8327816-T-C)
SNP B12966b (17329650-C-T)
SNP: 23527111-G-T
464d: 17-16
GATA H4: 11-10
CDYa: 37-36
CDYb: 37-36
714: 25-24 (P5)
FTY265: 11-10 (P6)
FTY267: 11-12 (P6)
FTY614: 14-13 (P7)
FTY1005: 6o3 (P7)
FTY1083: 13-12 (P7)
627a3: no call (P7)
SNP FT28021 (4567685-A-T)
SNP A8013 (8331486-T-C)
487: 25-26
711: 65-o64 (YSeq116, Note 8))
627a3: 20-21 (P7)
SNP FT42403 (2901890-A-G)
SNP FT42404 (2909909-C-A)
SNP FT42743 (3647033-A-G)
SNP FT42870 (3670802-A-G)
SNP B17241 (8629747-C-G)
SNP B19126 (11622323-T-G)
SNP B13990 (10188018-C-T)
SNP FT43757 (10883276-T-A)
SNP B19784 (14071493-A-C)
SNP FT42142B (15822145-G-A)
SNP FT42350 (16379801-G-A)
SNP B13270 (16520995-A-C)
SNP B11960 (20740668-G-T)
XB0030
SNP FT29051 (4715513-C-T)
SNP B16218 (7114659-A-T)
SNP B13585 (11680078-G-T)
552: 25-26 (P5)
FTY275: 11-12 (P6)
FTY285: 11-12 (P6)
FTY292: 7-o6 (P6)
FTY552: 11-12 (P6)
FTY627: no call (P7)
FTY1114: 13-12 (P7)
627a3: no call (P7)
CDYb: 37-38
458: 17-18
714: 25-24 (P5)
389-2 : 389-1: 15-14
448: 19-20
SULLIVAN 429678
MCMARTY 905943
MCMARTY 905269
SULLIVAN 129862
P314.2+
572: 11-10
549: 13-14 (P5, Note 8)
533: 13-14 (P5, Note 8)
OUTLINE ALTERNATIVE CONFIGURATION TO THE ABOVE
572: 11-10
549: 13-14 (P5, Note 8)
533: 13-14 (P5, Note 8)
552: 25-26 (P5)
458b: 10-9
CDYa: 37-38
458: 17-18
714: 25-24 (P5)
389-2 : 389-1: 15-14
448: 19-20
SULLIVAN 429678
MCMARTY 905943
MCMARTY 905269
SULLIVAN 129862
SNP A10064 (9007602-G-T)
SNP A10065 (10222498-G-A)
SNP B12498 (20307953-G-T) (Note 14)
CDYb: 38-37 (Note 25)
481: 22-23 (P4, Note 8)
SNP A10066 (19695151-A-G)
SNP A10067 (19797934-C-T)
SNP A10068 (19847202-G-T)
Guide: 1430
SNP FT29661 (12028735-G-A)
TYR90: 17-16 (P7, Note 13)
SNP FT28012 (9007568-C-A)
SNP B16738 (8695969-C-A)
SNP FT28922 (7366837-G-C)
SNP FT29064 (8076876-G-A)
SNP FT33574 (10121166-G-C)
SNP FT33576 (10121600-C-T)
SNP FT29700 (10769660-G-A)
SNP B19132 (13288186-C-A)
SNP FT29792 (13735316-G-A)
SNP FT29793 (13735319-G-A)
SNP FT31718 (21587514-A-C)
SNP V8029B (21587614-G-T)
SNP FT31795 (22264463-A-G)
436: 13-12
CDYb: 37-36
464d: 17-16
SNP CTS1823 (11963763-T-G)
YCA B: 23-22
631: 11-12 (P6, Note 9)
612u5: 28-29 (P7)
546u4: 17-18 (P7, Note 23)
548: 13-14 (P7)
67 PECK 130971 P314.2+
37 PECK 132418
111 KELLY 193630
37 KELLY 156723
838 (-66) 561 (-11) BY 109330
SNP FT359799 (9005754-T-C)
SNP B16739 (8695970-G-A)
SNP B15[2] (10005586-A-C)
SNP B14343 (11239004-C-A)
SNP B19862 (12865867-T-G)
SNP B11245 (15007627-C-T)
SNP B11790 (15495245-C-T)
SNP B12371 (17891721-G-A)
SNP B11725 (20111501-C-T) (Note 14)
SNP B11726 (20111504-G-A)
SNP FT31237 (20784979-G-T)
SNP: 23862307-A-T (Note 18)
SNP: 23948333-C-G (Note 18)
390: 23-22
436: 13-12
CDYa: 37-36
FTY285: 11-10 (P6)
546u4: 17-18 (P7, Note 23)
464d: 17-16
CDYa: 37-36
458: 17-18
CDYb: 36-37
612u5: 28-30 (P7)
FTY939: 14-15 (P7)
627a3: no call (P7)
Dainty MacCarthy b.ca. 1745
Darby Bean McCarthy b. 1765
SNP B11963 (14790907-C-T)
SNP FT170501 (19847131-A-T)
SNP B14612 (21320459-A-C)
390: 23-22
490: 10-11
650: 19-20 (P5)
612u5: 28-30 (P7)
FTY939: 14-15 (P7)
627a3: no call (P7)
Guide: 1530
SNP FT160439 (13663547-G-C)
436: 13-12 (P5)
SNP FT159343 (8476928-C-A)
SNP FT161953 (9149528-G-A)
SNP FT161855 (20357016-G-T)
389b: 14-13
712: 20-21 (P5)
488: 13-12 (P6)
685c: 18-19 (P7)
FTY939: 14-15 (P7)
DYF390u3: 24-25 (P7)
FTY927: no call (P7)
614u10: 18-19 (P7)
614u10: 18-19 (P7)
SNP B16057 (8769483-T-C)
SNP B12216B7 (20304229-T-C)
(Note 14)
SNP: 23782250-C-T (Note 18)
SNP B12262B (23664330-C-T)
SNP B14264 (25831258-T-G)
391: 11-12
710: 36-37 (P5)
716: 26-27 (P5)
712: 20-19 (P5)
510: 17-18 (P5)
489: no call (P6)
612u5: 28-27 (P7)
SNP A21813 (18543490-A-G) (Notes 17, 18)
534: 15-16
Guide: 1370
449: 29-30
710: 36-37 (P5)
SNP B19689 (13256699-G-A)
SNP B17463 (17116227-G-A)
SNP B13234 (19318772-T-G)
SNP B13563 (19651029-C-T)
SNP B14866 (20279235-G-T)
SNP B13878B (20361401-C-T)
19:394: 14-15
389-2 : 389-1: 15-16
576: 19-17
FTY1005: 6o3-o4
FTY1083: 13-12
FTY1174: 8-7
650: 18-17 (P5)
FTY661: 11-12 (P6)
FTY645: no call (P7)
FTY960: 17-18 (P7)
627a3: no call (P7)
SNP FT106617 (3364490-T-C)
SNP FT106639 (3661750-G-T)
SNP FT106637 (4487351-C-T)
SNP FT106918 (4823594-A-G)
SNP B19612 (23959113-C-T)
SNP A13390 (23047706-C-T)
SNP FT419809 (26328094-C-T)
464c: 16-17
GDYa: 37-36
2YP385518: 8u15
710: 36-37 (P5)
512: 20-19 (P5)
CTS7314: 14u13 (P7)
544: 10-11 (P6)
FTY614: 14-12 (P7)
FTY1047: 11-10 (P7)
612u5: 28-30 (P7)
FTY700: 12-11 (P7)
SNP FT419086 (4908248-G-T)
SNP B19311[2] (11687048-C-T)
SNP FT423711 (15882867-T-C)
SNP B19418B (12116877-G-A)
SNP B11257 (13682403-T-A)
SNP B11258[2] (13682403-T-A)
SNP B13387 (19307068-C-T)
SNP B12187B (20276805-C-T)
SNP B14399 (23047706-C-T)
SNP FT419809 (26328094-C-T)
464c: 16-17
GDYa: 37-36
2YP385518: 8u15
710: 36-37 (P5)
512: 20-19 (P5)
CTS7314: 14u13 (P7)
544: 10-11 (P6)
FTY614: 14-12 (P7)
FTY1047: 11-10 (P7)
612u5: 28-30 (P7)
FTY700: 12-11 (P7)
838 (-87) 575 (-21) BY 700
O'NEILL 910132
SNP FT106630 (3246947-A-T)
SNP FT106426 (8917070-G-A)
SNP B17277 (8514650-G-A)
SNP FT163754 (15692076-G-A)
SNP FT164244 (20366640-A-G)
SNP FT164463 (21335376-A-G)
458: 17-18
449: 29-27
576: 19-17
CDYb: 37-36
Guide: 1590
Guide: 1530
Guide: 1370
Guide: 1390
Guide: 1480
Guide: 1465
Guide: 1430

McCARTHY (Y-DNA) SURNAME STUDY

PHYLOGENETIC TREE FOR SNP R-ZS4606 M(a)cCARTHYS (McCARTHY R-L21 GROUP 'B')

For Revision date, Legend, Notes and other information, see sheet 1

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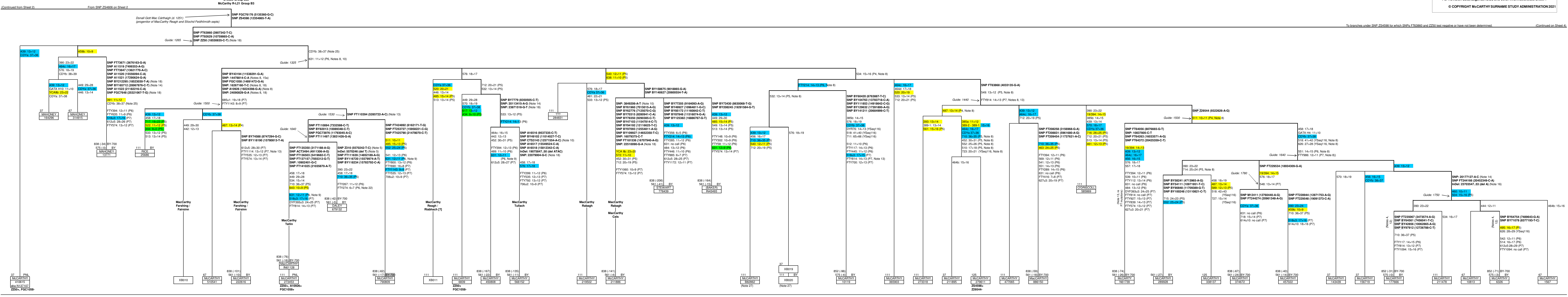
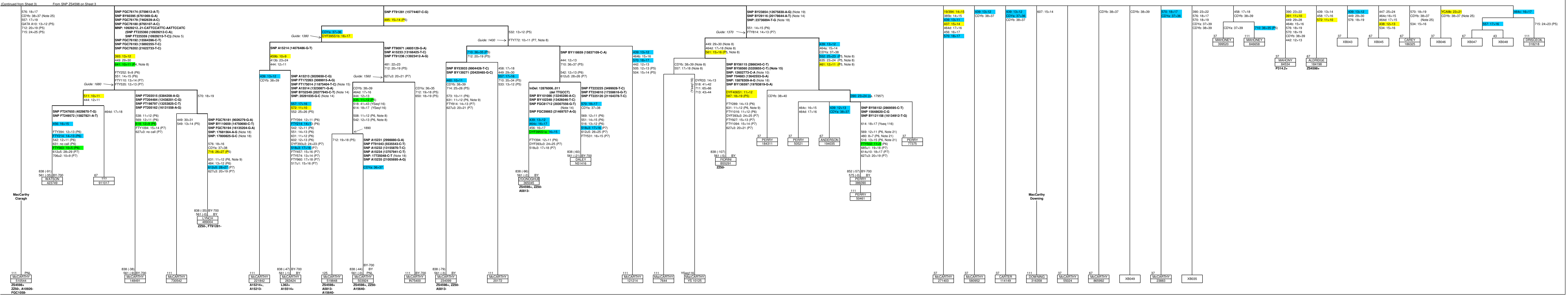


McCARTHY (Y-DNA) SURNAME STUDY

PHYLOGENETIC TREE FOR SNP R-ZS4606 M(a)cCARTHYS
(McCARTHY R-L21 GROUP 'B')

For Revision date, Legend, Notes and other information, see sheet 1

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