

Legend to *CYP2D6* Allelic Variation Summary Table (R2)

A literature search was performed using the following search terms: *CYP2D6*, ethnic, ethnicity, populations, cytochrome P450 2D6, names of countries and/or populations such as 'Spain, Spanish, Brazil, Brazilian, etc or a combination thereof. In addition, reports were also identified from citations by others or review articles.

Manuscripts published before 1995 were excluded due to the sparse amount of genotype information provided in these reports. Also, only reports describing cohorts ≥ 50 subjects were included, with few selected exceptions (i.e. smaller cohorts were part of larger studies).

'-' indicates that this allele has not been tested. N/a indicates that no average, minimum or maximum allele frequencies are available. Healthy subjects and patient cohorts are listed separately or were combined in some instances if 'no difference' was reported. The number of total subjects was not determined for each major ethnic group, because some reports utilized the same cohort(s), or a substantial number of subjects, in more than one study, e.g. to determine additional sequence variations/allelic variants.

A few studies did not report allele frequencies, but genotype counts/frequencies. In these instances, allele frequencies were calculated from the data provided.

In some instances allele frequency calculation errors were detected and are shown corrected. In some instances authors were contacted for additional information and verification. Hence, allele frequencies in this table do not always correspond with those in their original publications.

Some papers did not report the frequency of *CYP2D6*1*; in such cases, its frequency was calculated as 100% - the sum of variants. *CYP2D6*1* is indicated as '-', if a manuscript only reported on a particular rare allelic variant or few variants which would dramatically overestimate the frequency of *CYP2D6*1*.

For some alleles, including *CYP2D6*14* and *56, manuscripts report an allele subtype. The reader is referred to the original article for further detail.

Note that frequencies tabulated for *CYP2D6*36* refer to the 'single' *CYP2D6*36* gene and not to the *CYP2D6*36+*10* tandem. This tandem is typically found in Asians and is often not discriminated from alleles carrying a 'single' *CYP2D6*10* gene. Particularly in Asians, reported *CYP2D6*10* allele frequencies comprise *CYP2D6*10* and the *CYP2D6*36+*10* tandem.

*CYP2D6*41* was tabulated as reported regardless of whether genotyping was performed using -1584C>G or 2988G>A. Note that the P450 AmpliChip Test determines *CYP2D6*41* via -1584C>G, which may particularly impact the accurate determination of *CYP2D6*2* and *41 in Africans and their descendants. *CYP2D6*41* allele frequencies may dramatically differ depending on whether -1584C>G or 2988G>A was used for its detection.

*CYP2D6*45* and *46 are shown separately and combined, because these alleles share a key SNP and are often not discriminated.

Note that some reports have used a re-sequencing approach. For some, only the alleles specifically reported on have been tabulated, while other alleles are shown as '-'. If absence of particular alleles could be inferred, their frequencies are shown as '0'. Please see original articles for specific information.

Many studies tested for the presence of ‘gene duplications’, but did not determine whether the duplication affected a *CYP2D6**1, *2, *4 or other gene. Often, duplications are defaulted to and reported as *CYP2D6**2xN. Unless duplications were clearly discriminated, they were tabulated in this summary table as ‘undefined/other duplications’. Sometimes it may be possible to infer the nature of a duplication allele from a genotype (e.g. *CYP2D6**2/*2x2); this however, could not systematically be captured in this tabulation. Also, some manuscripts reported on the number of gene copies, e.g. x2, x3, etc. Since there are few reports, these were combined with their respective x2 group.

Some alleles, including *CYP2D6**1 and *2, have a wide range of allele frequencies. These alleles are ‘default’ alleles, which means that if no sequence variations are detected or only a small number of variants are tested, an allele is assigned as (or defaulted to) *CYP2D6**1 or *2. In such instances, *CYP2D6**1 and *2 frequencies are likely over-estimated.

The nomenclature for *CYP2D7/2D6* hybrid alleles has recently been updated. All alleles carrying a gene composed of *CYP2D7* and *2D6* and have a T-insertion in exon 1, have been consolidated under the *CYP2D6**13 designation. This change affects *CYP2D6**13, *16, *66, *67, *79 and *80; each is shown in its own respective column, but are also shown as ‘*13 revised’. Note that *CYP2D6**76, *77 and *78 have only been reported in tandem arrangements to date. These are listed separately along their revised genotypes.

This *CYP2D6* allele frequency summary may not be complete. If you wish to have your paper and/or data included into this resource, or identify any errors, please contact Andrea Gaedigk, PhD at agaedigk@cmh. This table will be periodically updated to include additional reports and *CYP2D6* allelic variants.

To access the *CYP2D6* allelic variation summary table in excel format please see http://www.pharmgkb.org/download.action?filename=CYP2D6_allele_frequency_table_R2.xlsx. The excel table was last updated August 2013.

If this legend is reached through the *CPIC Guidelines for CYP2D6 Genotype and Codeine Therapy – Supplement v.1.0* published in 2012, please note the allele frequencies for some populations have changed in the excel table referred above.

Please see

http://www.pharmgkb.org/download.action?filename=CYP2D6_allele_frequency_table.xlsx to access the previous version of *CYP2D6* allelic Variation Summary Table.

| Authors | Major ethnicity | *1 | *2 | *3 | *4 | *5 | *6 | *7 | *8 | *9 | *10 | *14 | *17 | *41 | *1xN | *2xN | *4xN |
|-------------------------|-----------------|-------|-------|------|-------|-------|-------|------|------|------|-------|------|-------|-------|------|------|------|
| Daly et al | Africa | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Leathart et al | Africa | 83.00 | - | 0.60 | 7.30 | 6.90 | - | - | - | - | - | - | - | - | - | - | - |
| Leathart et al | Africa | - | - | - | - | - | 0.00 | - | - | 0.70 | 5.00 | - | 26.00 | - | - | - | - |
| Wan et al | Africa | 34.70 | 26.90 | 0.30 | 7.80 | 6.20 | - | - | - | - | 7.50 | - | 14.60 | - | - | - | - |
| Gaedigk et al | Africa | 29.70 | 19.10 | 0.20 | 5.40 | 6.60 | 0.40 | 0.00 | 0.00 | 0.20 | 3.60 | 0.00 | 21.30 | - | 0.12 | 0.16 | 0.30 |
| Gaedigk et al | Africa | 29.70 | 19.10 | 0.20 | 5.40 | 6.60 | 0.40 | 0.00 | 0.00 | 0.20 | 3.60 | 0.00 | 21.30 | - | 1.20 | 1.60 | 0.30 |
| Gaedigk et al | Africa | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Gaedigk et al | Africa | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Gaedigk et al | Africa | - | - | - | - | - | - | - | - | - | - | - | - | 2.10 | - | - | - |
| Cai et al | Africa | 36.20 | 4.20 | 0.38 | 7.60 | 5.00 | 0.38 | 0.00 | 0.00 | 1.15 | 2.70 | 0.00 | 15.60 | 14.90 | 0.00 | 2.30 | 1.90 |
| Cai et al | Africa | 34.10 | 4.90 | 0.55 | 4.90 | 6.60 | 0.00 | 0.00 | 0.00 | 0.55 | 4.90 | 0.00 | 13.70 | 13.70 | 0.00 | 2.20 | 2.20 |
| Cai et al | Africa | 35.30 | 4.50 | 0.45 | 6.50 | 5.60 | 0.23 | 0.00 | 0.00 | 0.90 | 3.60 | 0.00 | 14.90 | 14.40 | 0.00 | 2.25 | 2.00 |
| Gaedigk et al | Africa | - | - | - | - | - | - | - | - | - | 6.63 | - | - | - | - | - | - |
| Gaedigk et al | Africa | - | - | - | - | - | - | - | - | - | - | - | - | - | 1.20 | 2.40 | 2.00 |
| Gaedigk et al | Africa | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.71 | 1.42 | 2.68 |
| Gaedigk et al | Africa | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.00 | 0.68 | 4.11 |
| Gaedigk et al | Africa | - | - | - | - | - | - | - | - | - | 3.20 | - | - | - | - | - | - |
| Gaedigk et al | Africa | 32.90 | 13.98 | 0.18 | 3.86 | 6.43 | 0.55 | 0.00 | 0.00 | 0.18 | 2.94 | - | 19.12 | 1.84 | 0.37 | 1.84 | 2.76 |
| de Leon et al | Africa | 59.70 | 6.00 | 0.20 | 5.50 | 2.80 | 0.20 | - | 0.00 | 0.40 | 3.80 | - | 18.40 | 14.90 | 0.80 | 1.20 | 2.40 |
| Gaedigk et al | Africa | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Yee et al | African | 30.70 | 28.7 | 0 | 8 | 8.7 | 0 | 0 | 0 | 0 | 2.7 | 0 | 17.3 | 4 | - | - | - |
| Average | | 40.60 | 14.15 | 0.31 | 6.23 | 6.14 | 0.24 | 0.00 | 0.00 | 0.48 | 4.18 | 0.00 | 18.22 | 9.41 | 0.44 | 1.61 | 2.07 |
| Min | | 29.70 | 4.20 | 0.00 | 3.86 | 2.80 | 0.00 | 0.00 | 0.00 | 0.00 | 2.70 | 0.00 | 13.70 | 1.84 | 0.00 | 0.16 | 0.30 |
| Max | | 83.00 | 28.70 | 0.60 | 8.00 | 8.70 | 0.55 | 0.00 | 0.00 | 1.15 | 7.50 | 0.00 | 26.00 | 14.90 | 1.20 | 2.40 | 4.11 |
| Akiliu et al | Africa | 61.90 | - | 0.00 | 1.20 | 3.30 | - | - | - | - | 8.60 | - | 9.00 | - | - | - | - |
| Akiliu et al | Africa | 21.50 | 13.60 | 0.00 | 4.10 | 3.30 | - | - | - | - | 8.60 | - | 11.30 | 21.60 | - | - | - |
| Akiliu et al | Africa | 18.50 | 14.20 | 0.00 | 5.90 | 3.10 | 0.00 | - | - | - | 8.00 | - | 14.90 | 25.30 | - | - | - |
| Griese et al | Africa | 43.70 | 10.60 | 0.00 | 7.00 | 6.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.10 | 0.00 | 27.70 | - | - | - | - |
| Gaedigk et al | Africa | 26.77 | 15.15 | 0.00 | 7.07 | 17.17 | 0.00 | 0.00 | 0.00 | 0.00 | 2.53 | 0.51 | 12.63 | 3.54 | 1.52 | 1.01 | 0.00 |
| Sistonen et al | Africa | 24.40 | 32.70 | 0.00 | 2.80 | 5.90 | 0.00 | - | - | 0.00 | 4.30 | - | 12.20 | 2.80 | 2.40 | 0.80 | 3.50 |
| Bathum et al | Africa | 87.00 | - | 0.00 | 4.00 | - | 27.47 | - | - | - | - | - | - | - | - | - | - |
| Dandara et al | Africa | 42.10 | 21.00 | 0.00 | 2.30 | 4.50 | - | - | - | - | - | - | 30.10 | - | - | - | - |
| Dandara et al | Africa | 56.10 | 18.40 | 0.50 | 1.40 | 3.30 | - | - | - | - | - | - | 20.30 | - | - | - | - |
| Wennerholm et al | Africa | 27.80 | 40.00 | 0.00 | 0.90 | 6.30 | 0.00 | - | - | - | 3.80 | - | 17.00 | - | - | - | 1.00 |
| Wennerholm et al | Africa | 27.80 | 20.30 | 0.00 | 0.90 | 6.10 | 0.00 | - | - | - | 3.80 | - | 17.00 | - | - | - | 0.09 |
| Man et al | Africa | 29.90 | 30.90 | 0.00 | 6.10 | 1.00 | 0.00 | 0.00 | - | 0.40 | 5.70 | - | 20.70 | - | - | - | - |
| Dandara et al | Africa | 50.00 | 17.80 | 0.00 | 3.30 | 4.60 | - | - | - | - | - | - | 24.00 | - | - | - | - |
| Wright et al | Africa | 24.04 | 13.94 | 0.00 | 1.44 | 16.35 | 0.00 | - | 0.00 | - | 19.23 | - | 14.90 | 1.44 | 0.48 | 2.88 | 2.40 |
| Masimirembwa et al | Africa | - | - | - | - | - | - | - | - | - | - | - | 34.00 | - | - | - | - |
| Dandara et al | Africa | 47.00 | 13.00 | 0.00 | 2.00 | 4.00 | - | - | - | - | - | - | 34.00 | - | - | - | - |
| Average | | 39.23 | 20.12 | 0.03 | 3.36 | 6.07 | 3.05 | 0.00 | 0.00 | 0.10 | 6.77 | 0.26 | 19.98 | 10.94 | 1.47 | 1.56 | 1.40 |
| Min | | 18.50 | 10.60 | 0.00 | 0.90 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.53 | 0.00 | 9.00 | 1.44 | 0.48 | 0.80 | 0.00 |
| Max | | 87.00 | 40.00 | 0.50 | 7.07 | 17.17 | 27.47 | 0.00 | 0.00 | 0.40 | 19.23 | 0.51 | 34.00 | 25.30 | 2.40 | 2.88 | 3.50 |
| Mendoza et al | Americas | 10.29 | 45.60 | 0.57 | 20.63 | 4.58 | - | - | - | - | 14.90 | - | 1.43 | - | - | - | - |
| Casner | Americas | 75.00 | - | 0.00 | 17.00 | 2.00 | 0.00 | 0.00 | 0.00 | - | 1.00 | - | 2.00 | - | - | - | - |
| Luo et al | Americas | 55.10 | 22.00 | 0.20 | 10.00 | 1.70 | 0.40 | 0.00 | 0.00 | 1.10 | 2.80 | 0.00 | 0.20 | 5.50 | 0.00 | 0.60 | 0.20 |
| Gaedigk et al | Americas | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Baillet et al | Americas | 39.90 | 23.80 | 0.00 | 17.80 | 0.00 | 4.20 | - | 0.60 | - | 7.10 | 1.80 | - | - | - | - | - |
| da Silva Silveira et al | Americas | 78.91 | - | 7.89 | 13.16 | - | - | - | - | - | - | - | - | - | - | - | - |
| da SilvaSilveira et al | Americas | 87.88 | - | 3.03 | 9.09 | - | - | - | - | - | - | - | - | - | - | - | - |
| da SilvaSilveira et al | Americas | 82.87 | - | 3.09 | 14.04 | - | - | - | - | - | - | - | - | - | - | - | - |
| da SilvaSilveira et al | Americas | 88.76 | - | 1.69 | 9.55 | - | - | - | - | - | - | - | - | - | - | - | - |
| Kohlrusch et al | Americas | 41.38 | 12.65 | 1.15 | 6.32 | 4.02 | 0.00 | - | - | 0.00 | 4.02 | 0.00 | 9.20 | 10.92 | 0.00 | 1.72 | 0.00 |
| Kohlrusch et al | Americas | 42.93 | 12.50 | 0.00 | 10.33 | 1.09 | 2.17 | - | - | 2.17 | 2.72 | 0.54 | 2.17 | 7.07 | 0.54 | 4.35 | 1.62 |
| Kohlrusch et al | Americas | 38.44 | 18.28 | 1.07 | 13.18 | 2.15 | 0.54 | - | - | 1.61 | 2.15 | 0.00 | 1.34 | 8.33 | 0.54 | 2.96 | 0.54 |
| Antunes et al | Americas | 37.11 | 17.53 | 2.06 | 14.43 | 4.64 | 0.52 | 0.00 | 0.00 | 3.61 | 1.03 | - | 1.03 | 4.12 | - | - | 1.03 |
| Jurima-Romet et al | Americas | 89.10 | - | 0.00 | 8.62 | - | - | - | - | - | 2.30 | - | - | - | - | - | - |
| Nowak et al | Americas | 94.00 | - | 0.00 | 3.00 | - | - | - | - | - | 3.00 | - | - | - | - | - | - |
| Nowak et al | Americas | 68.00 | - | 0.00 | 24.00 | - | - | - | - | - | 8.00 | - | - | - | - | - | - |
| Sistonen et al | Americas | 60.20 | 30.10 | 0.00 | 3.20 | 0.90 | 0.00 | - | - | 0.00 | 0.00 | - | 0.50 | 0.00 | 2.30 | 2.80 | 0.00 |
| Munoz et al | Americas | 66.10 | 18.50 | 0.00 | 3.60 | 4.20 | - | - | - | 0.00 | 1.80 | - | - | - | - | - | - |
| Roco et al | Americas | - | - | 0.99 | 11.86 | - | - | - | - | - | - | - | - | - | - | - | - |
| Isaza et al | Americas | 38.80 | 37.00 | 1.20 | 19.40 | 0.80 | 0.00 | 0.00 | 0.00 | - | - | - | 1.60 | - | - | - | - |
| Llerena et al | Americas | 67.20 | - | 0.00 | 14.30 | 1.60 | 1.20 | - | - | - | 0.80 | - | 10.20 | - | - | - | 0.00 |
| Llerena et al | Americas | 76.48 | - | 0.00 | 14.60 | 1.90 | 0.08 | - | - | - | 0.40 | - | 2.70 | - | - | - | 0.04 |
| Dorado et al | Americas | 47.90 | 31.35 | 0.40 | 10.60 | 2.10 | 0.00 | - | - | - | 1.30 | - | 0.42 | 2.54 | 0.42 | 0.42 | 0.85 |
| Lopez et al | Americas | 43.42 | 19.34 | 1.44 | 11.21 | 2.67 | - | - | - | - | 12.45 | - | 1.65 | - | 1.65 | 3.29 | - |
| Contreras et al | Americas | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Contreras et al | Americas | 50.00 | 25.50 | 0.00 | 14.00 | 2.00 | - | - | - | - | 2.60 | - | 0.00 | - | - | - | - |
| Salazar-Flores | Americas | 96.12 | - | 0 | 3.88 | - | 0 | 0 | 0 | - | - | - | - | - | - | - | - |
| Salazar-Flores | Americas | 93.20 | - | 1.2 | 5.6 | - | 0 | 0 | 0 | - | - | - | - | - | - | - | - |
| Sosa-Macias et al | Americas | 83.70 | - | 0.90 | 13.10 | - | 0.00 | - | - | - | 2.30 | - | - | - | - | - | - |
| Sosa-Macias et al | Americas | 99.40 | - | 0.00 | 0.60 | - | 0.00 | - | - | - | 0.00 | - | - | - | - | - | - |
| Agundez et al | Americas | 70.10 | - | 1.80 | 15.70 | 3.60 | - | - | - | 4.40 | 3.30 | - | - | - | - | - | - |
| Llerena et al | Americas | 76.10 | - | 0.00 | 14.20 | 4.60 | 0.00 | - | - | - | 3.10 | - | 0.00 | - | - | - | 0.00 |
| Jorge et al | Americas | 84.90 | - | 0.00 | 14.00 | 0.00 | 1.10 | - | - | - | - | - | - | - | - | - | - |
| Jorge et al | Americas | 82.40 | - | 0.00 | 17.10 | 0.00 | 0.50 | - | - | - | - | - | - | - | - | - | - |
| Ruaño et al | Americas | - | - | - | 0.20 | - | - | - | - | - | - | - | - | - | - | - | - |
| Gaedigk et al | Americas | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Montane et al | Americas | 36.89 | 13.59 | 0.49 | 1.94 | 5.34 | 0 | 0 | 0 | 0 | 2.91 | 0 | 16.5 | 1.46 | 0.49 | 4.37 | 2.91 |
| Montane et al | Americas | 44.61 | 17.37 | 0.6 | 11.68 | 2.69 | 0 | 0 | 0 | 0.3 | 5.09 | 0 | 0 | 13.47 | 0.6 | 0.9 | 0 |
| Griman et al | Americas | 62.80 | 22.10 | 0.00 | 12.30 | 0.00 | 0.00 | - | - | - | 2.80 | - | - | - | - | - | - |
| Griman et al | Americas | 39.90 | 11.30 | 0.00 | 42.50 | 0.00 | 0.00 | - | - | - | 6.30 | - | - | - | - | - | - |
| Griman et al | Americas | 59.80 | 31.50 | 0.00 | 5.40 | 0.00 | 0.00 | - | - | - | 3.30 | - | - | - | - | - | - |
| Griman et al | Americas | 81.20 | 15.00 | 0.00 | 2.50 | 0.00 | 0.00 | - | - | - | 1.30 | - | - | - | - | - | - |
| Griman et al | Americas | 63.80 | 32.80 | 0.00 | 1.70 | 0.00 | 0.00 | - | - | - | 1.70 | - | - | - | - | - | - |
| Griman et al | Americas | 75.00 | 20.80 | 0.00 | 4.20 | 0.00 | 0.00 | - | - | - | 0.00 | - | - | - | - | - | - |
| Griman et al | Americas | 41.50 | 37.90 | 0.00 | 13.40 | 2.00 | 1.20 | - | - | - | 4.00 | - | - | - | - | - | - |
| Average | | 64.28 | 23.48 | 0.73 | 11.28 | 1.88 | 0.43 | 0.00 | 0.07 | 1.32 | 3.37 | 0.33 | 3.00 | 5.93 | 0.73 | 2.38 | 0.60 |

| Authors | Major ethnicity | *1 | *2 | *3 | *4 | *5 | *6 | *7 | *8 | *9 | *10 | *14 | *17 | *41 | *1xN | *2xN | *4xN |
|--------------------|-----------------|-------|-------|------|-------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|
| Min | | 10.29 | 11.30 | 0.00 | 0.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.42 | 0.00 |
| Max | | 99.40 | 37.90 | 3.09 | 42.50 | 5.34 | 2.17 | 0.00 | 0.00 | 4.40 | 12.45 | 0.54 | 16.50 | 13.47 | 2.30 | 4.37 | 2.91 |
| Gaedigk et al | Asian | - | - | - | - | - | - | - | - | - | - | 18.42 | - | - | - | - | - |
| Man et al | Asian | 31.00 | 11.20 | 0.00 | 0.40 | 3.20 | 0.00 | 0.00 | - | 0.00 | 49.40 | 0.60 | 0.00 | - | - | - | - |
| Ji et al | East Asia | 37.90 | - | 0.00 | 0.20 | 7.20 | 0.00 | - | 0.00 | - | 51.30 | 2.00 | - | - | - | - | - |
| Ismail et al | East Asia | 38.35 | - | 0.00 | 0.21 | 2.54 | - | - | - | 1.27 | 56.99 | - | 0.21 | - | - | - | - |
| Cai et al | East Asia | - | - | - | - | - | - | - | - | - | 55.80 | 1.80 | - | - | - | - | - |
| Sheng et al | East Asia | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.41 | 0.00 | 0.00 |
| Myrand et al | East Asia | 21.60 | 16.00 | 0.00 | 0.00 | 6.40 | 0.00 | 0.00 | 0.00 | - | 53.00 | 0.50 | - | - | - | - | - |
| Qin et al | East Asia | 25.68 | 10.87 | 0.00 | 0.00 | 7.06 | 0.00 | 0.00 | 0.00 | 0.00 | 50.54 | 1.63 | - | - | - | - | - |
| Qin et al | East Asia | 24.72 | 15.73 | 0.00 | 0.56 | 3.67 | 0.00 | 0.00 | 0.00 | 0.00 | 46.63 | 1.12 | - | - | - | - | - |
| Qin et al | East Asia | 17.95 | 8.33 | 0.00 | 0.00 | 3.85 | 0.00 | 0.00 | 0.00 | 0.00 | 64.10 | 2.56 | - | - | - | - | - |
| Zhou et al | East Asia | 18.50 | 14.00 | 0.00 | 1.00 | 7.00 | 0.50 | 0.00 | 0.00 | 0.00 | 49.00 | 1.50 | 0.00 | 4.00 | 0.00 | 0.50 | 0.00 |
| Kim et al | East Asia | 27.50 | 13.50 | - | - | 9.60 | - | - | - | - | 43.80 | 1.10 | - | 2.20 | - | - | - |
| Man et al | East Asia | 28.10 | 11.00 | 0.00 | 1.10 | 6.10 | 0.00 | 0.00 | - | 0.00 | 48.40 | 1.10 | 0.00 | - | - | - | - |
| Zuo et al | East Asia | - | - | - | - | - | - | - | - | - | 57.35 | - | - | - | - | - | - |
| Zuo et al | East Asia | - | - | - | - | - | - | - | - | - | 22.43 | - | - | - | - | - | - |
| Zuo et al | East Asia | - | - | - | - | - | - | - | - | - | 39.72 | - | - | - | - | - | - |
| Zuo et al | East Asia | - | - | - | - | - | - | - | - | - | 46.52 | - | - | - | - | - | - |
| Qin et al | East Asia | 30.23 | 9.30 | 0.00 | 0.00 | 4.07 | 0.00 | 0.00 | 0.00 | 0.00 | 48.84 | 0.00 | - | - | - | - | - |
| Yin et al | East Asia | - | - | - | - | - | - | - | - | - | 48.72 | - | - | - | - | - | - |
| Yin et al | East Asia | - | - | - | - | - | - | - | - | - | 51.00 | - | - | - | - | - | - |
| Yin et al | East Asia | - | - | - | - | - | - | - | - | - | 25.22 | - | - | - | - | - | - |
| Jin et al | East Asia | 25.00 | 42.71 | 0 | 0 | 2.08 | 0 | 0 | 0 | 0 | 28.13 | 0 | 0 | 1.56 | - | - | - |
| Sistonen et al | East Asia | 30.90 | 16.40 | 0.00 | 2.70 | 5.80 | 0.00 | - | - | 0.00 | 39.40 | - | 0.00 | 2.30 | 0.40 | 0.60 | 0.00 |
| Love et al | East Asia | 30.00 | 12.40 | 0.00 | 0.00 | 2.40 | 0.00 | - | - | - | 52.40 | - | - | 2.80 | - | - | - |
| Chida et al | East Asia | 93.79 | - | 0.00 | 0.77 | 4.10 | - | - | - | - | - | - | - | - | - | - | - |
| Tateishi et al | East Asia | 42.30 | 9.20 | 0.00 | 0.50 | 6.10 | - | - | - | - | 40.80 | - | - | - | - | - | - |
| Kubota et al | East Asia | 40.20 | 12.96 | 0.00 | 0.00 | 6.17 | - | - | - | - | 38.58 | 2.16 | 0.00 | - | - | - | - |
| Nishida et al | East Asia | 43.00 | 12.30 | - | 0.20 | 4.50 | - | - | - | - | 38.10 | 0.70 | - | - | 0.50 | 0.50 | - |
| Chida et al | East Asia | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ishiguro et al | East Asia | 39.80 | 12.30 | - | 0.00 | 6.20 | - | - | - | - | 37.00 | 2.20 | - | - | 0.30 | 0.30 | - |
| Yamazaki et al | East Asia | 41.10 | 9.20 | 0.00 | 0.50 | 6.10 | 0.00 | 0.00 | 0.00 | 0.00 | 40.80 | 0.00 | 0.00 | - | - | - | - |
| Soyama et al | East Asia | - | - | - | 0 | 3.52 | - | - | - | - | 31.22 | 0.7 | - | - | - | - | - |
| Ebisawa et al | East Asia | 42.66 | 11.36 | - | 0.17 | 7.17 | - | - | - | - | 36.19 | - | - | - | - | - | - |
| Ikenaga et al | East Asia | - | 10.20 | - | - | - | - | - | - | - | - | - | - | 2.60 | - | - | - |
| Myrand et al | East Asia | 27.00 | 15.50 | 0.00 | 0.50 | 7.00 | 0.00 | 0.00 | 0.00 | - | 43.00 | 0.50 | - | - | - | - | - |
| Myrand et al | East Asia | 32.30 | 14.40 | 0.00 | 0.50 | 7.10 | 0.00 | 0.00 | 0.00 | - | 42.80 | 0.00 | - | - | - | - | - |
| Myrand et al | East Asia | 33.50 | 18.30 | 0.00 | 0.00 | 4.80 | 0.00 | 0.00 | 0.00 | - | 37.30 | 0.00 | - | - | - | - | - |
| Hosono et al | East Asia | 43.40 | 12.80 | 0.00 | 0.40 | 5.70 | 0.00 | 0.00 | 0.00 | 0.00 | 8.60 | 0.30 | 0.00 | - | 0.50 | 0.40 | 0.00 |
| Kiyotani et al | East Asia | 38.78 | 7.65 | 0.00 | 0.51 | 7.14 | 0.00 | 0.00 | 0.00 | 0.00 | 8.67 | 0.00 | 0.00 | 1.53 | 0.51 | 0.00 | 0.00 |
| Man et al | East Asia | 44.50 | 10.00 | 0.00 | 0.10 | 5.10 | 0.00 | 0.00 | - | 0.00 | 37.80 | 0.10 | 0.00 | - | - | - | - |
| Kiyotani et al | East Asia | 47.45 | - | - | 0.00 | 4.59 | 0.00 | - | - | - | 45.92 | 0.00 | - | 0.51 | - | - | - |
| Lee et al | East Asia | 33.25 | 10.13 | 0.00 | 0.25 | 6.13 | 0.00 | 0.00 | 0.00 | 0.00 | 45.00 | 0.50 | 0.00 | 1.88 | 0.13 | 0.50 | 0.00 |
| Myrand et al | East Asia | 17.50 | 17.50 | 0.00 | 0.50 | 7.50 | 0.00 | 0.00 | 0.00 | - | 50.00 | 3.00 | - | - | - | - | - |
| Lee et al | East Asia | 32.32 | 10.88 | 0.00 | 0.00 | 5.61 | - | - | - | - | 45.58 | 0.33 | - | 2.24 | 0.07 | 0.99 | 0.00 |
| Kim et al | East Asia | 32.30 | 10.10 | - | - | 5.60 | - | - | - | - | 45.60 | 0.30 | - | 2.20 | - | - | - |
| Man et al | East Asia | 33.60 | 12.10 | 0.00 | 0.80 | 6.20 | 0.00 | 0.00 | - | 0.00 | 44.10 | 0.50 | 0.00 | - | - | - | - |
| Kim et al | East Asia | 34.69 | 12.24 | 0.00 | 0.00 | 9.18 | 0.00 | 0.00 | 0.00 | 0.00 | 17.35 | 0.00 | 0.00 | 0.00 | - | - | - |
| Suwannasri et al | East Asia | 21.00 | 9.70 | - | 0.70 | 4.30 | 0.00 | - | - | - | 44.60 | 1.04 | - | - | - | - | - |
| Chamnannphon et al | East Asia | 35.00 | 9.6 | 0 | 0.9 | 4.4 | 0 | 0 | 0 | 0 | 45.6 | 0.9 | 0 | 1.8 | 0 | 0 | 0 |
| Veiga et al | East Asia | 47.10 | - | - | 1.40 | 8.00 | - | - | - | - | 43.50 | - | - | - | - | - | - |
| Kim et al | East Asia | 24.60 | 7.80 | - | - | 6.10 | - | - | - | - | 57.00 | 1.20 | - | 2.90 | - | - | - |
| Love et al | East Asia | 24.00 | 11.00 | 0.00 | 0.50 | 5.00 | 0.00 | - | - | - | 58.50 | - | - | 1.00 | - | - | - |
| Average | | 34.17 | 12.82 | 0.00 | 0.42 | 5.61 | 0.02 | 0.00 | 0.00 | 0.07 | 42.31 | 0.86 | 0.01 | 1.97 | 0.28 | 0.38 | 0.00 |
| Min | | 17.50 | 7.65 | 0.00 | 0.00 | 2.08 | 0.00 | 0.00 | 0.00 | 0.00 | 8.60 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Max | | 93.79 | 42.71 | 0.00 | 2.70 | 9.60 | 0.50 | 0.00 | 0.00 | 1.27 | 64.10 | 3.00 | 0.21 | 4.00 | 0.51 | 0.99 | 0.00 |
| Daly et al | Europe | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Marez et al | Europe | 33.50 | 32.70 | 1.70 | 17.20 | 6.90 | 1.20 | 0.10 | 0.10 | 2.70 | 1.50 | 0.00 | 0.10 | - | - | - | - |
| Sachse et al | Europe | 36.40 | 32.40 | 2.04 | 20.70 | 1.95 | 0.93 | 0.08 | 0.00 | 1.78 | 1.53 | 0.00 | - | - | 0.51 | 1.34 | 0.08 |
| Leathart et al | Europe | 76.00 | - | 1.20 | 18.00 | 2.90 | - | - | - | - | - | - | - | - | - | - | - |
| Leathart et al | Europe | - | - | - | - | - | 0.70 | - | - | 2.00 | 4.00 | - | 0.00 | - | - | - | - |
| Griese et al | Europe | 36.60 | 32.20 | 1.00 | 19.50 | 4.10 | 1.30 | 0.30 | 0.30 | 2.00 | 2.00 | - | 0.00 | - | - | - | - |
| Gaedigk et al | Europe | 37.00 | 33.70 | 1.00 | 17.50 | 3.80 | 1.00 | 0.00 | 0.00 | 2.90 | 1.90 | - | 0.20 | - | 0.20 | 0.70 | 0.20 |
| Aynacioglu et al | Europe | 37.10 | 35.30 | 0.00 | 11.30 | 1.49 | 0.74 | 0.50 | 0.00 | 0.62 | 6.06 | 0.00 | 1.11 | - | 3.59 | 1.98 | 0.25 |
| Wan et al | Europe | 40.60 | 26.20 | 1.40 | 19.90 | 2.10 | - | - | - | - | 8.00 | - | 0.30 | - | - | - | - |
| Tamminga et al | Europe | 79.30 | - | 1.80 | 18.40 | - | 0.40 | 0.10 | 0.00 | - | - | - | - | - | - | - | - |
| Molden et al | Europe | 71.08 | - | 0.00 | 21.08 | 6.02 | 1.81 | - | - | - | - | - | - | - | - | - | - |
| Niewinski et al | Europe | 75.70 | - | 1.30 | 23.00 | - | - | - | - | - | - | - | - | - | - | - | - |
| Gaikovitch et al | Europe | 70.86 | - | 1.03 | 17.07 | 2.41 | 1.21 | - | - | - | 4.14 | - | - | - | 1.72 | 0.52 | 0.00 |
| Bozina et al | Europe | 76.75 | - | 2.75 | 14.00 | 1.00 | 1.50 | - | - | - | - | - | - | - | - | - | - |
| Gaedigk et al | Europe | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Raimundo et al | Europe | 36.40 | 17.50 | - | - | - | - | - | - | 2.10 | 1.80 | - | - | 8.40 | 0.00 | 1.10 | - |
| Scordo et al | Europe | 75.00 | - | 0.70 | 15.30 | 3.40 | 1.40 | - | - | - | - | - | - | - | - | - | - |
| Fuselli et al | Europe | 41.18 | 35.29 | 0.00 | 17.65 | 1.96 | 0.00 | - | - | 0.98 | 0.98 | - | 0.98 | - | 0.00 | 0.98 | 0.00 |
| Fuselli et al | Europe | 36.46 | 40.63 | 0.00 | 12.50 | 1.04 | 0.00 | - | - | 0.00 | 4.17 | - | 0.00 | - | 0.00 | 2.08 | 0.00 |
| Zachrisson et al | Europe | 36.70 | 32.40 | 1.40 | 24.40 | 4.30 | 0.09 | - | - | - | - | - | - | - | - | - | - |
| Zachrisson et al | Europe | 42.80 | 34.10 | 1.50 | 16.90 | 3.80 | 0.80 | - | - | - | - | - | - | - | - | - | - |
| Gaedigk et al | Europe | - | - | - | - | - | - | - | - | - | - | - | - | 7.60 | - | - | - |
| Aydin et al | Europe | 83.00 | - | 2.00 | 15.00 | - | - | - | - | - | - | - | - | - | - | - | - |
| Halling et al | Europe | 61.60 | - | 0.20 | 33.40 | - | 1.90 | - | - | 0.80 | - | - | - | - | - | - | - |
| Pedersen et al | Europe | 69.38 | - | 2.17 | 22.64 | - | 1.99 | - | - | 3.80 | - | - | - | - | - | - | - |
| Li et al | Europe | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Toscano et al | Europe | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Gaedigk et al | Europe | - | - | - | - | - | - | - | - | - | 3.83 | - | - | - | - | - | - |
| Menoyo et al | Europe | 31.00 | 40.47 | 0.95 | 13.80 | 3.33 | 0.95 | 0.00 | 0.00 | 2.38 | 1.90 | 0.00 | - | - | 1.90 | 1.90 | 0.47 |
| Rasmussen et al | Europe | 36.90 | 22.40 | 3.10 | 19.10 | 2.90 | 1.60 | 0.00 | 0.00 | 3.60 | 0.90 | - | 0.00 | 6.90 | 0.20 | 1.80 | 0.00 |
| Gaedigk et al | Europe | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.00 | 0.76 | 0.38 |
| Gaedigk et al | Europe | - | - | - | - | - | - | - | - | - | 1.47 | - | - | - | - | - | - |

| Authors | Major ethnicity | *1 | *2 | *3 | *4 | *5 | *6 | *7 | *8 | *9 | *10 | *14 | *17 | *41 | *1xN | *2xN | *4xN |
|---------------------------|----------------------|-------|-------|------|-------|------|------|------|------|------|-------|------|------|-------|-------|------|------|
| Sistonen et al | Europe | 34.40 | 28.70 | 0.30 | 17.20 | 3.20 | 0.60 | - | - | 2.50 | 2.90 | - | 0.00 | 7.00 | 0.60 | 1.30 | 0.60 |
| Scott et al | Europe | 28.60 | 16.40 | 0.80 | 22.60 | 0.80 | 0.20 | - | - | 0.80 | 6.20 | - | 0.80 | 14.00 | 2.20 | 5.80 | - |
| Arvanitidis et al | Europe | 72.44 | - | 2.30 | 17.84 | - | - | - | - | - | - | - | - | - | - | - | - |
| Rasmussen et al | Europe | 38.50 | 18.40 | 1.60 | 19.70 | 5.30 | 1.30 | 0.00 | 0.00 | 2.90 | 1.60 | - | 0.00 | 9.80 | 0.00 | 0.80 | 0.00 |
| Koseler et al | Europe | - | - | - | 21.00 | - | - | - | - | - | - | - | - | - | - | - | - |
| Crescenti et al | Europe | 79.2 | - | 0.9 | 16.5 | 2.7 | 0.7 | - | - | - | - | - | - | - | - | - | - |
| Crescenti et al | Europe | 77 | - | 2 | 19 | 2 | 1 | - | - | - | - | - | - | - | - | - | - |
| Crescenti et al | Europe | 78 | - | 1 | 20 | 0 | 2 | - | - | - | - | - | - | - | - | - | - |
| Gaedigk et al | Europe | 36.46 | 21.90 | 1.01 | 19.74 | 3.31 | 1.01 | 0.14 | 0.00 | 3.03 | 2.16 | - | 0.43 | 8.07 | 0.29 | 0.58 | 0.43 |
| Myrand et al | Europe | 37.50 | 32.80 | 2.10 | 18.20 | 1.70 | 2.10 | 0.00 | 0.00 | - | 1.40 | 0.00 | - | - | - | - | - |
| Gjerde et al | Europe | 74.83 | - | 0.33 | 20.53 | 2.32 | 0.33 | - | - | - | - | - | - | - | - | - | - |
| Buzková | Europe | 69.50 | - | 1.10 | 22.90 | 3.10 | 0.20 | - | - | - | - | - | - | - | - | - | - |
| de Leon et al | Europe | 37.40 | 15.90 | 1.80 | 21.00 | 2.30 | 1.10 | 0.00 | 0.00 | 2.90 | 1.00 | - | 0.30 | 9.80 | 0.70 | 0.50 | 0.10 |
| Gaedigk et al | Europe | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Rebsamen et al | Europe | 35.50 | 15.50 | 0.60 | 20.60 | 2.40 | 1.20 | 0.30 | 0.00 | 2.70 | 2.70 | 0.00 | 0.30 | 7.30 | 0.60 | 1.50 | 0.30 |
| Correia et al | Europe | 74.60 | - | 1.40 | 13.30 | 2.80 | 1.87 | - | - | - | - | - | - | - | - | - | - |
| Man et al | Europe | 32.00 | 25.10 | 2.20 | 18.80 | 3.30 | 1.70 | 0.10 | - | 1.70 | 2.80 | 0.00 | 0.10 | - | - | - | - |
| Gaedigk et al | Europe | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Gaedigk et al | Europe | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Fernandez-Santander et al | Europe | 81.30 | - | 0.90 | 15.90 | 1.90 | 0.00 | 0.00 | 0.00 | - | - | - | - | - | - | - | - |
| Fernandez-Santander et al | Europe | 78.20 | - | 1.60 | 18.50 | 1.00 | 0.50 | 0.20 | 0.00 | - | - | - | - | - | - | - | - |
| De Luca et al | Europe | 68.60 | - | 3.20 | 17.70 | 0.00 | 0.90 | - | - | - | - | - | - | 9.50 | - | - | - |
| De Luca et al | Europe | 68.30 | - | 0.90 | 16.10 | 1.80 | 0.90 | - | - | - | - | - | - | 11.90 | - | - | - |
| Vangsted | Europe | 70.90 | - | 1.30 | 21.90 | 3.80 | 0.60 | - | - | - | - | - | - | - | - | - | - |
| Zachrisson et al | Europe | 41.40 | 33.70 | 1.50 | 16.30 | 3.60 | 0.80 | - | - | - | - | - | - | - | 1.30 | 0.80 | 0.60 |
| Zachrisson et al | Europe | 41.30 | 29.70 | 3.10 | 18.50 | 3.10 | 0.80 | - | - | - | - | - | - | - | 1.00 | 1.80 | 0.60 |
| Wesmler et al | Europe | 33.48 | 29.46 | 0.45 | 19.64 | 0 | - | - | - | 2.23 | 1.79 | - | - | - | - | - | - |
| Serin et al | Europe | 69.00 | - | 1 | 10 | 3 | 2.5 | - | - | - | 14.5 | - | - | - | - | - | - |
| Häber et al | Europe | 28.20 | 20 | 2.7 | 29.1 | 0 | 1.8 | 0 | 0 | 1.8 | 1.8 | 0 | 0 | 6.4 | 0 | 0 | 0 |
| Zafra-Ceres et al | Europe | 35.00 | 20 | 0 | 18.89 | 5.6 | 0 | 0 | 0 | 5 | 3.89 | 0 | 1.11 | 6.11 | 2.22 | 0.56 | 0 |
| Fernández_Santander et al | Europe | 65.04 | 10.53 | 0.75 | 11.65 | 3.38 | 0.38 | 0 | 0 | 1.5 | 0.38 | 0 | 0.75 | 3.76 | - | - | - |
| Zachrisson et al | Europe | 40.70 | 31.50 | 2.40 | 19.30 | 3.90 | 0.70 | - | - | - | - | - | - | - | 0.50 | 0.00 | 1.00 |
| Rideg et al | Europe | 39.80 | 15.10 | 1.80 | 20.40 | 1.80 | 0.40 | 0.40 | - | 1.40 | - | - | - | 8.00 | 0.40 | 1.40 | - |
| Beer et al | Europe | 35.90 | 27.30 | 0.50 | 14.00 | 1.60 | 0.50 | 0.00 | 0.00 | 1.60 | 4.30 | 0.00 | 0.00 | 12.40 | 0.50 | 1.10 | 0.00 |
| Sahin et al | Europe | - | - | - | 12.00 | - | - | - | - | - | - | - | - | - | - | - | - |
| Slanar et al | Europe | 72.40 | - | 1.00 | 20.20 | 3.50 | 0.00 | - | - | - | - | - | - | - | - | - | - |
| Average | | 53.63 | 26.91 | 1.32 | 18.50 | 2.69 | 0.95 | 0.11 | 0.02 | 2.14 | 3.16 | 0.00 | 0.32 | 8.56 | 0.80 | 1.27 | 0.25 |
| Min | | 28.20 | 10.53 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.38 | 0.00 | 0.00 | 3.76 | 0.00 | 0.00 | 0.00 |
| Max | | 83.00 | 40.63 | 3.20 | 33.40 | 6.90 | 2.50 | 0.50 | 0.30 | 5.00 | 14.50 | 0.00 | 1.11 | 14.00 | 3.59 | 5.80 | 1.00 |
| McLellan et al | Middle East | 89.50 | - | - | 3.50 | 1.00 | - | - | - | - | 3.00 | - | 3.00 | - | - | - | - |
| Fuselli et al | Middle East | 47.06 | 30.39 | 0.00 | 9.80 | 0.98 | 0.98 | - | - | 0.00 | 2.94 | - | 0.00 | - | 3.92 | 3.92 | 0.00 |
| Luo et al | Middle East | 49.00 | 9.00 | 0.00 | 4.00 | 3.00 | - | - | - | - | 2.00 | - | 2.00 | 29.00 | - | - | - |
| Sistonen et al | Middle East | 35.10 | 25.00 | 0.00 | 6.80 | 3.70 | 1.40 | - | - | 0.00 | 0.70 | - | 2.00 | 16.90 | 3.70 | 3.40 | 0.00 |
| Kouhi et al | Middle East | 56.50 | 32.00 | - | 12.50 | 3.00 | - | - | - | - | 9.00 | - | 0.00 | - | - | - | - |
| Qumsieh et al | Middle East | 39.1 | 12.2 | 0 | 9 | - | 0 | 0 | 0 | 0 | 3.3 | 0 | 2.5 | 15.2 | 1.6 | 4.3 | - |
| Hashemi-Soteh et al | Middle East | 90.00 | - | 0.50 | 9.00 | - | 0.50 | - | - | - | - | - | - | - | - | - | - |
| Average | | 58.04 | 21.72 | 0.10 | 7.80 | 2.34 | 0.72 | 0.00 | 0.00 | 0.00 | 3.49 | 0.00 | 1.58 | 20.37 | 3.07 | 3.87 | 0.00 |
| Min | | 35.10 | 9.00 | 0.00 | 3.50 | 0.98 | 0.00 | n/a | n/a | 0.00 | 0.70 | n/a | 0.00 | 15.20 | 1.60 | 3.40 | 0.00 |
| Max | | 90.00 | 32.00 | 0.50 | 12.50 | 3.70 | 1.40 | n/a | n/a | 0.00 | 9.00 | n/a | 3.00 | 29.00 | 3.92 | 4.30 | 0.00 |
| Griese et al | Oceania | 85.80 | 3.80 | 0.00 | 1.50 | 7.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.80 | - | 0.20 | - | - | - | - |
| Sistonen et al | Oceania | 71.80 | 0.00 | 0.00 | 0.00 | 1.30 | 0.00 | - | - | 0.00 | 2.60 | - | 0.00 | 0.00 | 11.50 | 0.00 | 0.00 |
| von Ahsen et al | Oceania | 63.00 | 0.00 | 0.00 | 0.00 | 3.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 11.00 | - | - |
| von Ahsen et al | Oceania | 60.00 | 1.00 | 0.00 | 3.00 | 8.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.00 | 0.00 | 0.00 | 0.00 | 13.00 | - | - |
| Average | | 70.15 | 1.20 | 0.00 | 1.13 | 4.95 | 0.00 | 0.00 | 0.00 | 0.00 | 1.60 | 0.00 | 0.05 | 0.00 | 11.83 | 0.00 | 0.00 |
| Min | | 60.00 | 0.00 | 0.00 | 0.00 | 1.30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 11.00 | 0.00 | 0.00 |
| Max | | 85.80 | 3.80 | 0.00 | FALSE | 8.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.00 | 0.00 | 0.20 | 0.00 | 13.00 | 0.00 | 0.00 |
| Ismail & The | South/Central Asia | 69.00 | - | 0.00 | 8.00 | 1.00 | - | - | - | 1.00 | 15.00 | - | 1.00 | - | - | - | - |
| Teh et al | South/Central Asia | 37.90 | - | 0.00 | 2.80 | 5.10 | - | - | - | 3.30 | 49.50 | - | 0.50 | - | - | - | - |
| Adithan et al | South/Central Asia | 72.20 | - | 0.00 | 6.60 | 0.90 | - | - | - | - | 20.30 | - | - | - | - | - | - |
| Naveen et al | South/Central Asia | 46.10 | 34.80 | 0.00 | 7.30 | 1.90 | - | - | - | - | 10.20 | 0.00 | 0.00 | - | - | - | - |
| Sistonen et al | Central/South Asians | 43.30 | 29.00 | 0.00 | 8.10 | 3.80 | 0.00 | - | - | 0.00 | 3.80 | - | 0.00 | 10.50 | 0.50 | 0.50 | 0.00 |
| Average | | 53.70 | 31.90 | 0.00 | 6.56 | 2.54 | 0.00 | n/a | n/a | 1.43 | 19.76 | 0.00 | 0.38 | 10.50 | 0.50 | 0.50 | 0.00 |
| Min | | 37.90 | 29.00 | 0.00 | 2.80 | 0.90 | 0.00 | n/a | n/a | 0.00 | 3.80 | 0.00 | 0.00 | 10.50 | 0.50 | 0.50 | 0.00 |
| Max | | 72.20 | 34.80 | 0.00 | 8.10 | 5.10 | 0.00 | n/a | n/a | 3.30 | 49.50 | 0.00 | 1.00 | 10.50 | 0.50 | 0.50 | 0.00 |

created by A. Gaedigk, PhD 2

12/9/14

CYP2D6 Allele Frequencies

| Authors | *1a | *2a | *4a | *6a | *10a | *17a | *20a | *26a | *36a | *45a | *48a | Undefined/ other duplications | All duplications combined all | *28a*10 | *36a*10a | *28a*2*10 | *36a*2*10 | *78a*2 *70a*2a | *77a*2 *70a*2a | *78a*2 *70a*2a | Other rearrange- ments |
|----------------------|-------|------|------|------|------|------|------|------|------|------|------|--|-------------------------------------|---------|----------|-----------|-----------|-------------------|-------------------|-------------------|------------------------------|
| Motani et al | | | | | | | | | | | | Undefined/ other duplications 10.40 | 10.40 | | | | | | | | |
| Furetti et al | 3.92 | 3.92 | 0.00 | - | - | - | - | - | - | - | - | - | 7.84 | - | - | - | - | - | - | - | - |
| Lee et al | - | - | - | - | - | - | - | - | - | - | - | 2.00 | 2.00 | - | - | - | - | - | - | - | - |
| Stanton et al | 3.79 | 3.40 | 0.00 | - | 0.00 | - | - | - | - | 0.00 | - | - | 7.59 | - | - | - | - | - | - | - | - |
| Koulu et al | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Chen et al | 1.8 | 4.3 | - | - | - | - | - | - | - | - | - | - | 6.20 | - | 0.00 | 12.40 | - | - | - | - | - |
| Hopkins-Schell et al | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Average | 3.07 | 3.97 | 0.00 | n/a | 0.15 | n/a | n/a | n/a | n/a | 0.00 | n/a | 0.20 | 6.71 | n/a | 0.00 | 12.40 | - | n/a | n/a | n/a | n/a |
| Min | 1.69 | 3.40 | 0.00 | n/a | 0.00 | n/a | n/a | n/a | n/a | 0.00 | n/a | 2.00 | 2.00 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Max | 3.92 | 4.30 | 0.00 | n/a | 0.30 | n/a | n/a | n/a | n/a | 0.00 | n/a | 10.40 | 10.40 | n/a | n/a | n/a | - | n/a | n/a | n/a | n/a |
| Greiss et al | - | - | - | - | - | - | - | - | - | - | - | 0.00 | 0.00 | - | - | - | - | - | - | - | - |
| Stanton et al | 11.00 | 0.00 | 0.00 | - | 0.00 | - | - | - | - | 0.00 | - | - | 11.00 | - | - | - | - | - | - | - | - |
| van Alphen et al | 11.00 | - | - | - | - | - | - | - | - | - | - | - | 11.00 | - | - | - | - | - | - | - | - |
| van Alphen et al | 11.00 | - | - | - | - | - | - | - | - | - | - | - | 11.00 | - | - | - | - | - | - | - | - |
| Average | 11.81 | 0.00 | 0.00 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 0.0 | 8.88 | n/a | n/a | n/a | - | n/a | n/a | n/a | n/a |
| Min | 11.00 | 0.00 | 0.00 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 0.00 | 0.00 | n/a | n/a | n/a | - | n/a | n/a | n/a | n/a |
| Max | 13.00 | 0.00 | 0.00 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 0.00 | 13.00 | n/a | n/a | n/a | - | n/a | n/a | n/a | n/a |
| Wong & Troy | - | - | - | - | - | - | - | - | - | - | - | 2.00 | 2.00 | - | - | - | - | - | - | - | - |
| Tan et al | - | - | - | - | - | - | - | - | - | - | - | 0.00 | 0.00 | - | - | - | - | - | - | - | - |
| Auligan et al | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Stanton et al | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Stanton et al | 0.00 | 0.00 | 0.00 | - | 0.00 | - | - | - | - | 0.00 | - | - | 1.00 | - | - | - | - | - | - | - | - |
| Average | 0.00 | 0.00 | 0.00 | n/a | 0.00 | n/a | n/a | n/a | n/a | 0.00 | n/a | 1.45 | 1.30 | n/a | n/a | n/a | - | n/a | n/a | n/a | n/a |
| Min | 0.00 | 0.00 | 0.00 | n/a | 0.00 | n/a | n/a | n/a | n/a | 0.00 | n/a | 0.00 | 0.00 | n/a | n/a | n/a | - | n/a | n/a | n/a | n/a |
| Max | 0.00 | 0.00 | 0.00 | n/a | 0.00 | n/a | n/a | n/a | n/a | 0.00 | n/a | 2.00 | 2.00 | n/a | n/a | n/a | - | n/a | n/a | n/a | n/a |
| Geordak et al | 1.80 | 3.30 | 3.20 | 0.00 | 0.10 | 0.10 | 0.00 | 0.10 | 0.00 | 0.10 | 0.10 | 0.00 | 8.80 | 0.00 | - | - | - | 0.10 | 0.20 | 0.10 | 0.00 |
| Geordak et al | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.30 |
| Shukla et al | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Geordak et al | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | <0.00 |

CYP2D6 Allele Frequencies

| date | for R2 | Change Note |
|---------|--------|---|
| 8/13/13 | X | corrected spelling of von Ahsen |
| 8/16/13 | X | added number of subjects for Yin et al. and updated year of publication |
| 8/16/13 | X | added number of subjects for Ebisawa et al. |
| 8/16/13 | X | corrected entries for *13 'revised' for all ethnicities (0 was incorrect for most) |
| 8/17/13 | X | corrected *76+*2 to *76+*1 |
| 8/16/13 | X | added columns for *61, *62, *84, *85, *86, *100, *101, *36x3+*10 and *1x2+*83 |
| 8/16/13 | X | revised/updated ethnicities and populations for Americas |
| 8/16/13 | X | added 5 papers (6 line entires) for East Asia |
| 8/16/13 | X | added 5 papers (5 line entries) for Europe |
| 8/16/13 | X | added 4 papers (6 line entires) for Americas |
| 8/16/13 | X | added 2 papers (2 line entries) for Africa |
| 8/16/13 | X | added 1 paper with 'unspecified' ethnicity and approximate frequency |
| 8/16/13 | X | added 1 paper with approxomate frequency |
| 8/16/13 | X | sorted ethnicities by 1) major ethnicity, 2) population, 3) year and 4) author |
| 8/28/13 | X | excluded Zihlif et al. *10 incorrectly called; corresponded with author revealing this mishap |
| 8/29/13 | X | correponded with Antunes; mistake in paper re some freq; |
| 8/30/13 | X | have not heard back from Zafra-Ceres to confirm allele freq |
| 9/9/13 | X | Added data for *1, *2 and *35 received from Ana Santander for PMID 23922954 |