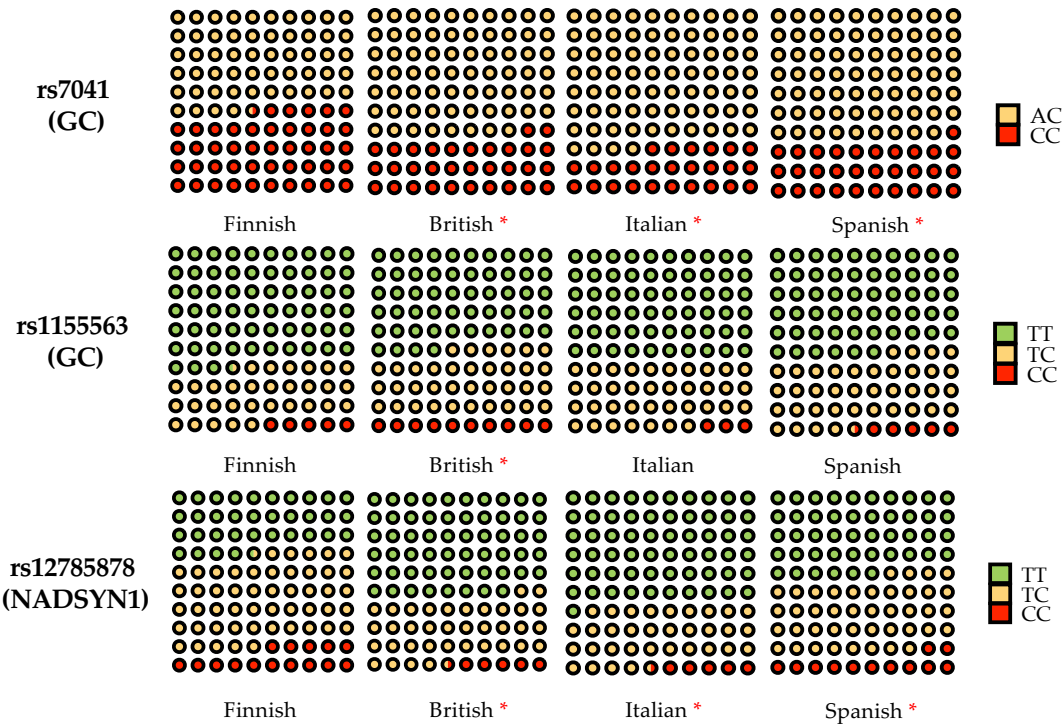
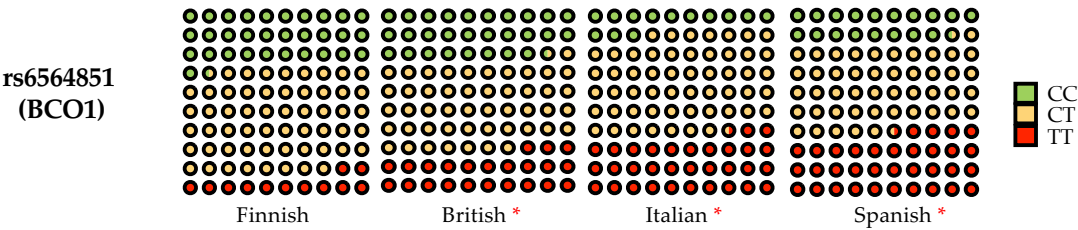


**Supplementary Figure 1.** Country genotype frequencies of Single Nucleotide Polymorphisms (SNPs) involved in specific Vitamins and Minerals nutritional status<sup>1</sup>.

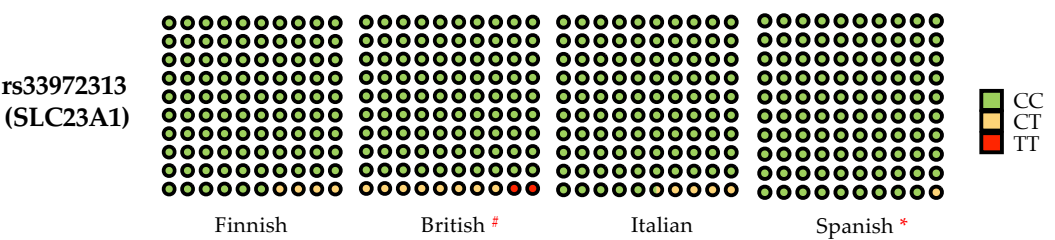
**A. SNP frequencies in European populations that may influence Vitamin D status**



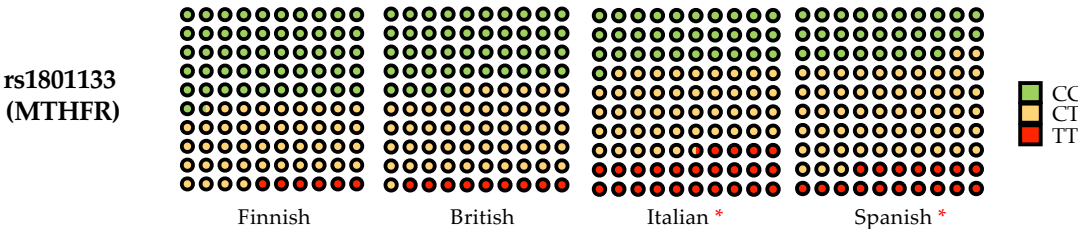
**B. SNP frequencies in European populations that may influence Vitamin A status**



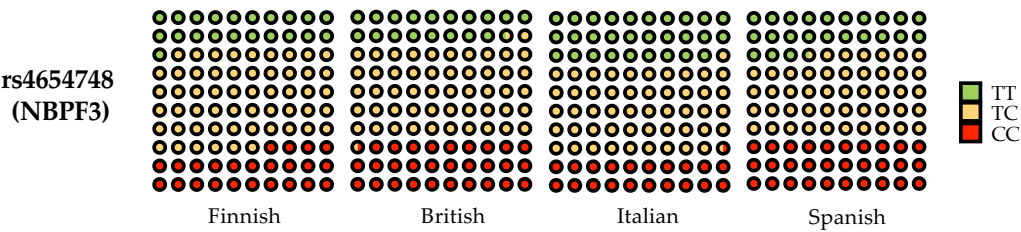
**C. SNP frequencies in European populations that may influence Vitamin C status**



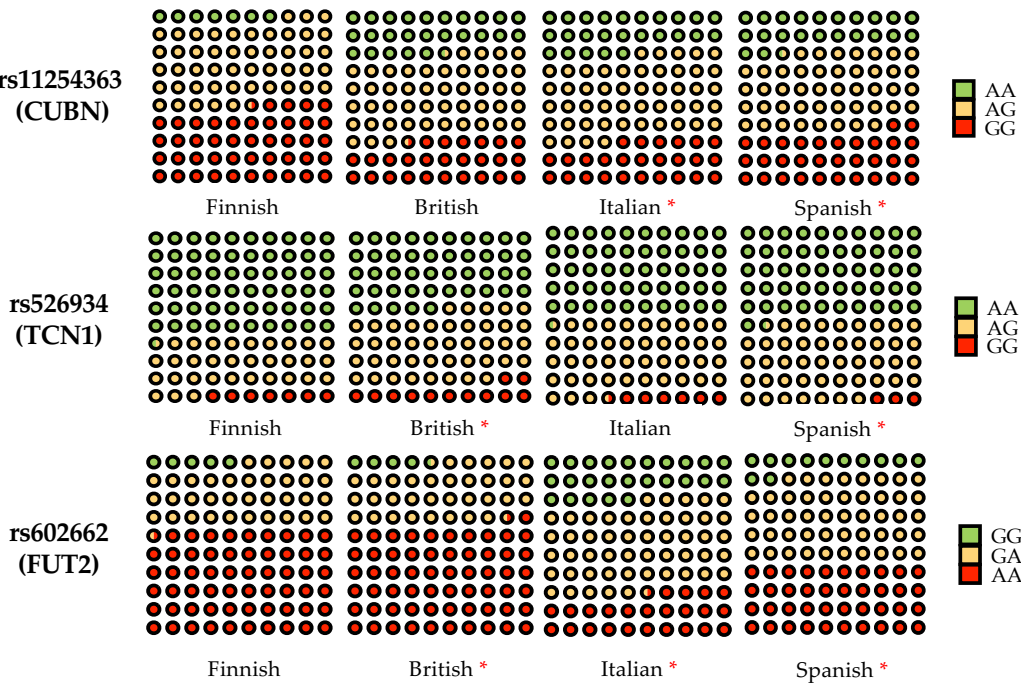
**D. SNP frequencies in European populations that may influence Folate status**



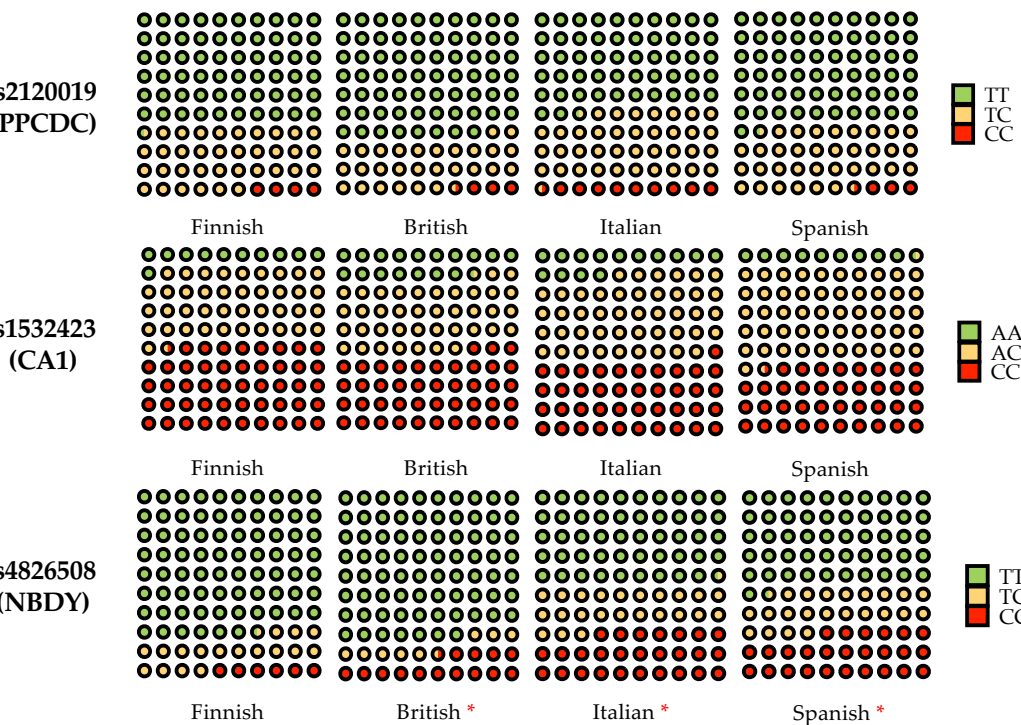
E. SNP frequencies in European populations that may influence **Vitamin B<sub>6</sub>** status



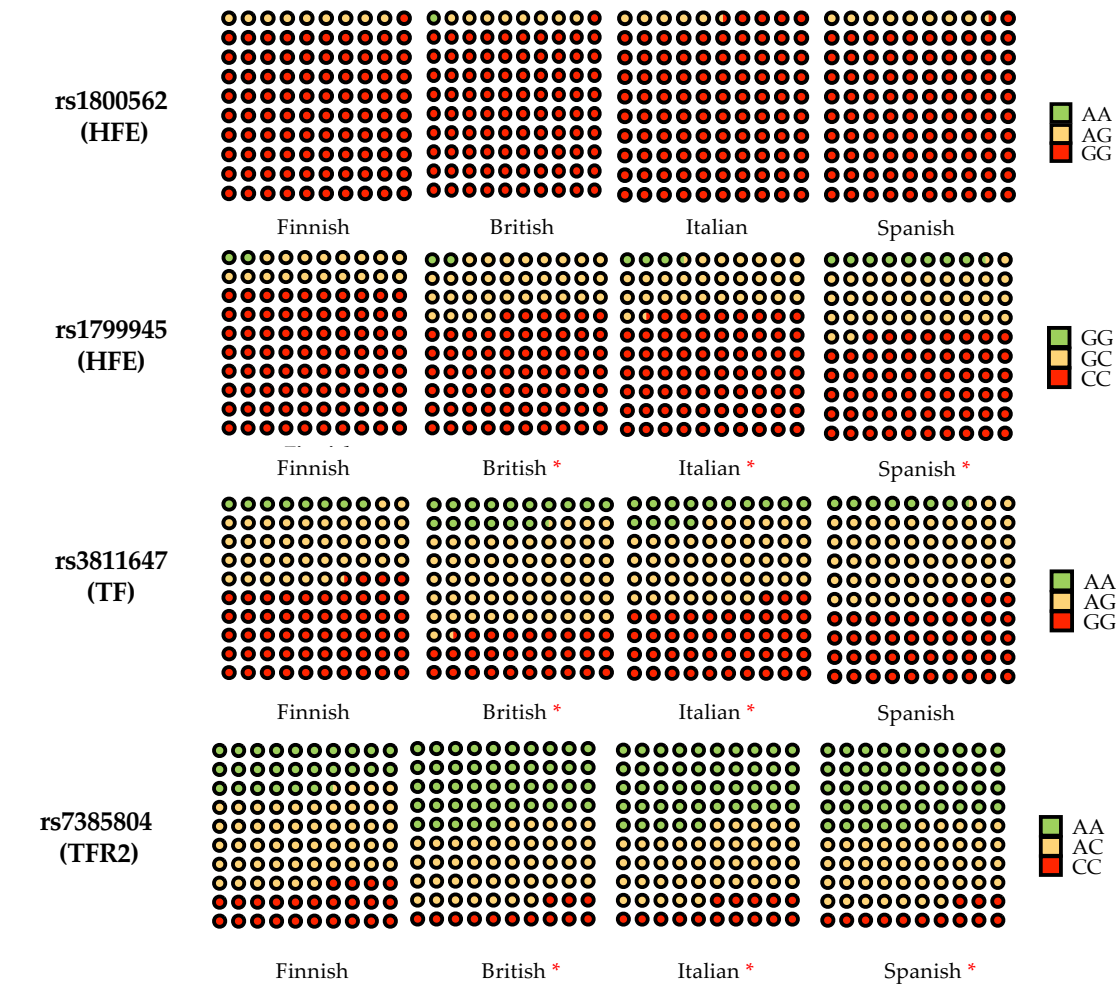
F. SNP frequencies in European populations that may influence **Vitamin B<sub>12</sub>** status



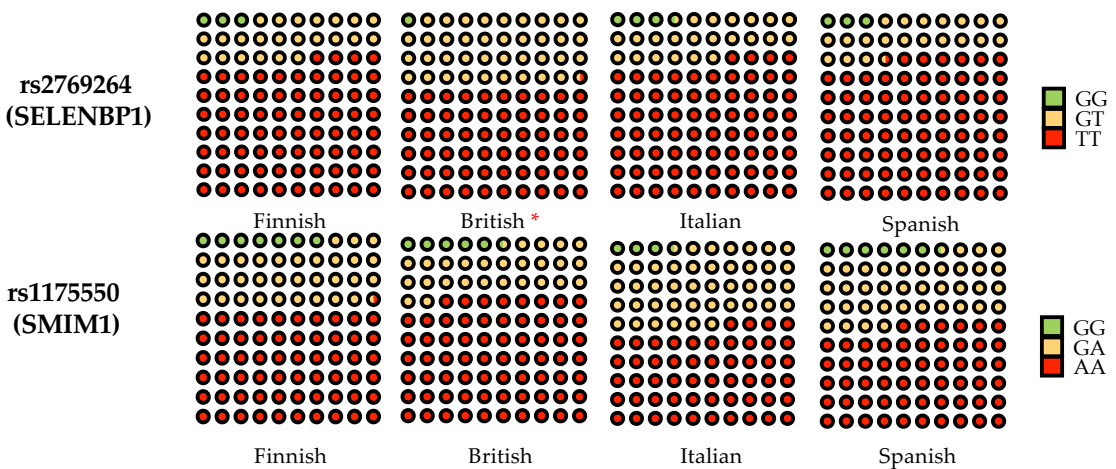
G. SNP frequencies in European populations that may influence **Zinc** status



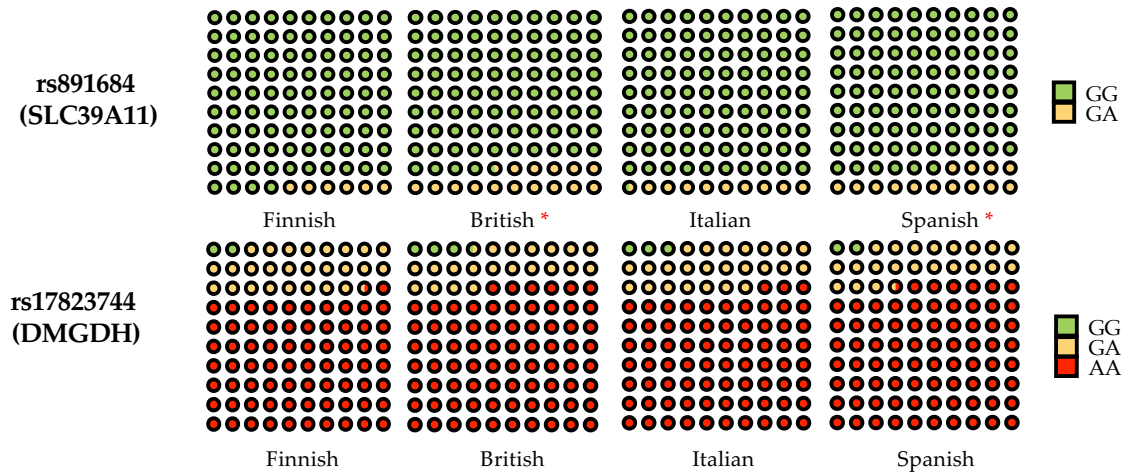
H. SNP frequencies in European populations that may influence **Iron** status



I. SNP frequencies in European populations that may influence **Copper** status



J. SNP frequencies in European populations that may influence **Selenium** status



<sup>1</sup>Frequency (%) of genotype combinations of each SNPs involved in Vitamin/Mineral status by country. SNPs are classified in blocks according to the nutrient on which they can affect their bioavailability or circulating levels. For each SNP, the percentage of occurrence of each possible allelic combination is represented in the indicated population: **green** dots represent the percentage of expected individuals carrying the genotype no associated to genetic risk for low levels or suboptimal status of the indicated nutrient; **yellow** dots represent the percentage of expected individuals carrying the genotype with one risk allele; **red** dots represent the percentage of expected individuals carrying the genotype with both risk alleles.

\*Means significantly ( $p<0.05$ ) differences of allele distribution of each country compared with Finland (as reference country). Statistical differences have been assessed by Chi-Square.