**Supplementary Table 1.** Single nucleotide polymorphisms explored in the study

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gene** | **SNP** | **MAF** | **Outcome** | **Reference** |
| ***SLC4A5***  (electrogenic sodium bicarbonate cotransporter) | rs7571842  rs10177833 | 0.46  0.44 | Blood pressure, pulse pressure, salt sensitivity (humans) | Carey et al. (19)  Stütz et al. (61) |
| ***SCNN1B***  (β-subunit of the ENaC) | rs239345 | 0.27 | Salt taste suprathreshold sensitivity (humans), hypertension (humans) | Dias et al. (8)  Hannila-Handelberg et al. (24)  Jin et al. (25) |
| ***TRPV1*** (transient receptor potential cation channel, subfamily V, member 1) | rs8065080 | 0.36 | Salt taste suprathreshold sensitivity (humans), *TRPV1* downregulation - salt sensitivity (animals) | Dias et al. (8)  Hao et al. (21)  Wang and Wang (20) |

MAF, minor allele frequency

**Supplementary Table 2.** Observed genotype and allele frequencies for the SNPs in the *SLC4A5* (rs7571842, rs10177833), *SCNN1B* (rs239345) and *TRPV1* (rs8065080) genes in the study population (n=20)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Genotype** | **Observed Number (%)** | **Allele frequency** | |
| **rs7571842** | A/A | 7 (35) | **A** | **G** |
| A/G | 8 (40) | 0.55 | 0.45 |
| G/G | 5 (25) |
| **rs10177833** | A/A | 8 (40) | **A** | **C** |
| A/C | 8 (40) | 0.60 | 0.40 |
| C/C | 4 (20) |
| **rs239345** | T/T | 11 (55) | **T** | **A** |
| T/A | 6 (30) | 0.70 | 0.30 |
| A/A | 3 (15) |
| **rs8065080** | T/T | 10 (50) | **T** | **C** |
| T/C | 7 (35) | 0.68 | 0.33 |
| C/C | 3 (15) |

**Supplementary Table 3.** Correlation analysis between salt taste thresholds (mol/l) and mean change in BP (mmHg) from low- to high-salt diet, and salt taste thresholds (mol/l) and dietary sodium intake (mg sodium per 1000 kcal) according to rs7571842 and rs10177833 genotypes (n=14)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **∆SBP** | **∆DBP** | **∆MAP** | **∆PP** |
| **rs7571842 AA (n=4)** |  |  |  |  |
| **STDT** | **1** (0.001) | 0.389 (0.611) | 0.632 (0.368) | -0.105 (0.895) |
| **STRT** | 0.500 (0.500) | 0.889 (0.111) | 0.949 (0.051) | -0.738 (0.262) |
| **rs7571842 AG +GG**  **(n=10)** |  |  |  |  |
| **STDT** | 0.104 (0.774) | **-0.750 (0.012)** | -0.625 (0.053) | **0.845 (0.002)** |
| **STRT** | 0.413 (0.235) | -0.174 (0.632) | -0.102 (0.779) | 0.354 (0.316) |
| **rs10177833 AA (n=6)** |  |  |  |  |
| **STDT** | 0.537 (0.272) | 0.015 (0.978) | 0.224 (0.670) | 0.353 (0.492) |
| **STRT** | 0.600 (0.208) | 0.823 (0.044) | 0.857 (0.029) | -0.372 (0.468) |
| **rs10177833 AC + CC**  **(n=8)** |  |  |  |  |
| **STDT** | 0.155 (0.714) | -0.791 (0.020) | -0.597 (0.118) | 0.781 (0.022) |
| **STRT** | 0.426 (0.292) | -0.307 (0.459) | -0.242 (0.564) | 0.429 (0.289) |

DBP, diastolic blood pressure; MAP, mean arterial pressure; PP, pulse pressure; STDT. salt taste detection threshold; STRT, salt taste recognition threshold; SBP, systolic blood pressure; Spearman rho (p value)

**Supplementary Table 4.** Correlation analysis between salt taste thresholds (mol/l) and total dietary sodium intake (mg sodium per 1000 kcal) and salt taste thresholds (mol/l) and discretionary salt intake according to sex (n=20, Spearman’s correlation).

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Sodium intake** | **Adding salt while cookinga** | **Adding salt at the tablea** |
| **STDT** | 0.069 (0.774) | 0.134 (0.573) | 0.342 (0.140) |
| **STRT** | 0.025 (0.918) | 0.083 (0.727) | -0.071 (0.767) |

STDT, salt taste detection threshold; STRT, salt taste recognition threshold STRT; a, (never, rarely, sometimes, usually, always); Spearman rho (p value)

**Supplementary Table 5**. Confounding variables according to *SLC4A5*, *SCNN1B* and *TRPV1* genotypes (n=20). Data presented as mean and SEM or relative frequencies. P value for differences between the major allele homozygotes and heterozygotes + minor allele homozygotes (Independent samples t-test, Fischer’s exact test, Mann-Whitney U test).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **rs7571842** | | | |  | **rs1017783** | | | |  | **rs239345** | | | |  | **rs8065080** | | | |  | |
|  | **AA**  **Mean** | **SEM** | **AG + GG**  **Mean** | **SEM** | **p** | **AA**  **Mean** | **SEM** | **AC + CC**  **Mean** | **SEM** | **p** | **TT**  **Mean** | **SEM** | **AT + AA**  **Mean** | **SEM** | **p** | **TT**  **Mean** | **SEM** | **CT + CC**  **Mean** | **SEM** | **p** |
| **Sex (%)** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Male | 37.5 |  | 62.5 |  | 1.000 | 37.5 |  | 62.5 |  | 1.000 | 50 |  | 50 |  | 1.000 | 62.5 |  | 37.5 |  | 0.650 |
| Female | 33.3 |  | 66.7 |  |  | 41.7 |  | 58.3 |  |  | 58.3 |  | 41.7 |  |  | 41.7 |  | 58.3 |  |  |
| **BMI (kg/m2)** | 25.8 | 1.5 | 22.8 | 0.7 | 0.019 | 24.4 | 1.1 | 23.5 | 0.9 | 0.554 | 24.2 | 0.9 | 23.4 | 1.2 | 0.941 | 24.9 | 0.9 | 22.7 | 1.1 | 0.143 |
| **Age (years)** | 35.4 | 3.2 | 29.9 | 2.1 | 0.157 | 34.6 | 2.8 | 29.9 | 2.3 | 0.135 | 31.1 | 2.4 | 32.6 | 2.9 | 0.766 | 30.1 | 2.2 | 33.5 | 2.9 | 0.364 |