**High-resolution phylogeography of zoonotic tapeworm Echinococcus granulosus sensu stricto genotype G1 with an emphasis on its distribution in Turkey, Italy and Spain.**

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**Supplementary Information**

**Table S1.** Diversity and neutrality indices for *E. granulosus* s. s. genotype G1 in Europe based on 1674 bp (*cox1*) of mtDNA. The Southern European samples (South Eur) included all samples except Turkish and Finnish (Algerian).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Diversity |  |  |  | Neutrality |  |
|  | n | Hn | Hd ± S.D. | π± S.D. | *D* | Fs |
| Total  *Origin*  Turkey  Spain  Italy  South Eur  *Host*  Cattle  Sheep | 91  69  10  7  21  42  43 | 49  37  7  3  12  24  26 | 0.920 ± 0.023  0.939 ± 0.019  0.867 ± 0.107  0.524 ± 0.209  0.786 ± 0.096  0.937 ± 0.024  0.905 ± 0.039 | 0.00196 ± 0.00019  0.00202 ± 0.00021  0.00143 ± 0.00048  0.00051 ± 0.00025  0.00159 ± 0.00043  0.00171 ± 0.00020  0.00217 ± 0.00031 | -2.49144\*\*  -2.30562\*  -1.96119\*  -1.35841  -2.13632\*  -2.11559\*\*  -2.28186\*\* | -26.27676\*\*  -26.23723\*\*  -9.51463\*\*  -9.21700\*\*  -26.54614\*\*  -26.41819\*\*  -26.02824\*\* |

Abbreviations: number of isolates examined (n), number of haplotypes (Hn), haplotype diversity (Hd), nucleotide diversity (π), Tajima’s D (*D*), Fu’s Fs (Fs), and standard deviation (S.D.).

\*\*Highly significant P value (P < 0.000001).

\* Significant P value (P < 0.05).

**Table S2.** Diversity and neutrality indices for *E. granulosus* s. s. genotype G1 in Europe based on 351 bp (*cox1*) of mtDNA. The Southern European samples (South Eur) included all samples except Turkish and Finnish (Algerian).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Diversity |  |  |  | Neutrality |  |
|  | n | Hn | Hd ± S.D. | π± S.D. | *D* | Fs |
| Total  *Origin*  Turkey  Spain  Italy  South Eur  *Host*  Cattle  Sheep | 91  69  10  7  21  42  43 | 11  8  4  1  5  8  6 | 0.596 ± 0.043  0.621 ± 0.042  0.533 ± 0.180  -  0.486 ± 0.124  0.677 ± 0.049  0.520 ± 0.070 | 0.00219 ± 0.00025  0.00231 ± 0.00028  0.00171 ± 0.00067  -  0.00174 ± 0.00054  0.00271 ± 0.00040  0.00176 ± 0.00031 | -1.43098\*  -0.83662  -1.56222  -  -1.28742  -0.83916  -1.16481 | -7.065  -3.396  -1.964  -  -2.365  -3.514  -2.720 |

Abbreviations: number of isolates examined (n), number of haplotypes (Hn), haplotype diversity (Hd), nucleotide diversity (π), Tajima’s D (*D*), Fu’s Fs (Fs), and standard deviation (S.D.).

\*\*Highly significant P value (P < 0.000001).

\* Significant P value (P < 0.05).

**Table S3.** Pairwise fixation index (Fst) values between *E. granulosus* s. s. genotype G1 subpopulations based on mtDNA datasets of different length. The Southern European samples (South Eur) included all samples except Turkish and Finnish (Algerian).

|  |  |  |
| --- | --- | --- |
|  | 1 | 2 |
| **8274 bp (mtDNA)**  1. Turkey  2. Italy  3. Spain  4. South Eur  **1674 bp (full *cox1*)**  1. Turkey  2. Italy  3. Spain  4. South Eur  **351 bp (partial *cox1*)**  1. Turkey  2. Italy  3. Spain  4. South Eur | 0.02008  0.04064\*  0.01642  0.00443  0.00868  0.01272\*  0.10934  0.07072  0.03297 | 0.00447  -0.3714  -0.03960 |

\* Significant P value (P < 0.05).