**Supplementary Table 1: G+C % in whole genome sequence (WGS), at IRs and FFS of the five amino acids in genome as well as in the high expression genes (HEGs) of LeS and LaS**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Regions | | *Ec* | | *Kp* | | *Se* | | *Sa* | | *Sp* | |
| LeS | LaS | LeS | LaS | LeS | LaS | LeS | LaS | LeS | LaS |
| WGS | | 50.8 | | 57.7 | | 52.2 | | 32.8 | | 39.5 | |
| IRs | | 40.8 | 39.9 | 46.7 | 45.5 | 41.7 | 41.5 | 27.3 | 27.9 | 33.5 | 32.7 |
| FFS (genome) | Val | 59.8 | 59.9 | 77.0 | 79.4 | 62.9 | 63.7 | 24.2 | 27.4 | 40.1 | 41.9 |
| Pro | 68.7 | 65.9 | 84.7 | 84.2 | 73.6 | 73.2 | 15.5 | 12.2 | 17.0 | 16.3 |
| Thr | 73.0 | 73.3 | 88.4 | 89.1 | 79.8 | 80.6 | 21.6 | 19.6 | 33.6 | 31.7 |
| Ala | 64.0 | 64.1 | 84.7 | 86.2 | 75.8 | 76.6 | 22.1 | 19.9 | 32.7 | 33.1 |
| Gly | 56.4 | 56.6 | 76.9 | 78.5 | 65.7 | 67.4 | 20.9 | 25.8 | 26.9 | 27.5 |
| No. of genes analysed | 1784 | 1431 | 1956 | 1625 | 1818 | 1364 | 1194 | 336 | 994 | 218 |
| FFS (HEGs) | Val | 15.3 | 36.0 | 30.1 | 48.4 | 27.0 | 42.1 | 10.9 | 0.0 | 15.8 | 40.0 |
| Pro | 80.6 | 69.4 | 85.1 | 93.2 | 77.0 | 80.0 | 3.9 | 0.0 | 4.0 | 0.0 |
| Thr | 50.0 | 59.2 | 63.7 | 72.9 | 59.1 | 68.5 | 6.7 | 0.0 | 8.4 | 0.0 |
| Ala | 24.8 | 33.3 | 41.9 | 54.7 | 39.7 | 47.2 | 10.2 | 0.0 | 15.2 | 0.0 |
| Gly | 40.1 | 40.8 | 50.6 | 63.0 | 46.4 | 55.1 | 12.9 | 0.0 | 9.9 | 0.0 |
| No. of genes analysed | 19 | 7 | 19 | 5 | 17 | 6 | 19 | 2 | 18 | 2 |