*Twin Research and Human Genetics*

Genetic and Environmental Influences on General Skin Traits: Healthy Twins and Families in Korea

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**Supplementary Table S1.** Associations between clinical characteristics and skin phenotypes

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Melanin index  |  | Sebum  |  | Arm humidity  |  | Cheek humidity  |
|  | Beta [95% CI] |  | P-value a |  | Beta [95% CI] |  | P-value |  | Beta [95% CI] |  | P-value |  | Beta [95% CI] |  | P-value |
| Age  |  | -0.62 [-0.78, -0.47] |  | <0.0001  |  | -0.10 [-0.26, 0.06] |  | 0.2432 |  | 0.07 [0.03, 0.11] |  | 0.0006 |  | 0.10 [0.04, 0.16] |  | 0.0008 |
| Sex (Male) |  | -1.14 [-6.92, 4.64] |  | 0.6987 |  | 39.55 [33.62, 45.48] |  | <0.0001 |  | -0.15 [-1.59, 1.28] |  | 0.8335 |  | -6.95 [-9.22, -4.67] |  | <0.0001 |
| Creatine |  | 1.02 [-6.70, 8.73] |  | 0.7963 |  | 1.11 [-6.98, 9.20] |  | 0.7870 |  | 1.29 [-0.69, 3.27] |  | 0.2003 |  | 1.80 [-1.34, 4.94] |  | 0.2608 |
| History of hyperthyroidism |  | 2.20 [-14.77, 19.16] |  | 0.7995 |  | -7.68 [-24.74, 9.38] |  | 0.3771 |  | 1.38 [-2.70, 5.45] |  | 0.5073 |  | 8.88 [2.38, 15.38] |  | 0.0075 |
| History of diabetes mellitus |  | -7.92 [-17.41, 1.56] |  | 0.1015 |  | 1.23 [-8.89, 11.34] |  | 0.8120 |  | -1.08 [-3.46, 1.30] |  | 0.3740 |  | -1.08 [-4.84, 2.68] |  | 0.5725 |
| History of atopic dermatitis |  | -6.29 [-15.97, 3.40] |  | 0.2030 |  | 3.57 [-6.03, 13.16] |  | 0.4660 |  | -2.83 [-5.14, -0.52] |  | 0.0163 |  | 0.35 [-3.32, 4.03] |  | 0.8507 |
| History of chronic hepatitis/liver cirrhosis |  | -0.35 [-15.04, 14.33] |  | 0.9625 |  | -16.82 [-32.75, -0.90] |  | 0.0385 |  | -0.33 [-4.16, 3.49] |  | 0.8637 |  | 4.17 [-1.85, 10.19] |  | 0.1742 |
| Smoking status (Ever smoker) |  | 7.52 [1.76, 13.28] |  | 0.0106 |  | -4.26 [-10.16, 1.65] |  | 0.1578 |  | 0.17 [-1.25, 1.59] |  | 0.8115 |  | 0.83 [-1.41, 3.08] |  | 0.4680 |
| Season |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Summer |  | 1.61 [-5.24, 8.46] |  | 0.6442 |  | -12.45 [-19.43, -5.47] |  | 0.0005 |  | 4.07 [2.28, 5.85] |  | <0.0001 |  | 6.01 [3.03, 8.99] |  | <0.0001 |
| Winter |  | 3.87 [-2.25, 9.98] |  | 0.2148 |  | -13.00 [-18.96, -7.04] |  | <0.0001 |  | -3.16 [-4.69, -1.63] |  | <0.0001 |  | -5.04 [-7.59, -2.49] |  | 0.0001 |

Note: a P-value obtained by mixed model for a skin phenotype with a random effect for correlation among same family.