**Genetics of heat tolerance for milk yield and quality in Holsteins**

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Supplementary Table S1. Posterior means of the ratio ($σ\_{g}^{2}\_{sl}/σ\_{g}^{2}\_{int}$) and correlation between intercept and slope ($r\_{g}\_{sl,int}$) for additive genetic and permanent environmental effects for milk yield and quality traits in Holsteins

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Effect | Trait | First lactation |  | Second lactation |  | Third lactation |
| $$σ\_{g}^{2}\_{sl}/σ\_{g}^{2}\_{int}$$ | $$r\_{g}\_{sl,int}$$ |  | $$σ\_{g}^{2}\_{sl}/σ\_{g}^{2}\_{int}$$ | $$r\_{g}\_{sl,int}$$ |  | $$σ\_{g}^{2}\_{sl}/σ\_{g}^{2}\_{int}$$ | $$r\_{g}\_{sl,int}$$ |
| additive | Milk (kg) | 0.02 | -0.23 |  | 0.04 | -0.21 |  | 0.07 | -0.20 |
| Fat (%) | 0.02 | -0.75 |  | 0.02 | -0.85 |  | 0.03 | -0.72 |
| Protein (%) | 0.01 | -0.78 |  | 0.02 | -0.35 |  | 0.04 | -0.33 |
| SCS | 0.05 | -0.30 |  | 0.04 | 0.04 |  | 0.06 | 0.07 |
|  |  |  |  |  |  |  |  |  |  |
| permanent | Milk (kg) | 0.01 | -0.27 |  | 0.04 | -0.25 |  | 0.07 | -0.20 |
| Fat (%) | 0.04 | 0.22 |  | 0.02 | -0.34 |  | 0.03 | -0.32 |
| Protein (%) | 0.03 | -0.02 |  | 0.02 | -0.04 |  | 0.02 | -0.24 |
| SCS | 0.01 | 0.15 |  | 0.02 | -0.33 |  | 0.03 | -0.31 |

SCS = somatic cell score