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**Figure S1.** Violin plots for descriptive statistics for white blood cell traits in Blood 1, Blood 3, and Blood 4 collected at 2-weeks before, and at 2- and 6-weeks after the challenge, respectively. WBC: total white blood cell concentration; NEU: neutrophil concentration; LYM: lymphocyte concentration; MONO: monocyte concentration; EOS: eosinophil concentration; BASO: basophil concentration. Wider sections of the violin plots represent a higher probability that members of the population shown as the given value and the skinnier sections represent a lower probability. Suggested reference intervals for CBC traits were derived from Iowa State University's Clinical Pathology Laboratory (2011). The suggested reference intervals for BASO traits are not applicable.

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**Figure S2*.*** Violin plots for descriptive statistics for red blood cell traits in Blood 1, Blood 3, and Blood 4 collected at 2-weeks before, and at 2- and 6-weeks after the challenge, respectively. RBC: red blood cell concentration; HGB: hemoglobin concentration; HCT: hematocrit; MCV: mean corpuscular volume; MCH: mean corpuscular hemoglobin; MCHC: mean corpuscular hemoglobin concentration; RDW: red blood cell distribution width. Wider sections of the violin plots represent a higher probability that members of the population shown as the given value and the skinnier sections represent a lower probability. Suggested reference intervals for CBC traits were derived from Iowa State University's Clinical Pathology Laboratory (2011). The suggested reference intervals for RDW traits are not applicable.

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**Figure S3*.*** Violin plots for descriptive statistics for platelet traits in Blood 1, Blood 3, and Blood 4 collected at 2-weeks before, and at 2- and 6-weeks after the challenge, respectively. PLT: platelet concentration; MPV: mean platelet volume. Wider sections of the violin plots represent a higher probability that members of the population shown as the given value and the skinnier sections represent a lower probability. Suggested reference intervals for CBC traits were derived from Iowa State University's Clinical Pathology Laboratory (2011). The suggested reference intervals for MPV traits are not applicable.

**Table S1.** Genetic correlations between red blood cell traits of mean corpuscular hemoglobin (MCH), mean corpuscular volume (MCV), and red blood cell concentration (RBC) traits in Blood 1, Blood 3, and Blood 4.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Traits** | | **MCH** | | |
| **Blood 1** | **Blood 3** | **Blood 4** |
| **RBC** | **Blood 1** | -0.71 ± 0.10 | -0.83 ± 0.07 | -0.60 ± 0.09 |
| **Blood 3** | -0.62 ± 0.10 | -0.74 ± 0.06 | -0.43 ± 0.09 |
| **Blood 4** | -0.69 ± 0.10 | -0.66 ± 0.08 | -0.55 ± 0.08 |
| **MCV** | **Blood 1** | 0.90 ± 0.03 | 0.81 ± 0.07 | 0.77 ± 0.08 |
| **Blood 3** | 0.75 ± 0.07 | 0.86 ± 0.03 | 0.77 ± 0.05 |
| **Blood 4** | 0.95 ± 0.02 | 0.86 ± 0.04 | 0.95 ± 0.02 |
| **Traits** | | **MCV** | | |
| **Blood 1** | **Blood 3** | **Blood 4** |
| **RBC** | **Blood 1** | -0.72 ± 0.09 | -0.68 ± 0.08 | -0.54 ± 0.09 |
| **Blood 3** | -0.65 ± 0.09 | -0.59 ± 0.08 | -0.44 ± 0.10 |
| **Blood 4** | -0.71 ± 0.10 | -0.56 ± 0.08 | -0.55 ± 0.08 |