

## Supplementary Information

### **Can saliva testing replace blood measurements for health monitoring? Insights from a correlation study of salivary and whole blood glutathione in humans.**

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## **S1 Standard additions procedures:**

### **justification of the concentration increments used**

As mentioned in the Assay Validation section in the main text, the GSH concentration increments used in standard addition were 332 nM. This value is chosen to roughly double the amount of total glutathione present in the solution to minimize the experimental errors and keep the maximum concentration within the linear range.<sup>1</sup> The average amount of glutathione in saliva is ca. 4  $\mu$ M.<sup>2, 3</sup> The use of 100  $\mu$ L saliva in the final assay volume of 980  $\mu$ L results in the glutathione concentration of ca. 408 nM. Whole blood glutathione content was reported to be ca. 1 mM.<sup>4</sup> After hemolysis in the phosphate buffer and dilution when mixed with other components of the assay, the final concentration of glutathione from blood in the assay is ca. 510 nM.

## S2 Information of the subjects

Saliva and blood samples were collected from 15 healthy participants. The information regarding age, gender and the results of the total glutathione measurements in both saliva and blood samples of each subject are summarized in Table S1.

**Table S1:** Information of the subjects on age, gender and the content of glutathione equivalents in their blood and saliva samples

| Participant Number | Age / years | Gender | Blood [GSHeq] / $\mu\text{M}$ | Saliva [GSH] / $\mu\text{M}$ |
|--------------------|-------------|--------|-------------------------------|------------------------------|
| 1                  | 50          | F      | $1111 \pm 88$                 | $4.9 \pm 0.1$                |
| 2                  | 25          | F      | $1433 \pm 56$                 | $5.6 \pm 0.2$                |
| 3                  | 45          | F      | $990 \pm 16$                  | $3.2 \pm 0.2$                |
| 4                  | 38          | F      | $1885 \pm 104$                | $3.4 \pm 0.2$                |
| 5                  | 50          | F      | $1240 \pm 16$                 | $3.5 \pm 0.2$                |
| 6                  | 47          | F      | $1136 \pm 68$                 | $1.5 \pm 0.1$                |
| 7                  | 31          | F      | $1242 \pm 87$                 | $1.7 \pm 0.1$                |
| 8                  | 28          | F      | $1051 \pm 37$                 | $1.5 \pm 0.1$                |
| 9                  | 41          | F      | $1238 \pm 19$                 | $2.5 \pm 0.2$                |
| 10                 | 22          | F      | $1759 \pm 82$                 | $8.8 \pm 0.2$                |
| 11                 | 25          | F      | $1031 \pm 44$                 | $4.1 \pm 0.2$                |
| 12                 | 25          | F      | $1137 \pm 54$                 | $5.6 \pm 0.2$                |
| 13                 | 23          | F      | $1271 \pm 27$                 | $6.0 \pm 0.1$                |
| 14                 | 31          | M      | $1472 \pm 36$                 | $4.3 \pm 0.1$                |
| 15                 | 27          | M      | $1335 \pm 19$                 | $2.7 \pm 0.2$                |

## References

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