Table S3. Individual and joint effect of trehalose and glutamate on the odds of diabetic retinopathy in non-proliferative diabetic retinopathy patient pairs.

| | | Model 1[a] | | Model 2[b] | | Model 3[c] | |
|---|---|---|---|---|---|---|---|
| **Metabolites > median** | | **OR (95%CI)** | **P** | **OR (95%CI)** | **P** | **OR (95%CI)** | **P** |
| Trehalose | | | | | | | |
| Per IQR | | 0.45(0.27,0.74) | 0.002 | 0.45(0.27,0.75) | 0.002 | 0.24(0.11,0.51) | <0.001 |
| Quartiles | | | | | | | |
| $Q_1$ | | 1.00(1.00,1.00) | Ref. | 1.00(1.00,1.00) | Ref. | 1.00(1.00,1.00) | Ref. |
| $Q_2$ | | 0.49(0.17,1.41) | 0.187 | 0.41(0.13,1.28) | 0.125 | 0.19(0.04,0.87) | 0.033 |
| $Q_3$ | | 0.56(0.19,1.62) | 0.286 | 0.55(0.18,1.65) | 0.286 | 0.10(0.02,0.52) | 0.006 |
| $Q_4$ | | 0.11(0.03,0.35) | <0.001 | 0.10(0.03,0.35) | <0.001 | 0.01(0.00,0.07) | <0.001 |
| P for trend | | | 0.001 | | 0.001 | | <0.001 |
| Glutamate | | | | | | | |
| Per IQR | | 1.58(1.08,2.30) | 0.018 | 1.68(1.12,2.51) | 0.012 | 2.03(1.23,3.35) | 0.006 |
| Quartiles | | | | | | | |
| $Q_1$ | | 1.00(1.00,1.00) | Ref. | 1.00(1.00,1.00) | Ref. | 1.00(1.00,1.00) | Ref. |
| $Q_2$ | | 1.75(0.62,4.97) | 0.294 | 1.89(0.62,5.79) | 0.266 | 2.01(0.53,7.54) | 0.303 |
| $Q_3$ | | 2.62(0.92,7.46) | 0.072 | 2.53(0.82,7.78) | 0.106 | 2.45(0.61,9.78) | 0.205 |
| $Q_4$ | | 3.46(1.20,9.99) | 0.022 | 4.75(1.50,15.09) | 0.008 | 8.10(1.92,34.22) | 0.004 |
| P for trend | | | 0.016 | | 0.007 | | 0.004 |
| Trehalose | Glutamate | | | | | | |
| Yes | No | 1.00(1.00,1.00) | Ref. | 1.00(1.00,1.00) | Ref. | 1.00(1.00,1.00) | Ref. |
| No | No | 0.90(0.32,2.52) | 0.833 | 0.75(0.25,2.28) | 0.608 | 1.44(0.34,6.03) | 0.621 |
| Yes | Yes | 0.78(0.28,2.21) | 0.639 | 0.73(0.24,2.23) | 0.585 | 0.50(0.13,1.89) | 0.309 |
| No | Yes | 8.85(2.44,32.12) | 0.001 | 9.63(2.51,37.02) | 0.001 | 32.40(5.46,192.35) | <0.001 |
| Interaction (Trehalose*Glutamate) | | 12.70(2.44,66.16) | 0.003 | 17.55(3.00,102.48) | 0.001 | 44.83(4.63,433.91) | 0.001 |
| RERI (95% CI) | | 8.18(-2.60,18.96) | | 9.15(-3.21,21.51) | | 31.46(-25.26,88.18) | |

Abbreviation: IQR, interquartile range; Q1, the first quartile; Q2, the second quartile; Q3, the third quartile; Q4, the fourth quartile; RERI, relative excess risk of interaction; OR, odds ratio.

[a] Model 1 was unadjusted.

[b] Model 2 was adjusted for SBP and duration of diabetes.

[c] Model 3 was adjusted for the confounders chosen by LASSO regression.