Shifts in rotifer life history in response to stable isotope enrichment: testing theories of isotope effects on organismal growth

Elena Gorokhova

Electronic Supplementary Materials

Appendix S1, Tables S1-S5.

Table S1. Dunn’s multiple comparison tests for age at first reproduction in *Brachionus plicatilis* receiving diets with varying $^{15}$N enrichment. All treatments are compared to the control (0.37 at% $^{15}$N concentration); ns: not significant, ****: $p < 0.0001$. See also Figure 2B.

| Pairwise comparison | Mean rank diff. | Summary |
|---------------------|----------------|---------|
| Control vs. 0.4 at% | -13.92 | ns |
| Control vs. 0.5 at% | -23.98 | ns |
| Control vs. 1.0 at% | -52.17 | **** |
| Control vs. 3.5 at% | -10.77 | ns |
| Control vs. 5.0 at% | -52.17 | **** |

Table S2. Dunnett’s multiple comparison tests for the duration of the reproductive period *Brachionus plicatilis* receiving algal diets with varying $^{15}$N enrichment. All treatments are compared to the control (0.37 at% $^{15}$N concentration); ns: not significant, *: $p < 0.05$; ** $p < 0.01$. See also Figure 2C.

| Pairwise comparison | Mean diff. | 95%-CI of diff. | Summary |
|---------------------|------------|----------------|---------|
| Control vs. 0.4%    | -0.5833    | -3.147 to 1.980| ns      |
| Control vs. 0.5%    | -1.958     | -4.522 to 0.6050| ns      |
| Control vs. 1%      | -2.750     | -5.313 to -0.1866| *       |
| Control vs. 3.5%    | -1.708     | -4.272 to 0.8550| ns      |
| Control vs. 5%      | -3.375     | -5.938 to -0.8116| **      |
Table S3. Dunnett’s multiple comparison tests for the lifetime fecundity in *Brachionus plicatilis* receiving algal diets with varying $^{15}$N enrichment. All treatments are compared to the control (0.37 at% $^{15}$N concentration); ns: not significant, *: p < 0.05; ** p < 0.01. See also Figure 2D.

| Pairwise comparison | Mean diff. | 95%-CI of diff. | Summary |
|---------------------|------------|-----------------|---------|
| Control vs. 0.4%    | 2.583      | -0.3765 to 5.543| ns      |
| Control vs. 0.5%    | 2.792      | -0.1682 to 5.751| ns      |
| Control vs. 1%      | 3.375      | 0.4152 to 6.335 | *       |
| Control vs. 3.5%    | 0.6667     | -2.293 to 3.626 | ns      |
| Control vs. 5%      | 3.000      | 0.04017 to 5.960| *       |

Table S4. Dunnett’s multiple comparison tests for the individual protein content of the *Brachionus plicatilis* neonates produced by mothers receiving diets with varying $^{15}$N enrichment. All treatments are compared to the control (0.37 at% $^{15}$N concentration); ns: not significant, *: p < 0.05; ** p < 0.01. See also Figure 2E.

| Pairwise comparison | Mean diff. | 95%-CI of diff. | Summary |
|---------------------|------------|-----------------|---------|
| Control vs. 0.4%    | 7.000      | -6.508 to 20.51 | ns      |
| Control vs. 0.5%    | 14.00      | 0.6497 to 27.35 | *       |
| Control vs. 1%      | 14.00      | 0.3200 to 27.68 | *       |
| Control vs. 3.5%    | 5.000      | -9.548 to 19.55 | ns      |
| Control vs. 5%      | 16.00      | 0.5104 to 31.49 | *       |
Table S5. Dunnett’s multiple comparison tests for the RNA:protein ratio in the neonates of *Brachionus plicatilis* produced by mothers receiving diets with varying $^{15}$N enrichment. All treatments are compared to the control (0.37 at% $^{15}$N concentration); ns: not significant, *: p < 0.05; ** p < 0.01. See also Figure 2F.

| Pairwise comparison | Mean diff. | 95%-CI of diff. | Summary |
|---------------------|------------|-----------------|---------|
| Control vs. 0.4%    | 0.0500     | -0.03029 to 0.1303 | ns      |
| Control vs. 0.5%    | 0.0800     | 0.0006538 to 0.1593 | *       |
| Control vs. 1%      | 0.1000     | 0.01869 to 0.1813 | **      |
| Control vs. 3.5%    | 0.06000    | -0.02647 to 0.1465 | ns      |
| Control vs. 5%      | 0.1100     | 0.01794 to 0.2021 | *       |