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**Title:** The evolution and plasticity of life histories upon variation in nutrition: an ageing focused integrative approach  
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1. The predictive adaptive response hypothesis is relevant for relatively short-lived organisms that live in predictable seasonal environments (chapter 2).

2. Dietary restriction responses are not evolutionarily conserved (chapter 3).

3. Experiencing a yo-yo diet and plasticity in egg number and weight does not have substantial consequences for lifespan in the fruit fly, *Drosophila melanogaster* (chapter 4).

4. The transcriptome changes that occur when keeping flies on a high or low caloric diet can also be studied on a yo-yo diet in the fruit fly, *Drosophila melanogaster* (chapter 5).

5. How fecundity and lifespan correlate with one another depends on the age of the individuals that are examined (chapter 6).

6. Natural selection on life history traits has shaped genetic variation in insulin signaling pathway genes in the least killifish, *Heterandria formosa* (chapter 7).

7. Not one single trait is maximized, but all traits are optimized by evolution (after Schoener, 1971).

8. The present day practice of describing organisms through expensive technologically driven ‘omics data is not necessarily better than describing organisms by easily assessable phenotypes.

9. Currently, if one wants to improve general health, money could be better allocated to education than to ageing research.

10. Not the relationships among the involved traits, but discovering the mechanisms of ageing will reveal whether antagonistic pleiotropy or disposable soma is the most plausible theory for the evolution of ageing.

11. Despite the focus in ageing research on the conservation of traits and plastic responses, the true beauty of evolution and the key to understanding organisms is diversity.