P013 Iron metabolism of *Drosophila melanogaster*: A magnetic approach

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Five genetic strains of *Drosophila melanogaster* with altered iron metabolisms have been used to assess ferritin protein levels and iron loading of the ferritin molecules.

Freeze-dried insects have been characterised by dynamical magnetic susceptibility. Due to the low concentration of other magnetogenic elements different from iron, the obtained information is specific of the bioinorganic iron status.

Differences in the proportion of iron-containing species with distinct magnetic properties that are present in the various strains can be observed. In addition, the low temperature susceptibility results of iron-loaded flies indicate the presence of iron-containing particles similar to what has been observed in mammalian ferritin molecules.

This new approach combines the iron-related proteome and the iron speciation leading to a more complete knowledge of its metabolism in this model organism.