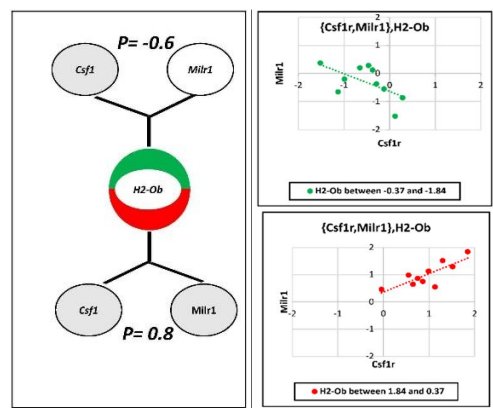


Supplementary File 2

A real example of three-way interaction model from E-MTAB-2121 dataset. The three-way interaction with switching mechanism between *H2-Ob* (as the switching gene) and $\{Csf1r, Milr1\}$ (as $\{X_1, X_2\}$) is presented. When *H2-Ob* gene is down-regulated (the expression level of it is between -1.84 and -0.37), there is an inverse correlation between *Milr1* and *Csf1r* expression levels (green). When *H2-Ob* gene is up-regulated (i.e., the expression level of it is between 0.37 and 1.84), there is a direct correlation between *Milr1* and *Csf1r* expression levels (red); this triplet will be further explained in our previous study (1).



1. Khayer N, Marashi SA, Mirzaie M, Goshadrou F. Three-way interaction model to trace the mechanisms involved in Alzheimer's disease transgenic mice. PloS one. 2017;12(9):e0184697. Epub 2017/09/22. doi: 10.1371/journal.pone.0184697. PubMed PMID: 28934252.