**Sup Figure 1:** Breakdown of decisions during iterations of the alignment of zebrafish (ZFA) and Xenopus (XAO)

The ZFA and XAO ontologies (Table 1) were aligned. For each window of 50 iterations of the algorithm, the number of decisions of validation (blue) or invalidation (red) are plotted.

**Sup Figure 2:** Alignment scores between zebrafish (ZFA) and Xenopus (XAO)

The ZFA and XAO ontologies (Table 1) were aligned. Each point corresponds to one proposition. X-axis, iteration number; Y axis, the score of the proposition. Black line: all propositions generated by Homolonto. Red crosses: validated propositions. Blue arrows: first two invalidated propositions; red arrow: last validated proposition

**Sup Figure 3:** Breakdown of decisions during iterations of the alignment of human (EHDAA) and mouse (EMAPA)

The EHDAA and EMAPA ontologies (Table 1) were aligned. For each window of 200 iterations of the algorithm, the number of decisions of validation (blue), validation as partial homology (hatched blue), or invalidation (red) are plotted.





