

**Evolutionarily conserved genes in metazoan reproduction identified in the *E. ancora* gonadal transcriptome assembly**

| Category             | Gene  | Assembly ID        | Accession      | Reference  |
|----------------------|---|--------------------|----------------|------------|
| Germline development | <i>Germ cell-less (gcl)</i>                             | Unigene34697_All   | M97933.1       | [126]      |
|                      | <i>Mago nashi (mago)</i>                                | Unigene124549_All  | NM_057288      | [127]      |
|                      | <i>Boule-like (boule)</i>                               | CL3838.Contig1_All | HM222645.1     | [128]      |
|                      | <i>Pumilio homolog 1 (pum1)</i>                         | Unigene32425_All   | NM_001159604.2 | [129]      |
| Meiotic process      | <i>MutS protein homolog 4 (msh4)</i>                    | Unigene5502_All    | NM_002440.4    | [130-132]  |
|                      | <i>MutS protein homolog 5 (msh5)</i>                    | Unigene44110_All   | NM_172165.4    | [130-132]  |
|                      | <i>DNA mismatch repair protein Mlh1</i>                 | Unigene4354_All    | AY090776.1     | [132]      |
|                      | <i>Synaptonemal complex protein 1 (sycp1)</i>           | CL6324.Contig2_All | NM_012810.1    | [133]      |
|                      | <i>Synaptonemal complex protein 3 (sycp3)</i>           | Unigene41119_All   | NP_035647.2    | [134]      |
|                      | <i>Double-strand-break repair protein rad21 (rad21)</i> | CL3751.Contig1_All | NM_009009.4    | [135, 136] |