

Table S2 – Genome sequencing status of species used in this study. The underlined species were used in the alignments shown in Figure S6. The status of genome sequencing reflects that of the NCBI Genome Project databases in May 2009.

Organism Name	Eukaryotic Group	Genome Sequencing Status
<i>Aedes aegypti</i>	Opisthokonts, Animals	Assembly (Nene et al., 2007)
<i>Anopheles gambiae</i>	Opisthokonts, Animals	Assembly (Holt et al., 2002)
<i>Apis mellifera</i>	Opisthokonts, Animals	Assembly (Consortium, 2006)
<u><i>Arabidopsis thaliana</i></u>	Plants, Land plants	Complete (Initiative, 2000)
<i>Aspergillus fumigatus</i>	Opisthokonts, Fungi	Assembly (Nierman et al., 2005)
<u><i>Batrachochytrium dendrobatidis</i></u>	Opisthokonts, Fungi	Assembly
<i>Bos Taurus</i>	Opisthokonts, Animals	Assembly (Everts-van der Wind et al., 2005)
<i>Brugia malayi</i>	Opisthokonts, Animals	In progress (Ghedini et al., 2007)
<i>Caenorhabditis briggsae</i>	Opisthokonts, Animals	Assembly (Stein et al., 2003)
<u><i>Caenorhabditis elegans</i></u>	Opisthokonts, Animals	Complete (Consortium, 1998)
<i>Canis familiaris</i>	Opisthokonts, Animals	Assembly (Kirkness et al., 2003)
<u><i>Chlamydomonas reinhardtii</i></u>	Plants, Chlorophyte algae	Assembly (Merchant et al., 2007)
<i>Ciona intestinalis</i>	Opisthokonts, Animals	Assembly (Dehal et al., 2002)
<u><i>Cyanidioschyzon merolae</i></u>	Plants, Red algae	Complete (Matsuzaki et al., 2004)
<i>Danio rerio</i>	Opisthokonts, Animals	In progress
<u><i>Dictyostelium discoideum</i></u>	Amoebozoa, Dictyostelid slime molds	Assembly (Eichinger et al., 2005)
<u><i>Drosophila melanogaster</i></u>	Opisthokonts, Animals	Complete (Adams et al., 2000; Celniker et al., 2002)
<u><i>Encephalitozoon cuniculi</i></u>	Opisthokonts, Microsporiadia	Complete (Katinka et al., 2001)
<i>Entamoeba histolytica</i>	Amoebozoa	Complete (Loftus et al., 2005)
<u><i>Enterocytozoon bieneusi</i></u>	Opisthokonts, Microsporiadia	Assembly (Akiyoshi et al., 2009)
<i>Gallus gallus</i>	Opisthokonts, Animals	Assembly (Consortium, 2004a)
<i>Giardia lamblia</i>	Excavates, Diplomonads	Assembly (Morrison et al., 2007)
<u><i>Homo sapiens</i></u>	Opisthokonts, Animals	Complete (Consortium, 2004b; Deloukas et al., 2004; Deloukas et al., 2001; Dunham et al., 2004; Dunham et al., 1999; Gregory et al., 2006; Grimwood et al., 2004; Hattori et al., 2000; Heilig et al., 2003; Hillier et al., 2003; Humphray et al., 2004; Mungall et al., 2003; Muzny et al., 2006; Nusbaum et al., 2006; Nusbaum et al., 2005; Ross et al., 2005; Scherer et al., 2006; Scherer et al., 2003; Schmutz et al., 2004; Taylor et al., 2006; Zody et al., 2006a; Zody et al., 2006b)
<i>Hydra magnipapillata</i>	Opisthokonts, Animals	Assembly
<i>Leishmania major</i>	Discicristates, Leishmanias	Assembly (Ivens et al., 2005)
<i>Macaca mulatta</i>	Opisthokonts, Animals	Assembly (Gibbs et al., 2007)
<u><i>Monosiga brevicollis</i></u>	Opisthokonts, Choanoflagellates	Assembly (King et al., 2008)
<i>Mus musculus</i>	Opisthokonts, Animals	Complete (Waterston et al., 2002)

<i>Naegleria gruberi</i>	Discicristates, Vahlkampfiid amoebas	In progress
<i>Nematostella vectensis</i>	Opisthokonts, Animals	Assembly (Putnam et al., 2007)
<i>Ostreococcus lucimarinus</i>	Plants, Chlorophyte algae	Assembly (Palenik et al., 2007)
<i>Ostreococcus tauri</i>	Plants, Chlorophyte algae	In progress (Derelle et al., 2006)
<i>Pan troglodytes</i>	Opisthokonts, Animals	Assembly (Consortium, 2005)
<i>Paramecium tetraurelia</i>	Alveolates, Ciliates	Assembly (Aury et al., 2006)
<i>Physcomitrella patens</i>	Plants, Land Plants	Assembly (Rensing et al., 2008)
<i>Plasmodium falciparum</i>	Alveolates, Apicomplexans	Complete (Gardner et al., 2002)
<i>Rattus norvegicus</i>	Opisthokonts, Animals	Assembly (Gibbs et al., 2004)
<i>Saccharomyces cerevisiae</i>	Opisthokonts, Fungi	Complete (Bowman et al., 1997; Bussey et al., 1995; Bussey et al., 1997; Churcher et al., 1997; Dietrich et al., 1997; Dujon et al., 1997; Dujon et al., 1994; Feldmann et al., 1994; Galibert et al., 1996; Jacq et al., 1997; Johnston et al., 1994; Johnston et al., 1997; Murakami et al., 1995; Oliver et al., 1992; Philippsen et al., 1997; Tettelin et al., 1997)
<i>Schizosaccharomyces pombe</i>	Opisthokonts, Fungi	Complete (Katinka et al., 2001)
<i>Strongylocentrotus purpuratus</i>	Opisthokonts, Animals	Assembly
<i>Tetrahymena thermophila</i>	Alveolates, Ciliates	Assembly (Eisen et al., 2006)
<i>Tetraodon nigroviridis</i>	Opisthokonts, Animals	Assembly (Jaillon et al., 2004)
<i>Thalassiosira pseudonana</i>	Heterokonts, Diatoms	Assembly (Armbrust et al., 2004)
<i>Tribolium castaneum</i>	Opisthokonts, Animals	Assembly (Richards et al., 2008)
<i>Trichomonas vaginalis</i>	Excavates, Parabasalids	Assembly (Carlton et al., 2007)
<i>Trypanosoma cruzi</i>	Discicristates, Trypanosomes	Complete (El-Sayed et al., 2005)
<i>Ustilago maydis</i>	Opisthokonts, Fungi	Assembly (Kamper et al., 2006)
<i>Xenopus tropicalis</i>	Opisthokonts, Animals	In progress

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