

Supplemental Table 1: Vertebrate genome characteristics

Species (formal name)	Genome length (Gb)	*Genome assembly	*Gene annotation methods
Amazon molly (<i>Poecilia formosa</i>)	1.00	Contigs and scaffolds	RNA-seq data, orthologous vertebrate protein sequences
Anole lizard (<i>Anolis carolinensis</i>)	1.78	Contigs and scaffolds	RNA-seq data, cDNAs, ESTs, alignments of chicken protein sequences
Cave fish (<i>Astyanax mexicanus</i>)	1.00	Contigs and scaffolds	RNA-seq data, orthologous vertebrate protein sequences
Chicken (<i>Gallus gallus</i>)	1.13	Contigs and scaffolds	RNA-seq data, cDNAs, long read RNAs
Cod (<i>Gadus morhua</i>)	0.90	Whole genome shotgun and paired-end sequencing (25X coverage)	Whole genome alignment to stickleback, orthologous vertebrate protein sequences
Coelacanth (<i>Latimeria chalumnae</i>)	2.90	Whole genome shotgun sequencing	RNA-seq data, cDNAs, coelacanth protein sequences
Duck (<i>Anas platyrhynchos</i>)	1.14	Contigs and scaffolds	Orthologous vertebrate genes and protein sequences
Flycatcher (<i>Ficedula albicollis</i>)	1.12	Contigs and scaffolds	RNA-seq data, orthologous vertebrate protein sequences
Frog (<i>Xenopus tropicalis</i>)	1.36	Contigs and scaffolds, plus whole genome shotgun sequencing (7.65X coverage)	cDNAs, orthologous vertebrate protein sequences
Fugu (<i>Takifugu rubripes</i>)	0.39	Contigs and scaffolds	Fugu proteins, orthologous vertebrate proteins, non-vertebrate protein sequences
Lamprey (<i>Petromyzon marinus</i>)	1.92	Whole genome shotgun (5X coverage), BAC-end sequence reads	Lamprey cDNA and protein sequences, orthologous vertebrate protein sequences
Medaka (<i>Oryzias latipes</i>)	0.70	Whole genome shotgun sequencing	cDNAs, ESTs, orthologous vertebrate protein sequences
Platyfish (<i>Xiphophorus maculatus</i>)	0.65	Whole genome shotgun sequencing (19.6X coverage)	RNA-seq data, platyfish protein sequences, orthologous vertebrate protein sequences
Spotted gar (<i>Lepisosteus oculatus</i>)	0.95	Whole genome shotgun sequencing	RNA-seq data, orthologous vertebrate protein sequences
Stickleback (<i>Gasterosteus aculeatus</i>)	0.46	Whole genome shotgun sequencing (11X coverage)	cDNAs, ESTs, orthologous vertebrate protein sequences
Tetraodon	0.34	Contigs and scaffolds, whole genome	#Orthologous vertebrate protein sequences

(<i>Tetraodon nigroviridis</i>)		shotgun sequencing (6X coverage)	
Tilapia (<i>Oreochromis niloticus</i>)	0.97	Whole genome shotgun sequencing	RNA-seq data, orthologous vertebrate protein sequences
Turkey (<i>Meleagris gallopavo</i>)	1.04	Whole genome shotgun sequencing (30X coverage)	cDNAs, ESTs, chicken cDNAs, orthologous vertebrate protein sequences
Turtle (<i>Pelodiscus sinensis</i>)	2.10	Contigs and scaffolds	RNA-seq data, orthologous vertebrate protein sequences
Zebra finch (<i>Taeniopygia guttata</i>)	1.20	Whole genome shotgun sequencing (6X coverage), plus 35 BAC clones	ESTs, avian protein sequences
Zebrafish (<i>Danio rerio</i>)	1.37	Contigs and scaffolds; BAC and fosmid clones	RNA-seq data, cDNAs, zebrafish protein sequences

*Contigs and scaffolds – overlapping large DNA fragments; BAC – bacterial artificial chromosome (contains foreign DNA); EST – expressed sequence tag; RNA-seq – RNA-based DNA sequencing

#Information on assembly is incomplete.