

Table S1: Species used to construct chimerical sequences

<i>Babesia</i>	<i>Babesia bovis</i>	<i>Babesia microti</i>						
<i>Candida</i>	<i>Candida albicans</i>	<i>Candida tropicalis</i>	<i>Candida glabrata</i>	<i>Candida maltosa</i>				
<i>Ciona</i>	<i>Ciona intestinalis</i>	<i>Ascidia sydneiensis</i>	<i>Molgula tectiformis</i>	<i>Halocynthia roretzi</i>	<i>Styela plicata</i>	<i>Polyandrocarpa misakiensis</i>		
<i>Eimeria</i>	<i>Eimeria tenella</i>	<i>Eimeria sp.</i>						
<i>Glomus</i>	<i>Glomus intraradices</i>	<i>Glomus versiforme</i>						
<i>Hydra</i>	<i>Hydra magnipapillata</i>	<i>Podocoryne carnea</i>	<i>Hydra vulgaris</i>					
<i>Laminaria</i>	<i>Laminaria digitata</i>	<i>Fucus distichus</i>						
<i>Leishmania</i>	<i>Leishmania major</i>	<i>Leishmania braziliensis</i>	<i>Leishmania donovani</i>	<i>Leishmania tropica</i>	<i>Leishmania tarentolae</i>	<i>Leishmania amazonensis</i>	<i>Leishmania infantum</i>	<i>Leishmania chagasi</i>
<i>Neocallimastix</i>	<i>Neocallimastix patriciarum</i>	<i>Monoblepharis insignis</i>	<i>Monoblepharis macrandra</i>	<i>Harpochytrium sp.</i>				
<i>Phaeodactylum</i>	<i>Phaeodactylum tricornutum</i>	<i>Fragilariopsis cylindrus</i>						
<i>Phytophthora</i>	<i>Phytophthora sojae</i>	<i>Phytophthora infestans</i>						
<i>Pinus</i>	<i>Pinus taeda</i>	<i>Picea mariana</i>						
<i>Plasmodium</i>	<i>Plasmodium falciparum</i>	<i>Plasmodium yoelii</i>		<i>Plasmodium berghei</i>				
<i>Porphyra</i>	<i>Porphyra yezoensis</i>	<i>Gracilaria gracilis</i>	<i>Cyanidioschyzon merolae</i>	<i>Cyanidium caldarium</i>	<i>Griffithsia japonica</i>			
<i>Tetrahymena</i>	<i>Tetrahymena thermophila</i>	<i>Tetrahymena pyriformis</i>						
<i>Theileria</i>	<i>Theileria annulata</i>	<i>Theileria parva</i>	<i>Theileria orientalis</i>					
<i>Toxoplasma</i>	<i>Toxoplasma gondii</i>	<i>Neospora caninum</i>	<i>Sarcocystis neurona</i>					

Table S2: Number of amino acids available for each species

	#positions
<i>Aeropyrum</i>	23492
<i>Arabidopsis</i>	22593
<i>Archaeoglobus</i>	23395
<i>Babesia</i>	11637
<i>Candida</i>	23808
<i>Chlamydomonas</i>	17808
<i>Ciona</i>	20043
<i>Cryptococcus</i>	24002
<i>Cryptosporidium</i>	21937
<i>Dictyostelium</i>	23930
<i>Drosophila</i>	22423
<i>Dunaliella</i>	7434
<i>Eimeria</i>	8479
<i>Encephalitozoon</i>	22982
<i>Glomus</i>	5490
<i>Homo</i>	23322
<i>Hydra</i>	15086
<i>Laminaria</i>	4883
<i>Leishmania</i>	20431
<i>Mastigamoeba</i>	6899
<i>Methanococcus</i>	21743
<i>Monosiga</i>	10179
<i>Neocallimastix</i>	8309
<i>Neurospora</i>	24173
nucleomorph <i>Guillardia</i>	17200
<i>Oryza</i>	21354
<i>Phaeodactylum</i>	9523
<i>Physcomitrella</i>	15791
<i>Phytophthora</i>	24197
<i>Pinus</i>	15937
<i>Plasmodium</i>	22934
<i>Porphyra</i>	14868
<i>Pyrobaculum</i>	20140
<i>Pyrococcus</i>	24294
<i>Saccharomyces</i>	24002
<i>Schizosaccharomyces</i>	24002
<i>Sulfolobus</i>	23395
<i>Tetrahymena</i>	20431
<i>Thalassiosira</i>	23055
<i>Theileria</i>	18269
<i>Toxoplasma</i>	17929
<i>Trypanosoma brucei</i>	23128
<i>Trypanosoma cruzi</i>	12730
<i>Ustilago</i>	24197
Average	18451

Table S3

#species	List of species
6	Encephalitozoon, Homo, Pyrococcus, Pyrobaculum, Aeropyrum, Schizosaccharomyces Or Nucleomorph, Porphyra, Arabidopsis, Pyrococcus, Pyrobaculum, Aeropyrum
9	Encephalitozoon, Schizosaccharomyces, Homo, Pyrococcus, Archaeoglobus, Methanococcus, Pyrobaculum, Sulfolobus, Aeropyrum, Or Nucleomorph, Porphyra, Arabidopsis, Pyrococcus, Archaeoglobus, Methanococcus, Pyrobaculum, Sulfolobus, Aeropyrum
14	Arabidopsis, Porphyra, Pyrococcus, Archaeoglobus, Methanococcus, Pyrobaculum, Sulfolobus, Aeropyrum, Plasmodium, Phytophthora, Dictyostelium, Homo, Schizosaccharomyces + the fast evolving species
15	Arabidopsi, Porphyra, Pyrococcus, Archaeoglobus, Methanococcus, Pyrobaculum, Sulfolobus, Aeropyrum, Cryptosporidium, Tetrahymena, Phytophthora, Dictyostelium, Homo, Ustilago + the fast evolving species
35	Pyrococcus, Porphyra, Arabidopsis, Oryza, Pinus, Physcomitrella, Chlamydomonas, Dunaliella, Babesia, Theileria, Plasmodium, Eimeria, Toxoplasma, Cryptosporidium, Tetrahymena, Phaeodactylum, Thalassiosira, Laminaria, Phytophthora, Dictyostelium, Mastigamoeba, Drosophila, Homo, Ciona, Hydra, Monosiga, Neocallimastix, Glomus, Candida, Saccharomyces, Neurospora, Schizosaccharomyces, Cryptococcus, Ustilago + the fast evolving species