

Table III: List of the Unique Superfamilies in 19 Genomes (worm excluded)

Species	ORF	SCOP dom	SCOP #	copy	Stat. Signif.	SCOP domain function
bbur	BBA15	d1ospo	2.58.1.1.1	2	5.00E-88	NONENZ Outer surface protein A
bsub	NprE	d1ezm_1	1.57.1.1.1	2	2.00E-47	ENZYME Extracellular elastase; Bacillolysin
bsub	PelB	d1idk_	2.62.1.2.1	2	1.00E-70	ENZYME Pectin lyase A
bsub	MtrB	d1wapa_	2.64.6.1.1	1	1.00E-32	NONENZ Trp RNA-binding attenuation protein
bsub	YrdF	d1brsd_	3.6.1.1.1	1	1.70E-14	NONENZ Barstar (barnase inhibitor)
cpne	AAD18679	d1kpta	4.37.1.1.1	1	0.00096	NONENZ Virally encoded KP4 toxin
ecol	tar	d2asr_	1.24.2.1.1	3	2.00E-57	NONENZ Aspartate receptor, ligand-binding domain
ecol	cybC	d256ba_	1.24.3.1.1	1	1.00E-52	NONENZ Cytochrome b562
ecol	arcB	d2a0b_	1.24.9.1.1	1	1.40E-48	NONENZ Aerobic respiration control sensor protein
ecol	holB	d1a5t_1	1.93.1.1.1	1	1.00E-80	ENZYME DNA polymerase III, delta subunit, C' dom
ecol	eco	d1slua_	2.12.1.1.1	1	3.70E-61	NONENZ Ecotin, trypsin inhibitor
ecol	lacZ	d1bglA4	2.22.1.1.1	2	2.50E-136	ENZYME Beta-Galactosidase, domain 5
ecol	tynA	d1oaca1	2.22.2.1.1	1	0	ENZYME Copper amine oxidase, domain 3 (catalytic)
ecol	b0717	d3dpa_2	2.6.2.1.1	10	2.00E-25	NONENZ Chaperone protein, PapD, C-domain
ecol	tynA	d1oaca3	4.13.2.1.1	2	1.00E-62	ENZYME Copper amine oxidase, domains 1 and 2
ecol	cheA	d1eayc_	4.34.20.1.1	1	1.00E-23	NONENZ CheY-binding domain of CheA
ecol	tynA	d1oaca4	4.43.1.1.1	1	1.50E-36	ENZYME Copper amine oxidase, domain N
ecol	tus	d1ecra	5.3.1.1.1	1	2.00E-130	NONENZ Replication terminator protein (Tus)
hinf	HI1478	d1bco_1	2.36.1.1.1	1	2.00E-29	ENZYME Mu transposase, C-terminal domain
mtub	Rv1353c	d2tct_2	1.94.1.1.1	1	8.00E-31	NONENZ Tetracyclin repressor, C-terminal domain
mtub	Rv1758	d1cex_	3.14.7.1.1	7	3.00E-40	ENZYME Cutinase, closest homolog in Penicillium
mtub	Rv0062	d1tml_	3.2.1.1.1	1	5.00E-66	ENZYME Cellulase E2
mtub	Rv0316	d1mli_	4.34.4.1.1	1	9.00E-07	ENZYME Muconalactone isomerase
mtub	Rv1919c	d1bv1_	4.79.3.1.1	1	0.0018	NONENZ Major birch pollen allergen Bet v 1
rpro	RP396	d3pcca_	2.3.3.1.1	1	1.00E-06	ENZYME Protocatechuate-3,4-dioxygenase
scer	YDL185W	d1vdea3	4.55.2.2.1	4	2.90E-43	NONENZ Homothallic switching nuclease
scer	YLR014C	d1pyia2	7.32.1.1.2	47	1.50E-20	NONENZ Zn/Cys6 DNA binding domain
scer	YHR053C	d1aoo	7.38.1.1.5	2	2.80E-22	NONENZ Metallothionein
syne	slr1317	d1hcz_1	2.2.5.1.1	1	3.00E-90	NONENZ Cytochrome f, large domain
syne	ssr2831	d1pse_	2.24.5.1.1	1	5.00E-33	NONENZ Photosystem I accessory protein E (PSAE)
syne	slr1028	d1jpc_	2.60.1.1.1	1	0.0035	NONENZ Lectin (agglutinin)
syne	slr0012	d3rubs_	4.38.1.1.1	2	1.00E-39	ENZYME RuBisCO, small subunit