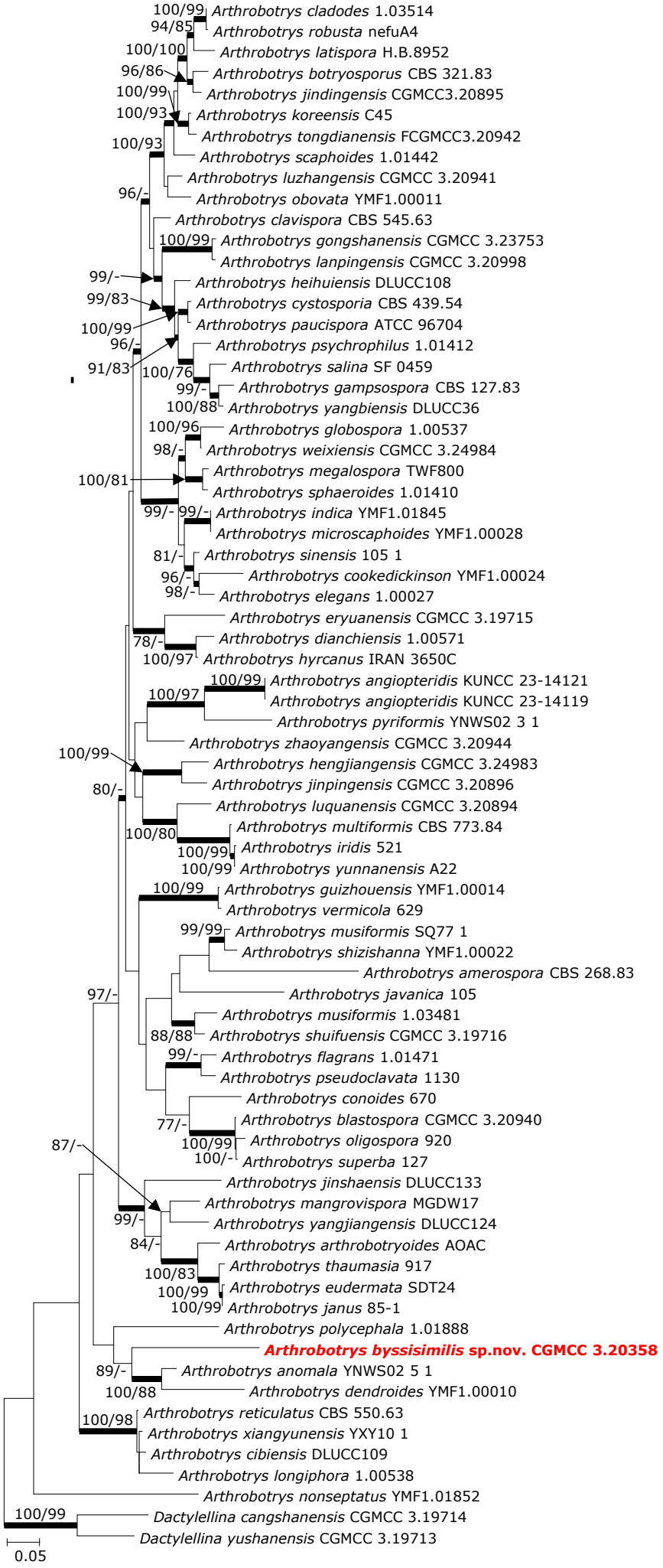
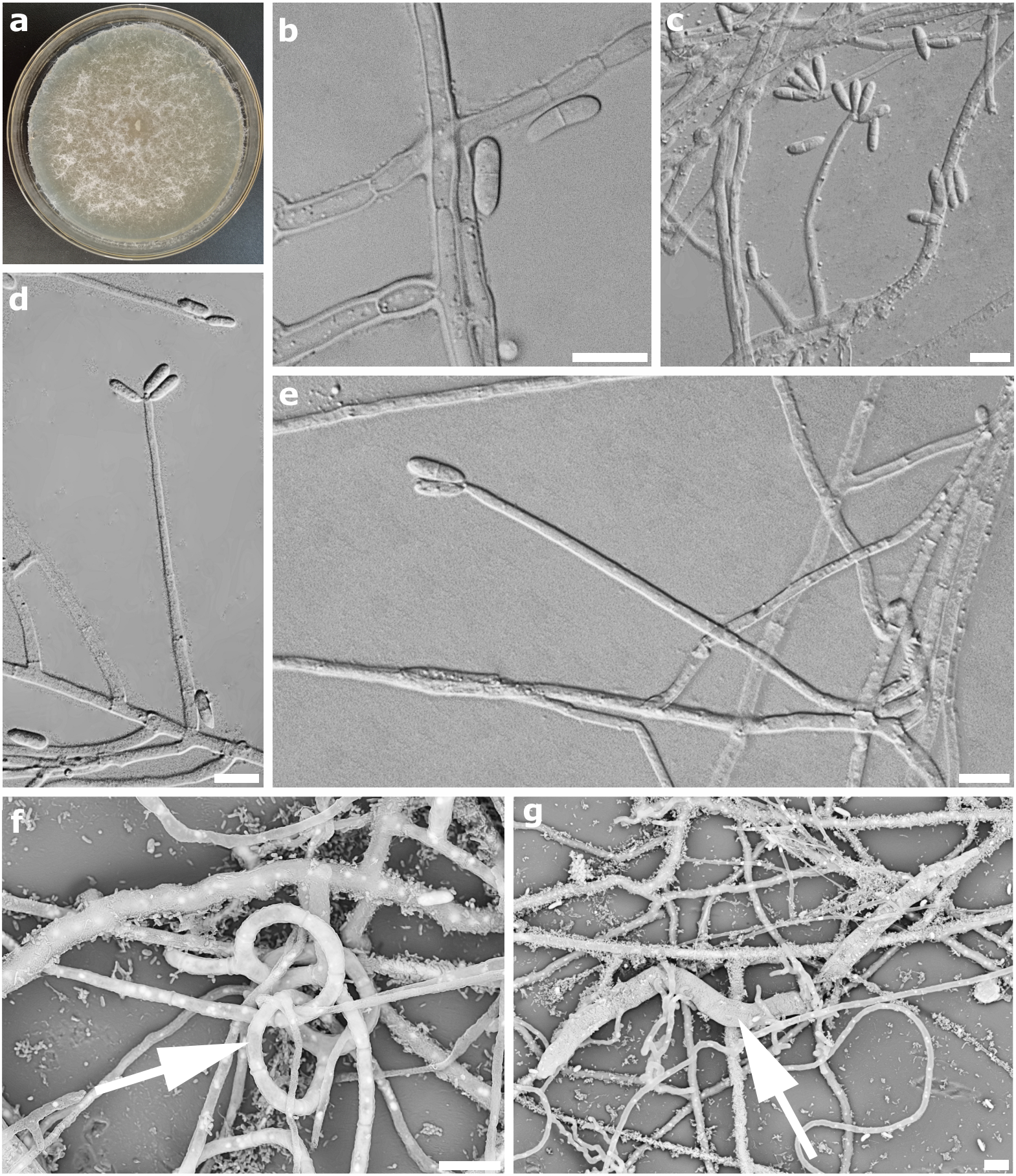
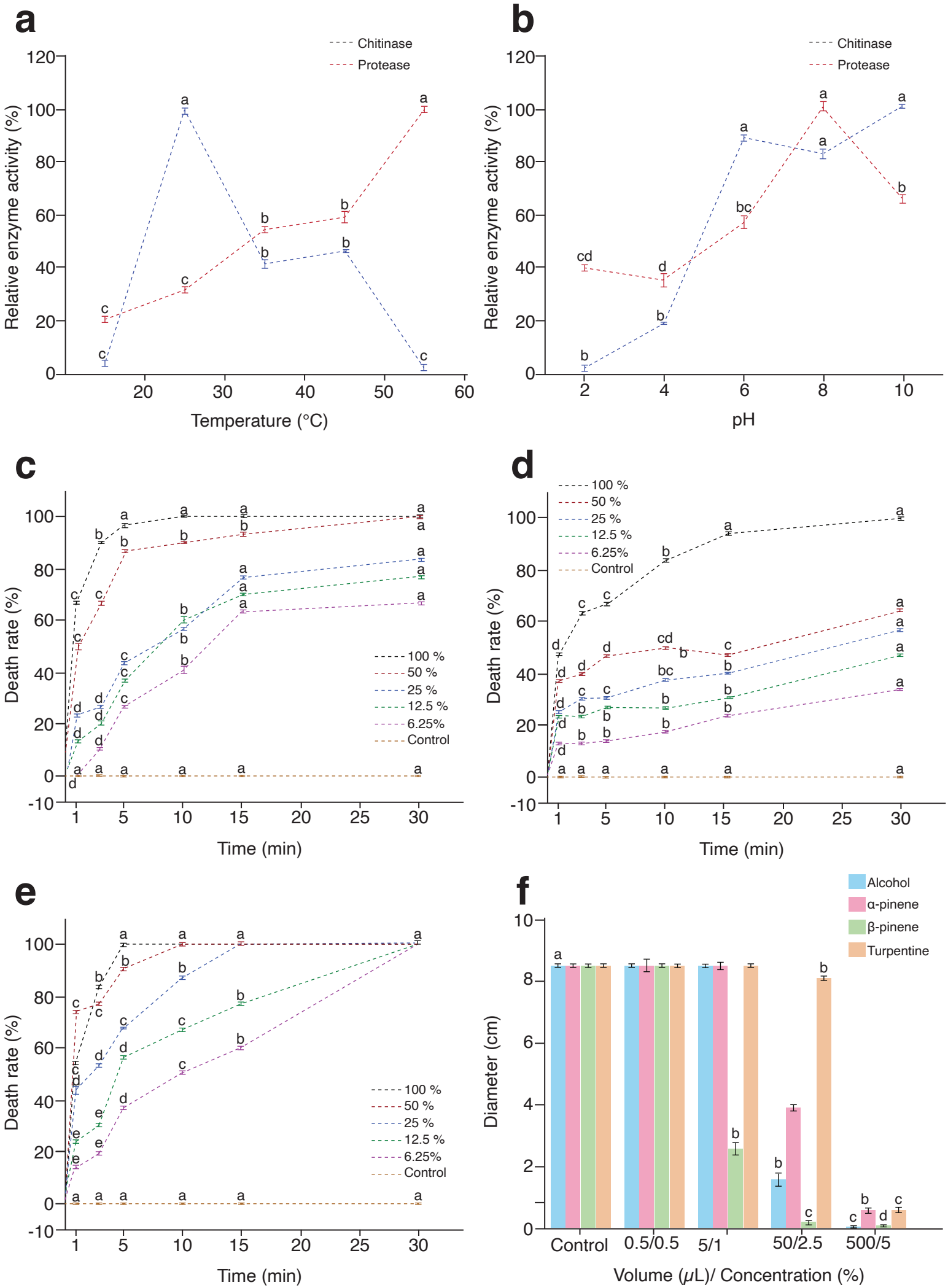
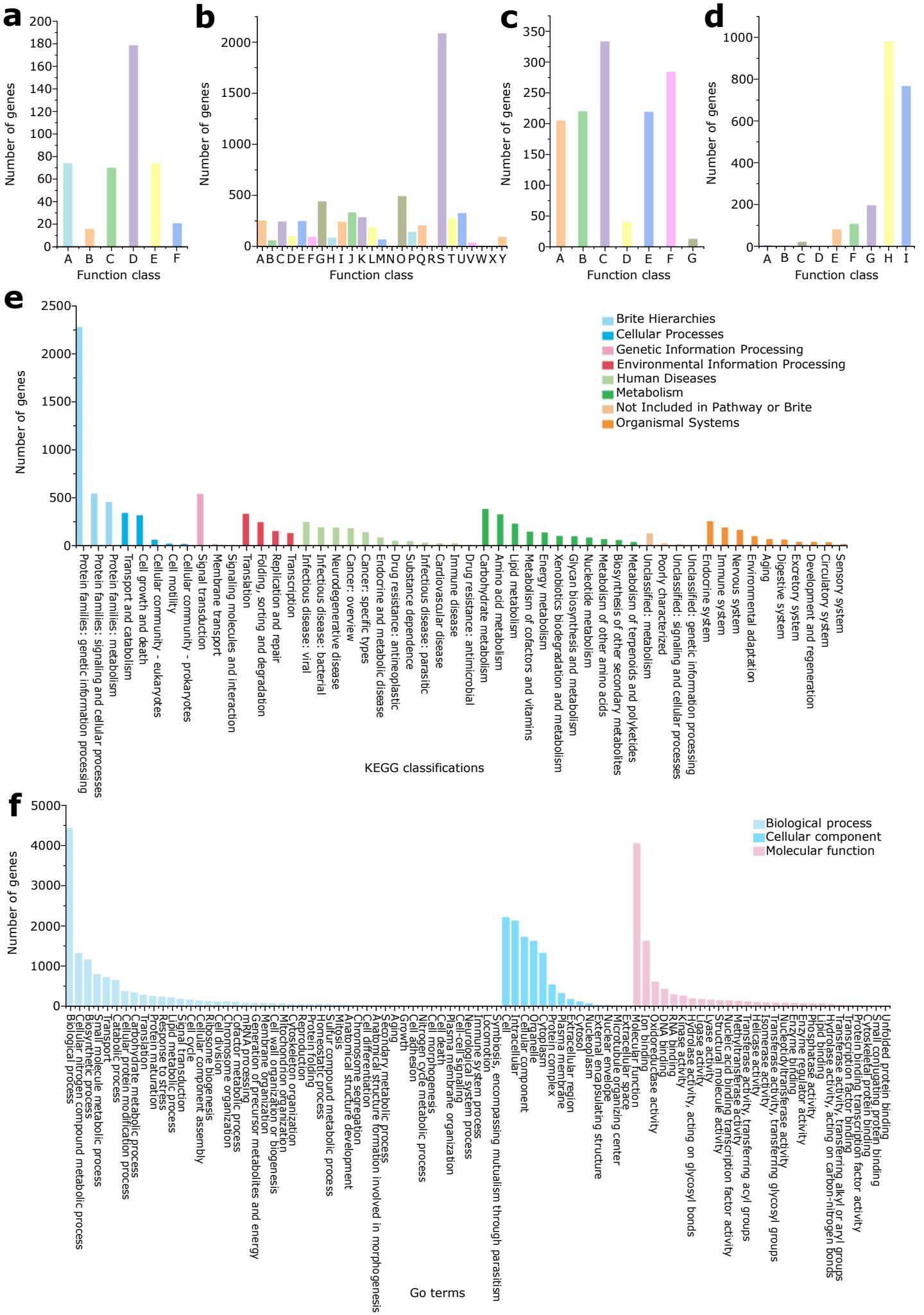
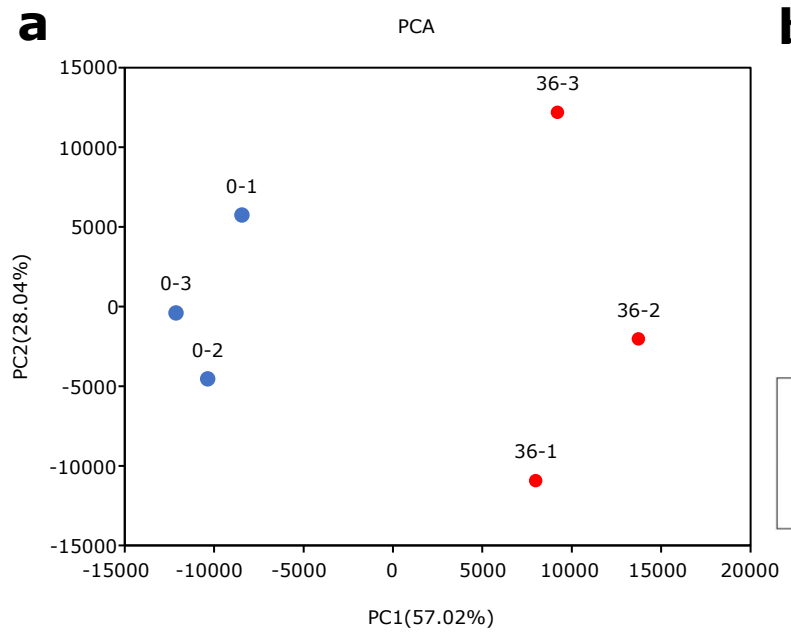
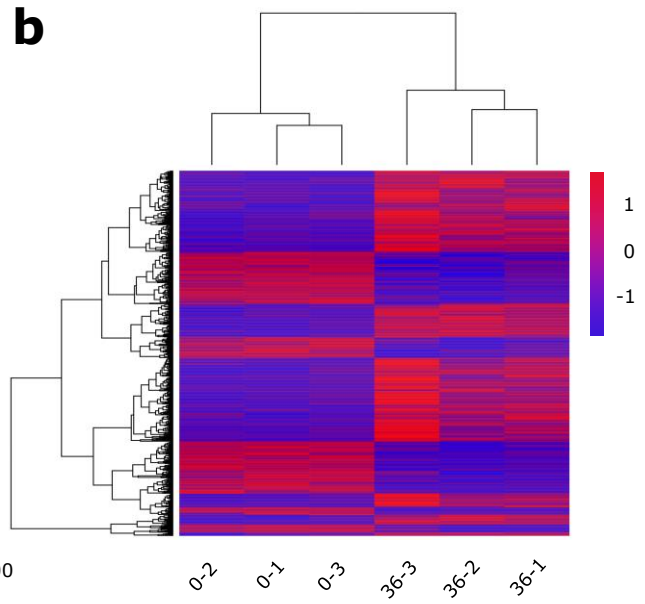

100/99 Arthrobotrys cladodes 1.03514
94/85 Arthrobotrys robusta nefuA4
100/100 Arthrobotrys latispora H.B.8952
96/86 Arthrobotrys botryosporus CBS 321.83
100/99 Arthrobotrys jindingensis CGMCC3.20895
100/93 Arthrobotrys koreensis C45
Arthrobotrys tongdianensis FCGMCC3.20942
100/93 Arthrobotrys scaphoides 1.01442
Arthrobotrys luzhangensis CGMCC 3.20941
96/- Arthrobotrys obovata YMF1.00011
Arthrobotrys clavispora CBS 545.63
100/99 Arthrobotrys gongshanensis CGMCC 3.23753
Arthrobotrys lanpingensis CGMCC 3.20998
99/- Arthrobotrys heihuiensis DLUCC108
99/83 Arthrobotrys cystosporia CBS 439.54
100/99 Arthrobotrys paucispora ATCC 96704
96/- Arthrobotrys psychrophilus 1.01412
91/83 100/76 Arthrobotrys salina SF 0459
99/- Arthrobotrys gampsospora CBS 127.83
100/88 Arthrobotrys yangbiensis DLUCC36
100/96 Arthrobotrys globospora 1.00537
98/- Arthrobotrys weixiensis CGMCC 3.24984
100/81 Arthrobotrys megalospora TWF800
Arthrobotrys sphaeroides 1.01410
99/- 99/- Arthrobotrys indica YMF1.01845
Arthrobotrys microscaphoides YMF1.00028
81/- Arthrobotrys sinensis 105 1
96/- Arthrobotrys cookedickinson YMF1.00024
98/- Arthrobotrys elegans 1.00027
Arthrobotrys eryuanensis CGMCC 3.19715
78/- Arthrobotrys dianchiensis 1.00571
100/97 Arthrobotrys hyrcanus IRAN 3650C
100/99 Arthrobotrys angiopteridis KUNCC 23-14121
100/97 Arthrobotrys angiopteridis KUNCC 23-14119
Arthrobotrys pyriformis YNWS02 3 1
Arthrobotrys zhaoyangensis CGMCC 3.20944
100/99 Arthrobotrys hengjiangensis CGMCC 3.24983
Arthrobotrys jinpingensis CGMCC 3.20896
80/- Arthrobotrys luquanensis CGMCC 3.20894
Arthrobotrys multiformis CBS 773.84
100/80 Arthrobotrys iridis 521
100/99 Arthrobotrys yunnanensis A22
100/99 Arthrobotrys guizhouensis YMF1.00014
Arthrobotrys vermicola 629
99/99 Arthrobotrys musiformis SQ77 1
Arthrobotrys shizishanna YMF1.00022
Arthrobotrys amerospora CBS 268.83
97/- Arthrobotrys javanica 105
Arthrobotrys musiformis 1.03481
88/88 Arthrobotrys shuifuensis CGMCC 3.19716
99/- Arthrobotrys flagrans 1.01471
Arthrobotrys pseudoclavata 1130
Arthrobotrys conoides 670
77/- Arthrobotrys blastospora CGMCC 3.20940
87/- 100/99 Arthrobotrys oligospora 920
100/- Arthrobotrys superba 127
Arthrobotrys jinshaensis DLUCC133
Arthrobotrys mangrovispora MGDW17
99/- Arthrobotrys yangjiangensis DLUCC124
84/- Arthrobotrys arthrobotryoides AOAC
100/83 Arthrobotrys thaumasia 917
100/99 Arthrobotrys eudermata SDT24
100/99 Arthrobotrys janus 85-1
Arthrobotrys polycephala 1.01888
Arthrobotrys byssisimilis sp.nov. CGMCC 3.20358
89/- Arthrobotrys anomala YNWS02 5 1
100/88 Arthrobotrys dendroides YMF1.00010
100/98 Arthrobotrys reticulatus CBS 550.63
Arthrobotrys xiangyunensis YXY10 1
Arthrobotrys cibiensis DLUCC109
Arthrobotrys longiphora 1.00538
Arthrobotrys nonseptatus YMF1.01852
100/99 Dactylellina cangshanensis CGMCC 3.19714
Dactylellina yushanensis CGMCC 3.19713
0.05

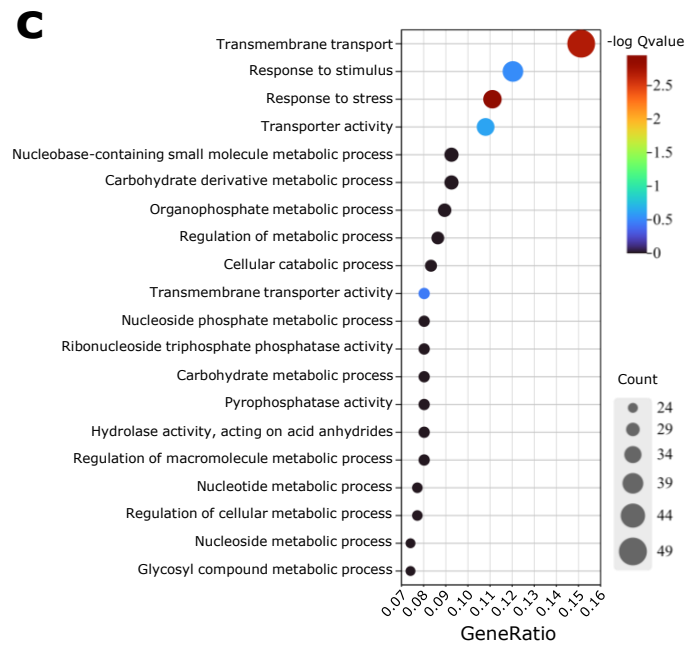

a
b
c
d
e
f
g

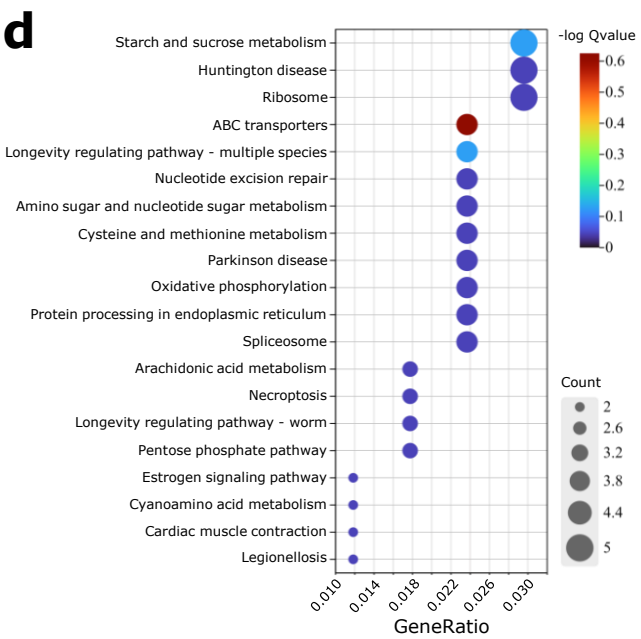

a
Chitinase
Protease
Relative enzyme activity (%)
Temperature (°C)
b
Chitinase
Protease
Relative enzyme activity (%)
pH
c
Death rate (%)
Time (min)
100 %
50 %
25 %
12.5 %
6.25%
Control
d
100 %
50 %
25 %
12.5 %
6.25%
Control
Death rate (%)
Time (min)
e
Death rate (%)
Time (min)
100 %
50 %
25 %
12.5 %
6.25%
Control
f
Alcohol
α-pinene
β-pinene
Turpentine
Diameter (cm)
Control
0.5/0.5
5/1
50/2.5
500/5
Volume (μL)/ Concentration (%)

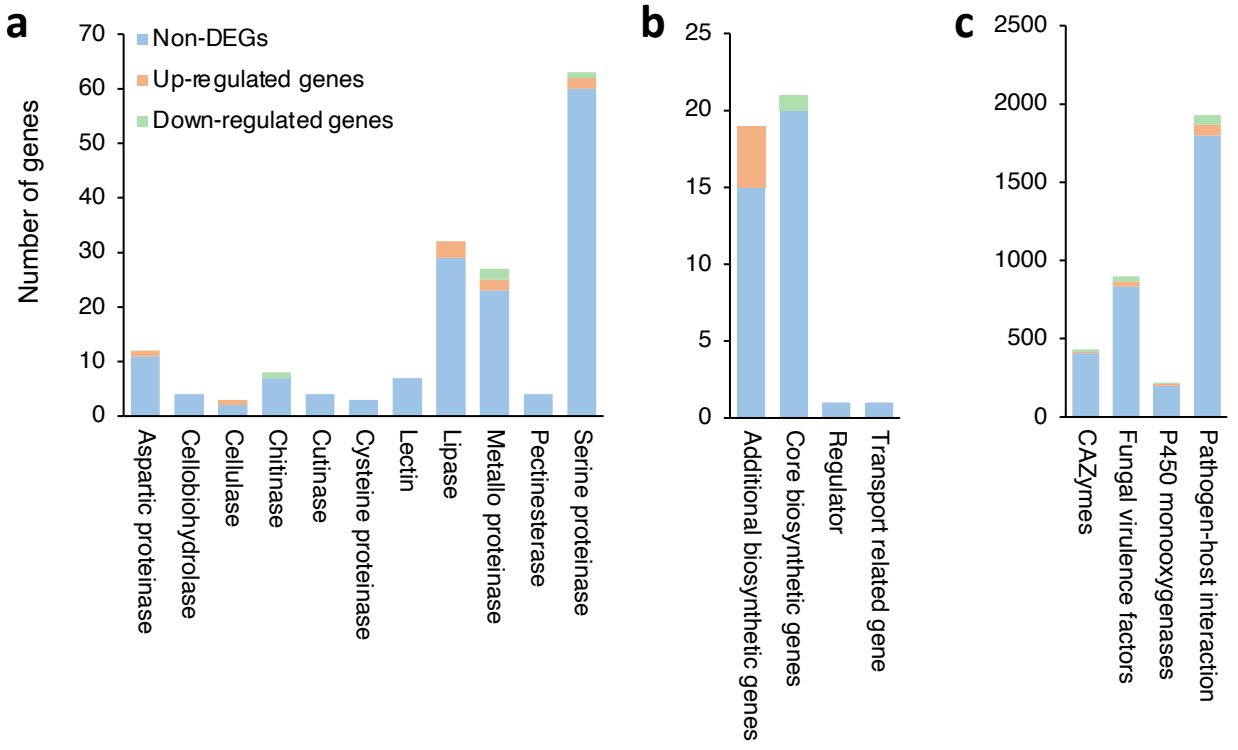

a
Number of genes
Function class
A B C D E F
b
Number of genes
Function class
A B C D E F G H I J K L M N O P Q R S T U V W X Y
c
Number of genes
Function class
A B C D E F G
d
Number of genes
Function class
A B C D E F G H I
e
Number of genes
Brite Hierarchies
Cellular Processes
Genetic Information Processing
Environmental Information Processing
Human Diseases
Metabolism
Not Included in Pathway or Brite
Organismal Systems
Protein families: genetic information processing
Protein families: signaling and cellular processes
Protein families: metabolism
Transport and catabolism
Cell growth and death
Cellular community - eukaryotes
Cell motility
Cellular community - prokaryotes
Signal transduction
Membrane transport
Signaling molecules and interaction
Translation
Folding, sorting and degradation
Replication and repair
Transcription
Infectious disease: viral
Infectious disease: bacterial
Neurodegenerative disease
Cancer: overview
Cancer: specific types
Endocrine and metabolic disease
Drug resistance: antineoplastic
Substance dependence
Infectious disease: parasitic
Cardiovascular disease
Immune disease
Drug resistance: antimicrobial
Carbohydrate metabolism
Amino acid metabolism
Lipid metabolism
Metabolism of cofactors and vitamins
Energy metabolism
Xenobiotics biodegradation and metabolism
Glycan biosynthesis and metabolism
Nucleotide metabolism
Metabolism of other amino acids
Biosynthesis of other secondary metabolites
Metabolism of terpenoids and polyketides
Unclassified: metabolism
Poorly characterized
Unclassified: signaling and cellular processes
Unclassified: genetic information processing
Endocrine system
Immune system
Nervous system
Environmental adaptation
Aging
Digestive system
Excretory system
Development and regeneration
Circulatory system
Sensory system
KEGG classifications
f
Number of genes
Biological process
Cellular component
Molecular function
Biological process
Cellular nitrogen compound metabolic process
Biosynthetic process
Small molecule metabolic process
Transport
Catabolic process
Cellular protein modification process
Carbohydrate metabolic process
Translation
Protein maturation
Response to stress
Lipid metabolic process
Signal transduction
Cell cycle
Cellular component assembly
Ribosome biogenesis
Cell division
Chromosome organization
Cofactor metabolic process
mRNA processing
Generation of precursor metabolites and energy
Membrane organization
Cell wall organization or biogenesis
Mitochondrion organization
Cytoskeleton organization
Reproduction
Protein folding
Homeostatic process
Sulfur compound metabolic process
Mitosis
Anatomical structure development
Chromosome segregation
Cell differentiation
Anatomical structure formation involved in morphogenesis
Secondary metabolic process
Aging
Growth
Nitrogen cycle metabolic process
Cell adhesion
Cell morphogenesis
Plasma membrane organization
Cell death
Cell-cell signaling
Neurological system process
Immune system process
Locomotion
Symbiosis, encompassing mutualism through parasitism
Cell
Intracellular
Cellular component
Organelle
Cytoplasm
Protein complex
Plasma membrane
Extracellular region
Cytosol
Nucleoplasm
External encapsulating structure
Nuclear envelope
Microtubule organizing center
Extracellular space
Molecular function
Ion binding
Oxidoreductase activity
DNA binding
RNA binding
Kinase activity
Hydrolase activity, acting on glycosyl bonds
Lyase activity
Hydrolase activity
Lyase activity
Structural molecule activity
Nucleic acid binding transcription factor activity
Methyltransferase activity
Transferase activity, transferring acyl groups
Isomerase activity
Helicase activity
Transferase activity, transferring glycosyl groups
Nucleotidyltransferase activity
Enzyme binding
Enzyme regulator activity
Phosphatase activity
Lipid binding
Hydrolase activity, acting on carbon-nitrogen bonds
Transferase activity, transferring alkyl or aryl groups
Transcription factor binding
Protein binding transcription factor activity
Cytoskeletal protein binding
Small conjugating protein binding
Unfolded protein binding
Go terms


a
PCA
36-3
0-1
0-3
0-2
36-2
36-1
PC2(28.04%)
PC1(57.02%)
15000
10000
5000
0
-5000
-10000
-15000
-15000
-10000
-5000
0
5000
10000
15000
20000


b
1
0
-1
0-2
0-1
0-3
36-3
36-2
36-1


c
Transmembrane transport
Response to stimulus
Response to stress
Transporter activity
Nucleobase-containing small molecule metabolic process
Carbohydrate derivative metabolic process
Organophosphate metabolic process
Regulation of metabolic process
Cellular catabolic process
Transmembrane transporter activity
Nucleoside phosphate metabolic process
Ribonucleoside triphosphate phosphatase activity
Carbohydrate metabolic process
Pyrophosphatase activity
Hydrolase activity, acting on acid anhydrides
Regulation of macromolecule metabolic process
Nucleotide metabolic process
Regulation of cellular metabolic process
Nucleoside metabolic process
Glycosyl compound metabolic process
-log Qvalue
2.5
2
1.5
1
0.5
0
Count
24
29
34
39
44
49
0.07
0.08
0.09
0.10
0.11
0.12
0.13
0.14
0.15
0.16
GeneRatio


d
Starch and sucrose metabolism
Huntington disease
Ribosome
ABC transporters
Longevity regulating pathway - multiple species
Nucleotide excision repair
Amino sugar and nucleotide sugar metabolism
Cysteine and methionine metabolism
Parkinson disease
Oxidative phosphorylation
Protein processing in endoplasmic reticulum
Spliceosome
Arachidonic acid metabolism
Necroptosis
Longevity regulating pathway - worm
Pentose phosphate pathway
Estrogen signaling pathway
Cyanoamino acid metabolism
Cardiac muscle contraction
Legionellosis
-log Qvalue
0.6
0.5
0.4
0.3
0.2
0.1
0
Count
2
2.6
3.2
3.8
4.4
5
0.010
0.014
0.018
0.022
0.026
0.030
GeneRatio


a
Number of genes
Non-DEGs
Up-regulated genes
Down-regulated genes
0
10
20
30
40
50
60
70
Aspartic proteinase
Cellobiohydrolase
Cellulase
Chitinase
Cutinase
Cysteine proteinase
Lectin
Lipase
Metallo proteinase
Pectinesterase
Serine proteinase
b
0
5
10
15
20
25
Additional biosynthetic genes
Core biosynthetic genes
Regulator
Transport related gene
c
0
500
1000
1500
2000
2500
CAZymes
Fungal virulence factors
P450 monooxygenases
Pathogen-host interaction