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PAML 4: phylogenetic analysis by maximum likelihood

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- 558 Chromosome-level genome assembly and functional characterization of terpene synthases provide insights into the volatile terpenoid biosynthesis of *Wurfbainia villosa*. 0

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- 550 A chromosome-scale genome assembly of turmeric provides insights into curcumin biosynthesis and tuber formation mechanism. 13, 0
- 549 Distinct selection signatures during domestication and improvement in crops: a tale of two genes in mungbean. 0
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- 504 Genomic signatures associated with maintenance of genome stability and venom turnover in two parasitoid wasps. **2022**, 13, 1

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501	Evolution and antiviral activity of a human protein of retroviral origin. 2022 , 378, 422-428	2
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499	Population genomics of an icefish reveals mechanisms of glacier-driven adaptive radiation in Antarctic notothenioids. 2022 , 20,	1
498	Characterization and evolutionary diversification of the phospholipase D gene family in mosses. 13,	0
497	Ancient homomorphy of molluscan sex chromosomes sustained by reversible sex-biased genes and sex determiner translocation.	0
496	The Genome of the Wasp <i>Anastatus disparis</i> Reveals Energy Metabolism Adaptations for Extreme Aggression.	0
495	The chromosome-level genome of <i>Akebia trifoliata</i> as an important resource to study plant evolution and environmental adaptation in the Cretaceous.	2
494	Phylogenomics reveals the evolution, biogeography, and diversification history of voles in the Hengduan Mountains. 2022 , 5,	1
493	Systematics and evolution of predatory flower flies (Diptera: Syrphidae) based on exon-capture sequencing.	1
492	The genome of single-petal jasmine (<i>Jasminum sambac</i>) provides insights into heat stress tolerance and aroma compound biosynthesis. 13,	0
491	Chromosome-length genome assemblies of cactophilic <i>Drosophila</i> illuminate links between structural and sequence evolution.	0
490	Multiple origins, one evolutionary trajectory: gradual evolution characterizes distinct lineages of allotetraploid <i>Brachypodium</i> .	2
489	Genomic underpinnings of convergent adaptation to high altitudes for alpine plants.	0
488	Demographic history and conservation genomics of caribou (<i>Rangifer tarandus</i>) in Québec.	0
487	Museum specimens shedding light on the evolutionary history and hidden diversity of the hedgehog family Erinaceidae.	0
486	The primordial knot: the deep-rooted origin of the disulfide-rich spider venom toxins.	0

- 485 Prediction of a conserved pheromone receptor lineage from antennal transcriptomes of the pine sawyer genus *Monochamus* (Coleoptera: Cerambycidae). o
- 484 Genomic Changes During the Evolution of the *Coxiella* Genus Along the Parasitism-Mutualism Continuum. o
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- 470 Integrated phylogenomic analyses unveil reticulate evolution in *Parthenocissus* (Vitaceae), highlighting speciation dynamics in the Himalayan-Hengduan Mountains. o
- 469 Gapless genome assembly of azalea and multi-omics investigation into divergence between two species with distinct flower color. 1
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- 4¹² Whole-genome assembly and annotation for the little yellow croaker (*Larimichthys polyactis*) provide insights into the evolution of hermaphroditism and gonochorism. 0
- 4¹¹ Long-read genome assemblies reveals acis-regulatory landscape associated with phenotypic divergence in two sisterSinipercafishes. 0
- 4¹⁰ Defensive spines are associated with large geographic range but not diversification in spiny ants (Hymenoptera: Formicidae: Polyrhachis). 1
- 4⁰⁹ A high-quality chromosome-level genome assembly of *Pelteobagrus vachelli* provides insights into its environmental adaptation and population history. 13, 0
- 4⁰⁸ The first high-quality chromosome-level genome assembly of Phyllanthaceae (*Phyllanthus cochinchinensis*) provides insights into flavonoid biosynthesis. **2022**, 256, 0
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- 381 Conformational epistasis impairs AlphaFold structural predictions. o
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- 321 The molecular evolution of spermatogenesis across mammals. o
- 320 Impaired immune function accompanies social evolution in spiders. **2022**, 18, o
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- 318 The blackgrass genome reveals patterns of non-parallel evolution of polygenic herbicide resistance. o
- 317 High-quality chromosome-level genome assembly of Pacific cod, *Gadus macrocephalus*. 9, o
- 316 Pan-cancer surveys indicate cell cycle-related roles of primate-specific genes in tumors and embryonic cerebrum. **2022**, 23, o
- 315 Chloroplast gene expression level is negatively correlated with evolutionary rates and selective pressure while positively with codon usage bias in *Ophioglossum vulgatum* L. **2022**, 22, 1
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- 313 The ecological adaptation of the unparalleled plastome character evolution in slipper orchids. 13, o
- 312 The chromosome-scale genome of *Kobresia myosuroides* sheds light on karyotype evolution and recent diversification of a dominant herb group on the Qinghai-Tibet Plateau. o
- 311 Continent-wide phylogenomic framework reveals introgression as a driver of intra-specific diversity and enriched molecular pathways in caribou. 1
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- 308 Jack of all trades: Genome assembly of Wild Jack and comparative genomics of *Artocarpus*. 13, o
- 307 Evolutionary genetics of flipper forelimb and hindlimb loss from limb development-related genes in cetaceans. **2022**, 23, o
- 306 Sequencing and description of the complete mitochondrial genome of *Limatus durhamii* (Diptera Culicidae). **2022**, 106805 o

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- 301 Topiary: pruning the manual labor from ancestral sequence reconstruction. 1
- 300 Assessing the relative performance of fast molecular dating methods for phylogenomic data. **2022**, 23, o
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- 298 Accelerated evolution of dim-light vision-related arrestin in deep-diving amniotes. 10, o
- 297 Immunogenetic losses co-occurred with seahorse male pregnancy and mutation in *tlx1* accompanied functional asplenia. **2022**, 13, o
- 296 Evaluation of methods to detect shifts in directional selection at the genome scale. o
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- 294 Widespread transposon co-option in the *Caenorhabditis* germline regulatory network. **2022**, 8, o
- 293 Uncovering a 500 million year old history and evidence of pseudogenization for TLR15. 13, o
- 292 *Sinapis* genomes provide insights into whole-genome triplication and divergence patterns within tribe Brassiceae. o
- 291 Parallel evolution of opsin visual pigments in hawkmoths by tuning of spectral sensitivities during transition from a nocturnal to a diurnal ecology. **2022**, 225, o
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- 271 Transcriptomic analysis of seed development in *Paysonia auriculata* (Brassicaceae) identifies genes involved in hydroxy fatty acid biosynthesis. 13, ○
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- 257 Investigation of the Molecular Evolution of Treg Suppression Mechanisms Indicates a Convergent Origin. **2023**, 45, 628-648 1
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232	Constraining Whole-Genome Duplication Events in Geological Time. 2023 , 139-154	o
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230	Chromosome fusions repatterned recombination rate and facilitated reproductive isolation during <i>Pristionchus</i> nematode speciation.	1
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226	Ancient loss of catalytic selenocysteine spurred convergent adaptation in a mammalian oxidoreductase.	o
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221	High-quality <i>Fagopyrum esculentum</i> genome provides insights into the flavonoid accumulation among different tissues and self-incompatibility.	o
220	Parallel duplication and loss of aquaporin-coding genes during the out of the sea transition as potential key drivers of animal terrestrialization.	o
219	Molecular evolution and population genetics of glutamate decarboxylase acid resistance pathway in lactic acid bacteria. 14,	o
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- 215 PlantTribes2: Tools for comparative gene family analysis in plant genomics. 13, ○
- 214 Is the Association of the Rare rs35667974 IFIH1 Gene Polymorphism With Autoimmune Diseases a Case of RNA Epigenetics?. ○
- 213 Genome Assembly and Comparative Analysis of the Egg Parasitoid Wasp *Trichogramma dendrolimi* Shed Light on the Composition and Evolution of Olfactory Receptors and Venoms. **2023**, 14, 144 ○
- 212 Comparative gene retention analysis in barley, wild emmer, and bread wheat pangenome lines reveals factors affecting gene retention following gene duplication. **2023**, 21, ○
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- 177 Chromosome-level genome assembly of the Colorado potato beetle, *Leptinotarsa decemlineata*. **2023**, 10, ○
- 176 Signatures of purifying selection and site-specific positive selection on the mitochondrial DNA of dromedary camels (*Camelus dromedarius*). **2023**, 69, 36-42 ○
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- 171 Next-generation development and application of codon model in evolution. 14, ○
- 170 The chromosome-level genome and key genes associated with mud-dwelling behavior and adaptations of hypoxia and noxious environments in loach (*Misgurnus anguillicaudatus*). **2023**, 21, ○
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- 165 Chromosome-Level Assembly of Flowering Cherry (*Prunus campanulata*) Provides Insight into Anthocyanin Accumulation. **2023**, 14, 389 ○
- 164 Genomic identification of cotton SAC genes branded ovule and stress-related key genes in *Gossypium hirsutum*. 14, ○
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- 162 Ancestral Sequence Reconstruction Enhances Gene Mining Efforts for Industrial Ene Reductases by Expanding Enzyme Panels with Thermostable Catalysts. **2023**, 13, 2576-2585 3

- 161 Phylotranscriptomics of Swertiinae (Gentianaceae) reveals that key floral traits are not phylogenetically correlated. o
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- 159 PANAS: Pipeline and a Case Study to Obtain Synonymous and Nonsynonymous Substitution Rates in Genes of Platyhelminthes. **2023**, 90, o
- 158 Complete mitochondrial genome of *Thuja sutchuenensis* and its implications on evolutionary analysis of complex mitogenome architecture in Cupressaceae. **2023**, 23, o
- 157 Insights into the convergent evolution of fructan biosynthesis in angiosperms from the highly characteristic chicory genome. **2023**, 238, 1245-1262 o
- 156 Mitonuclear Interactions and the Origin of Macaque Societies. **2023**, 15, o
- 155 The genome of *Magnolia hypoleuca* provides a new insight into cold tolerance and the evolutionary position of magnoliids. 14, o
- 154 Stepwise recombination suppression around the mating-type locus in an ascomycete fungus with self-fertile spores. **2023**, 19, e1010347 o
- 153 Expansion and loss of sperm nuclear basic protein genes in *Drosophila* correspond with genetic conflicts between sex chromosomes. 12, o
- 152 The genome of a vestimentiferan tubeworm (*Ridgeia piscesae*) provides insights into its adaptation to a deep-sea environment. **2023**, 24, o
- 151 *Halocynthiibacter halioticoli* sp. nov., isolated from the viscera of abalone *Haliotis discus hannai*. o
- 150 Genome size evolution in grasshoppers (Orthoptera: Caelifera: Acrididae). o
- 149 Characterization of Megabat-Favored, CA-Dependent Susceptibility to Retrovirus Infection. **2023**, 97, o
- 148 A chromosome-level genome assembly of *Ostrea denselamellosa* provides initial insights into its evolution. **2023**, 115, 110582 o
- 147 Chromosome-Level Genome Assembly of the Rough-Toothed Dolphin (*Steno bredanensis*). **2023**, 11, 418 o
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- 145 Genome-Wide Identification and Expression Analysis of Calmodulin-Like Gene Family in *Paspalum vaginatum* Revealed Their Role in Response to Salt and Cold Stress. **2023**, 45, 1693-1711 o
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- 142 Chromosome-scale genome assembly and insights into the metabolome and gene regulation of leaf color transition in an important oak species, *Quercus dentata*. ○
- 141 Transcriptome Identification of R2R3-MYB Gene Family Members in *Pinus massoniana* and PmMYB4 Response to Drought Stress. **2023**, 14, 410 1
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- 135 Evolutionary History of the *Poecilia picta* Sex Chromosomes. **2023**, 15, ○
- 134 Draft genome of the oriental garden lizard (*Calotes versicolor*). 14, ○
- 133 De Novo Assembly and Comparative Analysis of the Complete Mitochondrial Genome of *Chaenomeles speciosa* (Sweet) Nakai Revealed the Existence of Two Structural Isomers. **2023**, 14, 526 ○
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121	Synteny Identifies Reliable Orthologs for Phylogenomics and Comparative Genomics of the Brassicaceae. 2023 , 15,	O
120	Ancient Rapid Radiation Explains Most Conflicts Among Gene Trees and Well-Supported Phylogenomic Trees of Nostocalean Cyanobacteria.	O
119	Evolution of the Growth Hormone Gene Duplication in Passerine Birds. 2023 , 15,	O
118	Roadmap to the study of gene and protein phylogeny and evolutionA practical guide. 2023 , 18, e0279597	O
117	Identification of conserved genomic signatures specific to <i>Bifidobacterium</i> species colonising the human gut. 2023 , 13,	O
116	Molecular exploration of fossil eggshell uncovers hidden lineage of giant extinct bird. 2023 , 14,	O
115	FREEDA: an automated computational pipeline guides experimental testing of protein innovation by detecting positive selection.	O
114	Elucidation of the GAUT gene family in eight Rosaceae species and function analysis of PbrGAUT22 in pear pollen tube growth. 2023 , 257,	O
113	Chromosome-Length Assembly of the Baikal Seal (<i>Pusa sibirica</i>) Genome Reveals a Historically Large Population Prior to Isolation in Lake Baikal. 2023 , 14, 619	O
112	Evolution is not Uniform Along Coding Sequences. 2023 , 40,	O
111	Chromosome-level reference genome of <i>Tetrastigma hemsleyanum</i> (Vitaceae) provides insights into genomic evolution and the biosynthesis of phenylpropanoids and flavonoids.	O
110	Genomic Comparisons Reveal Selection Pressure and Functional Variation Between Nutritional Endosymbionts of Cave-Adapted and Epigeal Hawaiian Planthoppers. 2023 , 15,	O
109	Key innovations and the diversification of Hymenoptera. 2023 , 14,	O
108	Systematic analysis and expression of Gossypium 20DD superfamily highlight the roles of GhLDOXs responding to alkali and other abiotic stress in cotton. 2023 , 23,	O

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- 106 Mutational signatures in wild type *Escherichia coli* strains reveal dominance of DNA polymerase errors. o
- 105 Genomic analysis of *Leishmania turanica* strains from different regions of Central Asia. **2023**, 17, e0011145 o
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- 101 Unique gene duplications and conserved microsynteny potentially associated with resistance to wood decay in the Lauraceae. 14, o
- 100 De novo assembly of a chromosome-level reference genome of the ornamental butterfly *Sericanus montelus* based on nanopore sequencing and Hi-C analysis. 14, o
- 99 Hologenome analysis reveals independent evolution to chemosymbiosis by deep-sea bivalves. **2023**, 21, o
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- 97 Chromosome-level genome assembly of *Phrynocephalus forsythii* using third-generation DNA sequencing and Hi-C analysis. **2023**, 30, o
- 96 Seagrass genomes reveal a hexaploid ancestry facilitating adaptation to the marine environment. o
- 95 De novo Assembly and Comparative Analyses of Mitochondrial Genomes in Piperales. **2023**, 15, o
- 94 The path to *Femmes fatales*—the evolution of toxin resistance in predatory fireflies. o
- 93 Comparative Genomics of Firmicutes reveals probable adaptations for xylose fermentation in *Thermoanaerobacterium saccharolyticum*. o
- 92 Centriole Remodeling Evolved into Centriole Degradation in Mouse Sperm. o
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- 63 Depression: an adaptive disease?. o
- 62 Upregulation of ENKD1 disrupts cellular homeostasis to promote lymphoma development. o
- 61 Genomic convergence underlying high-altitude adaptation in alpine plants. o
- 60 Chromosome-aware phylogenomics of Assassin Bugs (Hemiptera: Reduvioidea) elucidates ancient gene conflict. o
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