

## **Supplementary Figures**

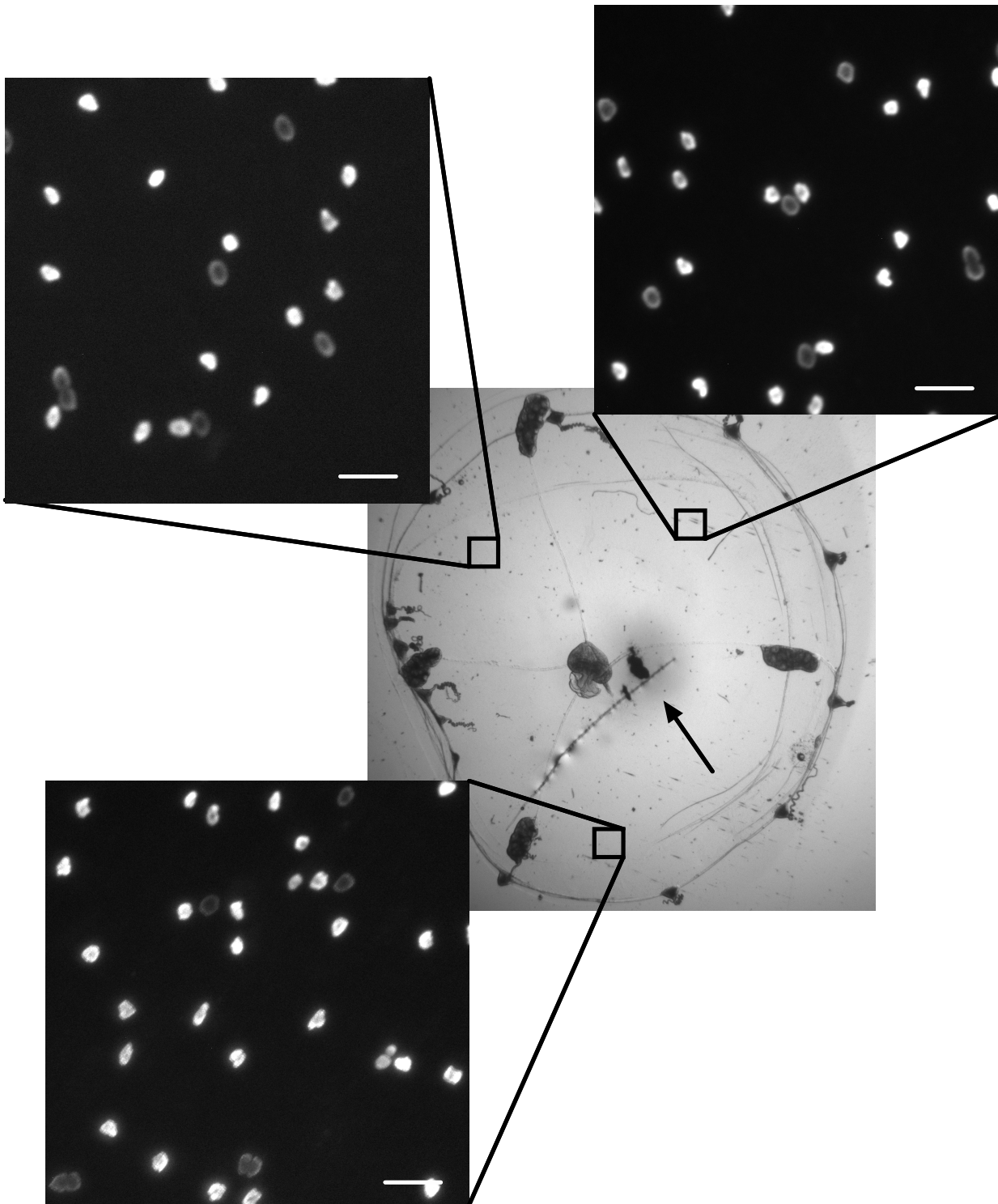
### **Epithelial wound healing in *Clytia hemisphaerica* provides insights into extracellular ATP signaling mechanisms and P2XR evolution**

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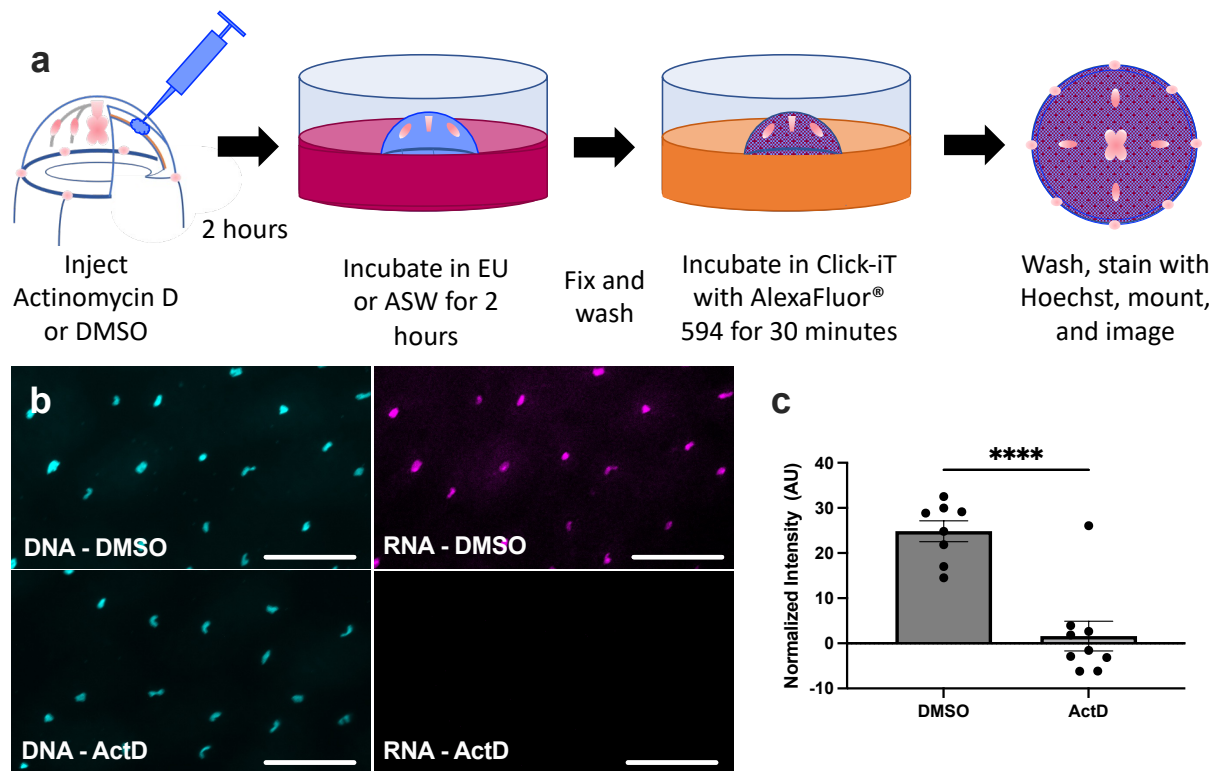
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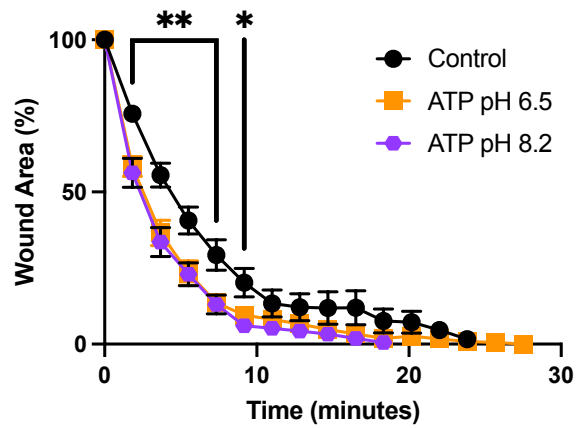
**Supplementary Figure S1. Hoechst dye diffuses from the site of injection to all four quadrants**

Adult medusa injected with 10  $\mu$ M Hoechst dye. Injection site is indicated by an arrow. Inserts are images of Hoechst-stained nuclei in three locations 5 minutes post-injection, indicating diffusion of the dye throughout the mesoglea and into the cells. Scale bars = 50  $\mu$ m.



**Supplementary Figure S2. Actinomycin D inhibits *de novo* transcription in Clytia.**

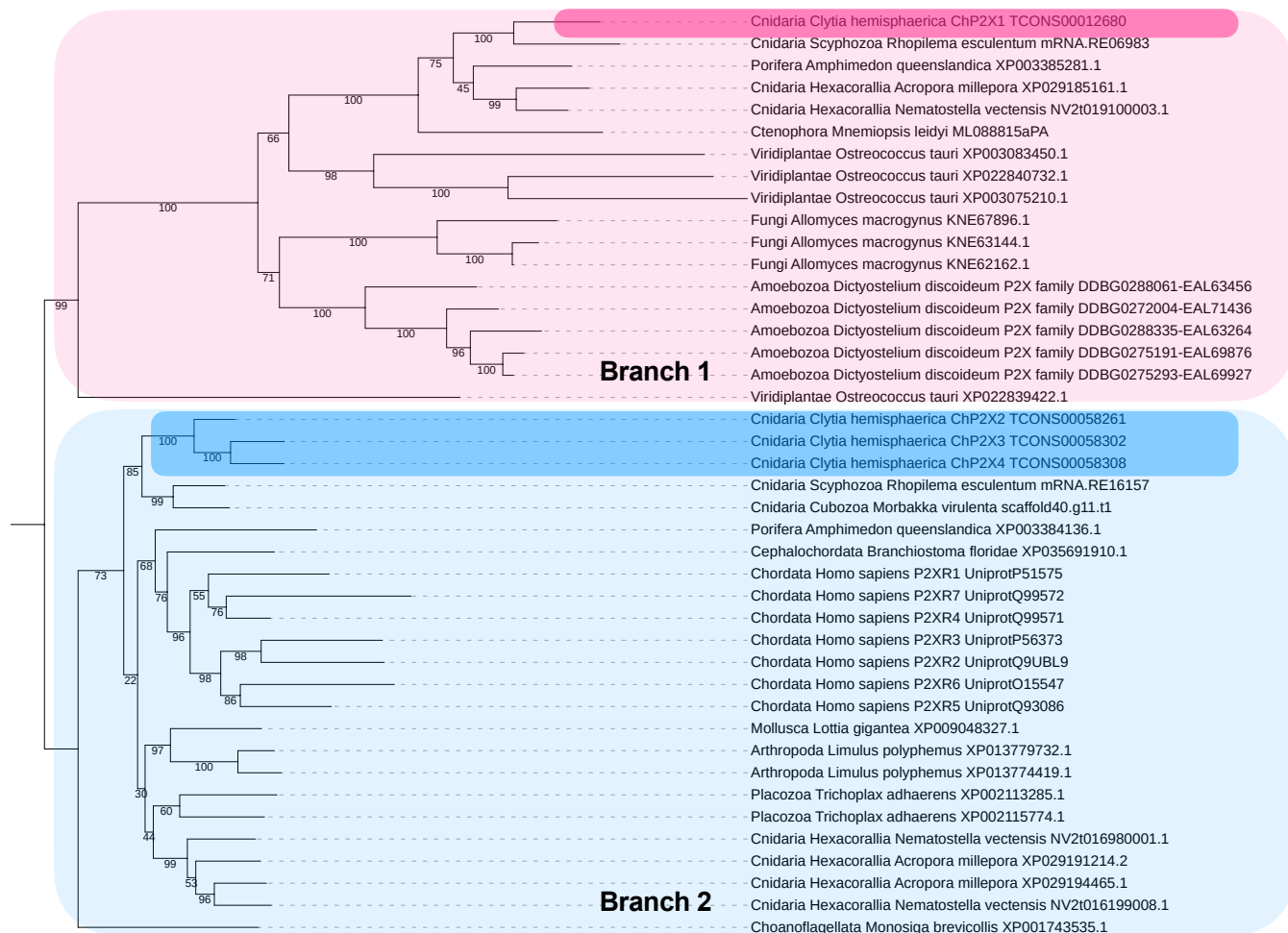
**a)** Schematic representation of EU labeling of *de novo* transcription in the presence of actinomycin D (ActD) or DMSO. **b)** 80 mM ActD represses transcription in the exumbrella epithelial cells. Representative images of exumbrella epithelial cells show DNA (Hoechst (left)) or *de novo* transcripts (RNA, EU (right)). **c)** Quantification of *de novo* transcription in the presence or absence of 80 mM ActD. Each datapoint represents the mean fluorescence intensity of EU in Hoechst-labeled nuclei in a single animal; two images were collected per animal. DMSO: n = 8, ActD: n = 9. n = number of animals. Bars represent the mean of the datapoints  $\pm$ SEM. Unpaired two-tailed T-test: P-value <0.0001 (\*\*\*\*).



**Supplementary Figure S3. Reduced pH is not responsible for ATP's effect on wound healing rate.**

ASW (control) has a pH of 8.2, whereas unadjusted 1 mM ATP has a pH of 6.5. Adjusting 1 mM ATP to pH 8.2 does not alter its ability to increase the wound healing rate, indicating that weak acidity of the solution does not explain the observed effect. One-way analysis of variance (ANOVA) at each time point:  $P < 0.01$  (\*\*);  $P < 0.05$  (\*).  $n$  = number of wounds analyzed in independent animals. Data is presented as mean percent of original wound area  $\pm$  SEM.





#### Supplementary Figure S4. Un-rooted un-collapsed phylogenetic tree of P2XRs across eukaryotes.

Homologs were detected by reciprocal BLAST back to reference gene family. Sequences were aligned in MAFFT, trimmed in ClipKit, and maximum likelihood trees produced in IQTree (see Methods). The tree is unrooted and no branches are collapsed. Branches having 95% or greater ultrafast bootstrap support are considered significant under ultrafast bootstrapping guidelines<sup>91</sup>. A rooted collapsed version of the tree is provided as Figure 7 in the main text.

## Conservation

Human P2X1 1 - - - - - MARRFQEELAAFLFEYDTGKPRMVLVRNKKKVGVIIFRLIQLVVLVYVIGWVFL 50  
Clytia\_00058302 1 LKMNQSRKQMVLEKSKFHCINFLLSYETGKVVVEIQNKKKVAFWYRRLIQLSVVIYVIGYAI 60  
Clytia\_00058261 1 - - - - - MGLTECRQKKGIGILLHNYETVKIIDIKNKKKVGALYFRFIQLI IISYVIGYVIV 51  
Clytia\_00058308 1 - - - - - MTGCAKVKNFYDFLFNFYQTVKLAIEIKDKKVGILSFRVFIQLAIVCYIIFVYV 52  
Clytia\_00012680 1 - - - - - - MSLFHYVTYKYYIIIKDKRRLGIALYIILAFLLIIFYITLVQTLV 40  
DICTYP2XE 1 - - - - - MNFRNIDWDSLSFSYSTIKIVIRIKDKRRLGILHFAFLIGIILYIIVGTIF 48  
DICTYP2XD 1 - - - - - MDWDNIFSYNTAKIVTIKDRRLGLHIIIFMVLIVYIIVYSTI 43  
DICTYP2XA 1 - - - - - MGFSFDWDDIFQYSTVKIVRIRDRRLGILHLSFSLVGIIVAYIVVYSAI 47  
DICTYP2XB 1 - - - - - MTIDWDSILSYNTIKVVIRIRDRRLGILHLCLFLIVLIVLYVVVYSAI 45

## Conservation

Human P2X1 51 YEKGYQTSSGLISSVSVKLGKGLAVTQLPG - - - - - L - - - - - GPQ 83  
Clytia\_00058302 61 YDKGYQEIDSAISSNTNTKKGKITHVNFNGN - - - - - FPFSTFFNGRM 99  
Clytia\_00058261 52 YKKGYQEFDAISTVTTKLKGITTYVDFGK - - - - - FNSTLFNGIR 90  
Clytia\_00058308 53 YKKGYQEFDAISTVTTKLKGITTYVDFGK - - - - - FNSSLFNGLQ 91  
Clytia\_00012680 41 NKSYLQYDSSPSGNMRLVNTPTKLQNDENEYININPDYCKQKESA - - - - - NST - - - - - ICR 91  
DICTYP2XE 49 LQKKYLVLESPIGSI RTSLMAPS VKPT - - - - - DLPYCLKNGTDTSYDGYPNK - - - - - PCQ 98  
DICTYP2XD 44 YKKGYLLTETPVGSI RASLLAPNEFKDDSD - - - - - NFKYCDDN - - - - - LIEYNTFKL - - - - - ECD 92  
DICTYP2XA 48 I KKGYLFTETPVGSI VRTSLKKGPNTFAS - - - - - NLTYCSNQHNQSYPFTPL - - - - - ECN 97  
DICTYP2XB 46 I KKGYVTTTEEPVGSIRTSLLAPDE LKS - - - - - NQAYCKNN - - - - - TEPYPYEKL - - - - - DCV 92

## Conservation

Human P2X1 84 VWDVADYVFP AQGDNSFVVMTNFIVTPKQTQGYCAE - - - - - HPEG - - - - - GICKEDSGCTPGKA 137  
Clytia\_00058302 100 IYDPQDYVIK - QDGDSEFFVMNTNMVITPKQYQGGKCE - - - - - DPESYRTICKTDKDCQQTGS 154  
Clytia\_00058261 91 IYDPNDYVIPPQETDAFVMTNMILTPKQYQSGNCE - - - - - DSKFKDIHCKKSDCCKMVP 146  
Clytia\_00058308 92 VYDAEDYVIKPKDGNLSFVMTNMVITPKQYQGGKCE - - - - - DPESYQALCKTDKDCQQTGS 147  
Clytia\_00012680 92 KLDGLSLNWPIESRVTLAT - FIKKEK - WQRPKDCQYALVYDPEN - - - - - PVKYE - - - - - 138  
DICTYP2XE 99 YWDEYSLVLYPPSEESSMFIITTRCTQETQSTVNGCNL - - - - - SEP - - - - - TCYVN - - - - - 142  
DICTYP2XD 93 YWDEAFVVSFFVGGDVSFAVTTTRVKTLL - - - - - DQVLCNCSS - - - - - KNP - - - - - KCKYT - - - - - 134  
DICTYP2XA 98 YWDEQLALFPVGGDVSFTCTTRVRLS - - - - - KQEANCF - - - - - TDP - - - - - TCKFY - - - - - 139  
DICTYP2XB 93 YWDEKLALFPVGGDVSFTASTRMRIS - - - - - DQTVNCSL - - - - - MNP - - - - - SCKFY - - - - - 134

## Conservation

Human P2X1 138 KRKAQGI RTGKCVAF - - - - - NDTVKTCEIFGWCPVEVD DDIPRP - - - - - ALLREAEANT 186  
Clytia\_00058302 155 NKYGHGERSGRCVPSDRNSTVKKVCESYGWCPTEYDV - - - - - LPMENYNNFSKTIPLLDGKTKEST 213  
Clytia\_00058261 147 VKNGNGVRTGKCVSSDRNSSMTVCEIYGWCPTEVDQ - - - - - LPMNP - - - - - SDTVPPLLDGKTKEST 204  
Clytia\_00058308 148 NKYGHGERTGRCVPSYRNSTLTVCIEIHGWCPTEDDR - - - - - LPMIK - - - - - SNVSTNIPLLLEGTKHAT 205  
Clytia\_00012680 139 - - - - - DL - - - - - - - - - - RDVDYAVNPEFAL 154  
DICTYP2XE 143 - - - - - TT - - - - - - - - - - SSDFYIANVENFT 158  
DICTYP2XD 135 - - - - - TV - - - - - - - - - - STRNVYVSDIEDFT 150  
DICTYP2XA 140 - - - - - DE - - - - - - - - - - PG - - - - - SAKNIYIADIESFT 157  
DICTYP2XB 135 - - - - - TN - - - - - - - - - - TSMNVYLADIESFT 150

## Conservation

Human P2X1 187 LFIKNSISFPRFKVNRNRLVEE - VNAAHMKTCFLHKT LHP - - - - - LCPVFQ 231  
Clytia\_00058302 214 VLIKNQIHFPKFKVTRNNIVHNQKKGSYMKRCLHNEETDP - - - - - FCPIFK 259  
Clytia\_00058261 205 MLVKNQISFPRFKFRAIRNNIIQF - NDSTYLKRCCHYNSDTP - - - - - LCPIFN 249  
Clytia\_00058308 206 VLIKNQIDFMKFDVATYNIPT - NNSRTYMKKCRYNAKTDP - - - - - LCPIFR 250  
Clytia\_00012680 155 IKVEHSFTAFSGQLT - - - - - NHSHRMSGSLVDMNGNTIKRL - - - - - NSNGVSKVDK - IL 202  
DICTYP2XE 159 ILLDHTLSAPSLGIQ - - - - - YNSAKQLNGQLLTDGNNPMSLPP - PNIVGVKGSPPDIMS 209  
DICTYP2XD 151 ILLDHTMFAPSSLIQ - - - - - YNSAKQLKGYILNDNNEIQINETINTVIGIPGKPDILT 202  
DICTYP2XA 158 ILLDHTMYAPSSSGSQ - - - - - FNAVDLHGYILNDQDGEVQIDANGSTIGVSGKPDIMT 209  
DICTYP2XB 151 VLI DHTMYAPSSSQIQ - - - - - FNGDDLSGYVLDQNGNEIQLNESVNTIGVQGKPDILQ 202

## Conservation

Human P2X1 232 LGYVVQES - - - - - GQNFSTLAEKGGVVGITIDWHCD - - - - - LDWHVVRHCRPIYEFH 277  
Clytia\_00058302 260 LRNI VENC - - - - - GDNYTKVGFKGGIYGI I IKWDCN - - - - - LDHSIYDCVPEYKFE 305  
Clytia\_00058261 250 LNDIVSSC - - - - - GDNYTDVAYQGA IYGI I IEWDCN - - - - - LDHSIDELCPKYQFK 295  
Clytia\_00058308 251 LQDIVSSC - - - - - GDNYTQVAFKGA IYGI I IEWKCN - - - - - LDYSIEECLPKYRFK 296  
Clytia\_00012680 203 LKDFLIAANV - SLDEVS DALNAKERTFRQNGLILHVSIMYKNSEKMLYGVNIPEYTYHVR 261  
DICTYP2XE 210 LQGVLLTAAGVESLDSQ - - - - - GLANKSRTIRDDGLILLCFITYSNT - - - - - TYNTNGNYHYTYQFK 265  
DICTYP2XD 203 IGKLLQLLANI - DLDGA - - - - - SSVNSTSVRYDGVVVALVFITYSNT - - - - - FSYNTNFKYVYSIQ 257  
DICTYP2XA 210 IGQLLSFGGV - SLDQA - - - - - SPVDSNVSIRYDGVVLFVFIYTSNT - - - - - TYYSTSDFKYVYSVQ 264  
DICTYP2XB 203 LGKLLLEFAGV - DLDGP - - - - - SLVNSNSIRYDGCVLFFVFIYTSNT - - - - - FSYDLKKIKYVYSIK 257

## Conservation

Human P2X1 278 GLYEE - KNLSPGFNFR FARHFV - - - - - ENGTNYRHLLFKVFGIRFDILVDGKAGKFDIIPTM 332  
Clytia\_00058302 306 RLDDDEKTPLSHGYNFRYVNYFV - - - - - ENGTTRYRTLTKAYGIFKFLVHGEAGKFSFIPLM 361  
Clytia\_00058261 296 RLDDVNSPISPGYNFYADYV - - - - - EEDTRYRTLTKAYGIFKFLVHGEAGKFNVIPL 351  
Clytia\_00058308 297 RLDSNRSSISKGFNFRYVNYV - - - - - EKGKRYRTLTKAYGIFKFLVHGEAGKFNVIPL 352  
Clytia\_00012680 262 RVPFSD - - - - - YRLKQEIPIANNEGNICERIKKRYAVRIEFHQGGKIGQFSSANLV 313  
DICTYP2XE 266 LVQNTK - - - - - YKIVKEPVF - - - - - TKDVEDRYIFDRHGVRIIFIQTGQLGQFSSQTM 313  
DICTYP2XD 268 KVEDTE - - - - - YGVEAVI - - - - - LDNVSSRMYYNRRHGIRLIFIQNGEIGSFNFQALL 305  
DICTYP2XA 265 QIANT I - - - - - YDVPETII - - - - - LESIHSLLYYRHGIRLIFIQTGTIGSFHFQTL 312  
DICTYP2XB 258 KVDDTA - - - - - YDVEPII - - - - - LNNENSRLLYKRRHAIIRLIFIQTGVIGSFNFQSL 305

## Conservation

Human P2X1 333 TTIGSGIGIFGVATVLCDDL LLLHILPKRHY YKQKKFKESAEDMGPP - - - - - GAAERDLAATS 387  
Clytia\_00058302 362 LNLGAGIGLLGLIATVWCDFIVLNLAKKRNVYRNHICESVGRGMSSNEKSSLDGDTK - - - - - 417  
Clytia\_00058261 352 TNLGAGMALLG IATVWCDFIVMYL LKKRNVYREHYQQRVDDDSQDPKGNVQVDDDENE - - - - - 409  
Clytia\_00058308 353 TNLGAGIGLLGLLATLCCDFIVLNLVPRKRNVYRDYICADVTQEEYEHLREAAKKEEKEATR 412  
Clytia\_00012680 314 FQLVSVMGLLTLTATVIDVIALYIVPNKDNVYRQYVFDESPEFSEQEKQTLKENVNDDEQ - S 372  
DICTYP2XE 314 LTFVSGIGLVTAASLIVDI IATIRMPQRSRYQELKFQDSSINN - - - - - TQKTPTNDHTP - L 368  
DICTYP2XD 306 LTFVSGGLGLLAISTVLVDQLAIRFLPERKTYSSHKFQIDTHGFSERAKLRISQNEKDP - L 364  
DICTYP2XA 313 LTLVSGGLGLLAVATTVDQLAIRLLPQRKSYSSSLKFQVTESSMSNPMKKRITTTDEGEDV - L 371  
DICTYP2XB 306 LTLVSGGLGLLTVSTLIVDQLAIRFLPQRKSYSSSLKFQTTESF - - - - - RMKKKIVNDDGEDK - L 362

## Conservation

Human P2X1 388 ST - - - LGLQENMR - - - TS - - - - - 399  
Clytia\_00058302 418 - - - - - QNCD - - - EKKTQEN - - - - - 429  
Clytia\_00058261 410 LE - - - - - SDRPEAER - L IKP - - - - - 423  
Clytia\_00058308 413 LK - - - LMMVNKCA - - - VRSPHTARKLLEML - - - - - 436  
Clytia\_00012680 373 KKDQ - - - - - - - - - - 376  
DICTYP2XE 369 LKDNEDTINENSYQNNSEYK - - - - - 388  
DICTYP2XD 365 LLEVETKNNENNNDYNDDDNEIFDDNNNGYQNIQNNNIIL 407  
DICTYP2XA 372 YT - RIEGL - - - - - 378  
DICTYP2XB 363 YH - NIEAL - - - - - 369

**Supplementary Figure S5. Alignment of Clytia and Dictyostelium P2XR homologs with human P2XR.**

Sequences were aligned using Clustal omega (<https://www.ebi.ac.uk/Tools/msa/clustalo/>)<sup>S1</sup>. Red boxes indicate residues similar or identical across the tree of life as identified by Surprenant and North<sup>66</sup>. Similar are IVLM, FYWH, KRH, EQDN. Yellow highlighting indicates amino acids shown to be essential for ATP binding in vertebrates. Blue boxes identify critical amino acids for PPADS sensitivity in vertebrates. Note that ChP2X1 does not have the critical amino acids for PPADS sensitivity.

## Supplementary Table S1 – Metazoan species genomes evaluated for completeness.

Original list of species whose genomes were evaluated for completeness.

Genus species	Name	Phylo-name
<i>Acanthopleura granulata</i>	Chiton	Metazoa-Mollusca-Polyplacophora-Chitonida-Chitonidae-Acanthopleura-granulata
<i>Achatina fulica</i>	Giant African snail	Metazoa-Mollusca-Class_unresolved-Order_unresolved-Family_unresolved-Achatina-fulica
<i>Acropora millepora</i>	Stony coral	Metazoa-Cnidaria-Anthozoa-Scleractinia-Acroporidae-Acropora-millepora
<i>Adineta ricciae</i>	Rotifer	Metazoa-Rotifera-Eurotatoria-Adinetida-Adinetidae-Adineta-ricciae
<i>Ailuropoda melanoleuca</i>	Panda	Metazoa-Chordata-Mammalia-Carnivora-Ursidae-Ailuropoda-melanoleuca
<i>Alligator mississippiensis</i>	Alligator	Metazoa-Chordata-Class_unclassified-Crocodylia-Alligatoridae-Alligator-mississippiensis
<i>Amblyraja radiata</i>	Thorny skate	Metazoa-Chordata-Chondrichthyes-Rajiformes-Rajidae-Amblyraja-radiata
<i>Amia calva</i>	Bowfin fish	Metazoa-Chordata-Actinopteri-Amiiformes-Amiidae-Amia-calva
<i>Amphibalanus amphitrite</i>	Barnacle	Metazoa-Arthropoda-Hexanauplia-Sessilia-Balanidae-Amphibalanus-amphitrite
<i>Amphimedon queenslandica</i>	Marine sponge	Metazoa-Porifera-Demospongiae-Haplosclerida-Niphatidae-Amphimedon-queenslandica
<i>Amyelois transitella</i>	Navel orangeworm moth	Metazoa-Arthropoda-Insecta-Lepidoptera-Pyralidae-Amyelois-transitella
<i>Amyntas corticis</i>	Earthworm	Metazoa-Annelida-Clitellata-Crassiclitellata-Megascolecidae-Amyntas-corticis
<i>Anneissia japonica</i>	Crionoid	Metazoa-Echinodermata-Crinoidea-Comatulida-Comatulidae-Anneissia-japonica
<i>Anopheles gambiae</i>	Mosquito	Metazoa-Arthropoda-Insecta-Diptera-Culicidae-Anopheles-gambiae
<i>Aphelenchus avenae</i>	Aphelenchus nematode Free	Metazoa-Nematoda-Chromadorea-Rhabditida-Aphelenchidae-Aphelenchus-avenae
<i>Apis mellifera</i>	Western honey bee	Metazoa-Arthropoda-Insecta-Hymenoptera-Apidae-Apis-mellifera
<i>Apolygus lucorum</i>	True bug	Metazoa-Arthropoda-Insecta-Hemiptera-Miridae-Apolygus-lucorum
<i>Apostichopus japonicus</i>	Japanese spiky sea cucumber	Metazoa-Echinodermata-Holothuroidea-Aspidochirotida-Stichopodidae-Apostichopus-japonicus
<i>Aptenodytes patagonicus</i>	King Penguin	Metazoa-Chordata-Aves-Sphenisciformes-Spheniscidae-Aptenodytes-patagonicus
<i>Archivesica marissinica</i>	Deep sea clam	Metazoa-Mollusca-Bivalvia-Venerida-Vesicomysidae-Archivesica-marissinica
<i>Argiope bruennichi</i>	Wasp spider	Metazoa-Arthropoda-Arachnida-Araneae-Araneidae-Argiope-bruennichi
<i>Aricia agestis</i>	Brown argus butterfly	Metazoa-Arthropoda-Insecta-Lepidoptera-Lycaenidae-Aricia-agestis
<i>Artemia franciscana</i>	Brine shrimp	Metazoa-Arthropoda-Branchiopoda-Anostraca-Artemiidae-Artemia-franciscana
<i>Artibeus jamaicensis</i>	Jamaican fruit bat	Metazoa-Chordata-Mammalia-Chiroptera-Phyllostomidae-Artibeus-jamaicensis
<i>Arvicola amphibius</i>	European water vole	Metazoa-Chordata-Mammalia-Rodentia-Cricetidae-Arvicola-amphibius
<i>Asterias rubens</i>	Common starfish	Metazoa-Echinodermata-Asteroidea-Forcipulatida-Asteriidae-Asterias-rubens
<i>Astyanax mexicanus</i>	Mexican tetra blind cavefish cave	Metazoa-Chordata-Actinopteri-Characiformes-Characidae-Astyanax-mexicanus
<i>Austrofundulus limnaeus</i>	Thickset riviulus killifish Guppies	Metazoa-Chordata-Actinopteri-Cyprinodontiformes-Rivulidae-Austrofundulus-limnaeus

<i>Bagarius yarrelli</i>	Goonch catfish	Metazoa-Chordata-Actinopteri-Siluriformes-Sisoridae-Bagarius-yarrelli
<i>Balaenoptera acutorostrata scammoni</i>	Minke whale	Metazoa-Chordata-Mammalia-Artiodactyla-Balaenopteridae-Balaenoptera-acutorostrata_scammoni
<i>Balaenoptera musculus</i>	Blue whale	Metazoa-Chordata-Mammalia-Artiodactyla-Balaenopteridae-Balaenoptera-musculus
<i>Balaenoptera physalus</i>	Fin whale	Metazoa-Chordata-Mammalia-Artiodactyla-Balaenopteridae-Balaenoptera-physalus
<i>Bathymodiolus platifrons</i>	Deep sea mussel	Metazoa-Mollusca-Class_unresolved-Order_unresolved-Family_unresolved-Bathymodiolus-platifrons
<i>Batillaria attramentaria</i>	Japanese mud snail	Metazoa-Mollusca-Gastropoda-Order_unclassified-Batillariidae-Batillaria-attramentaria
<i>Belgica antarctica</i>	Antarctic midge	Metazoa-Arthropoda-Insecta-Diptera-Chironomidae-Belgica-antarctica
<i>Biomphalaria glabrata</i>	Ram's horn snail	Metazoa-Mollusca-Gastropoda-Order_unclassified-Planorbidae-Biomphalaria-glabrata
<i>Blattella germanica</i>	German Cockroach	Metazoa-Arthropoda-Insecta-Blattodea-Ectobiidae-Blattella-germanica
<i>Boleophthalmus pectinirostris</i>	Mudskipper Gobies	Metazoa-Chordata-Actinopteri-Gobiiformes-Gobiidae-Boleophthalmus-pectinirostris
<i>Bombyx mori</i>	Domestic silk moth	Metazoa-Arthropoda-Insecta-Lepidoptera-Bombycidae-Bombyx-mori
<i>Bos taurus</i>	Cow	Metazoa-Chordata-Mammalia-Artiodactyla-Bovidae-Bos-taurus
<i>Branchiostoma floridae</i>	Amphioxus	Metazoa-Chordata-Leptocardii-Amphioxiformes-Branchiostomidae-Branchiostoma-floridae
<i>Brugia malayi</i>	Genetic model nematode III	Metazoa-Nematoda-Chromadorea-Rhabditida-Onchocercidae-Brugia-malayi
<i>Bufo gargarizans</i>	Asiatic toad	Metazoa-Chordata-Amphibia-Anura-Bufonidae-Bufo-gargarizans
<i>Bugula neritina</i>	Brown bryozoan	Metazoa-Bryozoa-Gymnolaemata-Cheilostomatida-Bugulidae-Bugula-neritina
<i>Caenorhabditis elegans</i>	Genetic model nematode V	Metazoa-Nematoda-Chromadorea-Rhabditida-Rhabditidae-Caenorhabditis-elegans
<i>Caligus rogercresseyi</i>	Sea louse copepod	Metazoa-Arthropoda-Hexanauplia-Siphonostomatoida-Caligidae-Caligus-rogercresseyi
<i>Callorhinchus milii</i>	Australian ghost shark	Metazoa-Chordata-Chondrichthyes-Chimaeriformes-Callorhinchidae-Callorhinchus-milii
<i>Camelus dromedarius</i>	Camel	Metazoa-Chordata-Mammalia-Artiodactyla-Camelidae-Camelus-dromedarius
<i>Candidula unifasciata</i>	Terrestrial snail	Metazoa-Mollusca-Gastropoda-Stylommatophora-Geomitridae-Candidula-unifasciata
<i>Canis lupus familiaris</i>	Dog	Metazoa-Chordata-Mammalia-Carnivora-Canidae-Canis-lupus_familiaris
<i>Capitella teleta</i>	Marine worm	Metazoa-Annelida-Polychaeta-Order_unclassified-Capitellidae-Capitella-teleta
<i>Capra hircus</i>	Goat	Metazoa-Chordata-Mammalia-Artiodactyla-Bovidae-Capra-hircus
<i>Capsaspora owczarzaki</i>	Unicell	Kingdom_unclassified-Phylum_unclassified-Filasterea-Order_unclassified-Family_unclassified-Capsaspora-owczarzaki
<i>Carassius auratus</i>	Goldfish	Metazoa-Chordata-Actinopteri-Cypriniformes-Cyprinidae-Carassius-auratus
<i>Carcharodon carcharias</i>	Great white shark	Metazoa-Chordata-Chondrichthyes-Lamniformes-Alopiidae-Carcharodon-carcharias
<i>Carlito syrichta</i>	Philippine tarsier	Metazoa-Chordata-Mammalia-Primates-Tarsiidae-Carlito-syrichta
<i>Cavia aperea</i>	Brazilian guinea pig	Metazoa-Chordata-Mammalia-Rodentia-Caviidae-Cavia-aperea
<i>Chiloscyllium plagiosum</i>	White spotted bamboo shark	Metazoa-Chordata-Chondrichthyes-Orectolobiformes-Hemiscylliidae-Chiloscyllium-plagiosum

<i>Chinchilla lanigera</i>	Long-tailed chinchilla	Metazoa-Chordata-Mammalia-Rodentia-Chinchillidae-Chinchilla-lanigera
<i>Choloepus didactylus</i>	Xenarthra southern two-toed sloth	Metazoa-Chordata-Mammalia-Pilosa-Megalonychidae-Choloepus-didactylus
<i>Chrysemys picta</i>	Painted turtle	Metazoa-Chordata-Class_unclassified-Testudines-Emydidae-Chrysemys-picta
<i>Chrysochloris asiatica</i>	Cape golden mole	Metazoa-Chordata-Mammalia-Afrosoricida-Chrysochloridae-Chrysochloris-asiatica
<i>Chrysomallon squamiferum</i>	Sea pangolin	Metazoa-Mollusca-Gastropoda-Order_unclassified-Peltosporidae-Chrysomallon-squamiferum
<i>Chrysoperla carnea</i>	Green lacewing	Metazoa-Arthropoda-Insecta-Neuroptera-Chrysopidae-Chrysoperla-carnea
<i>Ciona intestinalis</i>	Vase tunicate	Metazoa-Chordata-Ascidiacea-Phlebobranchia-Cionidae-Ciona-intestinalis
<i>Clarias magur</i>	Walking catfish	Metazoa-Chordata-Actinopteri-Siluriformes-Clariidae-Clarias-magur
<i>Cloeon dipterum</i>	Mayfly	Metazoa-Arthropoda-Insecta-Ephemeroptera-Baetidae-Cloeon-dipterum
<i>Clonorchis sinensis</i>	Chinese liver fluke	Metazoa-Platyhelminthes-Trematoda-Opisthorchiida-Opisthorchiidae-Clonorchis-sinensis
<i>Clytia hemisphaerica</i>	Brady's hydrozoan	Metazoa-Cnidaria-Hydrozoa-Leptothecata-Clytiidae-Clytia-hemisphaerica
<i>Coccinella septempunctata</i>	Seven-spotted ladybird	Metazoa-Arthropoda-Insecta-Coleoptera-Coccinellidae-Coccinella-septempunctata
<i>Colossoma macropomum</i>	Black pacu	Metazoa-Chordata-Actinopteri-Characiformes-Serrasalminidae-Colossoma-macropomum
<i>Condylura cristata</i>	Star-nosed mole	Metazoa-Chordata-Mammalia-Eulipotyphla-Talpidae-Condylura-cristata
<i>Conus betulinus</i>	Cone snail	Metazoa-Mollusca-Gastropoda-Neogastropoda-Conidae-Conus-betulinus
<i>Coptotermes formosanus</i>	Formosan subterranean termite	Metazoa-Arthropoda-Insecta-Blattodea-Rhinotermitidae-Coptotermes-formosanus
<i>Coregonus clupeaformis</i>	Lake whitefish	Metazoa-Chordata-Actinopteri-Salmoniformes-Salmonidae-Coregonus-clupeaformis
<i>Corvus moneduloides</i>	New caledonian crow	Metazoa-Chordata-Aves-Passeriformes-Corvidae-Corvus-moneduloides
<i>Crassostrea ariakensis</i>	Suminoe oyster	Metazoa-Mollusca-Bivalvia-Ostreida-Ostreidae-Crassostrea-ariakensis
<i>Crassostrea gigas</i>	Pacific oyster	Metazoa-Mollusca-Bivalvia-Ostreida-Ostreidae-Crassostrea-gigas
<i>Crassostrea virginica</i>	Atlantic oyster	Metazoa-Mollusca-Bivalvia-Ostreida-Ostreidae-Crassostrea-virginica
<i>Crocodylus porosus</i>	Australian saltwater crocodile	Metazoa-Chordata-Class_unclassified-Crocodylia-Crocodylidae-Crocodylus-porosus
<i>Crocuta crocuta</i>	Spotted hyena	Metazoa-Chordata-Mammalia-Carnivora-Hyaenidae-Crocuta-crocuta
<i>Cryptotermes secundus</i>	Termite	Metazoa-Arthropoda-Insecta-Blattodea-Kalotermitidae-Cryptotermes-secundus
<i>Ctenocephalides felis</i>	Cat fleas	Metazoa-Arthropoda-Insecta-Siphonaptera-Pulicidae-Ctenocephalides-felis
<i>Cyclina sinensis</i>	Black clam	Metazoa-Mollusca-Bivalvia-Venerida-Veneridae-Cyclina-sinensis
<i>Cyclopterus lumpus</i>	Lumpsucker	Metazoa-Chordata-Actinopteri-Perciformes-Cyclopteridae-Cyclopterus-lumpus
<i>Cyprinus carpio</i>	Common carp	Metazoa-Chordata-Actinopteri-Cypriniformes-Cyprinidae-Cyprinus-carpio
<i>Danaus plexippus</i>	Monarch butterfly	Metazoa-Arthropoda-Insecta-Lepidoptera-Nymphalidae-Danaus-plexippus
<i>Danio rerio</i>	Zebrafish	Metazoa-Chordata-Actinopteri-Cypriniformes-Danionidae-Danio-rerio

<i>Daphnia magna</i>	Waterflea	Metazoa-Arthropoda-Branchiopoda-Diplostraca-Daphniidae-Daphnia-magna
<i>Dasypus novemcinctus</i>	Xenarthra nine-banded armadillo	Metazoa-Chordata-Mammalia-Cingulata-Dasyopodidae-Dasypus-novemcinctus
<i>Delphinapterus leucas</i>	Beluga whale	Metazoa-Chordata-Mammalia-Artiodactyla-Monodontidae-Delphinapterus-leucas
<i>Dicyema japonicum</i>	Dicyemid	Metazoa-Dicyemida-Class_unclassified-Order_unclassified-Dicyemidae-Dicyema-japonicum
<i>Dimorphilus gyrociliatus</i>	Polychaete worm	Metazoa-Annelida-Polychaeta-Order_unclassified-Dinophilidae-Dimorphilus-gyrociliatus
<i>Diploscapter coronatus</i>	Nematode V	Metazoa-Nematoda-Chromadorea-Rhabditida-Rhabditidae-Diploscapter-coronatus
<i>Ditylenchus destructor</i>	Nematode IV	Metazoa-Nematoda-Chromadorea-Rhabditida-Anguinidae-Ditylenchus-destructor
<i>Ditylenchus dipsaci</i>	Nematode IV	Metazoa-Nematoda-Chromadorea-Rhabditida-Anguinidae-Ditylenchus-dipsaci
<i>Dreissena polymorpha</i>	Zebra mussel	Metazoa-Mollusca-Bivalvia-Myida-Dreissenidae-Dreissena-polymorpha
<i>Dreissena rostriformis</i>	Quagga mussel Dres	Metazoa-Mollusca-Bivalvia-Myida-Dreissenidae-Dreissena-rostriformis
<i>Dromiciops gliroides</i>	Marsupial Monito del monte	Metazoa-Chordata-Mammalia-Microbiotheria-Microbiotheriidae-Dromiciops-gliroides
<i>Drosophila melanogaster</i>	Fruit fly	Metazoa-Arthropoda-Insecta-Diptera-Drosophilidae-Drosophila-melanogaster
<i>Echinococcus multilocularis</i>	Tapeworm	Metazoa-Platyhelminthes-Cestoda-Cyclophyllidea-Taeniidae-Echinococcus-multilocularis
<i>Echinops telfairi</i>	Small Madagascar hedgehog	Metazoa-Chordata-Mammalia-Afrosoricida-Tenrecidae-Echinops-telfairi
<i>Eisenia andrei</i>	Tiger worm relative	Metazoa-Annelida-Clitellata-Crassiclitellata-Lumbricidae-Eisenia-andrei
<i>Electrophorus electricus</i>	Electric eel	Metazoa-Chordata-Actinopteri-Gymnotiformes-Gymnotidae-Electrophorus-electricus
<i>Elephantulus edwardii</i>	Cape elephant shrew	Metazoa-Chordata-Mammalia-Macroselidea-Macroselidea-Elephantulus-edwardii
<i>Elysia chlorotica</i>	Sea slug photosynthesis	Metazoa-Mollusca-Gastropoda-Order_unclassified-Plakobranhidae-Elysia-chlorotica
<i>Elysia marginata</i>	Sea slug photosynthesis	Metazoa-Mollusca-Gastropoda-Order_unclassified-Plakobranhidae-Elysia-marginata
<i>Ephemera danica</i>	Mayfly	Metazoa-Arthropoda-Insecta-Ephemeroptera-Ephemeridae-Ephemera-danica
<i>Ephydatia muelleri</i>	Sea2Water sponge	Metazoa-Porifera-Demospongiae-Spongillida-Spongillidae-Ephydatia-muelleri
<i>Eptatretus burgeri</i>	Inshore hagfish	Metazoa-Chordata-Myxini-Myxiniformes-Myxinidae-Eptatretus-burgeri
<i>Equus caballus</i>	Horse	Metazoa-Chordata-Mammalia-Perissodactyla-Equidae-Equus-caballus
<i>Erinaceus europaeus</i>	Western european hedgehog	Metazoa-Chordata-Mammalia-Eulipotyphla-Erinaceidae-Erinaceus-europaeus
<i>Eulimnadia texana</i>	Desert shrimp	Metazoa-Arthropoda-Branchiopoda-Diplostraca-Limnadiidae-Eulimnadia-texana
<i>Eurytemora affinis</i>	Copepod	Metazoa-Arthropoda-Hexanauplia-Calanoida-Temoridae-Eurytemora-affinis
<i>Felis catus</i>	Cat	Metazoa-Chordata-Mammalia-Carnivora-Felidae-Felis-catus
<i>Folsomia candida</i>	Springtail	Metazoa-Arthropoda-Collembola-Entomobryomorpha-Isotomidae-Folsomia-candida
<i>Frankliniella occidentalis</i>	Western flower thrips	Metazoa-Arthropoda-Insecta-Thysanoptera-Thripidae-Frankliniella-occidentalis
<i>Fukomys damarensis</i>	Damara mole rat	Metazoa-Chordata-Mammalia-Rodentia-Bathyergidae-Fukomys-damarensis

<i>Fundulus heteroclitus</i>	Mummichog killifish Guppies	Metazoa-Chordata-Actinopteri-Cyprinodontiformes-Fundulidae-Fundulus-heteroclitus
<i>Gadus morhua</i>	Cod	Metazoa-Chordata-Actinopteri-Gadiformes-Gadidae-Gadus-morhua
<i>Galemys pyrenaicus</i>	Pyrenean desman	Metazoa-Chordata-Mammalia-Eulipotyphla-Talpidae-Galemys-pyrenaicus
<i>Galeopterus variegatus</i>	Sunda flying lemur	Metazoa-Chordata-Mammalia-Dermoptera-Cynocephalidae-Galeopterus-variegatus
<i>Galleria mellonella</i>	Greater wax moth	Metazoa-Arthropoda-Insecta-Lepidoptera-Pyralidae-Galleria-mellonella
<i>Gigantopelta aegis</i>	Deep sea snail	Metazoa-Mollusca-Gastropoda-Order_unclassified-Peltopiridae-Gigantopelta-aegis
<i>Globicephala melas</i>	Long-finned pilot whale	Metazoa-Chordata-Mammalia-Artiodactyla-Delphinidae-Globicephala-melas
<i>Gopherus evgoodei</i>	Goodes thornscrub tortoise	Metazoa-Chordata-Class_unclassified-Testudines-Testudinidae-Gopherus-evgoodei
<i>Haemonchus contortus</i>	Nematode V	Metazoa-Nematoda-Chromadorea-Strongylida-Haemonchidae-Haemonchus-contortus
<i>Haliotis rubra</i>	Black liped abalone	Metazoa-Mollusca-Gastropoda-Lepetellida-Haliotidae-Haliotis-rubra
<i>Haliotis rufescens</i>	Red abalone	Metazoa-Mollusca-Gastropoda-Lepetellida-Haliotidae-Haliotis-rufescens
<i>Helobdella robusta</i>	Leech	Metazoa-Annelida-Clitellata-Rhynchobdellida-Glossiphoniidae-Helobdella-robusta
<i>Heterocephalus glaber</i>	African naked mole rat	Metazoa-Chordata-Mammalia-Rodentia-Bathyergidae-Heterocephalus-glaber
<i>Hippopotamus amphibius</i>	Hippo	Metazoa-Chordata-Mammalia-Artiodactyla-Hippopotamidae-Hippopotamus-amphibius
<i>Hipposideros armiger</i>	Rhinolophid Hipposideridae great roundleaf bat	Metazoa-Chordata-Mammalia-Chiroptera-Hipposideridae-Hipposideros-armiger
<i>Hirudo medicinalis</i>	Medicinal leech	Metazoa-Annelida-Clitellata-Hirudinida-Hirudinidae-Hirudo-medicinalis
<i>Hofstenia miamia</i>	Acoel flatworm	Metazoa-Xenacoelomorpha-Class_unclassified-Acoela-Hofsteniidae-Hofstenia-miamia
<i>Homarus americanus</i>	American lobster	Metazoa-Arthropoda-Malacostraca-Decapoda-Nephropidae-Homarus-americanus
<i>Homo sapiens</i>	Human	Metazoa-Chordata-Mammalia-Primates-Hominidae-Homo-sapiens
<i>Hormiphora californensis</i>	Ctenophore	Metazoa-Ctenophora-Tentaculata-Cydippida-Pleurobrachiidae-Hormiphora-californensis
<i>Hydra viridissima</i>	Green hydra	Metazoa-Cnidaria-Hydrozoa-Anthoathecata-Hydridae-Hydra-viridissima
<i>Hydra vulgaris</i>	Hydra	Metazoa-Cnidaria-Hydrozoa-Anthoathecata-Hydridae-Hydra-vulgaris
<i>Hydrophis curtus</i>	Shaw's sea snake	Metazoa-Chordata-Lepidosauria-Squamata-Hydrophiidae-Hydrophis-curtus
<i>Hymenolepis microstoma</i>	Rodent tapeworm	Metazoa-Platyhelminthes-Cestoda-Cyclophyllidea-Hymenolepididae-Hymenolepis-microstoma
<i>Hyposmocoma kahamanoa</i>	Oahu moth	Metazoa-Arthropoda-Insecta-Lepidoptera-Cosmopterigidae-Hyposmocoma-kahamanoa
<i>Hypsibius dujardini</i>	Tardigrade	Metazoa-Tardigrada-Eutardigrada-Parachela-Hypsibiidae-Hypsibius-dujardini
<i>Ictalurus punctatus</i>	Channel catfish	Metazoa-Chordata-Actinopteri-Siluriformes-Ictaluridae-Ictalurus-punctatus
<i>Kryptolebias marmoratus</i>	Mangrove rivulus killifish Guppies	Metazoa-Chordata-Actinopteri-Cyprinodontiformes-Rivulidae-Kryptolebias-marmoratus
<i>Ladona fulva</i>	Scarce chaser	Metazoa-Arthropoda-Insecta-Odonata-Libellulidae-Ladona-fulva
<i>Lagenorhynchus obliquidens</i>	Pacific white-sided dolphin	Metazoa-Chordata-Mammalia-Artiodactyla-Delphinidae-Lagenorhynchus-obliquidens



<i>Lamellibrachia luymesii</i>	Deep sea worm	Metazoa-Annelida-Class_unresolved-Order_unresolved-Family_unresolved-Lamellibrachia-luymsi
<i>Laticauda laticaudata</i>	Blue-ringed sea krait	Metazoa-Chordata-Lepidosauria-Squamata-Elapidae-Laticauda-laticaudata
<i>Latimeria chalumnae</i>	Coelacanth	Metazoa-Chordata-Class_unclassified-Coelacanthiformes-Coelacanthidae-Latimeria-chalumnae
<i>Lautoconus ventricosus</i>	Cone snail	Metazoa-Mollusca-Class_unresolved-Order_unresolved-Family_unresolved-Lautoconus-ventricosus
<i>Lepas anserifera</i>	Gooseneck barnacle	Metazoa-Arthropoda-Hexanauplia-Pedunculata-Lepadidae-Lepas-anserifera
<i>Lepeoptheirus salmonis</i>	Sea louse copepod	Metazoa-Arthropoda-Class_unresolved-Order_unresolved-Family_unresolved-Lepeoptheirus-salmonis
<i>Lepidurus apus_apus</i>	Tadpole shrimp	Metazoa-Arthropoda-Branchiopoda-Notostraca-Triopsidae-Lepidurus-apus_apus
<i>Lepidurus apus_lubbocki</i>	Tadpole shrimp	Metazoa-Arthropoda-Branchiopoda-Notostraca-Triopsidae-Lepidurus-apus_lubbocki
<i>Lepidurus arcticus</i>	Tadpole shrimp	Metazoa-Arthropoda-Branchiopoda-Notostraca-Triopsidae-Lepidurus-arcticus
<i>Leptobrachium leishanense</i>	Leishan spiny toad	Metazoa-Chordata-Amphibia-Anura-Megophryidae-Leptobrachium-leishanense
<i>Limnoperna fortunei</i>	Golden mussel	Metazoa-Mollusca-Bivalvia-Mytiloidea-Mytilidae-Limnoperna-fortunei
<i>Limulus polyphemus</i>	Horseshoe crab	Metazoa-Arthropoda-Merostomata-Xiphosura-Limulidae-Limulus-polyphemus
<i>Lingula anatina</i>	Lampshell	Metazoa-Brachiopoda-Lingulata-Lingulida-Lingulidae-Lingula-anatina
<i>Liparis tanakae</i>	Tanaka snailfish	Metazoa-Chordata-Actinopteri-Perciformes-Liparidae-Liparis-tanakae
<i>Lipotes vexillifer</i>	Yangtze River dolphin	Metazoa-Chordata-Mammalia-Artiodactyla-Lipotidae-Lipotes-vexillifer
<i>Lottia gigantea</i>	Owl limpet	Metazoa-Mollusca-Gastropoda-Order_unclassified-Lottiidae-Lottia-gigantea
<i>Loxodonta africana</i>	Afrotherian african savanna elephant	Metazoa-Chordata-Mammalia-Proboscidea-Elephantidae-Loxodonta-africana
<i>Lytechinus variegatus</i>	Green sea urchin	Metazoa-Echinodermata-Echinoidea-Temnopleuroidea-Toxopneustidae-Lytechinus-variegatus
<i>Macrobrachium nipponense</i>	Oriental river prawn	Metazoa-Arthropoda-Malacostraca-Decapoda-Palaemonidae-Macrobrachium-nipponense
<i>Macrostomum lignano</i>	Marine flatworm	Metazoa-Platyhelminthes-Rhabditophora-Macrostomida-Macrostomidae-Macrostomum-lignano
<i>Manis pentadactyla</i>	Chinese pangolin	Metazoa-Chordata-Mammalia-Pholidota-Manidae-Manis-pentadactyla
<i>Margaritifera margaritifera</i>	Sea2Water pearl mussel Unio	Metazoa-Mollusca-Bivalvia-Unionida-Margaritiferidae-Margaritifera-margaritifera
<i>Marisa cornuarietis</i>	Colombian ramshorn apple snail	Metazoa-Mollusca-Gastropoda-Architaenioglossa-Ampullariidae-Marisa-cornuarietis
<i>Mercenaria mercenaria</i>	Hard clam	Metazoa-Mollusca-Bivalvia-Venerida-Veneridae-Mercenaria-mercenaria
<i>Meriones unguiculatus</i>	Mongolian gerbil	Metazoa-Chordata-Mammalia-Rodentia-Muridae-Meriones-unguiculatus
<i>Mesocricetus auratus</i>	Golden hamster	Metazoa-Chordata-Mammalia-Rodentia-Cricetidae-Mesocricetus-auratus
<i>Metaphire vulgaris</i>	Earthworm	Metazoa-Annelida-Clitellata-Crassiclitellata-Megascolecidae-Metaphire-vulgaris
<i>Microcebus murinus</i>	Grey mouse lemur	Metazoa-Chordata-Mammalia-Primates-Cheirogaleidae-Microcebus-murinus
<i>Miniopterus natalensis</i>	Vespertilionoidid Miniopteridae Natal long-fingered bat	Metazoa-Chordata-Mammalia-Chiroptera-Vespertilionidae-Miniopterus-natalensis

<i>Mizuhopecten yessoensis</i>	Giant exo scallop	Metazoa-Mollusca-Bivalvia-Pectinida-Pectinidae-Mizuhopecten-yessoensis
<i>Mnemiopsis leidyi</i>	Warty comb jelly	Metazoa-Ctenophora-Tentaculata-Lobata-Bolinopsidae-Mnemiopsis-leidyi
<i>Modiolus philippinarum</i>	Philippine horse mussel	Metazoa-Mollusca-Bivalvia-Mytiloidea-Mytilidae-Modiolus-philippinarum
<i>Molossus molossus</i>	Vespertilionoidid Molossidae Pallas's mastiff bat	Metazoa-Chordata-Mammalia-Chiroptera-Molossidae-Molossus-molossus
<i>Monodelphis domestica</i>	Marsupial Grey short-tailed opossum	Metazoa-Chordata-Mammalia-Didelphimorphia-Didelphidae-Monodelphis-domestica
<i>Monodon monoceros</i>	Narwhal	Metazoa-Chordata-Mammalia-Artiodactyla-Monodontidae-Monodon-monoceros
<i>Monosiga brevicollis</i>	Unicellular choanoflagellate	Kingdom_unclassified-Phylum_unclassified-Choanoflagellata-Craspedida-Salpingoecidae-Monosiga-brevicollis
<i>Morbakka virulenta</i>	Box jellyfish	Metazoa-Cnidaria-Cubozoa-Carybdeida-Carukiidae-Morbakka-virulenta
<i>Mus musculus</i>	Mouse	Metazoa-Chordata-Mammalia-Rodentia-Muridae-Mus-musculus
<i>Mytilus coruscus</i>	Korean mussel	Metazoa-Mollusca-Bivalvia-Mytiloidea-Mytilidae-Mytilus-coruscus
<i>Mytilus edulis</i>	Blue mussel	Metazoa-Mollusca-Bivalvia-Mytiloidea-Mytilidae-Mytilus-edulis
<i>Mytilus galloprovincialis</i>	Mediterranean mussel	Metazoa-Mollusca-Bivalvia-Mytiloidea-Mytilidae-Mytilus-galloprovincialis
<i>Naja naja</i>	Indian cobra	Metazoa-Chordata-Lepidosauria-Squamata-Elapidae-Naja-naja
<i>Nannospalax galili</i>	Upper Galilee mountains blind mole rat	Metazoa-Chordata-Mammalia-Rodentia-Spalacidae-Nannospalax-galili
<i>Nautilus pompilius</i>	Nautilus	Metazoa-Mollusca-Cephalopoda-Nautilida-Nautilidae-Nautilus-pompilius
<i>Nematostella vectensis</i>	Starlet sea anemone	Metazoa-Cnidaria-Anthozoa-Actiniaria-Edwardsiidae-Nematostella-vectensis
<i>Neoceratodus forsteri</i>	Australian lungfish	Metazoa-Chordata-Class_unclassified-Ceratodontiformes-Ceratodontidae-Neoceratodus-forsteri
<i>Neophocaena asiaeorientalis_asiaeorientalis</i>	Yangtze finless porpoise	Metazoa-Chordata-Mammalia-Artiodactyla-Phocoenidae-Neophocaena-asiaeorientalis_asiaeorientalis
<i>Nilaparvata lugens</i>	Brown planthopper	Metazoa-Arthropoda-Insecta-Hemiptera-Delphacidae-Nilaparvata-lugens
<i>Notechis scutatus</i>	Mainland tiger snake	Metazoa-Chordata-Lepidosauria-Squamata-Elapidae-Notechis-scutatus
<i>Nothobranchius furzeri</i>	Torquoise killifish Guppies	Metazoa-Chordata-Actinopteri-Cyprinodontiformes-Nothobranchiidae-Nothobranchius-furzeri
<i>Notospermus geniculatus</i>	Nemertean worm	Metazoa-Nemertea-Pilidiophora-Heteronemertea-Lineidae-Notospermus-geniculatus
<i>Nymphon striatum</i>	Sea spider	Metazoa-Arthropoda-Pycnogonida-Pantopoda-Nymphonidae-Nymphon-striatum
<i>Octodon degus</i>	Degu	Metazoa-Chordata-Mammalia-Rodentia-Octodontidae-Octodon-degus
<i>Octopus sinensis</i>	East asian common octopus	Metazoa-Mollusca-Cephalopoda-Octopoda-Octopodidae-Octopus-sinensis
<i>Oikopleura dioica</i>	Pelagic seasquirt	Metazoa-Chordata-Appendicularia-Copelata-Oikopleuridae-Oikopleura-dioica
<i>Onchocerca volvulus</i>	Nematode III	Metazoa-Nematoda-Chromadorea-Rhabditida-Onchocercidae-Onchocerca-volvulus
<i>Oncorhynchus mykiss</i>	Rainbow trout	Metazoa-Chordata-Actinopteri-Salmoniformes-Salmonidae-Oncorhynchus-mykiss
<i>Orcinus orca</i>	Killer whale	Metazoa-Chordata-Mammalia-Artiodactyla-Delphinidae-Orcinus-orca

<i>Ornithorhynchus anatinus</i>	Montreme platypus	Metazoa-Chordata-Mammalia-Monotremata-Ornithorhynchidae-Ornithorhynchus-anatinus
<i>Orycteropus afer_afer</i>	Afrotherian aardvark	Metazoa-Chordata-Mammalia-Tubulidentata-Orycteropodidae-Orycteropus-afer_afer
<i>Oryctolagus cuniculus</i>	Lagomorphan rabbit	Metazoa-Chordata-Mammalia-Lagomorpha-Leporidae-Oryctolagus-cuniculus
<i>Oryzias latipes</i>	Medaka Guppies	Metazoa-Chordata-Actinopteri-Beloniformes-Adrianichthyidae-Oryzias-latipes
<i>Owenia fusiformis</i>	Owenid tubeworm	Metazoa-Annelida-Polychaeta-Sabellida-Oweniidae-Owenia-fusiformis
<i>Panagrolaimus es5</i>	Panagrolaimus nematode IV	Metazoa-Nematoda-Class_unresolved-Order_unresolved-Family_unresolved-Panagrolaimus-es5
<i>Panagrolaimus ps1159</i>	Panagrolaimus nematode IV	Metazoa-Nematoda-Class_unresolved-Order_unresolved-Family_unresolved-Panagrolaimus-ps1159
<i>Panagrolaimus superbus</i>	Panagrolaimus nematode IV	Metazoa-Nematoda-Chromadorea-Rhabditida-Panagrolaimidae-Panagrolaimus-superbus
<i>Pangasianodon hypophthalmus</i>	Iridescent shark catfish	Metazoa-Chordata-Actinopteri-Siluriformes-Pangasiidae-Pangasianodon-hypophthalmus
<i>Papilio xuthus</i>	Asian swallowtail butterfly	Metazoa-Arthropoda-Insecta-Lepidoptera-Papilionidae-Papilio-xuthus
<i>Paraescarpia echinospica</i>	Vestimentiferan tubeworm	Metazoa-Annelida-Polychaeta-Sabellida-Siboglinidae-Paraescarpia-echinospica
<i>Paramormyrops kingsleyae</i>	Elephantfish electric fish	Metazoa-Chordata-Actinopteri-Osteoglossiformes-Mormyridae-Paramormyrops-kingsleyae
<i>Pararge aegeria</i>	Specked wood butterfly	Metazoa-Arthropoda-Insecta-Lepidoptera-Nymphalidae-Pararge-aegeria
<i>Patiria miniata</i>	Bat star	Metazoa-Echinodermata-Asteroidea-Valvatida-Asterinidae-Patiria-miniata
<i>Pecten maximus</i>	Great scallop	Metazoa-Mollusca-Bivalvia-Pectinida-Pectinidae-Pecten-maximus
<i>Pediculus humanus_corporis</i>	Human louse	Metazoa-Arthropoda-Insecta-Phthiraptera-Pediculidae-Pediculus-humanus_corporis
<i>Penaeus monodon</i>	Giant tiger prawn	Metazoa-Arthropoda-Malacostraca-Decapoda-Penaeidae-Penaeus-monodon
<i>Periophthalmus magnuspinnatus</i>	Mudskipper Gobies	Metazoa-Chordata-Actinopteri-Gobiiformes-Gobiidae-Periophthalmus-magnuspinnatus
<i>Perna viridis</i>	Asian green mussel	Metazoa-Mollusca-Bivalvia-Mytiloidea-Mytilidae-Perna-viridis
<i>Petromyzon marinus</i>	Inshore lamprey	Metazoa-Chordata-Hypermartia-Petromyzontiformes-Petromyzontidae-Petromyzon-marinus
<i>Phascolarctos cinereus</i>	Marsupial Koala	Metazoa-Chordata-Mammalia-Diprotodontia-Phascolarctidae-Phascolarctos-cinereus
<i>Phoca vitulina</i>	Harbor seal	Metazoa-Chordata-Mammalia-Carnivora-Phocidae-Phoca-vitulina
<i>Phocoena sinus</i>	Vaquita	Metazoa-Chordata-Mammalia-Artiodactyla-Phocoenidae-Phocoena-sinus
<i>Phoronis australis</i>	Phoronid worm	Metazoa-Phoronida-Class_unclassified-Order_unclassified-Family_unclassified-Phoronis-australis
<i>Photinus pyralis</i>	Common eastern firefly	Metazoa-Arthropoda-Insecta-Coleoptera-Lampyridae-Photinus-pyralis
<i>Phyllostomus discolor</i>	Noctilionoidid Phyllostomidae pale spear-nosed bat	Metazoa-Chordata-Mammalia-Chiroptera-Phyllostomidae-Phyllostomus-discolor
<i>Physeter catodon</i>	Sperm whale	Metazoa-Chordata-Mammalia-Artiodactyla-Physeteridae-Physeter-catodon
<i>Pinctada fucata</i>	Akoya pearl oyster	Metazoa-Mollusca-Bivalvia-Pterioidea-Pteriidae-Pinctada-fucata

<i>Pipistrellus kuhlii</i>	Vespertilionoidid Vespertilionidae Kuhl's pipistrelle	Metazoa-Chordata-Mammalia-Chiroptera- Vespertilionidae-Pipistrellus-kuhlii
<i>Plakobranthus ocellatus</i>	Sea slug	Metazoa-Mollusca-Gastropoda-Order_unclassified- Plakobranthidae-Plakobranthus-ocellatus
<i>Plectus sambesii</i>	Nematode C	Metazoa-Nematoda-Chromadorea-Plectida-Plectidae- Plectus-sambesii
<i>Plutella xylostella</i>	Diamondback moth	Metazoa-Arthropoda-Insecta-Lepidoptera-Plutellidae- Plutella-xylostella
<i>Poecilia latipinna</i>	Molly Guppies	Metazoa-Chordata-Actinopteri-Cyprinodontiformes- Poeciliidae-Poecilia-latipinna
<i>Poeciliopsis occidentalis</i>	Topminnow Guppies	Metazoa-Chordata-Actinopteri-Cyprinodontiformes- Poeciliidae-Poeciliopsis-occidentalis
<i>Polistes fuscatus</i>	common paper wasp	Metazoa-Arthropoda-Insecta-Hymenoptera-Vespidae- Polistes-fuscatus
<i>Pollicipes pollicipes</i>	Barnacle	Metazoa-Arthropoda-Hexanauplia-Pedunculata- Pollicipedidae-Pollicipes-pollicipes
<i>Polypedilum vanderplanki</i>	Sleeping chironomid midge	Metazoa-Arthropoda-Insecta-Diptera-Chironomidae- Polypedilum-vanderplanki
<i>Pomacea canaliculata</i>	Golden apple snail	Metazoa-Mollusca-Gastropoda-Architaenioglossa- Ampullariidae-Pomacea-canaliculata
<i>Pontoporia blainvillei</i>	Franciscana	Metazoa-Chordata-Mammalia-Artiodactyla- Pontoporiidae-Pontoporia-blainvillei
<i>Portunus trituberculatus</i>	Swimming crab	Metazoa-Arthropoda-Malacostraca-Decapoda- Portunidae-Portunus-trituberculatus
<i>Potamilus streckersoni</i>	Sea2Water mussel Unio	Metazoa-Mollusca-Bivalvia-Unionida-Unionidae- Potamilus-streckersoni
<i>Priapulus caudatus</i>	Priapulid worm	Metazoa-Priapulida-Priapulimorpha-Priapulimorphida- Priapulidae-Priapulus-caudatus
<i>Pristionchus pacificus</i>	Genetic model nematode V	Metazoa-Nematoda-Chromadorea-Rhabditida- Neodiplogasteridae-Pristionchus-pacificus
<i>Procambarus virginalis</i>	Crayfish	Metazoa-Arthropoda-Malacostraca-Decapoda- Cambaridae-Procambarus-virginalis
<i>Propanagrolaimus ju765</i>	Propanagrolaimus nematode IV	Metazoa-Nematoda-Class_unresolved- Order_unresolved-Family_unresolved- Propanagrolaimus-ju765
<i>Protopterus annectens</i>	African lungfish	Metazoa-Chordata-Class_unclassified- Ceratodontiformes-Protopteridae-Protopterus-annectens
<i>Pseudoliparis swirei</i>	Mariana hadal snailfish	Metazoa-Chordata-Actinopteri-Perciformes-Liparidae- Pseudoliparis-swirei
<i>Pseudoliparis YAP</i>	Hadal snailfish	Metazoa-Chordata-Class_unresolved-Order_unresolved- Family_unresolved-Pseudoliparis-YAP
<i>Pseudonaja textilis</i>	Eastern brown snake	Metazoa-Chordata-Lepidosauria-Squamata-Elapidae- Pseudonaja-textilis
<i>Pygocentrus nattereri</i>	Piranha	Metazoa-Chordata-Actinopteri-Characiformes- Serrasalminidae-Pygocentrus-nattereri
<i>Ramazzottius varieornatus</i>	Tardigrade	Metazoa-Tardigrada-Eutardigrada-Parachela- Ramazzottiidae-Ramazzottius-varieornatus
<i>Rana temporaria</i>	Frog	Metazoa-Chordata-Amphibia-Anura-Ranidae-Rana- temporaria
<i>Rattus norvegicus</i>	Rat	Metazoa-Chordata-Mammalia-Rodentia-Muridae-Rattus- norvegicus
<i>Rhinolophus ferrumequinum</i>	Rhinolophid Rhinolophidae greater horseshoe bat	Metazoa-Chordata-Mammalia-Chiroptera-Rhinolophidae- Rhinolophus-ferrumequinum
<i>Rhizomys pruinosus</i>	Hoary bamboo rat	Metazoa-Chordata-Mammalia-Rodentia-Spalacidae- Rhizomys-pruinosus
<i>Rhopalosiphum maidis</i>	Corn leaf aphid	Metazoa-Arthropoda-Insecta-Hemiptera-Aphididae- Rhopalosiphum-maidis
<i>Rhopilema esculentum</i>	Flame jellyfish	Metazoa-Cnidaria-Scyphozoa-Rhizostomeae- Rhizostomatidae-Rhopilema-esculentum

<i>Rotaria socialis</i>	Rotifer	Metazoa-Rotifera-Eurotatoria-Order_unclassified-Family_unclassified-Rotaria-socialis
<i>Rousettus aegyptiacus</i>	Pteropodid Pteropodidae egyptian rousette	Metazoa-Chordata-Mammalia-Chiroptera-Pteropodidae-Rousettus-aegyptiacus
<i>Saccoglossus kowalevskii</i>	Acorn worm	Metazoa-Hemichordata-Enteropneusta-Order_unclassified-Harrimaniidae-Saccoglossus-kowalevskii
<i>Saccostrea glomerata</i>	Sydney rock oyster	Metazoa-Mollusca-Bivalvia-Ostreida-Ostreidae-Saccostrea-glomerata
<i>Salmo salar</i>	Salmon	Metazoa-Chordata-Actinopteri-Salmoniformes-Salmonidae-Salmo-salar
<i>Salvelinus namaycush</i>	Lake trout	Metazoa-Chordata-Actinopteri-Salmoniformes-Salmonidae-Salvelinus-namaycush
<i>Sarcophilus harrisii</i>	Marsupial Tasmanian devil	Metazoa-Chordata-Mammalia-Dasyuromorphia-Dasyuridae-Sarcophilus-harrisii
<i>Scapharca broughtonii</i>	Blood clam	Metazoa-Mollusca-Class_unresolved-Order_unresolved-Family_unresolved-Scapharca-broughtonii
<i>Schistosoma mansoni</i>	Blood fluke	Metazoa-Platyhelminthes-Trematoda-Strigeidida-Schistosomatidae-Schistosoma-mansoni
<i>Schmidtea mediterranea</i>	Sea2Water triclad flatworm	Metazoa-Platyhelminthes-Rhabditophora-Tricladida-Dugesidae-Schmidtea-mediterranea
<i>Scleropages formosus</i>	Asian arowana electric fish	Metazoa-Chordata-Actinopteri-Osteoglossiformes-Osteoglossidae-Scleropages-formosus
<i>Sepia pharaonis</i>	Pharaoh cuttlefish	Metazoa-Mollusca-Cephalopoda-Sepiida-Sepiidae-Sepia-pharaonis
<i>Sinocyclocheilus anshuiensis</i>	Barbine	Metazoa-Chordata-Actinopteri-Cypriniformes-Cyprinidae-Sinocyclocheilus-anshuiensis
<i>Sinocyclocheilus grahami</i>	Golden barbel barbine	Metazoa-Chordata-Actinopteri-Cypriniformes-Cyprinidae-Sinocyclocheilus-grahami
<i>Sinocyclocheilus rhinoceros</i>	Barbine	Metazoa-Chordata-Actinopteri-Cypriniformes-Cyprinidae-Sinocyclocheilus-rhinoceros
<i>Sinonovacula constricta</i>	Razor clam	Metazoa-Mollusca-Bivalvia-Cardiida-Solecurtidae-Sinonovacula-constricta
<i>Solenopsis invicta</i>	Fire ant	Metazoa-Arthropoda-Insecta-Hymenoptera-Formicidae-Solenopsis-invicta
<i>Sorex araneus</i>	European shrew	Metazoa-Chordata-Mammalia-Eulipotyphla-Soricidae-Sorex-araneus
<i>Sousa chinensis</i>	Indo-pacific humpbacked dolphin	Metazoa-Chordata-Mammalia-Artiodactyla-Delphinidae-Sousa-chinensis
<i>Sphaeroforma arctica</i>	Unicell	Kingdom_unclassified-Phylum_unclassified-Ichthyosporea-Ichthyophonida-Family_unclassified-Sphaeroforma-arctica
<i>Sphenodon punctatus</i>	Tuatara	Metazoa-Chordata-Lepidosauria-Sphenodontia-Sphenodontidae-Sphenodon-punctatus
<i>Spodoptera frugiperda</i>	Fall armyworm moth	Metazoa-Arthropoda-Insecta-Lepidoptera-Noctuidae-Spodoptera-frugiperda
<i>Streblospio benedicti</i>	Ram's horn worm	Metazoa-Annelida-Polychaeta-Spionida-Spionidae-Streblospio-benedicti
<i>Strix occidentalis_caurina</i>	Northern spotted owl	Metazoa-Chordata-Aves-Strigiformes-Strigidae-Strix-occidentalis_caurina
<i>Strongylocentrotus purpuratus</i>	Sea urchin	Metazoa-Echinodermata-Echinoidea-Camarodonta-Strongylocentrotidae-Strongylocentrotus-purpuratus
<i>Styela clava</i>	Stalked sea squirt	Metazoa-Chordata-Ascidacea-Stolidobranchia-Styelidae-Styela-clava
<i>Sus scrofa</i>	Pig	Metazoa-Chordata-Mammalia-Artiodactyla-Suidae-Sus-scrofa
<i>Taenia multiceps</i>	Tapeworm	Metazoa-Platyhelminthes-Cestoda-Cyclophyllidea-Taeniidae-Taenia-multiceps
<i>Taeniopygia guttata</i>	Zebra finch	Metazoa-Chordata-Aves-Passeriformes-Estrildidae-Taeniopygia-guttata

<i>Talpa occidentalis</i>	Iberian mole	Metazoa-Chordata-Class_unresolved-Order_unresolved-Family_unresolved-Talpa-occidentali
<i>Teleogryllus occipitalis</i>	Cricket	Metazoa-Arthropoda-Insecta-Orthoptera-Gryllidae-Teleogryllus-occipitalis
<i>Tetraodon nigroviridis</i>	Pufferfish	Metazoa-Chordata-Actinopteri-Tetraodontiformes-Tetraodontidae-Tetraodon-nigroviridis
<i>Thelohanellus kitauei</i>	Mxyozoan parasite	Metazoa-Cnidaria-Myxozoa-Bivalvulida-Myxobolidae-Thelohanellus-kitauei
<i>Thrips palmi</i>	Thrip	Metazoa-Arthropoda-Insecta-Thysanoptera-Thripidae-Thrips-palmi
<i>Tigriopus californicus</i>	Tigger Pod copepod	Metazoa-Arthropoda-Hexanauplia-Harpacticoida-Harpacticidae-Tigriopus-californicus
<i>Tribolium madens</i>	Black flour beetle	Metazoa-Arthropoda-Insecta-Coleoptera-Tenebrionidae-Tribolium-madens
<i>Trichechus manatus_latirostris</i>	Florida manatee	Metazoa-Chordata-Mammalia-Sirenia-Trichechidae-Trichechus-manatus_latirostris
<i>Trichoplax adhaerens</i>	Placozoan	Metazoa-Placozoa-Class_unclassified-Order_unclassified-Trichoplacidae-Trichoplax-adhaerens
<i>Triops cancriformis</i>	Tadpole shrimp	Metazoa-Arthropoda-Branchiopoda-Notostraca-Triopsidae-Triops-cancriformis
<i>Triops longicaudatus</i>	Tadpole shrimp	Metazoa-Arthropoda-Branchiopoda-Notostraca-Triopsidae-Triops-longicaudatus
<i>Tupaia chinensis</i>	Scandentian chinese tree shrew	Metazoa-Chordata-Mammalia-Scandentia-Tupaiidae-Tupaia-chinensis
<i>Tursiops truncatus</i>	Common bottlenose dolphin	Metazoa-Chordata-Mammalia-Artiodactyla-Delphinidae-Tursiops-truncatus
<i>Vicugna vicugna_mensalis</i>	Vicugna	Metazoa-Chordata-Mammalia-Artiodactyla-Camelidae-Vicugna-vicugna_mensalis
<i>Vombatus ursinus</i>	Marsupial Common wombat	Metazoa-Chordata-Mammalia-Diprotodontia-Vombatidae-Vombatus-ursinus
<i>Xenopus laevis</i>	African clawed frog	Metazoa-Chordata-Amphibia-Anura-Pipidae-Xenopus-laevis
<i>Xenopus tropicalis</i>	Western clawed frog	Metazoa-Chordata-Amphibia-Anura-Pipidae-Xenopus-tropicalis
<i>Zalophus californianus</i>	Sea lion	Metazoa-Chordata-Mammalia-Carnivora-Otariidae-Zalophus-californianus
<i>Zerene cesonia</i>	Dogface butterfly	Metazoa-Arthropoda-Insecta-Lepidoptera-Pieridae-Zerene-cesonia
<i>Zootoca vivipara</i>	Common lizard	Metazoa-Chordata-Lepidosauria-Squamata-Lacertidae-Zootoca-vivipara

## Supplementary Table S2 – Species selected for genome-scale phylogenetic analysis of P2XRs.

Species used in the creation of figure 7 and supplementary figure S4 and the source for each genome.

Organism	Location of genome data
Dictyostelium discoideum	<a href="https://www.ncbi.nlm.nih.gov/data-hub/genome/GCF_000004695.1/">https://www.ncbi.nlm.nih.gov/data-hub/genome/GCF_000004695.1/</a>
Monosiga brevicollis	<a href="https://www.ncbi.nlm.nih.gov/genome/713?genome_assembly_id=30632">https://www.ncbi.nlm.nih.gov/genome/713?genome_assembly_id=30632</a>
Amphimedon queenslandica	<a href="https://www.ncbi.nlm.nih.gov/genome/annotation_euk/Amphimedon_queenslandica/102/">https://www.ncbi.nlm.nih.gov/genome/annotation_euk/Amphimedon_queenslandica/102/</a>
Mnemiopsis leidyi	<a href="https://metazoa.ensembl.org/Mnemiopsis_leidyi/Info/Annotation/#assembly">https://metazoa.ensembl.org/Mnemiopsis_leidyi/Info/Annotation/#assembly</a>
Trichoplax adhaerens	<a href="https://www.ncbi.nlm.nih.gov/assembly/GCF_000150275.1/#/st">https://www.ncbi.nlm.nih.gov/assembly/GCF_000150275.1/#/st</a>
Thelohanellus kitauei	<a href="https://www.ncbi.nlm.nih.gov/data-hub/genome/GCA_000827895.1/">https://www.ncbi.nlm.nih.gov/data-hub/genome/GCA_000827895.1/</a>
Morbakka virulenta	<a href="https://marinegenomics.oist.jp/morbakka_virulenta/download/MOR05_r06_proteins.fa.gz">https://marinegenomics.oist.jp/morbakka_virulenta/download/MOR05_r06_proteins.fa.gz</a>
Nematostella vectensis	<a href="https://genomes.stowers.org/files/pub/nematostella/Nvec/genomes/Nvec200/aligned/tcs_v2/tcs_v2.20211013.protein.versioned.fasta">https://genomes.stowers.org/files/pub/nematostella/Nvec/genomes/Nvec200/aligned/tcs_v2/tcs_v2.20211013.protein.versioned.fasta</a>
Acropora millepora	<a href="https://www.ncbi.nlm.nih.gov/genome/annotation_euk/Acropora_millepora/100/">https://www.ncbi.nlm.nih.gov/genome/annotation_euk/Acropora_millepora/100/</a>
Rhopilema esculentum	<a href="https://www.ncbi.nlm.nih.gov/data-hub/genome/GCA_013076305.1/">https://www.ncbi.nlm.nih.gov/data-hub/genome/GCA_013076305.1/</a>
Clytia hemisphaerica	<a href="https://ftp.ensemblgenomes.ebi.ac.uk/pub/metazoa/release-56/fasta/clytia_hemisphaerica_gca902728285/pep/Clytia_hemisphaerica_gca902728285.GCA902728285v1.pep.all.fa.gz">https://ftp.ensemblgenomes.ebi.ac.uk/pub/metazoa/release-56/fasta/clytia_hemisphaerica_gca902728285/pep/Clytia_hemisphaerica_gca902728285.GCA902728285v1.pep.all.fa.gz</a>
Lottia gigantea	<a href="https://metazoa.ensembl.org/Lottia_gigantea/Info/Annotation/">https://metazoa.ensembl.org/Lottia_gigantea/Info/Annotation/</a>
Limulus polyphemus	<a href="https://www.ncbi.nlm.nih.gov/genome/annotation_euk/Limulus_polyphemus/101/">https://www.ncbi.nlm.nih.gov/genome/annotation_euk/Limulus_polyphemus/101/</a>
Branchiostoma floridae	<a href="https://www.ncbi.nlm.nih.gov/genome/annotation_euk/Branchiostoma_floridae/100/">https://www.ncbi.nlm.nih.gov/genome/annotation_euk/Branchiostoma_floridae/100/</a>
Homo sapiens	<a href="https://www.ensembl.org/Homo_sapiens/Info/Annotation">https://www.ensembl.org/Homo_sapiens/Info/Annotation</a>
Allomyces macrogynus	<a href="https://www.ncbi.nlm.nih.gov/data-hub/genome/GCA_000151295.1/">https://www.ncbi.nlm.nih.gov/data-hub/genome/GCA_000151295.1/</a>
Ostreococcus tauri	<a href="https://www.ncbi.nlm.nih.gov/data-hub/genome/GCF_000214015.3/">https://www.ncbi.nlm.nih.gov/data-hub/genome/GCF_000214015.3/</a>

**Supplementary Table S3 – *Clytia* P2XR gene information**

Table of the putative P2X gene locations within the *Clytia* genome.

<b>Clytia name</b>	<b>Transcript</b>	<b>gene</b>	<b>coordinates</b>	
ChP2X1	TCONS_00012680	XLOC_007123	sc0000147:234352..239148 +	
ChP2X2	TCONS_00058261	XLOC_036701	scaffold_309:662166..672147 +	
ChP2X3	TCONS_00058302	XLOC_036723	scaffold_309:672814..694604 -	
ChP2X4	TCONS_00058308	XLOC_036725	scaffold_309:695613..708230 -	



## Supplementary References

S1. Sievers, F. *et al.* Fast, scalable generation of high-quality protein multiple sequence alignments using Clustal Omega. *Molecular Systems Biology* **7**, 539 (2011).