Release Notes:
Omics Playground v3.5.0

v3.5.0-beta8+master240819

BigOmics Analytics Inc.

August 2024

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Overview

Scope

The purpose of this document is to provide information of new features and version information of used databases of this newly released version of OmicsPlayground.The scope of this Release Notes document is not limited to the below:

- New features
- Bug fixes and improvement on code level
- Used gene annotation databases and their version
- Operating System (OS), R and R packages version
- OmicsPlayground configuration and default settings

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1 What's new in OmicsPlayground v3.5.0

1.1 Full Proteomics Support

- Missing value imputation using `SVDimpute`
- New normalization methods: `maxMedian` and `maxSum`
- Text and labels are adapted for proteomics terminologies
- UNIPROT id's are detected and annotated automatically
- Reference links to UniProtKB and PhosphoSite databases

1.2 Extended species support

OmicsPlayground v3.5.0 now supports annotation of well over 200 different species.

- Automatic annotation from ENSEMBL, symbol, UNIPROT or accession number.
- Automatic annotation to human ortholog gene/protein.
- Automatic annotation of organism-specific Gene Ontology

1.3 Automatic Reports

Also new in v3.5.0 is the ability to create automatic visual reports in PDF format.

1.4 New modules/boards

- The Prize-Collection Steiner Tree (PCSF) module (previously in beta) is now standard included under "SystemBio" in the main menu.

1.5 Improved information on methods

We have much improved the information about the methods including references for each plot or table. Click on the 'i' button on the top right of each plot to see this. This information can be copy and pasted for your paper submission.

1.6 Improved information on plot settings

For improved reproducibility, when downloading plots, you have now the possibility to include the plot settings in the PDF. In this way, you can remember what settings you used to create the plot.

1.7 Other new features

- feat: use database for credentials + expiry (prototype)
- feat: utils for database
- feat: read options from database
- feat: add modal wizard to the upload module
- feat: upload new data button now works
- feat: upload button now has bigomics styles
- feat: disable upload tab and handle upload UI directly via modal calls
- feat: upload module can now be triggered via load dataset module button
- feat: modal upload can now be triggered by welcome board
- feat: upload module is not triggered at startup
- feat: Add legend and checklist to upload_table_preview_counts_ui via server rendering
- feat: dynamically render UI based on input of counts
- feat: counts are now passing directly from counts_ui to checked_counts
- feat: wizard can now be locked based on state of input file
- feat: restyle buttons and load example counts when clicking load_example button
- feat: logic for counts when other input files are uploaded
- feat: handle deletion of samples when contrasts are already uploaded
- feat: contrast builder is embedded into contrasts_ui
- feat: dynamically render contrast builder
- feat: wizard now sends message to compute and active step
- feat: upload module now responds to wizard commands
- feat: rename compute tab and add an additional tab for review, to avoid the locking issues
- feat: contrasts step now (un)locks depending on modified_ct
- feat: block new uploads if we already have a processx computation running
- feat: shinyvalidate now works!
- feat: countsstats is displays correctly and checkTables deprecated input removed
- feat: manage to render the plots in correct size (with a lot of flickering)
- feat: initial prototype of wizard reset
- feat: wizard reset on new upload
- feat: wizard works without conflicts with shinyvalidate and shinyalert (preventing re-initializa
- feat: pass wizard controls to fire updateSelectInput exactly when contrast builder is triggered
- feat: validate dataset name is not at upload_server level for better wizard control
- feat: end of computation does not trigger new wizard upload
- feat: reset conditions when user add contrast
- feat: prevent updateTextInput newname observer to change upon reset of builder
- feat: shinyvalidate does not need to to be triggered at page trigger
- feat: improve ux by warning user that a locked button was clicked
- feat: centralize all warnings to give real-time feedback to use (in alerts, embed in wizard...)
- feat: add shinyalert with error message only
- feat: add default step layout to batch correction module
- feat: option to color or not (up/down reg) volcano plots
- feat: echo playbase branch
- feat: aux function to check if user in DB
- feat: if user in DB use it, otherwise use user folder OPTIONS
- feat: extra duration for clustering board
- feat: colo up/down MA plot
- feat: act matrix with plotly
- feat: disable legen on small plot
- feat: drugconnect actmatrix change color gradient

- feat: pathway actmatrix change color ramp
- feat: pathway invert y axis
- new: add detection of mobile and show warning

2 What has been fixed in v3.5.0

Bug fixes improve security and stability of our application. Our team is continuously resolving bugs and errors. If you find a bug, please contact us or report this as an Issue at our GitHub page.

- fix: cookie + database fixes
- fix: umap different
- fix: umap mismatch problem
- improve button spacing
- improve color style of navbar steps when steps succeed
- improve styles of margins
- improve button border color style
- improve styling of wizard buttons to match load board styles
- improve style of run comparison builder
- fix: unload sidebar correctly
- fix: clean sidebar when loading welcome board
- minor improvements
- feat: improve ux by warning user that a locked button was clicked
- improve styles
- improve UI; match color/style of contrast builder button across entire upload
- improve style of comparison upload widget text
- minor fix: replace contrast with comparison
- improvement in alert message when step is incomplete
- attempt to improve bs_alert layout
- improve styles of description step
- improve style of computation options
- improve spacing between computation options; reorder description inputs
- minor improvement in message
- minor improvements in message
- add option to leave BC; reset BC state when wizard resets; improve leave BC button
- fix: move specific packages after playbase installation
- temp fix: to be removed after deploying new base image
- fix: show info text when no geneset is selected
- fix: remove test -- workflow is now fixed
- fix: use pgx geneset genes
- fix: remove browser
- fix: remove unused values
- fix: remove unused wait
- fix: extra time + connectivity more duration
- fix: threshold
- fix: add plot options
- fix: robust file extension detection
- fix: detect colored columns after modifying `df`
- fix: change drugconnect color scale + order
- fix: do not check user on credentials on this auth metdho

- fix: use db when logged with cookie
- fix: if no labels matched return plain wikipath
- fix: use mail variable, not reactive
- fix: use dir variable, not reactive
- fix: use req with a logic condition
- fix: plot tissue csv
- fix: plot barplot csv
- fix: plot decisiontree csv
- fix: plot boxplot csv
- fix: plot heatmap csv
- fix: plot correlation csv
- fix: plot volcanomethods csv
- fix: Partial correlation network csv download
- fix: Mechanism of action csv download
- fix: Activation matrix csv download
- fix: Similarity scores csv download
- fix: upload files check
- fix: singlecell broken csv download (removed them)
- fix: Enrichment analysis csv download
- fix: Frequency in top gene sets csv download
- fix: Differential expression analysis csv download
- fix: Dataset abundance of major gene types csv download
- fix: Abundance of major gene types per group csv download
- fix: Contrast table csv download
- fix: Correlation scatter plots csv download
- fix: abort invite if no mail server
- fix: abort invite if no mail server
- fix: Expression of top differentially expressed genes csv download
- fix: Gene in comparisson csv download
- fix: QC tab not appearing
- fix: use custom genelist when selected
- fix: unresponsive close button in modal
- fix: sending invite
- fix: reactivity feature map plots
- fix: show all contrasts
- fix: react on contrasts missing in pgx

3 External Databases

3.1 Genomic annotation

For the major organism (Human, Mouse and Rat) we have manually included the most up-to-date annotation databases as provided by the latest `org.Xx.eg.db` packages in BioConductor.

3.1.1 Homo Sapiens (Human)

name	value
DBSCHEMAVERSION	2.1
Db type	OrgDb
Supporting package	AnnotationDbi
DBSCHEMA	HUMAN_DB
ORGANISM	Homo sapiens
SPECIES	Human
EGSOURCEDATE	2024-Mar12
EGSOURCENAME	Entrez Gene
EGSOURCEURL	ftp://ftp.ncbi.nlm.nih.gov/gene/DATA
CENTRALID	EG
TAXID	9606
GOSOURCENAME	Gene Ontology
GOSOURCEURL	http://current.geneontology.org/ontology/go-basic.obo
GOSOURCEDATE	2024-01-17
GOEGSOURCEDATE	2024-Mar12
GOEGSOURCENAME	Entrez Gene
GOEGSOURCEURL	ftp://ftp.ncbi.nlm.nih.gov/gene/DATA
GPSOURCENAME	UCSC Genome Bioinformatics (Homo sapiens)
GPSOURCEURL	
GPSOURCEDATE	2024-Feb29
ENSOURCEDATE	2023-Nov22
ENSOURCENAME	Ensembl
ENSOURCEURL	ftp://ftp.ensembl.org/pub/current_fasta
UPSOURCENAME	Uniprot
UPSOURCEURL	http://www.UniProt.org/
UPSOURCEDATE	Thu Apr 18 21:39:39 2024

3.1.2 Mus Musculus (Mouse)

name	value
DBSCHEMAVERSION	2.1

name	value
Db type	OrgDb
Supporting package	AnnotationDbi
DBSCHEMA	MOUSE_DB
ORGANISM	Mus musculus
SPECIES	Mouse
EGSOURCEDATE	2024-Mar12
EGSOURCENAME	Entrez Gene
EGSOURCEURL	ftp://ftp.ncbi.nlm.nih.gov/gene/DATA
CENTRALID	EG
TAXID	10090
GOSOURCENAME	Gene Ontology
GOSOURCEURL	http://current.geneontology.org/ontology/go-basic.obo
GOSOURCEDATE	2024-01-17
GOEGSOURCEDATE	2024-Mar12
GOEGSOURCENAME	Entrez Gene
GOEGSOURCEURL	ftp://ftp.ncbi.nlm.nih.gov/gene/DATA
GPSOURCENAME	UCSC Genome Bioinformatics (Mus musculus)
GPSOURCEURL	
GPSOURCEDATE	2024-Feb29
ENSOURCEDATE	2023-Nov22
ENSOURCENAME	Ensembl
ENSOURCEURL	ftp://ftp.ensembl.org/pub/current_fasta
UPSOURCENAME	Uniprot
UPSOURCEURL	http://www.UniProt.org/
UPSOURCEDATE	Thu Apr 18 21:47:52 2024

3.1.3 Rattus Norvegicus (Rat)

name	value
DBSCHEMAVERSION	2.1
Db type	OrgDb
Supporting package	AnnotationDbi
DBSCHEMA	RAT_DB
ORGANISM	Rattus norvegicus
SPECIES	Rat
EGSOURCEDATE	2024-Mar12
EGSOURCENAME	Entrez Gene
EGSOURCEURL	ftp://ftp.ncbi.nlm.nih.gov/gene/DATA
CENTRALID	EG
TAXID	10116
GOSOURCENAME	Gene Ontology
GOSOURCEURL	http://current.geneontology.org/ontology/go-basic.obo
GOSOURCEDATE	2024-01-17
GOEGSOURCEDATE	2024-Mar12
GOEGSOURCENAME	Entrez Gene
GOEGSOURCEURL	ftp://ftp.ncbi.nlm.nih.gov/gene/DATA
GPSOURCENAME	UCSC Genome Bioinformatics (Rattus norvegicus)
GPSOURCEURL	
GPSOURCEDATE	2021-Apr27

ENSOURCEDATE	2023-Nov22
ENSOURCENAME	Ensembl
ENSOURCEURL	ftp://ftp.ensembl.org/pub/current_fasta
UPSOURCENAME	Uniprot
UPSOURCEURL	http://www.UniProt.org/
UPSOURCEDATE	Thu Apr 18 21:41:50 2024

3.1.4 Other supported species

OmicsPlayground v3.5.0 supports annotation of a total of 298 species. For these organisms, we use the `AnnotationHub` package with snapshot date 2023-10-23. For annotation to human ortholog we use `orthogene` package.

organism_id	species
80966	Acanthochromis polyacanthus
7029	Acyrthosiphon pisum
7159	Aedes aegypti
7160	Aedes albopictus
9646	Ailuropoda melanoleuca
13333	Amborella trichopoda
400682	Amphimedon queenslandica
80972	Amphiprion ocellaris
64144	Amphiprion testudineus
4615	Ananas comosus
8839	Anas boschas
28377	Anolis carolinensis
7173	Anopheles arabiensis
62324	Anopheles funestus
30066	Anopheles merus
30069	Anopheles mysorensis
217634	Anoplophora glabripennis
37293	Aotus nancymaae
112090	Aphanomyces astaci
157072	Aphanomyces invadans
223781	Aquila chrysaetos_chrysaetos
81972	Arabidopsis lyrata_subsp._lyrata
3702	Arabidopsis thaliana
4686	Asparagus officinalis
8154	Astatotilapia calliptera
7994	Astyanax mexicanus
9771	Balaena musculus
7038	Aleurodes tabaci
3555	Beta vulgaris_subsp._vulgaris
158456	Betta splendens
6526	Australorbis glabratus
43346	Bison bison_bison
7091	Bombyx mori
30522	Bos indicus_x_Bos_taurus
72004	Bos grunniens_mutus
9913	Bos taurus

15368	Brachypodium distachyon
3708	Brassica napus
3711	Brassica rapa
6238	Caenorhabditis briggsae
6239	Caenorhabditis elegans
31234	Caenorhabditis remanei
9483	Callithrix jacchus_jacchus
7868	Callorhinchus milii
90675	Camelina sativa
9838	Camelus dromedarius
286419	Canis dingo
9615	Canis familiaris
3483	Cannabis sativa
9925	Capra aegagrus_hircus
4072	Capsicum annuum
7957	Carassius auratus
1868482	Carlito syrichta
10141	Cavia aperea_porcellus
2715852	Cebus capucinus_imitator
9531	Cercocebus atys
106734	Chelonoidis abingdonii
63459	Chenopodium quinoa
34839	Chinchilla lanigera
3055	Chlamydomonas reinhardtii
60711	Cercopithecus aethiops_sabaeus
7719	Ascidia intestinalis
85681	Citrus clementina
7950	Clupea harengus_harengus
13451	Corylus avellana
56716	Aphritis gobio
93934	Coturnix coturnix_japanica
29159	Crassostrea gigas
10029	Cricetulus barabensis_griseus
8502	Crocodylus porosus
3656	Cucumis melo
3659	Cucumis sativus
7176	Culex fatigans
8103	Cyclopterus lumpus
244447	Cynoglossus (Arelia)_semilaevis
28743	Cyprinodon variegatus
7962	Cyprinus carpio
7955	Danio rerio
35525	Daphnia magna
6669	Daphnia pulex
9361	Dasypus novemcinctus
79200	Daucus carota_subsp._sativus
9749	Delphinapterus leucas
77166	Dendroctonus ponderosae
299321	Denticeps clupeoides
13489	Dicentrarchus labrax
55577	Dioscorea cayenensis_subsp._rotundata
10020	Dipodomys ordii

7217	Drosophila ananassae
7220	Drosophila erecta
7227	Drosophila melanogaster
7230	Drosophila mohavensis
7234	Drosophila persimilis
7238	Drosophila sechellia
7240	Drosophila simulans
7244	Drosophila virilis
7260	Drosophila willistoni
7245	Drosophila yakuba
9371	Echinops telfairii
8005	Electrophorus electricus
280463	Emiliania huxleyi_CCMP1516
9796	Equus caballus
9365	Erinaceus europaeus
27687	Calamoichthys calabaricus
71139	Eucalyptus grandis
72664	Arabidopsis salsuginea
9685	Felis catus
59894	Ficedula albicollis
158441	Folsomia candida
8078	Cobitis heteroclita
426428	Fusarium oxysporum_f._sp._lycopersici_4287
660122	Fusarium vanettenii_77-13-4
334819	Fusarium verticillioides_7600
8049	Gadus morhua
644352	Gaeumannomyces tritici_R3-111a-1
9031	Gallus gallus
69293	Gasterosteus aculeatus
48883	Geospiza fortis
3847	Glycine max
1825980	Gopherus evgoodei
9595	Gorilla gorilla_gorilla
29730	Gossypium raimondii
905079	Guillardia theta_CCMP2712
8153	Astatotilapia burtoni
4232	Helianthus annuus
6412	Helobdella robusta
10181	Heterocephalus glaber
109280	Hippocampus comes
9606	Homo sapiens
112509	Hordeum sativum
7998	Ictalurus punctatus
43179	Citellus tridecemlineatus
35885	Ipomoea triloba
6945	Ixodes dammini
51337	Jaculus jaculus
51240	Juglans regia
37003	Kryptolebias marmoratus
56723	Labrus bergylta
4236	Lactuca sativa
215358	Larimichthys crocea

8187	Holocentrus calcarifer
7897	Latimeria chalumnae
72036	Lepeophtheirus salmonis
7918	Lepisosteus oculatus
7574	Lingula anatina
7209	Loa loa
225164	Lottia gigantea
9785	Elephas africanus
7375	Lucilia cuprina
3871	Lupinus angustifolius
9541	Macaca cynomolgus
9544	Macaca mulatta
9545	Macaca nemestrina
3750	Malus communis
9568	Mandrillus leucophaeus
3983	Manihot esculenta
9994	Marmota marmota_marmota
205130	Macrognathus armatus
106582	Maylandia zebra
3880	Medicago truncatula
747676	Melampsora larici-populina_98AG31
9103	Meleagris gallopavo
113334	Melitaea cinxia
10036	Cricetus auratus
30608	Microcebus murinus
79684	Hypudaeus ochrogaster
13616	Didelphys domestica
40151	Monodon monoceros
10089	Mus caroli
10090	Mus musculus
10093	Coelomys parahi
9669	Mustela furo
59463	Myotis lucifugus
586833	Myripristis murdjan
1026970	Nannospalax ehrenbergi_galili
7425	Nasonia vitripennis
51031	Necator americanus
45351	Nematostella vectensis
452646	Mustela vison
32507	Lamprologus brichardi
49451	Nicotiana attenuata
61853	Hylobates concolor_leucogenys
8663	Naja scutata
105023	Nothobranchius furzeri
210225	Nymphaea colorata
9978	Ochotona princeps
10160	Octodon degus
37653	Octopus bimaculoides
158386	Olea europaea_subsp._europaea_var._sylvestris
8019	Oncorhynchus kisutch
8022	Oncorhynchus mykiss
74940	Oncorhynchus tschawytscha

6198	Opisthorchis viverrini
8128	Oreochromis nilotica
9258	Ornithorhynchus anatinus
9986	Lepus cuniculus
4533	Oryza brachyantha
4538	Oryza glaberrima
39947	Oryza sativa_(japonica_cultivar-group)
8090	Oryzias latipes
30732	Aplocheilus melastigmus
30611	Galago garnettii
9940	Ovis ammon_aries
9597	Pan paniscus
9598	Pan troglodytes
206008	Panicum hallii
9689	Leo leo
9691	Leo pardus
3469	Papaver somniferum
9555	Anubis baboon
5888	Paramecium aurelia_syngen_4
1676925	Brienomyrus kingsleyae
321614	Parastagonospora nodorum_SN15
9157	Parus major
13735	Pelodiscus sinensis
230844	Peromyscus maniculatus_bairdii
7757	Petromyzon marinus
38626	Phascolarctos cinereus
3885	Phaseolus vulgaris
42100	Phocoena sinus
3218	Phascum patens
9755	Physeter catodon
403677	Phytophthora infestans_strain_T30-4
67593	Phytophthora sojae
55513	Pistacia vera
3888	Pisum sativum
64176	Lacerrta muralis
48698	Limia formosa
48699	Mollienesia latipinna
8081	Acanthophacelus reticulata
9601	Pongo abelii
3694	Populus balsamifera_subsp._trichocarpa
379532	Propithecus coquereli
42229	Cerasus avium
3755	Amygdalus communis
3760	Amygdalus persica
8673	Furina textilis
132908	Pteropus vampyrus
418459	Puccinia graminis_f._sp._tritici_CRL_75-36-700-3
303518	Haplochromis nyererei
42514	Pygocentrus nattereri
97700	Quercus lobata
10116	Rattus norvegicus
59479	Rhinolophus ferrumequinum

61621	Pygathrix bieti
61622	Pygathrix roxellana
74649	Rosa chinensis
559292	Saccharomyces cerevisiae
8030	Salmo salar
8032	Salmo trutta
283035	Lucioperca lucioperca
9305	Sarcophilus harrisii
113540	Osteoglossum formosum
665079	Sclerotinia sclerotiorum__1980__UF-70
52904	Pleuronectes maximus
88036	Selaginella moellendorffii
9135	Fringilla canaria__Linnaeus,__1758
41447	Caranx dumerili
1841481	Seriola dorsalis
4182	Sesamum indicum
4555	Chaetochloa italica
4556	Setaria viridis
75366	Barbus grahami
4081	Lycopersicon esculentum
4113	Solanum tuberosum
13686	Solenopsis invicta
42254	Sorex araneus
4558	Andropogon sorghum
8175	Aurata aurata
144197	Pomacentrus partitus
35570	Stomoxis calcitrans
2489341	Strigops habroptila
7668	Strongylocentrotus purpuratus
441894	Struthio australis
9823	Sus scrofa
59729	Poephila guttata
31033	Fugu rubripes
139649	Cyrtodiopsis dalmanii
2587831	Cistudo triunguis
312017	Tetrahymena thermophila__SB210
3641	Theobroma cacao
6334	Trichinella spiralis
57577	Trifolium pratense
4565	Triticum aestivum
85692	Triticum dicoccoides
9739	Delphinus truncatus
9999	Citellus parryii
9643	Euarctos americanus
29073	Thalarctos maritimus
30538	Camelus pacos
3914	Phaseolus angularis
29760	Vitis vinifera
29139	Didelphis ursina
9627	Canis vulpes
8364	Silurana tropicalis

8083	Platypoecilus maculatus
4577	Zea mays
136037	Zootermopsis nevadensis

4 System and R Version

4.1 Operating System

```
Description:    Ubuntu 24.04 LTS
Release:    24.04
Codename:   noble
```

4.2 R version

name	version
platform	x86_64-pc-linux-gnu
arch	x86_64
os	linux-gnu
system	x86_64, linux-gnu
status	
major	4
minor	3.3
year	2024
month	02
day	29
svn rev	86002
language	R
version.string	R version 4.3.3 (2024-02-29)
nickname	Angel Food Cake
Bioconductor	3.18

4.3 R packages

Package	Version	License
AnnotationDbi	1.64.1	Artistic-2.0
AnnotationHub	3.10.1	Artistic-2.0
ape	5.8	GPL-2 | GPL-3
aws.s3	0.3.21	GPL (>= 2)
Azimuth	0.5.0	GPL-3 | file LICENSE
base	4.3.3	Part of R 4.3.3
base64enc	0.1-3	GPL-2 | GPL-3
batchelor	1.18.1	GPL-3
beepr	2.0	GPL-3
beeswarm	0.4.0	Artistic-2.0

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BiocParallel	1.36.0	GPL-2 | GPL-3
blastula	0.3.5	MIT + file LICENSE
Boruta	8.0.0	GPL (>= 2)
bslib	0.8.0	MIT + file LICENSE
bsutils	0.0.0.9000	MIT + file LICENSE
caret	6.0-94	GPL (>= 2)
circlize	0.4.16	MIT + file LICENSE
cluster	2.1.6	GPL (>= 2)
colorspace	2.1-1	BSD_3_clause + file LICENSE
ComICS	1.0.4	GPL-2
ComplexHeatmap	2.18.0	MIT + file LICENSE
cookies	0.2.3	MIT + file LICENSE
corpcor	1.6.10	GPL (>= 3)
corpora	0.6	GPL-3
corrplot	0.92	MIT + file LICENSE
cowplot	1.1.3	GPL-2
data.table	1.15.4	MPL-2.0 | file LICENSE
DBI	1.2.3	LGPL (>= 2.1)
DeconRNASeq	1.44.0	GPL-2
DESeq2	1.42.1	LGPL (>= 3)
doParallel	1.0.17	GPL-2
dplyr	1.1.4	MIT + file LICENSE
DT	0.33	GPL-3 | file LICENSE
edgeR	4.0.16	GPL (>=2)
EPIC	1.1.7	file LICENSE
fastcluster	1.2.6	FreeBSD | GPL-2 | file LICENSE
fgsea	1.29.1	MIT + file LICENCE
firebase	1.0.2	AGPL-3
FNN	1.1.4	GPL (>= 2)
forcats	1.0.0	MIT + file LICENSE
foreach	1.5.2	Apache License (== 2.0)
future	1.34.0	LGPL (>= 2.1)
GenomicRanges	1.54.1	Artistic-2.0
GEOquery	2.70.0	MIT
ggforce	0.4.2	MIT + file LICENSE
ggplot2	3.5.1	MIT + file LICENSE
ggrepel	0.9.5	GPL-3 | file LICENSE
ggtext	0.1.2	GPL-2
ggVennDiagram	1.5.2	GPL-3
glasso	1.11	GPL-2
glmnet	4.1-8	GPL-2
glue	1.7.0	MIT + file LICENSE
GO.db	3.18.0	Artistic-2.0
gplots	3.1.3.1	GPL-2
graphics	4.3.3	Part of R 4.3.3
grDevices	4.3.3	Part of R 4.3.3
grid	4.3.3	Part of R 4.3.3
gridExtra	2.3	GPL (>= 2)
GSVA	1.50.5	GPL (>= 2)
harmony	1.2.0	GPL-3
heatmaply	1.5.0	GPL-2 | GPL-3
htmltools	0.5.8.9000	GPL (>= 2)

htmlwidgets	1.6.4	MIT + file LICENSE
httr	1.4.7	MIT + file LICENSE
igraph	2.0.3	GPL (>= 2)
iheatmapr	0.7.1	MIT + file LICENSE
infercnv	1.21.0	BSD_3_clause + file LICENSE
inspectdf	0.0.12	GPL-2
irlba	2.3.5.1	GPL-3
isva	1.9	GPL-2
jpeg	0.1-10	GPL-2 | GPL-3
jsonlite	1.8.8	MIT + file LICENSE
lazyeval	0.2.2	GPL-3
limma	3.58.1	GPL (>=2)
magrittr	2.0.3	MIT + file LICENSE
markdown	1.13	MIT + file LICENSE
Matrix	1.6-4	GPL (>= 2) | file LICENCE
matrixStats	1.3.0	Artistic-2.0
matrixTests	0.2.3	GPL-2
methods	4.3.3	Part of R 4.3.3
microbenchmark	1.4.10	BSD_2_clause + file LICENSE
miniUI	0.1.1.1	GPL-3
missForest	1.5	GPL (>= 2)
mixOmics	6.26.0	GPL (>= 2)
msa	1.34.0	GPL (>= 2)
msImpute	1.12.0	GPL (>=2)
MSnbase	2.28.1	Artistic-2.0
MultiAssayExperiment	1.28.0	Artistic-2.0
NNLM	0.4.4	BSD_2_clause + file LICENSE
org.Hs.eg.db	3.19.1	Artistic-2.0
org.Mm.eg.db	3.19.1	Artistic-2.0
org.Pf.plasmo.db	3.14.0	Artistic-2.0
org.Rn.eg.db	3.19.1	Artistic-2.0
orthogene	1.8.0	GPL-3
pairsD3	0.1.3	GPL (>= 3)
pamr	1.57	GPL-2
parallel	4.3.3	Part of R 4.3.3
partykit	1.2-21	GPL-2 | GPL-3
patchwork	1.2.0	MIT + file LICENSE
pcaMethods	1.94.0	GPL (>= 3)
PCSF	0.99.1	MIT + file LICENSE
plotly	4.10.4	MIT + file LICENSE
plsRcox	1.7.7	GPL-3
png	0.1-8	GPL-2 | GPL-3
ppcor	1.1	GPL-2
processx	3.8.4	MIT + file LICENSE
promises	1.3.0	MIT + file LICENSE
psych	2.4.6.26	GPL (>= 2)
purrr	1.0.2	MIT + file LICENSE
qgraph	1.9.8	GPL-2
qlcMatrix	0.9.8	GPL-3
R6	2.5.1	MIT + file LICENSE
randomForest	4.7-1.1	GPL (>= 2)
randomForestSRC	3.3.1	GPL (>= 3)

RColorBrewer	1.1-3	Apache License 2.0
recount	1.28.0	Artistic-2.0
reshape2	1.4.4	MIT + file LICENSE
reticulate	1.38.0	Apache License 2.0
rgeolocate	1.4.2	Apache License (== 2.0)
rhdf5	2.46.1	Artistic-2.0
rliger	2.0.1	GPL-3
rpart	4.1.23	GPL-2 | GPL-3
RSQLite	2.3.7	LGPL (>= 2.1)
Rtsne	0.17	file LICENSE
ruv	0.9.7.1	GPL
RUVSeq	1.36.0	Artistic-2.0
rworldmap	1.3-8	GPL (>= 2)
SBGNview	1.16.0	AGPL-3
scales	1.3.0	MIT + file LICENSE
scatterD3	1.0.1	GPL (>= 3)
scran	1.30.2	GPL-3
Seurat	5.1.0	MIT + file LICENSE
sever	0.0.7	MIT + file LICENSE
shiny	1.9.1	GPL-3 | file LICENSE
shiny.i18n	0.3.0	MIT + file LICENSE
shinyalert	3.1.0	MIT + file LICENSE
shinybrowser	1.0.0	MIT + file LICENSE
shinyBS	0.61.1	GPL-3
shinybusy	0.3.3	GPL-3
shinycssloaders	1.1.0	MIT + file LICENSE
shinydashboardPlus	2.0.4	GPL (>= 2) | file LICENSE
shinyjqui	0.4.1	MIT + file LICENSE
shinyjs	2.1.0	MIT + file LICENSE
shinyvalidate	0.1.3	MIT + file LICENSE
shinyWidgets	0.8.6	GPL-3
SILGGM	1.0.0	GPL (>= 2)
SingleR	2.4.1	GPL-3 + file LICENSE
sodium	1.3.1	MIT + file LICENSE
sortable	0.5.0	MIT + file LICENSE
stats	4.3.3	Part of R 4.3.3
stringr	1.5.1	MIT + file LICENSE
SummarizedExperiment	1.32.0	Artistic-2.0
SuperCell	1.0	file LICENSE
survival	3.7-0	LGPL (>= 2)
sva	3.50.0	Artistic-2.0
svgPanZoom	0.3.4	MIT + file LICENSE
tools	4.3.3	Part of R 4.3.3
umap	0.2.10.0	MIT + file LICENSE
utils	4.3.3	Part of R 4.3.3
uwot	0.2.2	GPL (>= 3)
vioplot	0.5.0	BSD_3_clause + file LICENSE
viridis	0.6.5	MIT + file LICENSE
visNetwork	2.1.3	MIT + file LICENSE
waiter	0.2.5.9000	MIT + file LICENSE
webshot2	0.1.1	GPL-2

WGCNA	1.72-5	GPL (>= 2)	
withr	3.0.1	MIT + file LICENSE	
wordcloud	2.6	LGPL-2.1	
xfun	0.46	MIT + file LICENSE	
xgboost	1.7.8.1	Apache License (== 2.0) | file LICENSE	
xml2	1.3.6	MIT + file LICENSE	
yaml	2.3.10	BSD_3_clause + file LICENSE	
zip	2.3.1	MIT + file LICENSE	

4.4 OmicsPlayground configuration (OPTIONS)

```
TITLE                = 'Omics Playground'
AUTHENTICATION       = none
ALLOW_NEW_USERS      = TRUE
ALLOW_PERSONAL_EMAIL = FALSE
USE_CREDENTIALS      = FALSE
ENABLE_CHIRP         = TRUE
ENABLE_DELETE        = TRUE
ENABLE_PGX_DOWNLOAD  = TRUE
ENABLE_PUBLIC_SHARE  = TRUE
ENABLE_UPLOAD        = TRUE
ENABLE_USERDIR       = TRUE
ENABLE_USER_SHARE    = TRUE
ENABLE_USER_LOCK     = TRUE
ENABLE_HEARTBEAT     = TRUE
ENABLE_INACTIVITY    = TRUE
ENABLE_ANNOT         = FALSE
MAX_DATASETS         = 100
MAX_SAMPLES          = 1000
MAX_COMPARISONS      = 20
MAX_GENES            = 20000
MAX_GENESETS         = 5000
MAX_SHARED_QUEUE     = 3
MAX_SESSIONS         = 2
TIMEOUT              = 0
WATERMARK            = TRUE
APACHE_COOKIE_PATH   = /app/omicsplayground/
DEVMODE              = FALSE
```

4.5 OmicsPlayground default settings (DEFAULTS)

```
computation_options:
  probe_filtering:
    - remove.notexpressed
    - remove.unknown
    - only.proteincoding
```