SANS_FONS_MGLORIA_PAC1_do

2025-04-02

R Markdown

Anàlisis de les metadades

L'objecte que proporciona la crida està formada alhora per dos objectes "summarizedexperiment":m1,m2. S'han obtingut per selecció diferencial en l'assay cromatogràfic. Les anàlisis proporcionades són de la selecció amb ió positiu dels metabolits.

L'objecte m1 té 46 mostres que corresponen als 46 ratolins tractats o no amb el tractament immunològic i en diferents dietes que contenen fibra. Es corresponen amb "samples" en l'objecte summarized experiment m1. Té 327 files que corresponen a "features" del objecte summarizedexperiment m1. Mijançant la funció "dimnames" obtenim la numeració de les mostres (samples) i la numeració dels metabolits(features). Amb la funció colData obtenim els tractaments i les condicions del assaig.

```
se=do_query(
  context='study',
  input_item="study_id",
  input_value="ST003789",
  output_item="SummarizedExperiment"
)
assay(se)
```

```
## $AN006228
## class: SummarizedExperiment
## dim: 327 46
## metadata(8): data_source study_id ... description subject_type
## assays(1): ''
## rownames(327): ME1000003 ME1000004 ... ME1000326 ME1000327
## rowData names(3): metabolite_name metabolite_id refmet_name
## colnames(46): 12 14 ... 9 90
## colData names(8): local_sample_id study_id ... Diet Treatment
##
## $AN006229
## class: SummarizedExperiment
## dim: 266 46
## metadata(8): data_source study_id ... description subject_type
## assays(1): ''
## rownames(266): ME1000329 ME1000330 ... ME1000592 ME1000593
## rowData names(3): metabolite_name metabolite_id refmet_name
## colnames(46): 12 14 ... 9 90
## colData names(8): local_sample_id study_id ... Diet Treatment
```

```
m1<-se$AN006228
m1
```

```
## class: SummarizedExperiment
## dim: 327 46
## metadata(8): data_source study_id ... description subject_type
## assays(1): ''
## rownames(327): ME1000003 ME1000004 ... ME1000326 ME1000327
## rowData names(3): metabolite_name metabolite_id refmet_name
## colnames(46): 12 14 ... 9 90
## colData names(8): local_sample_id study_id ... Diet Treatment
```

```
m2<-se$AN006229
m2
```

```
## class: SummarizedExperiment
## dim: 266 46
## metadata(8): data_source study_id ... description subject_type
## assays(1): ''
## rownames(266): ME1000329 ME1000330 ... ME1000592 ME1000593
## rowData names(3): metabolite_name metabolite_id refmet_name
## colnames(46): 12 14 ... 9 90
## colData names(8): local_sample_id study_id ... Diet Treatment
```

```
dim(m1)
```

```
## [1] 327  46
```

```
dimnames(m1)
```

```
## [[1]]
##   [1] "ME1000003" "ME1000004" "ME1000005" "ME1000001" "ME1000002" "ME1000006"
##   [7] "ME1000007" "ME1000008" "ME1000009" "ME1000010" "ME1000011" "ME1000012"
##  [13] "ME1000013" "ME1000014" "ME1000015" "ME1000016" "ME1000017" "ME1000018"
##  [19] "ME1000019" "ME1000020" "ME1000021" "ME1000023" "ME1000022" "ME1000024"
##  [25] "ME1000025" "ME1000026" "ME1000027" "ME1000028" "ME1000029" "ME1000031"
##  [31] "ME1000030" "ME1000032" "ME1000033" "ME1000034" "ME1000035" "ME1000036"
##  [37] "ME1000037" "ME1000038" "ME1000039" "ME1000040" "ME1000041" "ME1000042"
##  [43] "ME1000043" "ME1000044" "ME1000045" "ME1000046" "ME1000047" "ME1000048"
##  [49] "ME1000049" "ME1000050" "ME1000051" "ME1000052" "ME1000053" "ME1000054"
##  [55] "ME1000055" "ME1000056" "ME1000057" "ME1000058" "ME1000059" "ME1000060"
##  [61] "ME1000061" "ME1000062" "ME1000063" "ME1000064" "ME1000065" "ME1000066"
##  [67] "ME1000067" "ME1000068" "ME1000069" "ME1000070" "ME1000071" "ME1000072"
##  [73] "ME1000073" "ME1000074" "ME1000075" "ME1000076" "ME1000077" "ME1000078"
##  [79] "ME1000079" "ME1000080" "ME1000081" "ME1000082" "ME1000083" "ME1000084"
##  [85] "ME1000085" "ME1000086" "ME1000087" "ME1000088" "ME1000089" "ME1000090"
##  [91] "ME1000091" "ME1000092" "ME1000093" "ME1000094" "ME1000095" "ME1000096"
##  [97] "ME1000097" "ME1000098" "ME1000099" "ME1000100" "ME1000101" "ME1000102"
## [103] "ME1000103" "ME1000104" "ME1000105" "ME1000106" "ME1000107" "ME1000108"
## [109] "ME1000109" "ME1000110" "ME1000111" "ME1000112" "ME1000113" "ME1000114"
## [115] "ME1000115" "ME1000116" "ME1000117" "ME1000118" "ME1000119" "ME1000120"
## [121] "ME1000121" "ME1000122" "ME1000123" "ME1000124" "ME1000125" "ME1000126"
## [127] "ME1000127" "ME1000128" "ME1000129" "ME1000130" "ME1000131" "ME1000132"
## [133] "ME1000133" "ME1000134" "ME1000135" "ME1000136" "ME1000137" "ME1000138"
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## [145] "ME1000145" "ME1000146" "ME1000147" "ME1000148" "ME1000149" "ME1000150"
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## [229] "ME1000230" "ME1000229" "ME1000231" "ME1000232" "ME1000233" "ME1000234"
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## [253] "ME1000252" "ME1000253" "ME1000254" "ME1000255" "ME1000256" "ME1000257"
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## [277] "ME1000276" "ME1000277" "ME1000278" "ME1000279" "ME1000280" "ME1000281"
## [283] "ME1000282" "ME1000283" "ME1000284" "ME1000285" "ME1000286" "ME1000287"
## [289] "ME1000288" "ME1000289" "ME1000290" "ME1000291" "ME1000292" "ME1000293"
## [295] "ME1000294" "ME1000295" "ME1000296" "ME1000297" "ME1000298" "ME1000299"
## [301] "ME1000300" "ME1000301" "ME1000302" "ME1000303" "ME1000304" "ME1000305"
## [307] "ME1000306" "ME1000307" "ME1000308" "ME1000309" "ME1000310" "ME1000311"
## [313] "ME1000312" "ME1000313" "ME1000314" "ME1000315" "ME1000316" "ME1000317"
## [319] "ME1000318" "ME1000319" "ME1000320" "ME1000321" "ME1000322" "ME1000323"
## [325] "ME1000324" "ME1000326" "ME1000327"
##
## [[2]]
##  [1] "12" "14" "2"  "22" "23" "24" "26" "27" "28" "29" "30" "32" "33" "37" "4"
## [16] "40" "41" "43" "44" "45" "46" "49" "50" "52" "55" "56" "57" "6"  "60" "61"
## [31] "63" "65" "7"  "71" "72" "73" "75" "78" "79" "80" "83" "86" "88" "89" "9"
## [46] "90"
```

```
colData(m1)
```

```
## DataFrame with 46 rows and 8 columns
##     local_sample_id    study_id sample_source mb_sample_id    raw_data
##         <character> <character>   <character>  <character> <character>
## 12               12    ST003789         Serum     SA412477    12.MZXML
## 14               14    ST003789         Serum     SA412473    14.MZXML
## 2                 2    ST003789         Serum     SA412472     2.MZXML
## 22               22    ST003789         Serum     SA412468    22.MZXML
## 23               23    ST003789         Serum     SA412469    23.MZXML
## ...             ...         ...           ...          ...         ...
## 86               86    ST003789         Serum     SA412497    86.MZXML
## 88               88    ST003789         Serum     SA412498    88.MZXML
## 89               89    ST003789         Serum     SA412499    89.MZXML
## 9                 9    ST003789         Serum     SA412475     9.MZXML
## 90               90    ST003789         Serum     SA412500    90.MZXML
##     Sample_source     Diet       Treatment
##          <factor> <factor>        <factor>
## 12         Serum     Chow  isotype control
## 14         Serum     Chow  isotype control
## 2          Serum     Chow  isotype control
## 22         Serum     Chow  anti-PD-1
## 23         Serum     Chow  anti-PD-1
## ...          ...      ...             ...
## 86         Serum   HC_In8  anti-PD-1
## 88         Serum   HC_In8  anti-PD-1
## 89         Serum   HC_In8  anti-PD-1
## 9          Serum   Chow    isotype control
## 90         Serum   HC_In8  anti-PD-1
```