Figure 1

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Contents

Fig 1A: Volcano plot of differential expression proteins

ALS versus Control (Miami cohort)
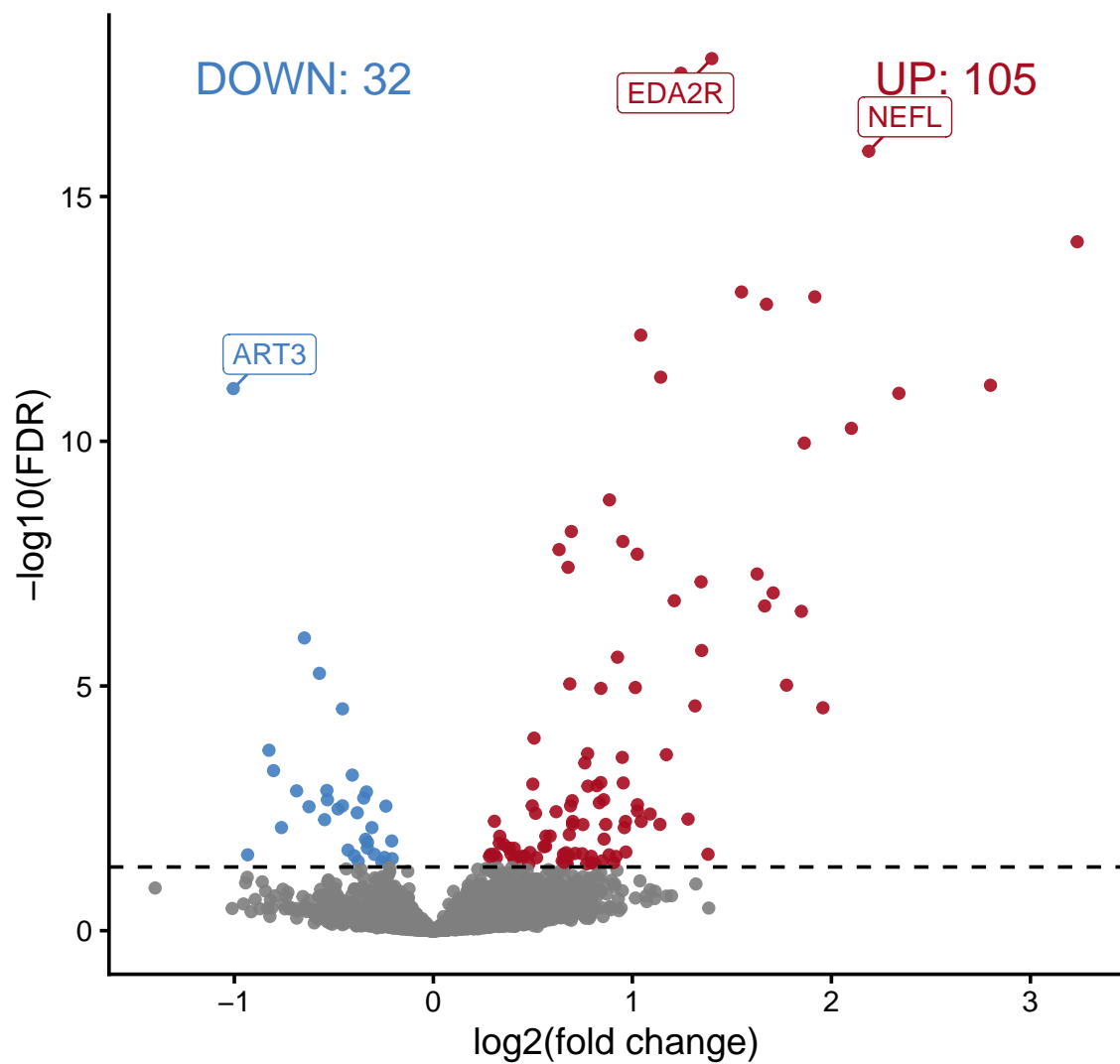
Fig 1B: Up enrichment analysis

Top 30 Up–regulated Pathways
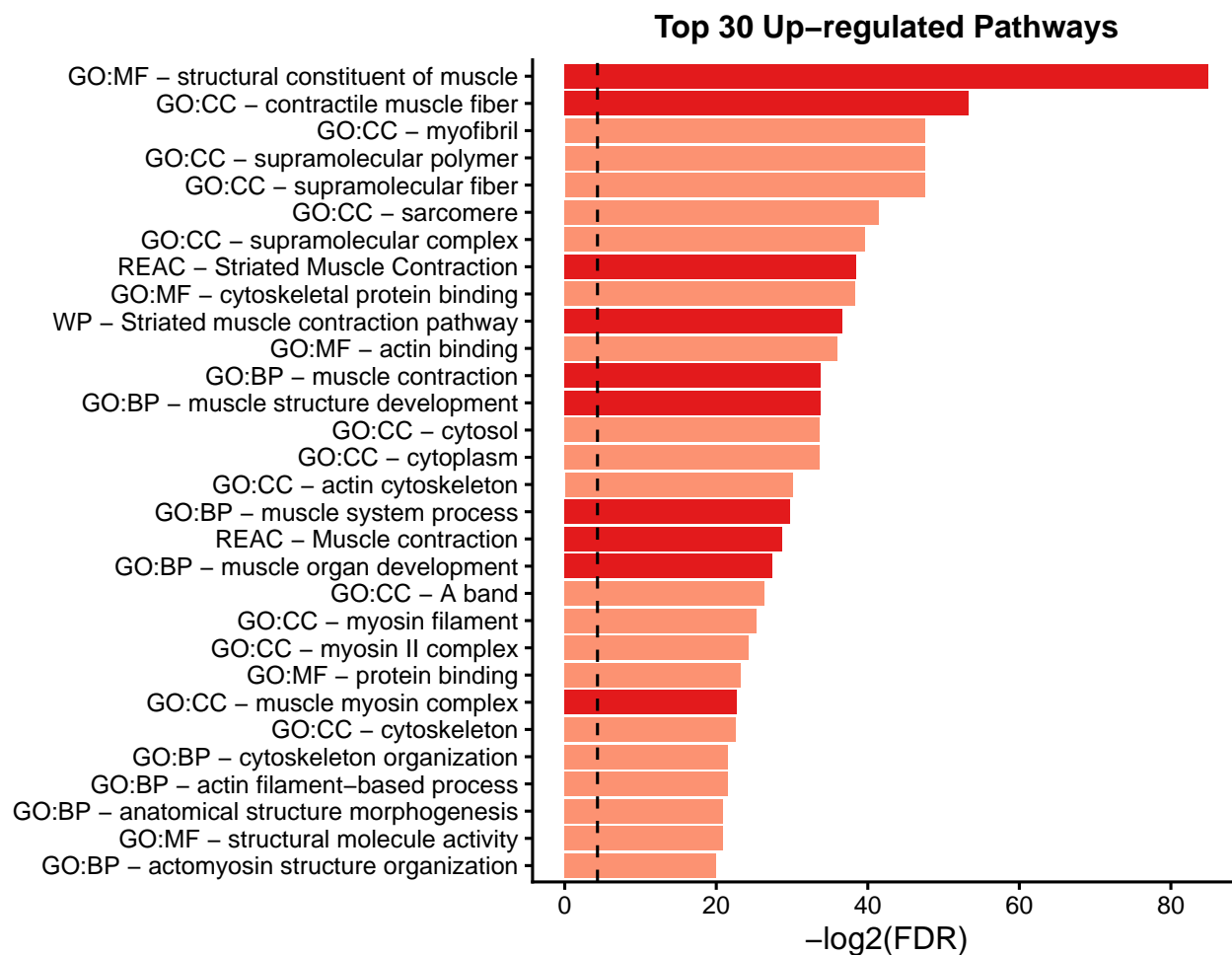
Fig 1C: Down enrichment analysis

Top 30 Downregulated Pathways
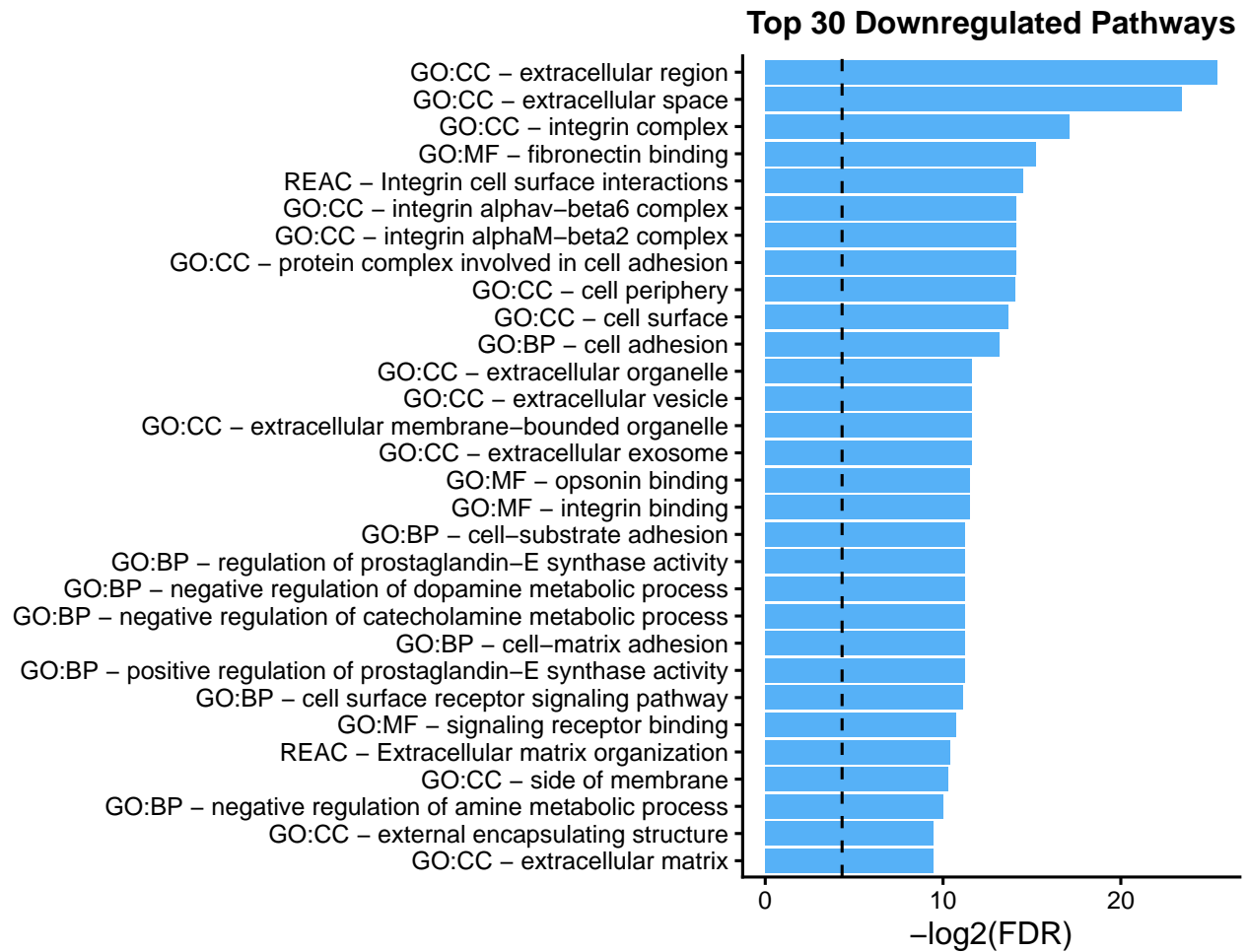
Fig 1D: PPI network of DE proteins
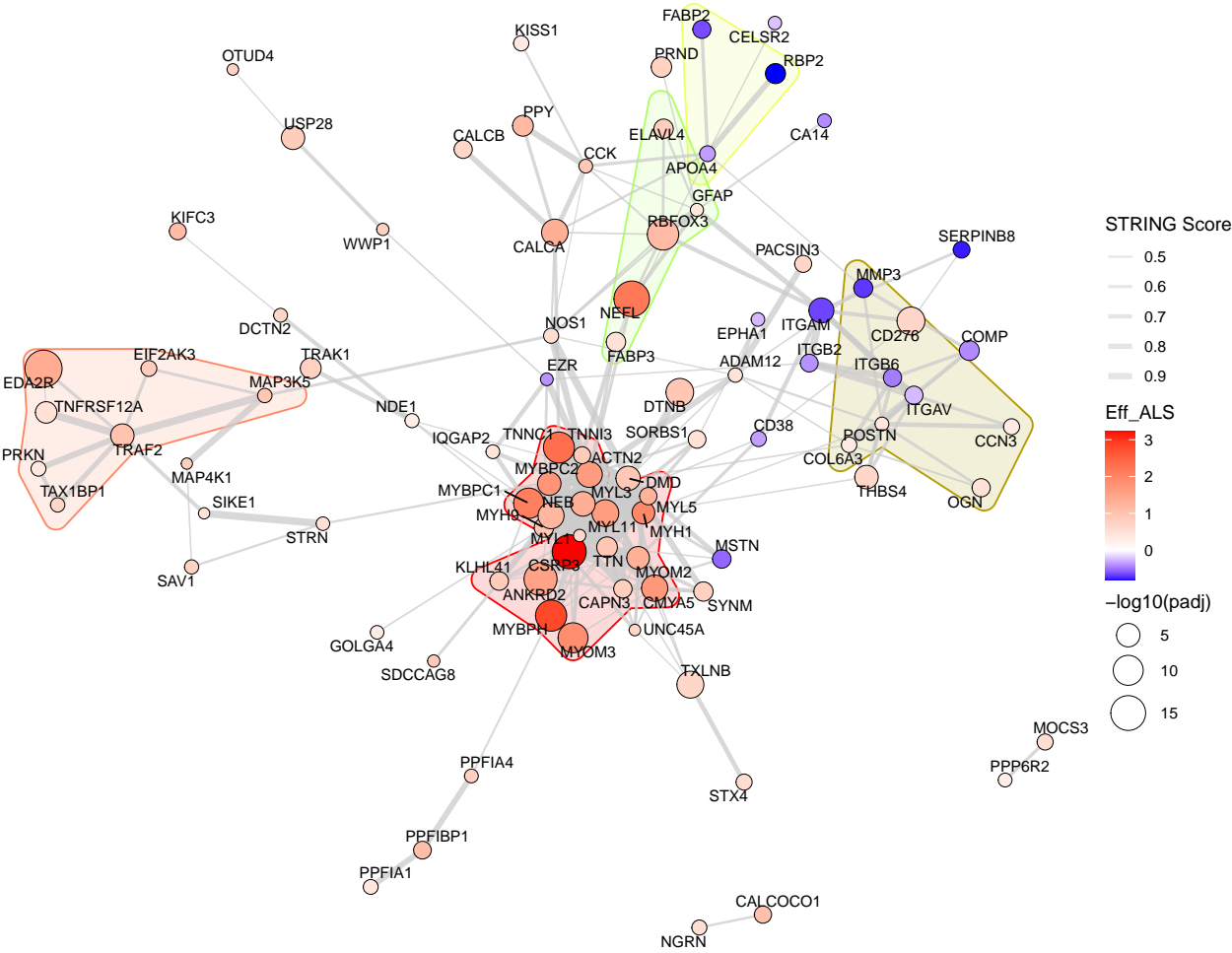
Fig 1E: Heatmap of selected proteins
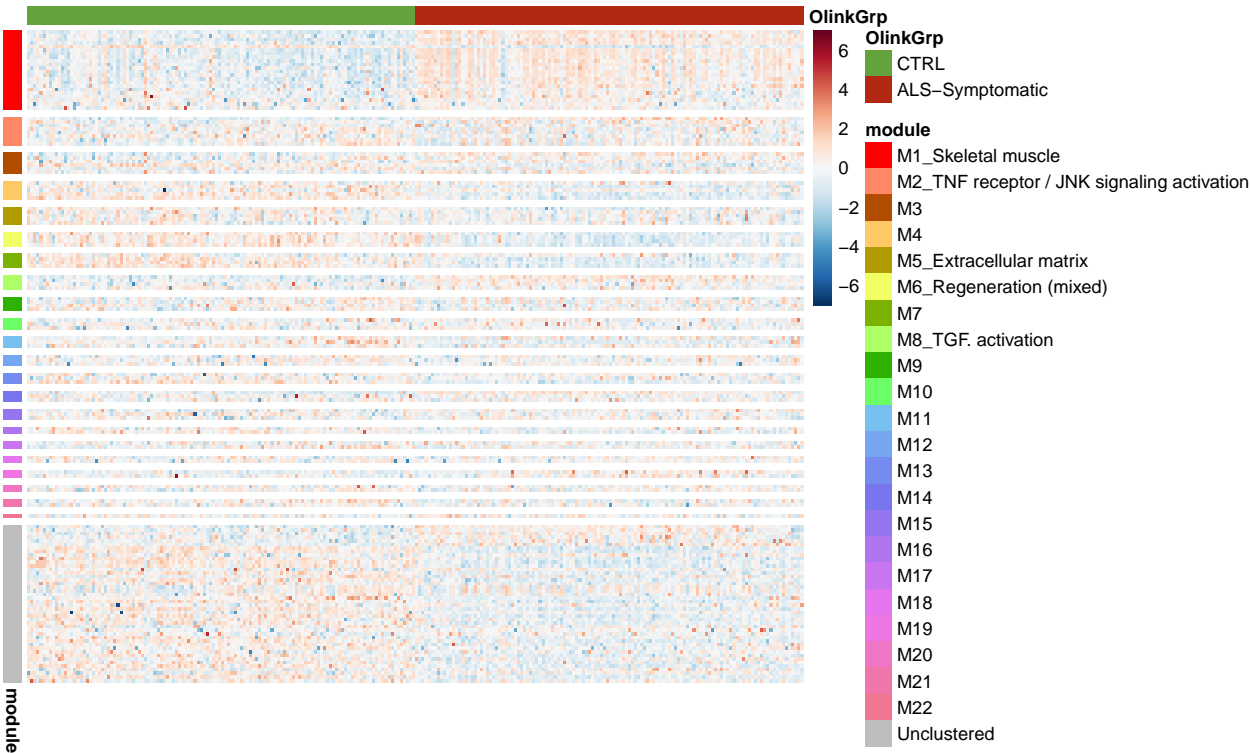
Combine all plots into one figure

A ALS versus Control (Miami cohort)

B Top 30 Up-regulated Pathways

C Top 30 Downregulated Pathways

D

E
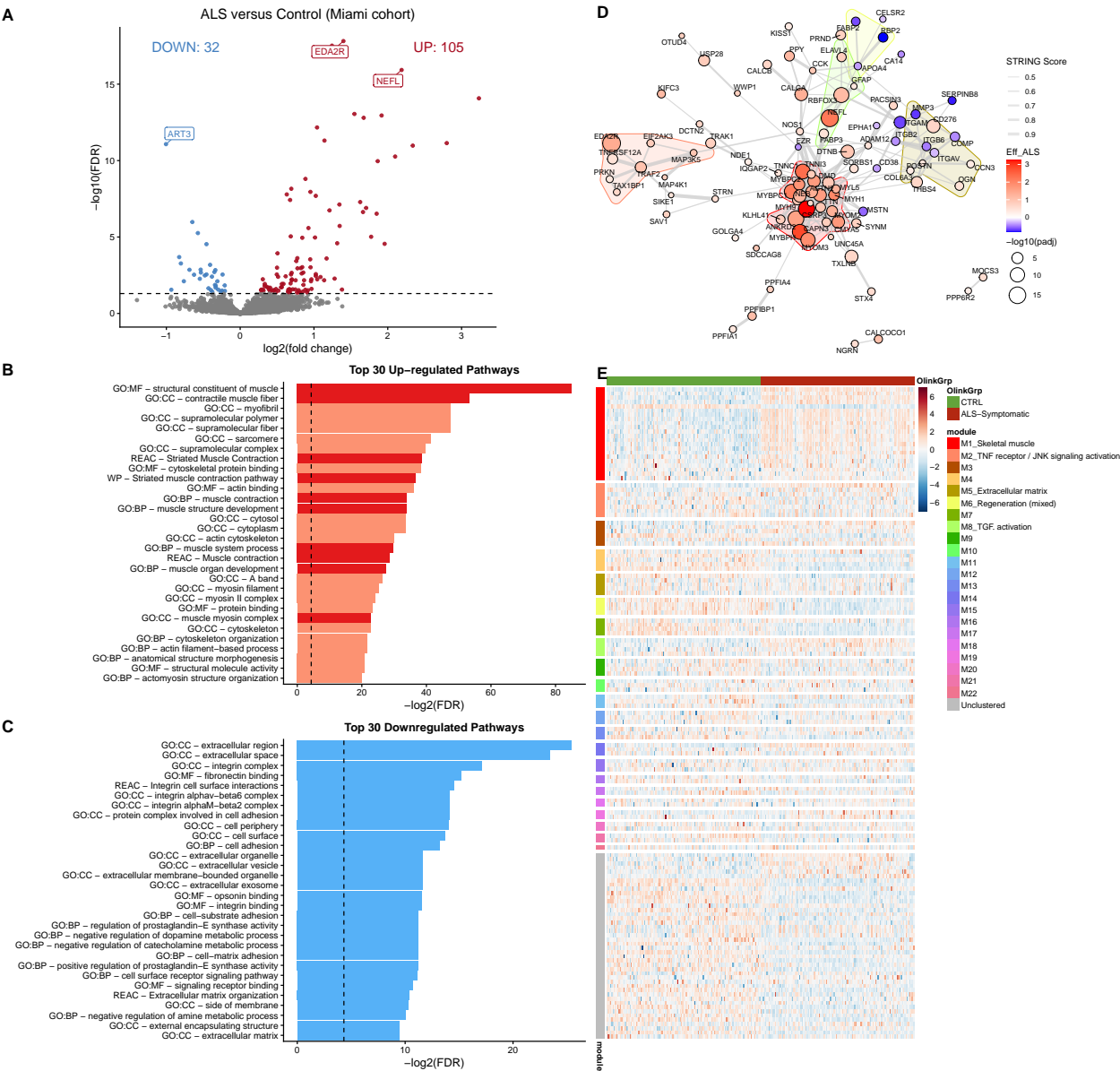
Session Info

```
## R version 4.4.0 (2024-04-24)
## Platform: aarch64-apple-darwin20
## Running under: macOS 26.0.1
##
## Matrix products: default
## BLAS:   /Library/Frameworks/R.framework/Versions/4.4-arm64/Resources/lib/libRblas.0.dylib
## LAPACK: /Library/Frameworks/R.framework/Versions/4.4-arm64/Resources/lib/libRlapack.dylib;  LAPACK v
##
## locale:
## [1] en_US.UTF-8/en_US.UTF-8/en_US.UTF-8/C/en_US.UTF-8/en_US.UTF-8
##
## time zone: America/New_York
## tzcode source: internal
##
## attached base packages:
## [1] stats     graphics  grDevices utils     datasets  methods   base
##
## other attached packages:
##  [1] here_1.0.1          ggplotify_0.1.2     RColorBrewer_1.1-3 pheatmap_1.0.12
##  [5] igraph_2.1.4        ggnewscale_0.5.1    ggforce_0.4.2       scales_1.4.0
##  [9] tidygraph_1.3.1     ggraph_2.2.1        gprofiler2_0.2.3    ggrepel_0.9.6
## [13] progress_1.2.3      kableExtra_1.4.0    lmerTest_3.1-3      lme4_1.1-37
## [17] Matrix_1.7-3        ggpubr_0.6.0        cowplot_1.1.3       jtools_2.3.0
## [21] ggsignif_0.6.4      extrafont_0.19      gridExtra_2.3       OlinkAnalyze_4.2.0
## [25] arrow_20.0.0        knitr_1.50          lubridate_1.9.4     forcats_1.0.0
## [29] stringr_1.5.1       dplyr_1.1.4         purrr_1.1.0         readr_2.1.5
## [33] tidyr_1.3.1         tibble_3.2.1        ggplot2_4.0.0       tidyverse_2.0.0
##
## loaded via a namespace (and not attached):
##   [1] rstudioapi_0.17.1   jsonlite_2.0.0      magrittr_2.0.3
##   [4] estimability_1.5.1  farver_2.1.2        nloptr_2.2.1
##   [7] rmarkdown_2.29      fs_1.6.6            ragg_1.4.0
##  [10] vctrs_0.6.5         memoise_2.0.1       minqa_1.2.8
##  [13] rstatix_0.7.2       tinytex_0.57        htmltools_0.5.8.1
##  [16] curl_6.2.3          broom_1.0.8         cellranger_1.1.0
##  [19] gridGraphics_0.5-1  Formula_1.2-5       parallelly_1.44.0
##  [22] htmlwidgets_1.6.4   emmeans_1.11.1      plotly_4.10.4
##  [25] cachem_1.1.0        lifecycle_1.0.4     pkgconfig_2.0.3
##  [28] R6_2.6.1            fastmap_1.2.0       rbibutils_2.3
##  [31] future_1.49.0       digest_0.6.37       numDeriv_2016.8-1.1
##  [34] furrr_0.3.1         rprojroot_2.0.4     textshaping_1.0.1
##  [37] labeling_0.4.3      timechange_0.3.0    httr_1.4.7
##  [40] polyclip_1.10-7     abind_1.4-8         compiler_4.4.0
##  [43] bit64_4.6.0-1       withr_3.0.2         pander_0.6.6
##  [46] S7_0.2.0            backports_1.5.0     carData_3.0-5
##  [49] viridis_0.6.5       Rttf2pt1_1.3.12     broom.mixed_0.2.9.6
##  [52] MASS_7.3-65         concaveman_1.1.0    tools_4.4.0
##  [55] extrafontdb_1.0     glue_1.8.0          nlme_3.1-168
##  [58] grid_4.4.0          generics_0.1.4      gtable_0.3.6
##  [61] tzdb_0.5.0          data.table_1.17.4   hms_1.1.3
##  [64] xml2_1.3.8          car_3.1-3           pillar_1.10.2
##  [67] yulab.utils_0.2.0   splines_4.4.0       tweenr_2.0.3
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##  [70] lattice_0.22-7     bit_4.6.0          tidyselect_1.2.1
##  [73] reformulas_0.4.1   V8_6.0.3           svglite_2.2.1
##  [76] xfun_0.52          graphlayouts_1.2.2 stringi_1.8.7
##  [79] lazyeval_0.2.2     yaml_2.3.10        boot_1.3-31
##  [82] evaluate_1.0.3     codetools_0.2-20   cli_3.6.5
##  [85] xtable_1.8-4       systemfonts_1.2.3  Rdpack_2.6.4
##  [88] dichromat_2.0-0.1  Rcpp_1.0.14        readxl_1.4.5
##  [91] globals_0.18.0     coda_0.19-4.1      parallel_4.4.0
##  [94] assertthat_0.2.1   prettyunits_1.2.0  listenv_0.9.1
##  [97] viridisLite_0.4.2  mvtnorm_1.3-3      crayon_1.5.3
## [100] rlang_1.1.6
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