Water Borne CORT

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## R Markdown for water borne cort

library(lme4)

## Warning: package 'lme4' was built under R version 4.1.3

## Loading required package: Matrix

## Warning: package 'Matrix' was built under R version 4.1.3

library(car)

## Warning: package 'car' was built under R version 4.1.3

## Loading required package: carData

## Warning: package 'carData' was built under R version 4.1.3

library(readr)

## Warning: package 'readr' was built under R version 4.1.3

library(moments)

## Warning: package 'moments' was built under R version 4.1.3

library(psych)

## Warning: package 'psych' was built under R version 4.1.3

##   
## Attaching package: 'psych'

## The following object is masked from 'package:car':  
##   
## logit

library(pastecs)  
library(ggplot2)

## Warning: package 'ggplot2' was built under R version 4.1.3

##   
## Attaching package: 'ggplot2'

## The following objects are masked from 'package:psych':  
##   
## %+%, alpha

library(ggbiplot)

## Loading required package: plyr

## Warning: package 'plyr' was built under R version 4.1.3

## Loading required package: scales

## Warning: package 'scales' was built under R version 4.1.3

##   
## Attaching package: 'scales'

## The following objects are masked from 'package:psych':  
##   
## alpha, rescale

## The following object is masked from 'package:readr':  
##   
## col\_factor

## Loading required package: grid

library(tidyverse)

## -- Attaching packages --------------------------------------- tidyverse 1.3.1 --

## v tibble 3.1.7 v dplyr 1.0.9  
## v tidyr 1.2.0 v stringr 1.5.0  
## v purrr 0.3.4 v forcats 0.5.1

## Warning: package 'tibble' was built under R version 4.1.3

## Warning: package 'tidyr' was built under R version 4.1.3

## Warning: package 'dplyr' was built under R version 4.1.3

## Warning: package 'stringr' was built under R version 4.1.3

## -- Conflicts ------------------------------------------ tidyverse\_conflicts() --  
## x ggplot2::%+%() masks psych::%+%()  
## x scales::alpha() masks ggplot2::alpha(), psych::alpha()  
## x dplyr::arrange() masks plyr::arrange()  
## x scales::col\_factor() masks readr::col\_factor()  
## x purrr::compact() masks plyr::compact()  
## x dplyr::count() masks plyr::count()  
## x purrr::discard() masks scales::discard()  
## x tidyr::expand() masks Matrix::expand()  
## x tidyr::extract() masks pastecs::extract()  
## x dplyr::failwith() masks plyr::failwith()  
## x dplyr::filter() masks stats::filter()  
## x dplyr::first() masks pastecs::first()  
## x dplyr::id() masks plyr::id()  
## x dplyr::lag() masks stats::lag()  
## x dplyr::last() masks pastecs::last()  
## x dplyr::mutate() masks plyr::mutate()  
## x tidyr::pack() masks Matrix::pack()  
## x dplyr::recode() masks car::recode()  
## x dplyr::rename() masks plyr::rename()  
## x purrr::some() masks car::some()  
## x dplyr::summarise() masks plyr::summarise()  
## x dplyr::summarize() masks plyr::summarize()  
## x tidyr::unpack() masks Matrix::unpack()

library(modelbased)

## Warning: package 'modelbased' was built under R version 4.1.3

library(dplyr)  
  
file.choose()

## [1] "C:\\R\\Aim 3 - Stress and the Microbiota\\Water Borne CORT.docx"

df <-read.csv("C:\\Users\\kjeme\\OneDrive\\Desktop\\Woodley Lab\\Aim 3 - CORT & the Microbiota\\Aim 3 (Restarted)\\Water-Borne CORT Assay\\Water-Borne CORT.csv")  
df$Date = factor(df$Date)  
df$Stressor = factor(df$Stressor)  
  
ggplot(df, aes(y = CORT, x = Date, colour = Stressor, shape = Stressor, group = Stressor)) +   
 geom\_point(size = 6) +  
 geom\_line() +  
 theme\_classic() +  
 scale\_color\_manual(values = c("red", "gray", "skyblue"),  
 labels = c("Predator Cue", "Vehicle Control", "CORT")) +  
 scale\_shape\_manual(values = c(16, 17, 15),  
 labels = c("Predator Cue", "Vehicle Control", "CORT")) +  
 labs(x = "Water Change", y = "Water-Borne CORT (pg/mL)") +  
 theme(axis.title = element\_text(face = "bold", size = 18)) +  
 theme(axis.text = element\_text(face = "bold", size = 16)) +  
 theme(legend.title = element\_blank()) +  
 theme(legend.text = element\_text(face = "bold", size = 14)) +  
 theme(legend.position = c(.85, .85))

