Couchii muscle results summary (very superficial)

IC50:

* Jessica already did this but I did it again
* Strongly correlated with whole animal resistance according to both pearson and kendall
  + 0.7087 for pearson, 0.5100 for kendall
* Linear regression stats look good

A red line with black dots

Description automatically generated

C4P:

* Only just realized that because there are four observations per muscle/individual there may be some artificial correlations just because of reduced variation between observations of the same individual, need to look into that more
* Slight positive correlation between LD50 and time to max force change according to both pearson and kendall, fairly certain that doesn’t mean anything in practice but it is a result
* Also between LD50 and time to 10 percent
* Other things have positive correlations based on different metrics
  + Max contraction amplitude (Pearson)
  + F max rate of change (Pearson)
  + F min rate of change (Pearson)
* Makes sense that these would be correlated
* Linear regression shows no relationships at all, highest r^2 is a whopping 0.03
  + Plots not exported for space purposes, can easily load them in R
* Comparisons with IC50:
  + some slightly better r2 values: 0.19 for contrampl, 0.2 for fmaxrate ngs, 0.2 for fminrate ngs, 0.19 for DiffFChgMaxtoMinms (but with bad RMSE)
  + ContrAmpl, To50pctms, X10to50pctms, ToFChgMinms, and DIffFChgMaxtoMinms all correlated under both tests
  + Fmax and FMinRateofChgNgs both only with Pearson

Tetanus:

* Only just realized that each muscle has two identical obs in the tetanus sheet, need to look into that and redo analyses in light of that
* Only one of these metrics correlates with MAMU according to the analyses, the base force (Kendall test)
* Linear regression also shows no relations, highest r^2 is 0.05
  + These plots also not exported for space purposes
* IC50 analyses:
  + Also improved R-squared fits some: 0.11 for To10pctms, 0.17 for To50pctms, 0.17 for X10to50pctms, 0.23 for toFChgMinms, 0.16 for FeeFChgMaxtoMinms (but again, all pretty bad RMSE)
  + BaseFNG correlated with both
  + To10pctms correlated with kendall
  + ToFChgMinms and FiiFChgMaxtoMinms with Pearson

Rheobase:

A close-up of a text

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* linear regression shows no relationship, highest r^2 is 0.14 (which I guess isn’t terrible)
  + this is based on different characteristics of the response to a given pulse length
* correlation tests not currently working, not going to spend time figuring that out right now because I think the highest priority for these is that I:
* haven’t figured out how to integrate analyses across pulse lengths, need to find the paper bobby gave me that summarizes how this is supposed to work