source('L:/Lab/NHEERL\_MEA/Carpenter\_Amy/pre-process\_mea\_acute\_for\_tcpl/DNT2019/run\_me.R')

data.table 1.12.8 using 2 threads (see ?getDTthreads). Latest news: r-datatable.com

DNT2019 MEA Acute TCPL Level 0 Data Prep Running Log

Date: 2020-07-27

Level 0 - Gather and Check Files:

Reading from DNT2019\_neural\_stats\_files\_log\_2020-05-18.txt...

Got 78 files.

All files are named correctly.

DNT2019\_check\_summary\_2020-07-27.txt is ready.

Level 1 - Extract All Data:

Reading from DNT2019\_neural\_stats\_files\_log\_2020-05-18.txt...

Got 78 files.

Reading data from files...

..............................................................................

DNT2019\_dat1\_2020-07-27.RData is ready.

Summary of dates/plates with wllq=0 at Level 1:

experiment.date plate.id wllq\_set\_to\_zero

1: 20190528 MW68-0808 C6,C7,D3,D4,D6,D7

2: 20190528 MW68-0811 B4,C6,D1,D3,D4,D6,E1,E2,F2,F3

3: 20190528 MW68-0812 A2,A3,B2,B3,B4,B5,B6,B7,C3,C5,D3,D4,D5,D6,D7,E3,E6,F2,F7

4: 20190530 MW68-0807 A1,A2,A5,A8,B5,B6,B7,C3,C4,C5,C6,C7,D3,D4,D5,D6,D7,E6,E7,F1,F3,F4,F6,F7

5: 20190530 MW68-0809 A1,A3,A6,B5,C4,C5,C6,D3,D4,D5,D6,D7,E1,F3,F4

6: 20190530 MW68-0810 A3,A4,A5,B2,B3,B5,B8,C5,C6,D4,D5,D6,D7,E1,E2,E3,E8,F1,F2,F3,F4,F5,F6,F7

7: 20190611 MW68-0819 A2,A3,A7,B1,E5,F2,F4,F5

8: 20190611 MW68-0820 A5,A6,F2,F6

9: 20190613 MW69-0104 A1,A2,A5,A6,A7,A8,B1,B2,B4,C1,D1,E1,E3,F1,F2,F5,F7,F8

10: 20190613 MW69-0105 A8,C8,F3

11: 20190618 MW69-0106 A5,A7,B7,C1,C3,C4,C5,C6,C8,D5,D6,E2,F2,F7

12: 20190618 MW69-0107 A1,A2,B2,B3,B7,C2,C7,D2,D3,D5,D7,E3,E6,E7,F2,F3,F4

13: 20190618 MW69-0108 A7,A8,B4,B6,C5,C6,C8,D1,D3,D5,D6,D7,E2,E3,E6

14: 20190626 MW69-0114 A1,A2,F1,F2,F3,F4,F6

15: 20190626 MW69-0115 A1,A3,A4,A6,A8,F6

16: 20190626 MW69-0116 A7,A8

17: 20190627 MW69-0117 A2,A3,A6,A7,B1,E7,F2,F3,F4,F8

18: 20190627 MW69-0120 A1,A2,A3,A4,A5,A6,A7,B1,B2,B3,B4,B8,E1,E3,E4,E6,E8,F2,F3,F5,F6,F8

19: 20190627 MW69-0201 A1,A2,A3,A5,A6,A7,A8,B1,B2,B3,B5,B6,B7,C1,E3,F1,F3,F4,F6,F7,F8

20: 20190730 MW68-0814 A4,A5,A8,F1

21: 20190730 MW68-0817 A5

22: 20190730 MW68-0818 A8,E4

23: 20190801 MW69-0217 D1,E8

24: 20190827 MW69-3807 D4

25: 20190827 MW69-3808 C5,E2,F4

26: 20190827 MW69-3809 A7

27: 20190829 MW69-3810 A8,B8,C3

28: 20190829 MW69-3811 A3,A5,A6,D3,F8

29: 20190829 MW69-3812 B8,F3,F5

30: 20190926 MW69-3916 A1,A5,A8,B1,C8,E8,F5

31: 20190926 MW69-3920 A1,A2,A4,A6,A8,F1

32: 20191008 MW70-2407 A1,A4,A5,B2,B3,B4,B5,C4,C5,C7,D2,D3,D4,D5,D6,D7,D8,E3,E5,F3,F5,F7,F8

33: 20191008 MW70-2408 A4,B1,B4,B5,B6,C2,C4,C5,C6,C7,D2,D3,D4,D5,D6,D7,E4,E5,F1,F2,F3,F7

34: 20191008 MW70-2409 A2,B3,B5,B6,C2,C4,C5,C6,C7,C8,D3,D4,D5,D7,E7,F6

experiment.date plate.id wllq\_set\_to\_zero

DNT2019\_dat1\_2020-07-27.RData

wllq\_notes V1

1: 3400

2: Baseline MFR < 0.6377603 Hz; 56

3: Baseline MFR > 3.4036511 Hz; 192

4: Baseline # of AE < 10; Baseline MFR < 0.6377603 Hz; 71

5: Baseline # of AE < 10; 25

Level 2 - Collapse Data by Plate ID:

Loading...

DNT2019\_dat1\_2020-07-27.RData

Collapsing treated and baseline data...

20190528\_MW68-0808

20190528\_MW68-0811

20190528\_MW68-0812

20190530\_MW68-0807

20190530\_MW68-0809

20190530\_MW68-0810

20190611\_MW69-0102

20190611\_MW68-0820

20190611\_MW68-0819

20190613\_MW69-0105

20190613\_MW69-0104

20190613\_MW69-0103

20190618\_MW69-0106

20190618\_MW69-0107

20190618\_MW69-0108

20190626\_MW69-0116

20190626\_MW69-0115

20190626\_MW69-0114

20190627\_MW69-0117

20190627\_MW69-0120

20190627\_MW69-0201

20190730\_MW68-0814

20190730\_MW68-0817

20190730\_MW68-0818

20190801\_MW69-0215

20190801\_MW69-0216

20190801\_MW69-0217

20190827\_MW69-3807

20190827\_MW69-3808

20190827\_MW69-3809

20190829\_MW69-3810

20190829\_MW69-3811

20190829\_MW69-3812

20190926\_MW69-3916

20190926\_MW69-3920

20190926\_MW70-2303

20191008\_MW70-2407

20191008\_MW70-2408

20191008\_MW70-2409

DNT2019\_dat2\_2020-07-27.RData is ready.

DNT2019\_dat2\_2020-07-27.RData

Load Cytotoxicity Data:

Reading from DNT2019\_calculations\_files\_log\_2020-07-22.txt...

Got 13 files.

Reading data from files...

20190515\_Calculations\_DNT Group\_1-DONE.xlsx

AB

MW68-0808 MW68-0811 MW68-0812

some values are negative. These will be set to 0

LDH

MW68-0808 MW68-0811 MW68-0812

some values are negative. These will be set to 0

20190515\_Calculations\_DNT Group\_2.xlsx

AB

MW68-0807 MW68-0809 MW68-0810

some values are negative. These will be set to 0

LDH

MW68-0807 MW68-0809 MW68-0810

some values are negative. These will be set to 0

20190529\_Calculations\_DNT Group\_3a.xlsx

AB

MW68-0819 MW68-0820 MW69-0102

some values are negative. These will be set to 0

LDH

MW68-0819 MW68-0820 MW69-0102

some values are negative. These will be set to 0

20190529\_Calculations\_DNT Group\_4.xlsx

AB

MW69-0103 MW69-0104 MW69-0105

some values are negative. These will be set to 0

LDH

MW69-0103 MW69-0104 MW69-0105

some values are negative. These will be set to 0

20190605\_Calculations\_DNT Group\_5\_updated\_concentrations.xlsx

AB

MW69-0106 MW69-0107 MW69-0108

some values are negative. These will be set to 0

LDH

MW69-0106 MW69-0107 MW69-0108

some values are negative. These will be set to 0

20190612\_Calculations\_DNT Group\_7\_corrected\_plate\_id.xlsx

AB

MW69-0114 MW69-0115 MW69-0116

some values are negative. These will be set to 0

LDH

MW69-0114 MW69-0115 MW69-0116

20190612\_Calculations\_DNT Group\_8a.xlsx

AB

MW69-0117 MW69-0120 MW69-0201

some values are negative. These will be set to 0

LDH

MW69-0117 MW69-0120 MW69-0201

20190717\_Calculations\_DNT Group\_5 Repeata.xlsx

AB

MW68-0814 MW68-0817 MW68-0818

LDH

MW68-0814 MW68-0817 MW68-0818

some values are negative. These will be set to 0

20190717\_Calculations\_DNT Group\_6 Repeat.xlsx

AB

MW69-0215 MW69-0216 MW69-0217

LDH

MW69-0215 MW69-0216 MW69-0217

some values are negative. These will be set to 0

20190814\_Calculations\_DNT Group\_1 Repeat\_update20200722.xlsx

AB

MW69-3807 MW69-3808 MW69-3809

some values are negative. These will be set to 0

LDH

MW69-3807 MW69-3808 MW69-3809

some values are negative. These will be set to 0

20190814\_Calculations\_DNT Group\_2 Repeat.xlsx

AB

MW69-3810 MW69-3811 MW69-3812

some values are negative. These will be set to 0

LDH

MW69-3810 MW69-3811 MW69-3812

some values are negative. These will be set to 0

20190911\_Calculations\_DNT Various Repeat1.xlsx

AB

MW69-3916 MW69-3920 MW70-2303

some values are negative. These will be set to 0

LDH

MW69-3916 MW69-3920 MW70-2303

20190925\_Calculations\_DNT Group 6 and 7 Repeat.xlsx

AB

MW70-2407 MW70-2408 MW70-2409

some values are negative. These will be set to 0

LDH

MW70-2407 MW70-2408 MW70-2409

some values are negative. These will be set to 0

There are no NA values in cytodat.

cytodat is ready

Level 3 - Combine Cyto and Neural Stats Data; Initialize treatment, conc, and wllq

Loading...

DNT2019\_dat2\_2020-07-27.RData

DNT2019\_dat3\_2020-07-27.RData is ready.

Level 4 - Finalize well ID information:

DNT2019\_dat3\_2020-07-27.RData

Finalize Wllq:

NA rval's: 6332

Inf rval's (baseline==0): 21

Well quality set to 0 for these rval's.

Experiment date: 20190530 MW68-0807 C6 Contamination Summary:

rval acnm

1: NA active\_electrodes\_number

2: NA burst\_number

3: NA firing\_rate\_mean

4: NA network\_burst\_number

5: 22722 AB

6: 0 LDH

Well quality set to zero for 45 rows.

Experiment date: 20190530 MW68-0807 F1 Contamination Summary:

rval acnm

1: NA active\_electrodes\_number

2: NA burst\_number

3: NA firing\_rate\_mean

4: NA network\_burst\_number

5: 0.0000000 AB

6: 0.7799667 LDH

Well quality set to zero for 45 rows.

Experiment date: 20190530 MW68-0809 D7 Contamination Summary:

rval acnm

1: NA active\_electrodes\_number

2: NA burst\_number

3: NA firing\_rate\_mean

4: NA network\_burst\_number

5: 0 AB

6: 0 LDH

Well quality set to zero for 45 rows.

Experiment date: 20190530 MW68-0809 E1 Contamination Summary:

rval acnm

1: NA active\_electrodes\_number

2: NA burst\_number

3: NA firing\_rate\_mean

4: NA network\_burst\_number

5: 0 AB

6: 0 LDH

Well quality set to zero for 45 rows.

Experiment date: 20190530 MW68-0810 B5 Contamination Summary:

rval acnm

1: NA active\_electrodes\_number

2: NA burst\_number

3: NA firing\_rate\_mean

4: NA network\_burst\_number

5: 239 AB

6: 0 LDH

Well quality set to zero for 45 rows.

Experiment date: 20190730 MW68-0817 E5 Did not get full dose Summary:

rval acnm

1: 0.00000 active\_electrodes\_number

2: -51.92519 burst\_number

3: -38.11655 firing\_rate\_mean

4: -65.71429 network\_burst\_number

5: 33424.00000 AB

6: 0.04050 LDH

Well quality set to zero for 45 rows.

Experiment date: 20190730 MW68-0817 F5 Did not get full dose Summary:

rval acnm

1: 0.000000 active\_electrodes\_number

2: -8.198582 burst\_number

3: 35.312840 firing\_rate\_mean

4: -11.711712 network\_burst\_number

5: 28075.000000 AB

6: 0.043600 LDH

Well quality set to zero for 45 rows.

Verifying control compound labels:

Where treatment == 0, wells contained only Media

apid N

1: 20191008 945

Confirm that the rest of these treatments look normal (nothing NA, 0, etc):

DMSO, 17, 18, 19, TTX, 20, PICRO, 24, Media, 27, 3, 5, 8, 9, 11, Lysis, 12, 55, 58, 65, 66, 69, 70, 28, 32, 38, 41, 42, 45, 46, 47, 48, 49, 50, 51, 88, 89, 91, 93, 94, 96, 83, 84, 95, 98, 100, 71, 75, 77, 79, 80, 82, 1, 10, 13, 15, TTX/Lysis, 1:250 LDH, 1:2500 LDH, ½ Lysis, PICRO/Lysis

Assign spid's:

Using spidmap file: L:/Lab/NHEERL\_MEA/Project - DNT 2019/All Assays\_list\_toxcast\_OECD 20190524.xlsx

New names:

\* `Culture Date` -> `Culture Date...7`

\* Comments -> Comments...8

\* `Culture Date` -> `Culture Date...9`

\* Comments -> Comments...10

\* `` -> ...12

\* ...

Number of unique spids: 57

Prepare LDH 'p' wells (using Lysis or Half Lysis wells):

Treatments assigned to wllt 'p' for each apid:

apid LDH\_trts\_in\_p\_wells N

1: 20190530 2 \* ½ Lysis 9

2: 20190528 2 \* ½ Lysis 9

3: 20190730 2 \* ½ Lysis 9

4: 20190611 2 \* ½ Lysis 9

5: 20190613 2 \* ½ Lysis 9

6: 20190618 2 \* ½ Lysis 9

7: 20190626 2 \* ½ Lysis 9

8: 20190627 2 \* ½ Lysis 9

9: 20190801 2 \* ½ Lysis 9

10: 20190827 2 \* ½ Lysis 9

11: 20190829 2 \* ½ Lysis 9

12: 20190926 2 \* ½ Lysis 9

13: 20191008 2 \* ½ Lysis 9

Summary of median p wells by apid:

apid pval

1: 20190530 0.8089333

2: 20190528 0.8152000

3: 20190730 2.9057333

4: 20190611 1.9528667

5: 20190613 1.9566667

6: 20190618 0.6062000

7: 20190626 2.5370667

8: 20190627 2.5817333

9: 20190801 2.9057333

10: 20190827 1.6510667

11: 20190829 2.1779333

12: 20190926 3.2074000

13: 20191008 2.3888667

Assign Wllt:

wllt will be set to 't' for the MEA components for the following spid's:

EPAPLT0169D05, EPAPLT0169F09, EPAPLT0167H06, EPAPLT0167C02, EPAPLT0167C05, EPAPLT0167D08, EPAPLT0167C10, EPAPLT0167A11, EPAPLT0167D05, EPAPLT0167A09, EPAPLT0167B11, EPAPLT0167C07, EPAPLT0167F10, EPAPLT0167D07, EPAPLT0167A06, EPAPLT0169B07, EPAPLT0167C04, EPAPLT0167H10, EPAPLT0167G10, EPAPLT0167B09, EPAPLT0167C01, EPAPLT0167E02, EPAPLT0167B08, EPAPLT0167F09, EPAPLT0167A01, EPAPLT0167E04, EPAPLT0169B09, EPAPLT0169C05, EPAPLT0167E10, EPAPLT0167A02, EPAPLT0167A08, EPAPLT0167A04, EPAPLT0167D09, EPAPLT0167H03, EPAPLT0167F07, EPAPLT0167E07, EPAPLT0167D11, EPAPLT0167B05, EPAPLT0167D04, EPAPLT0167G07, EPAPLT0167H07, EPAPLT0169B03, EPAPLT0167D10, EPAPLT0167F05, EPAPLT0167F02, EPAPLT0167G09, EPAPLT0170D03, EPAPLT0167B02, EPAPLT0169A03, EPAPLT0167H02, EPAPLT0169C01

wllt will be set to 't' for the cytotoxicity components for the following spid's:

EPAPLT0169D05, EPAPLT0169F09, EPAPLT0167H06, EPAPLT0167C02, EPAPLT0167C05, EPAPLT0167D08, EPAPLT0167C10, EPAPLT0167A11, EPAPLT0167D05, EPAPLT0167A09, EPAPLT0167B11, EPAPLT0167C07, EPAPLT0167F10, EPAPLT0167D07, EPAPLT0167A06, EPAPLT0169B07, EPAPLT0167C04, EPAPLT0167H10, EPAPLT0167G10, EPAPLT0167B09, EPAPLT0167C01, EPAPLT0167E02, EPAPLT0167B08, EPAPLT0167F09, EPAPLT0167A01, EPAPLT0167E04, EPAPLT0169B09, EPAPLT0169C05, EPAPLT0167E10, EPAPLT0167A02, EPAPLT0167A08, EPAPLT0167A04, EPAPLT0167D09, EPAPLT0167H03, EPAPLT0167F07, EPAPLT0167E07, EPAPLT0167D11, EPAPLT0167B05, EPAPLT0167D04, EPAPLT0167G07, EPAPLT0167H07, EPAPLT0169B03, EPAPLT0167D10, EPAPLT0167F05, EPAPLT0167F02, EPAPLT0167G09, EPAPLT0170D03, EPAPLT0167B02, EPAPLT0169A03, EPAPLT0167H02, EPAPLT0169C01

Well Type Assignments for Control Compounds by assay component:

treatment spid CellTiter Blue LDH MEA components

1: DMSO DMSO n n n

2: Media Media b b b

3: PICRO Picrotoxin z z p

4: TTX Tetrodotoxin x x p

5: 2 \* ½ Lysis Tritonx100 - p -

6: Lysis Tritonx100 p x v

7: PICRO/Lysis Tritonx100 p - -

8: TTX/Lysis Tritonx100 p - -

Unique of wllt:

[1] "t" "n" "v" "p" "b" "z" "x"

Finalize Concentrations:

Concentration Corrections:

The following treatment have char conc. Will be set to NA:

spid treatment conc N

1: Tritonx100 Lysis Lysis 117

2: Tritonx100 2 \* ½ Lysis ½ Lysis 117

All conc's as numeric:

NA, 0.001, 0.01283748, 0.02268495, 0.02570805, 0.02908005, 0.02952135, 0.02999895, 0.0299991, 0.02999925, 0.0299994, 0.02999955, 0.03, 0.0300006, 0.0300009, 0.03000105, 0.0300012, 0.03000135, 0.03000225, 0.03003525, 0.0316, 0.0362907, 0.0427916, 0.0427916, 0.0756165, 0.0856935, 0.0856935, 0.0969335, 0.0969335, 0.0984045, 0.0999965, 0.0999965, 0.099997, 0.099997, 0.0999975, 0.0999975, 0.099998, 0.099998, 0.0999985, 0.1, 0.100002, 0.100002, 0.100003, 0.100003, 0.1000035, 0.1000035, 0.100004, 0.100004, 0.1000045, 0.1000045, 0.1000075, 0.1000075, 0.1001175, 0.105, 0.120969, 0.120969, 0.1283748, 0.1283748, 0.2268495, 0.2570805, 0.2570805, 0.2908005, 0.2952135, 0.2999895, 0.299991, 0.299991, 0.2999925, 0.2999925, 0.299994, 0.299994, 0.2999955, 0.2999955, 0.3, 0.300006, 0.300009, 0.300009, 0.3000105, 0.300012, 0.300012, 0.3000135, 0.3000135, 0.3000225, 0.3003525, 0.3003525, 0.316, 0.362907, 0.362907, 0.427916, 0.427916, 0.756165, 0.856935, 0.856935, 0.969335, 0.984045, 0.984045, 0.999965, 0.999965, 0.99997, 0.99997, 0.999975, 0.999975, 0.99998, 0.99998, 0.999985, 1, 1.00002, 1.00003, 1.000035, 1.00004, 1.00004, 1.000045, 1.000075, 1.001175, 1.05, 1.20969, 1.283748, 2.268495, 2.570805, 2.570805, 2.908005, 2.952135, 2.999895, 2.999895, 2.99991, 2.99991, 2.999925, 2.99994, 2.99994, 2.999955, 3, 3.00006, 3.00006, 3.00009, 3.00009, 3.000105, 3.000105, 3.00012, 3.000135, 3.000225, 3.003525, 3.16, 3.62907, 4.27916, 7.56165, 8.56935, 9.69335, 9.84045, 9.99965, 9.9997, 9.99975, 9.9998, 9.99985, 10, 10.0002, 10.0003, 10.00035, 10.0004, 10.00045, 10.00075, 10.01175, 10.5, 12.0969, 12.83748, 22.68495, 25, 25.70805, 29.08005, 29.52135, 29.99895, 29.9991, 29.99925, 29.9994, 29.99955, 30, 30.0006, 30.0009, 30.00105, 30.0012, 30.00135, 30.00225, 30.03525, 31.6, 36.2907

All compounds are assumed to have conc's 0.03 0.1 0.3 1 3 10 30

(You can change this by setting the 'expected\_concs' argument of the fun assign\_common\_conc()).

All compounds have the expected concetration-corrected values

Final Control Compound Conc Assignments by assay component:

treatment spid Conc Label in Source File CellTiter Blue LDH MEA components

1: DMSO DMSO Control 0.001 0.001 0.001

2: Media Media 10,25,0 NA NA NA

3: PICRO Picrotoxin 25,10 25 25 25

4: TTX Tetrodotoxin 1 1 1 1

5: 2 \* ½ Lysis Tritonx100 ½ Lysis - NA -

6: Lysis Tritonx100 10,25,Lysis NA NA NA

7: PICRO/Lysis Tritonx100 25 NA - -

8: TTX/Lysis Tritonx100 1 NA - -

Assign ACId:

(not doing this for now, since new acnm's need to be registered)

Final Checks:

Number of unique acnm's present: 45

Wllq breakdown:

wllq N

1: 1 62935

2: 0 21539

Number of plates tested: 39

Number of experiment dates: 13

LDH plates are expected to have 54 points.

The following plates don't have the expected number of points (48 for MEA & AB 54 for LDH):

(all plates have the expected number of points for each assay component)

Summary of MEA rval's above 300% change by acnm (for wllt 't' or 'n'):

acnm wllts N

1: CCTE\_Shafer\_MEA\_acute\_interburst\_interval\_std n,t 235

2: CCTE\_Shafer\_MEA\_acute\_interburst\_interval\_mean n,t 170

3: CCTE\_Shafer\_MEA\_acute\_interburst\_interval\_CV\_std n,t 91

4: CCTE\_Shafer\_MEA\_acute\_cross\_correlation\_HWHM t 51

5: CCTE\_Shafer\_MEA\_acute\_burst\_frequency\_std n,t 43

6: CCTE\_Shafer\_MEA\_acute\_cross\_correlation\_HWHM\_normalized t 36

7: CCTE\_Shafer\_MEA\_acute\_inter-network\_burst\_interval\_CV n,t 30

8: CCTE\_Shafer\_MEA\_acute\_median\_interspike\_interval\_within\_burst\_std t 25

9: CCTE\_Shafer\_MEA\_acute\_per\_network\_burst\_electrodes\_number\_std n,t 24

10: CCTE\_Shafer\_MEA\_acute\_burst\_percentage\_std n,t 21

11: CCTE\_Shafer\_MEA\_acute\_burst\_duration\_IQR\_std n,t 18

12: CCTE\_Shafer\_MEA\_acute\_median\_interspike\_interval\_within\_burst\_mean t 17

13: CCTE\_Shafer\_MEA\_acute\_network\_burst\_frequency n,t 15

14: CCTE\_Shafer\_MEA\_acute\_network\_burst\_number n,t 15

15: CCTE\_Shafer\_MEA\_acute\_mean\_interspike\_interval\_within\_burst\_std t 14

16: CCTE\_Shafer\_MEA\_acute\_mean\_interspike\_interval\_within\_burst\_mean t 10

17: CCTE\_Shafer\_MEA\_acute\_per\_network\_burst\_spike\_number\_mean t 10

18: CCTE\_Shafer\_MEA\_acute\_network\_burst\_duration\_IQR n,t 10

19: CCTE\_Shafer\_MEA\_acute\_per\_network\_burst\_mean\_spikes\_per\_electrode\_mean t 8

20: CCTE\_Shafer\_MEA\_acute\_burst\_duration\_std t 7

21: CCTE\_Shafer\_MEA\_acute\_network\_burst\_duration\_mean t 7

22: CCTE\_Shafer\_MEA\_acute\_interburst\_interval\_CV\_mean t 5

23: CCTE\_Shafer\_MEA\_acute\_cross\_correlation\_area t 4

24: CCTE\_Shafer\_MEA\_acute\_network\_burst\_duration\_std t 4

25: CCTE\_Shafer\_MEA\_acute\_per\_burst\_spike\_number\_std t 3

26: CCTE\_Shafer\_MEA\_acute\_per\_network\_burst\_mean\_spikes\_per\_electrode\_std t 3

27: CCTE\_Shafer\_MEA\_acute\_per\_network\_burst\_spike\_number\_std t 3

28: CCTE\_Shafer\_MEA\_acute\_burst\_duration\_IQR\_mean t 2

29: CCTE\_Shafer\_MEA\_acute\_burst\_frequency\_mean t 2

30: CCTE\_Shafer\_MEA\_acute\_interspike\_interval\_CV t 2

31: CCTE\_Shafer\_MEA\_acute\_burst\_number t 1

32: CCTE\_Shafer\_MEA\_acute\_firing\_rate\_mean t 1

33: CCTE\_Shafer\_MEA\_acute\_firing\_rate\_mean\_weighted t 1

34: CCTE\_Shafer\_MEA\_acute\_spike\_number t 1

35: CCTE\_Shafer\_MEA\_acute\_burst\_duration\_mean t 1

acnm wllts N

(note that the wllq is not quite final -

wllq will be updated for outlier DMSO wells will before creating lvl 0 snapshot)

dat4 saved on: 2020-07-27

Warning messages:

1: In eval(ei, envir) :

The following treatments don't have a corresponding spid:1:250 LDHThe following treatments don't have a corresponding spid:1:2500 LDH

2: In eval(jsub, SDenv, parent.frame()) : NAs introduced by coercion

1: This is okay, I will remove this warning in the future. I don’t have spids fro the 1:250 and 1:2500 LDH wells

2: just fixed this error – it occurs when I update the conc’s to numeric, but conc’s have not been assigned for Lysis wells yet, so those are still char and they ready as NA