ToxCast2016 MEA Acute TCPL Level 0 Data Prep Running Log

Date: 2020-07-23

Level 0 - Gather and Check Files:

Reading from ToxCast2016\_neural\_stats\_files\_log\_2020-06-18.txt...

Got 414 files.

All files are named correctly.

ToxCast2016\_check\_summary\_2020-07-23.txt is ready.

Level 1 - Extract All Data:

Reading from ToxCast2016\_neural\_stats\_files\_log\_2020-06-18.txt...

Got 414 files.

Reading data from files...

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TC\_MW 1076-38\_20160303\_20160317\_14\_01(001)\_Neural Statistics Compiler(000).csv will be removed. Recording length is 544.25.......................................................................................................................................................................................................................................................................................

ToxCast2016\_dat1\_2020-07-23.RData is ready.

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

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

1: 20150602 MW1062-43 A3,A6,A7,B6,B7,B8,C5,C6,C7,D7,D8,E5,E6,E7,F4,F5,F6,F7,F8

2: 20150602 MW1062-44 A1,A6,A8,B1,B7,B8,C4,D1,D8,E6,E7,E8,F7,F8

3: 20150602 MW1063-5 A6,A8,B6,F6

4: 20150616 MW1068-25 A1,A2,B1,C2,C4,C6,C7,C8,D3,D4,D5,D6,D7,D8,E1,E2,E4,E5,E6,E7,E8,F7,F8

5: 20150616 MW1068-26 A3,A4,A5,A7,B1,B4,B5,B7,B8,C2,C3,C4,C5,C6,C7,C8,D3,D4,D6,D7,D8,E1,E2,E3,E4,E5,E6,E7,E8,F2,F3,F7,F8

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153: 20160712 MW1139-06 B2,E1,E2

154: 20160712 MW1139-07 A2,B2,C2,F6

155: 20160714 MW1139-08 D1,E1

156: 20160714 MW1139-09 B2,E1,E2

157: 20160714 MW1139-10 A5,B5

ToxCast2016\_dat1\_2020-07-23.RData

wllq\_notes V1

1: 18816

2: Baseline # of AE < 10; Baseline MFR < 0.6377603 Hz; 264

3: Baseline MFR < 0.6377603 Hz; 310

4: Baseline MFR > 3.4036511 Hz; 386

5: Baseline # of AE < 10; 48

6: Recording length < 1000 s; 48

Updating a few typos in the plate.id's and resaving dat1, see notes.

Level 2 - Collapse Data by Plate ID:

Loading...

ToxCast2016\_dat1\_2020-07-23.RData

Collapsing treated and baseline data...

20160113\_MW1090-24

20160113\_MW1090-27

. . .

20150908\_MW1045-10

20150908\_MW1045-6

20150908\_MW1045-9

ToxCast2016\_dat2\_2020-07-23.RData is ready.

ToxCast2016\_dat2\_2020-07-23.RData

Settting negative blank-corrected LDH values to 0...

Updating acsn's from NHEERL to CCTE\_Shafer...

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

Loading...

ToxCast2016\_dat2\_2020-07-23.RData

ToxCast2016\_dat3\_2020-07-23.RData is ready.

Removing the rows with NA acnm from dat3

(I added these for plates 1089-90 and 1090-6, where the cytodat has diff plate.id's)

Warning message:

In combineNeuralAndCyto(cytodat, main.output.dir, dataset\_title) :

The following date\_plate's are only found in cytodat (and not in dat2): 20151215\_MW1089-8, 20151215\_MW1090-8

Wllq will be set to 1 for all wells on these LDH/AB plates.

Level 4 - Finalize well ID information:

ToxCast2016\_dat3\_2020-07-23.RData

Finalize Wllq:

NA rval's: 16983

Inf rval's (baseline==0): 18

Well quality set to 0 for these rval's.

Experiment date: 20160317 MW1076-37 A7 Mis-dosed Summary:

rval acnm

1: -13.33333333 active\_electrodes\_number

2: -83.98956357 burst\_number

3: -74.76505621 firing\_rate\_mean

4: -51.61744023 network\_burst\_number

5: 0.04016667 LDH

6: 1690.33333333 AB

Well quality set to zero for 45 rows.

Experiment date: 20160317 MW1076-37 A8 Mis-dosed Summary:

rval acnm

1: -13.33333333 active\_electrodes\_number

2: -86.61675246 burst\_number

3: -83.46617851 firing\_rate\_mean

4: -88.86699507 network\_burst\_number

5: 0.06296667 LDH

6: 424.33333333 AB

Well quality set to zero for 45 rows.

Experiment date: 20160317 MW1076-37 B7 Mis-dosed Summary:

rval acnm

1: -6.2500000 active\_electrodes\_number

2: -70.8066239 burst\_number

3: -59.2800658 firing\_rate\_mean

4: -18.5404339 network\_burst\_number

5: 0.1353667 LDH

6: 35904.3333333 AB

Well quality set to zero for 45 rows.

Experiment date: 20160317 MW1076-37 B8 Mis-dosed Summary:

rval acnm

1: -6.2500000 active\_electrodes\_number

2: -64.7880173 burst\_number

3: -60.5667421 firing\_rate\_mean

4: -29.9625468 network\_burst\_number

5: 0.1093667 LDH

6: 35769.3333333 AB

Well quality set to zero for 45 rows.

Experiment date: 20160317 MW1076-37 C7 Mis-dosed Summary:

rval acnm

1: -1.333333e+01 active\_electrodes\_number

2: -7.755315e+01 burst\_number

3: -6.702176e+01 firing\_rate\_mean

4: -6.237885e+01 network\_burst\_number

5: 3.926667e-02 LDH

6: 3.319833e+04 AB

Well quality set to zero for 45 rows.

Experiment date: 20160317 MW1076-37 C8 Mis-dosed Summary:

rval acnm

1: -6.666667e+00 active\_electrodes\_number

2: -5.191974e+01 burst\_number

3: -3.864463e+01 firing\_rate\_mean

4: 3.894298e+01 network\_burst\_number

5: 4.086667e-02 LDH

6: 3.998033e+04 AB

Well quality set to zero for 45 rows.

Experiment date: 20160317 MW1076-37 D7 Mis-dosed Summary:

rval acnm

1: 0.000000e+00 active\_electrodes\_number

2: -6.656078e+01 burst\_number

3: -6.103404e+01 firing\_rate\_mean

4: -2.110215e+01 network\_burst\_number

5: 3.106667e-02 LDH

6: 3.235333e+04 AB

Well quality set to zero for 45 rows.

Experiment date: 20160317 MW1076-37 D8 Mis-dosed Summary:

rval acnm

1: -1.250000e+01 active\_electrodes\_number

2: -7.616225e+01 burst\_number

3: -7.069528e+01 firing\_rate\_mean

4: -5.710187e+01 network\_burst\_number

5: 4.636667e-02 LDH

6: 3.454333e+04 AB

Well quality set to zero for 45 rows.

Experiment date: 20160317 MW1076-37 E7 Mis-dosed Summary:

rval acnm

1: -6.250000e+00 active\_electrodes\_number

2: -6.959410e+01 burst\_number

3: -6.321336e+01 firing\_rate\_mean

4: -3.520750e+01 network\_burst\_number

5: 3.686667e-02 LDH

6: 3.057733e+04 AB

Well quality set to zero for 45 rows.

Experiment date: 20160317 MW1076-37 E8 Mis-dosed Summary:

rval acnm

1: 0.000000e+00 active\_electrodes\_number

2: -6.440714e+01 burst\_number

3: -5.673813e+01 firing\_rate\_mean

4: 1.334951e+00 network\_burst\_number

5: 4.006667e-02 LDH

6: 3.923433e+04 AB

Well quality set to zero for 45 rows.

Experiment date: 20160317 MW1076-37 F7 Mis-dosed Summary:

rval acnm

1: -1.250000e+01 active\_electrodes\_number

2: -7.351411e+01 burst\_number

3: -6.844612e+01 firing\_rate\_mean

4: -5.007519e+01 network\_burst\_number

5: 3.326667e-02 LDH

6: 1.721033e+04 AB

Well quality set to zero for 45 rows.

Experiment date: 20160317 MW1076-37 F8 Mis-dosed Summary:

rval acnm

1: -2.000000e+01 active\_electrodes\_number

2: -9.026288e+01 burst\_number

3: -7.651494e+01 firing\_rate\_mean

4: -6.519722e+01 network\_burst\_number

5: 4.276667e-02 LDH

6: 3.306033e+04 AB

Well quality set to zero for 45 rows.

Experiment date: 20160531 MW1048-15 A1 Mis-dosed Summary:

rval acnm

1: 0.0000000 active\_electrodes\_number

2: -10.8704794 burst\_number

3: -10.4074782 firing\_rate\_mean

4: 14.0065147 network\_burst\_number

5: 0.1720333 LDH

6: 47600.3333333 AB

Well quality set to zero for 45 rows.

Experiment date: 20160531 MW1048-15 A2 Mis-dosed Summary:

rval acnm

1: 0.000000e+00 active\_electrodes\_number

2: -4.691096e+00 burst\_number

3: -1.269072e+01 firing\_rate\_mean

4: -5.714286e+00 network\_burst\_number

5: 9.583333e-02 LDH

6: 3.982733e+04 AB

Well quality set to zero for 45 rows.

Experiment date: 20160531 MW1048-15 B1 Mis-dosed Summary:

rval acnm

1: 0.0000000 active\_electrodes\_number

2: -5.8075536 burst\_number

3: -6.0287532 firing\_rate\_mean

4: 19.5906433 network\_burst\_number

5: 0.2214333 LDH

6: 44602.3333333 AB

Well quality set to zero for 45 rows.

Experiment date: 20160531 MW1048-15 B2 Mis-dosed Summary:

rval acnm

1: 0.0000000 active\_electrodes\_number

2: -41.0574413 burst\_number

3: -36.9492196 firing\_rate\_mean

4: -32.1041215 network\_burst\_number

5: 0.2190333 LDH

6: 42074.3333333 AB

Well quality set to zero for 45 rows.

Experiment date: 20160531 MW1048-15 C1 Mis-dosed Summary:

rval acnm

1: -100.0000000 active\_electrodes\_number

2: -100.0000000 burst\_number

3: -100.0000000 firing\_rate\_mean

4: -100.0000000 network\_burst\_number

5: 0.1336333 LDH

6: 34680.3333333 AB

Well quality set to zero for 45 rows.

Experiment date: 20160531 MW1048-15 C2 Mis-dosed Summary:

rval acnm

1: -21.4285714 active\_electrodes\_number

2: -60.5772744 burst\_number

3: -52.7180165 firing\_rate\_mean

4: -46.9072165 network\_burst\_number

5: 0.1225333 LDH

6: 40941.3333333 AB

Well quality set to zero for 45 rows.

Experiment date: 20160531 MW1048-15 D1 Mis-dosed Summary:

rval acnm

1: 0.0000000 active\_electrodes\_number

2: -11.4649682 burst\_number

3: 9.9689403 firing\_rate\_mean

4: -6.6361556 network\_burst\_number

5: 0.1630333 LDH

6: 43085.3333333 AB

Well quality set to zero for 45 rows.

Experiment date: 20160531 MW1048-15 D2 Mis-dosed Summary:

rval acnm

1: 0.0000000 active\_electrodes\_number

2: -8.8394468 burst\_number

3: 102.4583443 firing\_rate\_mean

4: -41.5637860 network\_burst\_number

5: 0.1234333 LDH

6: 42396.3333333 AB

Well quality set to zero for 45 rows.

Experiment date: 20160531 MW1048-15 E1 Mis-dosed Summary:

rval acnm

1: 0.0000000 active\_electrodes\_number

2: -48.2453209 burst\_number

3: -9.3418014 firing\_rate\_mean

4: -64.9446494 network\_burst\_number

5: 0.1262333 LDH

6: 45129.3333333 AB

Well quality set to zero for 45 rows.

Experiment date: 20160531 MW1048-15 E2 Mis-dosed Summary:

rval acnm

1: 0.0000000 active\_electrodes\_number

2: -8.9478045 burst\_number

3: 20.0641758 firing\_rate\_mean

4: -35.9813084 network\_burst\_number

5: 0.1325333 LDH

6: 46709.3333333 AB

Well quality set to zero for 45 rows.

Experiment date: 20160531 MW1048-15 F1 Mis-dosed Summary:

rval acnm

1: -100.000000 active\_electrodes\_number

2: -100.000000 burst\_number

3: -100.000000 firing\_rate\_mean

4: -100.000000 network\_burst\_number

5: 2.707133 LDH

6: 2503.333333 AB

Well quality set to zero for 45 rows.

Experiment date: 20160531 MW1048-15 F2 Mis-dosed Summary:

rval acnm

1: 0.0000000 active\_electrodes\_number

2: 1.8081761 burst\_number

3: 2.4563899 firing\_rate\_mean

4: -1.9148936 network\_burst\_number

5: 0.1242333 LDH

6: 40123.3333333 AB

Well quality set to zero for 45 rows.

Experiment date: 20151222 MW1060-36 E3 Most likely contaminated with LDH positive control Summary:

rval acnm

1: 1.963167 LDH

Well quality set to zero for 1 rows.

Experiment date: 20151222 MW1060-36 F3 Most likely contaminated with LDH positive control Summary:

rval acnm

1: 1.550367 LDH

Well quality set to zero for 1 rows.

Experiment date: 20151027 MW1076-38 A1 Less than half of typical value, likely that some well contents spilled out. Don't want to include for normalization Summary:

rval acnm

1: 12426.67 AB

Well quality set to zero for 1 rows.

Experiment date: 20151027 MW1076-38 B1 Less than half of typical value, likely that some well contents spilled out. Don't want to include for normalization Summary:

rval acnm

1: 9685.667 AB

Well quality set to zero for 1 rows.

Experiment date: 20151027 MW1076-38 C1 Less than half of typical value, likely that some well contents spilled out. Don't want to include for normalization Summary:

rval acnm

1: 12948.67 AB

Well quality set to zero for 1 rows.

Verifying control compound labels:

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

DMSO, TX002474, TX006145, TX007998, BIC, TX009328, TX000856, LYSIS, TX000967, TX006155, TX006151, TX006238, TX006205, TX002599, TX007190, TX009216, TX003303, TX006183, TX001546, TX000659, TX005545, TX001424, TX005976, TX008788, TX000973, TX000696, TX000754, TX006170, TX011722, . . ., TX002814, TX004202, TX006204, TX008702, TX015415, TX015526, TX010369, TX003365, TX000926

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

The following apid's do not have any ½ Lysis wells with wllq=1. Full Lysis wells will be used instead

20150602

20150616

20150618

20150623

20150709

20150716

20150721

20150723

20150728

20150730

20150804

20150811

20150818

20150825

20150827

20150901

20150908

20150924

20150929

20151006

20151022

20151027

20151029

20151103

20151105

20151112

20151117

20151201

20151203

20151208

20151215

20151217

20151222

20160113

20160127

20160128

20160202

20160209

20160211

20160217

20160218

20160303

20160308

20160309

20160317

20160318

20160329

20160405

20160407

20160412

20160419

20160421

20160426

20160503

20160505

20160510

20160517

20160518

20160524

20160531

20160602

20160609

20160614

20160621

20160623

20160628

20160630

20160712

20160714

Treatments assigned to wllt 'p' for each apid:

apid LDH\_trts\_in\_p\_wells N

1: 20160421 LYSIS 3

2: 20160419 LYSIS 1

3: 20150709 LYSIS 3

4: 20150716 LYSIS 3

5: 20150730 LYSIS 3

6: 20150827 LYSIS 3

7: 20150825 LYSIS 3

8: 20150818 LYSIS 3

9: 20150901 LYSIS 3

10: 20150908 LYSIS 3

11: 20150618 LYSIS 2

12: 20150924 LYSIS 3

13: 20151022 LYSIS 2

14: 20151006 LYSIS 3

15: 20160531 LYSIS 2

16: 20151029 LYSIS 3

17: 20151103 LYSIS 3

18: 20160412 LYSIS 3

19: 20151222 LYSIS 2

20: 20160602 LYSIS 2

21: 20160308 LYSIS 3

22: 20160309 LYSIS 2

23: 20150721 LYSIS 3

24: 20150728 LYSIS 1

25: 20150602 LYSIS 3

26: 20160609 LYSIS 3

27: 20150616 LYSIS 2

28: 20160614 LYSIS 3

29: 20150929 LYSIS 3

30: 20150623 LYSIS 1

31: 20150723 LYSIS 3

32: 20160621 LYSIS 3

33: 20150804 LYSIS 3

34: 20160623 LYSIS 3

35: 20150811 LYSIS 3

36: 20151027 LYSIS 3

37: 20160317 LYSIS 3

38: 20151105 LYSIS 3

39: 20160318 LYSIS 3

40: 20160209 LYSIS 3

41: 20160503 LYSIS 3

42: 20160211 LYSIS 3

43: 20160505 LYSIS 3

44: 20151112 LYSIS 3

45: 20151203 LYSIS 3

46: 20151117 LYSIS 3

47: 20151201 LYSIS 3

48: 20160510 LYSIS 3

49: 20160218 LYSIS 2

50: 20151208 LYSIS 3

51: 20160217 LYSIS 3

52: 20151215 LYSIS 3

53: 20160113 LYSIS 2

54: 20151217 LYSIS 3

55: 20160127 LYSIS 3

56: 20160128 LYSIS 3

57: 20160202 LYSIS 3

58: 20160303 LYSIS 3

59: 20160524 LYSIS 3

60: 20160329 LYSIS 3

61: 20160407 LYSIS 3

62: 20160405 LYSIS 3

63: 20160426 LYSIS 3

64: 20160628 LYSIS 3

65: 20160517 LYSIS 3

66: 20160518 LYSIS 3

67: 20160630 LYSIS 3

68: 20160712 LYSIS 3

69: 20160714 LYSIS 3

apid LDH\_trts\_in\_p\_wells N

Summary of median p wells by apid:

apid pval

1: 20160421 1.4349000

2: 20160419 1.1377000

3: 20150709 2.2952333

4: 20150716 2.5879667

5: 20150730 2.4101667

6: 20150827 1.3801667

7: 20150825 1.3157000

8: 20150818 2.3023000

9: 20150901 1.6969000

10: 20150908 1.4696333

11: 20150618 2.4889667

12: 20150924 1.8018000

13: 20151022 2.4380000

14: 20151006 2.0308000

15: 20160531 2.1714333

16: 20151029 1.7195000

17: 20151103 2.2495667

18: 20160412 1.7592333

19: 20151222 2.6896500

20: 20160602 3.1150000

21: 20160308 1.9196000

22: 20160309 2.9767667

23: 20150721 1.6359667

24: 20150728 1.7982000

25: 20150602 0.5269333

26: 20160609 1.4267000

27: 20150616 2.1614500

28: 20160614 2.8339000

29: 20150929 1.7274667

30: 20150623 2.1680000

31: 20150723 2.2650333

32: 20160621 2.2415667

33: 20150804 2.2464333

34: 20160623 3.4878000

35: 20150811 1.8768333

36: 20151027 2.9805333

37: 20160317 0.7177667

38: 20151105 1.8937333

39: 20160318 1.0079000

40: 20160209 2.1574333

41: 20160503 1.1428667

42: 20160211 1.4686333

43: 20160505 1.5647333

44: 20151112 1.8796667

45: 20151203 1.6293667

46: 20151117 2.3125000

47: 20151201 1.1048000

48: 20160510 1.4586000

49: 20160218 2.4721333

50: 20151208 2.0173000

51: 20160217 1.5358333

52: 20151215 0.4342333

53: 20160113 0.6670833

54: 20151217 0.6246667

55: 20160127 1.9661333

56: 20160128 1.7593000

57: 20160202 1.7364667

58: 20160303 1.9290333

59: 20160524 1.5442333

60: 20160329 1.9198000

61: 20160407 1.7917667

62: 20160405 1.7650667

63: 20160426 1.6823667

64: 20160628 1.2782000

65: 20160517 1.3666000

66: 20160518 1.6687000

67: 20160630 1.7884667

68: 20160712 1.8538333

69: 20160714 1.9559333

apid pval

Assign spid's:

Using spidmap file: L:/Lab/NHEERL\_MEA/MAESTRO SYSTEM/ToxCast Compounds/Phase I and II Con Response/EPA\_11024\_TShafer\_384ph2\_75ul\_13May2015.xlsx

No spids are NA.

Number of unique spids: 387

Assign Wllt:

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

TP0001412A06, TP0001413D10, TP0001413E12, TP0001411A09, TP0001411H01, TP0001414H11, TP0001411A12, TP0001411F10, TP0001411E09, TP0001411E12, TP0001412G01, TP0001413F11, TP0001412D04, TP0001412B06, TP0001414B05, TP0001411F12, TP0001414A05, TP0001412E12, TP0001411F08, TP0001412E06, TP0001411H03, TP0001413G09, TP0001412F06, TP0001413G08, TP0001414A11, TP0001413H11, TP0001412H07, TP0001414D11, TP0001414A07, TP0001412H02, TP0001412A04, TP0001414H12, TP0001412A12, TP0001412F02, TP0001411E06, TP0001414C10, TP0001411G02, TP0001411F09, TP0001413C01, TP0001412C05, TP0001413D06, TP0001414H02, TP0001412D03, TP0001411F06, TP0001412E03, TP0001412F05, TP0001414B12, TP0001412H11, TP0001413G12, TP0001414F07, TP0001413B10, TP0001413G11, TP0001411C04, TP0001412C02, TP0001412D02, TP0001412F08, TP0001413C10, TP0001414F10, TP0001413E10, TP0001414G02, TP0001412B10, TP0001414A03, TP0001414F11, TP0001412B09, TP0001414B03, TP0001413H09, TP0001412H06, TP0001411B11, TP0001414F08, TP0001411A05, TP0001413D03, TP0001411C01, TP0001414H05, TP0001411F04, TP0001413H02, TP0001414G12, TP0001412H03, TP0001411D11, TP0001411D01, TP0001411A04, TP0001414C12, TP0001414B09, TP0001412D05, TP0001411B08, TP0001414A12, TP0001414B07, TP0001413F07, TP0001414G11, TP0001412G03, TP0001412E08, TP0001413B05, TP0001411B12, TP0001413B01, TP0001411A01, TP0001414D03, TP0001412C03, TP0001412C07, TP0001414H07, TP0001413B02, TP0001413H03, TP0001414C11, TP0001414D12, TP0001412C01, TP0001414A04, TP0001411A10, TP0001414H06, TP0001412G09, TP0001411C02, TP0001414C06, TP0001412E11, TP0001411H11, TP0001412D08, TP0001411A11, TP0001413C08, TP0001412H08, TP0001412C08, TP0001411D08, TP0001413G07, TP0001413G05, TP0001412G05, TP0001414G08, TP0001414F03, TP0001413A10, TP0001414B06, TP0001414G04, TP0001414C02, TP0001411E08, TP0001414E03, TP0001413F10, TP0001414F01, TP0001413A08, TP0001414H04, TP0001411E04, TP0001413C06, TP0001411H10, TP0001412A05, TP0001413F09, TP0001413A12, TP0001412C06, TP0001413H10, TP0001412B03, TP0001413B06, TP0001413C09, TP0001413C04, TP0001412H09, TP0001411H04, TP0001411A07, TP0001414B04, TP0001412A03, TP0001412E09, TP0001411B06, TP0001411G12, TP0001411G06, TP0001411D02, TP0001414D06, TP0001412B04, TP0001413E09, TP0001411D09, TP0001411G11, TP0001413F08, TP0001411C11, TP0001413D09, TP0001414H08, TP0001413G02, TP0001414A10, TP0001412F12, TP0001413C03, TP0001411F03, TP0001413D08, TP0001414G05, TP0001413F05, TP0001411G03, TP0001412A01, TP0001412D01, TP0001413H12, TP0001414D07, TP0001412F04, TP0001412A07, TP0001412A09, TP0001412G10, TP0001411C10, TP0001411G07, TP0001413D07, TP0001411E03, TP0001412G08, TP0001411H12, TP0001411D07, TP0001413B12, TP0001414A02, TP0001411G10, TP0001414E04, TP0001414G03, TP0001414D04, TP0001413A07, TP0001413E07, TP0001413G03, TP0001414E05, TP0001412B02, TP0001412G07, TP0001411E01, TP0001411B04, TP0001411C07, TP0001411B09, TP0001412C11, TP0001413F12, TP0001414A09, TP0001413D11, TP0001414D02, TP0001414F04, TP0001414E08, TP0001414E10, TP0001413C11, TP0001414E09, TP0001412G04, TP0001411G09, TP0001412D11, TP0001414B11, TP0001411D04, TP0001412C12, TP0001412A11, TP0001414F09, TP0001411G04, TP0001414C09, TP0001411B07, TP0001411H08, TP0001412D06, TP0001412C04, TP0001413E01, TP0001414E12, TP0001414D09, TP0001413C05, TP0001413D01, TP0001411G05, TP0001414D08, TP0001412H10, TP0001413H01, TP0001414G09, TP0001414E01, TP0001412A10, TP0001414G01, TP0001414E11, TP0001413B11, TP0001411E10, TP0001414F12, TP0001413F04, TP0001412H12, TP0001412B05, TP0001414C08, TP0001414H03, TP0001414G10, TP0001411D12, TP0001413F06, TP0001412F01, TP0001412D10, TP0001411B01, TP0001414C03, TP0001411C08, TP0001412C09, TP0001411A06, TP0001412B08, TP0001413H05, TP0001412C10, TP0001411D03, TP0001411F05, TP0001412E05, TP0001412G12, TP0001413F02, TP0001414F02, TP0001411G08, TP0001412F07, TP0001414A01, TP0001411F02, TP0001413A09, TP0001412G02, TP0001411B03, TP0001411C12, TP0001412H04, TP0001413A05, TP0001414F05, TP0001413E11, TP0001414B02, TP0001411C06, TP0001414C01, TP0001413B09, TP0001412F03, TP0001412F09, TP0001412G06, TP0001413E04, TP0001414G06, TP0001411B10, TP0001411G01, TP0001413B07, TP0001411H02, TP0001412D12, TP0001413D05, TP0001414C04, TP0001414E06, TP0001414C07, TP0001414G07, TP0001411B05, TP0001413D12, TP0001412B12, TP0001414H01, TP0001414F06, TP0001412E07, TP0001411E07, TP0001411D10, TP0001413B04, TP0001411A02, TP0001413H06, TP0001413B08, TP0001414E07, TP0001413H08, TP0001411B02, TP0001413A01, TP0001411E05, TP0001412G11, TP0001413B03, TP0001413G01, TP0001411H09, TP0001413G06, TP0001414D05, TP0001413A04, TP0001413E08, TP0001412B11, TP0001414E02, TP0001414C05, TP0001411C03, TP0001412B07, TP0001413G10, TP0001412B01, TP0001414B10, TP0001412F11, TP0001414B01, TP0001413A11, TP0001413G04, TP0001412D09, TP0001412E10, TP0001411D05, TP0001414A06, TP0001411H06, TP0001414H10, TP0001414H09, TP0001411D06, TP0001413D04, TP0001413F03, TP0001411F07, TP0001413C07, TP0001413A06, TP0001412A02, TP0001412D07, TP0001414B08, TP0001413H04, TP0001414A08, TP0001411F11, TP0001413E05, TP0001412H01, TP0001413E06, TP0001411A08, TP0001411C05, TP0001411A03, TP0001411F01, TP0001411H07, TP0001412F10, TP0001413D02, TP0001413A02, TP0001413C02, TP0001412E02, TP0001412E04, TP0001412A08, TP0001412H05, TP0001413E02, TP0001412E01, TP0001414D01, TP0001413F01, TP0001411H05, TP0001414D10, TP0001411E02, TP0001413H07, TP0001413E03, TP0001411C09, TP0001413A03, TP0001411E11, TP0001413C12

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

(same as above)

Well Type Assignments for Control Compounds by assay component:

treatment spid CellTiter Blue LDH MEA components

1: BIC Bicuculline z z p

2: DMSO DMSO n n n

3: LYSIS Tritonx100 p p v

Unique of wllt:

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

Finalize Concentrations:

All conc's as char:

0.001, 0.002, 0.0027, 0.003, 0.0075, 0.009, 0.01, 0.0114, 0.015, 0.01845, 0.01875, 0.01935, 0.02175, 0.02265, 0.025, 0.0252, 0.0258, 0.02625, 0.0267, 0.027, 0.02715, 0.02745, 0.0276, 0.02775, 0.0279, 0.02805, 0.02865, 0.02985, 0.03, 0.03015, 0.0303, 0.03045, 0.03075, 0.03105, 0.0312, 0.03135, 0.038, 0.05, 0.0615, 0.0625, 0.0645, 0.0725, 0.075, 0.0755, 0.084, 0.086, 0.0875, 0.089, 0.09, 0.0905, 0.0915, 0.092, 0.0925, 0.093, 0.0935, 0.0955, 0.0995, 0.1, 0.1005, 0.101, 0.1015, 0.1025, 0.1035, 0.104, 0.1045, 0.114, 0.15, 0.185, 0.1875, 0.1935, 0.194, 0.2175, 0.2265, 0.25, 0.252, 0.258, 0.2625, 0.267, 0.27, 0.2715, 0.2745, 0.275, 0.276, 0.278, 0.279, 0.2805, 0.2865, 0.2985, 0.299, 0.3, 0.3015, 0.302, 0.303, 0.305, 0.308, 0.3105, 0.312, 0.314, 0.38, 0.5, 0.615, 0.625, 0.645, 0.725, 0.75, 0.755, 0.84, 0.86, 0.875, 0.89, 0.9, 0.905, 0.915, 0.92, 0.925, 0.93, 0.935, 0.955, 0.995, 1, 1.005, 1.01, 1.015, 1.025, 1.035, 1.04, 1.045, 1.14, 1.5, 1.85, 1.875, 1.935, 1.94, 10, 10.05, 10.1, 10.15, 10.25, 10.35, 10.4, 10.45, 100, 15.2, 1e-04, 2.175, 2.265, 2.5, 2.52, 2.58, 2.625, 2.67, 2.7, 2.715, 2.745, 2.75, 2.76, 2.78, 2.79, 2.805, 2.865, 2.985, 2.99, 20, 24.6, 25, 25.8, 29, 3, 3.015, 3.02, 3.03, 3.05, 3.08, 3.105, 3.12, 3.14, 3.6, 3.8, 30.2, 33.6, 34.4, 35, 35.6, 36, 36.2, 36.6, 36.8, 37, 37.2, 37.4, 38.2, 39.8, 3e-04, 3e-05, 40, 40.2, 40.4, 40.6, 41, 41.4, 41.6, 41.8, 5, 6.15, 6.25, 6.45, 7.25, 7.55, 8.4, 8.6, 8.75, 8.9, 9, 9.05, 9.15, 9.2, 9.25, 9.3, 9.35, 9.55, 9.95

All conc's as numeric:

3e-05, 1e-04, 3e-04, 0.001, 0.002, 0.0027, 0.003, 0.0075, 0.009, 0.01, 0.0114, 0.015, 0.01845, 0.01875, 0.01935, 0.02175, 0.02265, 0.025, 0.0252, 0.0258, 0.02625, 0.0267, 0.027, 0.02715, 0.02745, 0.0276, 0.02775, 0.0279, 0.02805, 0.02865, 0.02985, 0.03, 0.03015, 0.0303, 0.03045, 0.03075, 0.03105, 0.0312, 0.03135, 0.038, 0.05, 0.0615, 0.0625, 0.0645, 0.0725, 0.075, 0.0755, 0.084, 0.086, 0.0875, 0.089, 0.09, 0.0905, 0.0915, 0.092, 0.0925, 0.093, 0.0935, 0.0955, 0.0995, 0.1, 0.1005, 0.101, 0.1015, 0.1025, 0.1035, 0.104, 0.1045, 0.114, 0.15, 0.185, 0.1875, 0.1935, 0.194, 0.2175, 0.2265, 0.25, 0.252, 0.258, 0.2625, 0.267, 0.27, 0.2715, 0.2745, 0.275, 0.276, 0.278, 0.279, 0.2805, 0.2865, 0.2985, 0.299, 0.3, 0.3015, 0.302, 0.303, 0.305, 0.308, 0.3105, 0.312, 0.314, 0.38, 0.5, 0.615, 0.625, 0.645, 0.725, 0.75, 0.755, 0.84, 0.86, 0.875, 0.89, 0.9, 0.905, 0.915, 0.92, 0.925, 0.93, 0.935, 0.955, 0.995, 1, 1.005, 1.01, 1.015, 1.025, 1.035, 1.04, 1.045, 1.14, 1.5, 1.85, 1.875, 1.935, 1.94, 2.175, 2.265, 2.5, 2.52, 2.58, 2.625, 2.67, 2.7, 2.715, 2.745, 2.75, 2.76, 2.78, 2.79, 2.805, 2.865, 2.985, 2.99, 3, 3.015, 3.02, 3.03, 3.05, 3.08, 3.105, 3.12, 3.14, 3.6, 3.8, 5, 6.15, 6.25, 6.45, 7.25, 7.55, 8.4, 8.6, 8.75, 8.9, 9, 9.05, 9.15, 9.2, 9.25, 9.3, 9.35, 9.55, 9.95, 10, 10.05, 10.1, 10.15, 10.25, 10.35, 10.4, 10.45, 15.2, 20, 24.6, 25, 25.8, 29, 30.2, 33.6, 34.4, 35, 35.6, 36, 36.2, 36.6, 36.8, 37, 37.2, 37.4, 38.2, 39.8, 40, 40.2, 40.4, 40.6, 41, 41.4, 41.6, 41.8, 100

Final Control Compound Conc Assignments by assay component:

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

1: BIC Bicuculline NA 25 25 25

2: DMSO DMSO NA 0.002 0.002 0.002

3: LYSIS Tritonx100 NA 100 100 100

Concentration Corrections:

Most conc's from the flat file were already concentration-corrected in the flat file.

However, the following compounds appear to not have been conc-corrected:

spid treatment flatfile\_concs ALIQUOT\_CONC

1: TP0001411B01 TX006863 0.0274,0.0915,0.275,0.915,2.75,9.15,36.6 18.3

2: TP0001411B06 TX003303 0.0314,0.104,0.314,1.04,3.14,10.4,41.8 20.9

3: TP0001411D01 TX001415 0.0298,0.0995,0.299,0.995,2.99,9.95,39.8 19.9

4: TP0001411D07 TX005130 0.0308,0.102,0.308,1.02,3.08,10.2,41 20.5

5: TP0001411D11 TX001414 0.0302,0.1,0.302,1,3.02,10,40.2 20.1

6: TP0001411E07 TX009382 0.03,0.1,0.3,1,3,10,40 10.0

7: TP0001411F01 TX015544 0.0184,0.0615,0.185,0.615,1.85,6.15,24.6 12.3

8: TP0001412B01 TX011588 0.0304,0.102,0.305,1.01,3.05,10.2,40.6 20.3

9: TP0001412E07 TX009342 0.0286,0.0955,0.286,0.955,2.86,9.55,38.2 19.1

10: TP0001412H03 TX001412 0.0302,0.1,0.302,1,3.02,10,40.2 20.1

11: TP0001413D04 TX012340 0.015,0.03,0.05,0.1,0.15,0.3,0.5,1,1.5,3,5,10,20,40 10.0

12: TP0001413H03 TX001598 3e-05,1e-04,3e-04,0.001,0.003,0.01,0.03,0.1,0.3,1,3,10,40 20.0

13: TP0001414A12 TX001426 0.0298,0.0995,0.299,0.995,2.99,9.95,39.8 19.9

14: TP0001414B08 TX014268 3e-05,1e-04,3e-04,0.001,0.003,0.01,0.03,0.1,0.3,1,3,10,40 20.0

spidmap\_guess\_concs

1: 0.0274,0.0915,0.274,0.915,2.74,9.15,36.6

2: 0.0313,0.104,0.313,1.04,3.14,10.4,41.8

3: 0.0298,0.0995,0.298,0.995,2.98,9.95,39.8

4: 0.0307,0.102,0.307,1.02,3.08,10.2,41

5: 0.0302,0.101,0.302,1.01,3.02,10,40.2

6: 0.015,0.05,0.15,0.5,1.5,5,20

7: 0.0184,0.0615,0.184,0.615,1.84,6.15,24.6

8: 0.0304,0.102,0.305,1.02,3.05,10.2,40.6

9: 0.0286,0.0955,0.287,0.955,2.86,9.55,38.2

10: 0.0302,0.101,0.302,1.01,3.02,10,40.2

11: 0.015,0.05,0.15,0.5,1.5,5,20

12: 0.03,0.1,0.3,1,3,10,40

13: 0.0298,0.0995,0.298,0.995,2.98,9.95,39.8

14: 0.03,0.1,0.3,1,3,10,40

Conc's updated for TP0001411E07 and TP0001413D04

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 382640

2: 0 64480

Number of plates tested: 209

Number of experiment dates: 69

LDH plates are expected to have 48 points.

The following plates don't have the expected number of points (48 for MEA & AB48for LDH):

date\_plate AB LDH MEA\_pts

1: 20151215\_MW1089-8 48 48 0

date\_plate AB LDH MEA\_pts

1: 20151215\_MW1089-90 0 0 48

date\_plate AB LDH MEA\_pts

1: 20151215\_MW1090-6 0 0 48

date\_plate AB LDH MEA\_pts

1: 20151215\_MW1090-8 48 48 0

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\_CV\_std n,t 1657

2: CCTE\_Shafer\_MEA\_acute\_interburst\_interval\_std n,t 1400

3: CCTE\_Shafer\_MEA\_acute\_interburst\_interval\_mean n,t 676

4: CCTE\_Shafer\_MEA\_acute\_inter-network\_burst\_interval\_CV n,t 324

5: CCTE\_Shafer\_MEA\_acute\_per\_network\_burst\_electrodes\_number\_std n,t 184

6: CCTE\_Shafer\_MEA\_acute\_median\_interspike\_interval\_within\_burst\_std n,t 153

7: CCTE\_Shafer\_MEA\_acute\_interburst\_interval\_CV\_mean n,t 107

8: CCTE\_Shafer\_MEA\_acute\_burst\_duration\_std n,t 101

9: CCTE\_Shafer\_MEA\_acute\_mean\_interspike\_interval\_within\_burst\_std n,t 98

10: CCTE\_Shafer\_MEA\_acute\_burst\_duration\_IQR\_std n,t 94

11: CCTE\_Shafer\_MEA\_acute\_burst\_percentage\_std n,t 76

12: CCTE\_Shafer\_MEA\_acute\_burst\_frequency\_std n,t 65

13: CCTE\_Shafer\_MEA\_acute\_cross\_correlation\_HWHM n,t 65

14: CCTE\_Shafer\_MEA\_acute\_network\_burst\_duration\_std n,t 50

15: CCTE\_Shafer\_MEA\_acute\_median\_interspike\_interval\_within\_burst\_mean t 50

16: CCTE\_Shafer\_MEA\_acute\_per\_burst\_spike\_number\_std n,t 48

17: CCTE\_Shafer\_MEA\_acute\_per\_network\_burst\_mean\_spikes\_per\_electrode\_std n,t 34

18: CCTE\_Shafer\_MEA\_acute\_mean\_interspike\_interval\_within\_burst\_mean t 27

19: CCTE\_Shafer\_MEA\_acute\_interspike\_interval\_CV t 27

20: CCTE\_Shafer\_MEA\_acute\_network\_burst\_duration\_IQR t 25

21: CCTE\_Shafer\_MEA\_acute\_per\_network\_burst\_spike\_number\_std n,t 24

22: CCTE\_Shafer\_MEA\_acute\_cross\_correlation\_HWHM\_normalized t 22

23: CCTE\_Shafer\_MEA\_acute\_network\_burst\_duration\_mean t 22

24: CCTE\_Shafer\_MEA\_acute\_burst\_duration\_mean t 21

25: CCTE\_Shafer\_MEA\_acute\_per\_burst\_spike\_number\_mean n,t 19

26: CCTE\_Shafer\_MEA\_acute\_per\_network\_burst\_spike\_number\_mean t 11

27: CCTE\_Shafer\_MEA\_acute\_per\_network\_burst\_mean\_spikes\_per\_electrode\_mean t 10

28: CCTE\_Shafer\_MEA\_acute\_burst\_duration\_IQR\_mean t 5

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

30: CCTE\_Shafer\_MEA\_acute\_network\_burst\_number t 2

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: 2020-07-23