**Comparison of WiChR1 peak & end currents (Fig. 4D)**

**Wilcoxon Signed Ranks Test (9/21/2022 11:17:44)**

**Notes**

| X-Function         | Wilcoxon Signed Ranks Test |
|--------------------|----------------------------|
| User Name          | egovorunova                |
| Time               | 9/21/2022 11:17:44         |
| Data Filter        | No                         |

**Input Data**

| Data                  | Range           |
|-----------------------|-----------------|
| 1st Data Range        | [DataErev]Sheet1!PeakWiChR1"Peak WiChR1" [1*:6*] |
| 2nd Data Range        | [DataErev]Sheet1!EndWiChR1"End WiChR1" [1*:6*] |

**Descriptive Statistics**

|                  | N   | Min  | Q1   | Median  | Q3   | Max  |
|------------------|-----|------|------|---------|------|------|
| "Peak WiChR1"    | 6   | -111.4 | -104.65 | -100.9 | -95.15 | -85.4 |
| "End WiChR1"     | 6   | -88.4  | -87.65 | -81.9  | -73.9  | -66.4 |

**Ranks**

|                  | N | Mean Rank | Sum Rank |
|------------------|---|-----------|----------|
| Positive Ranks   | 6 | 3.5       | 21       |
| Negative Ranks   | 0 | 0         | 0        |

**Test Statistics**

| W | Z     | Exact Prob>|W| | Asymp. Prob>|W| |
|---|-------|------------|--------|--------|
| 0 | -2.09657 | 0.03125   | 0.03603 |

Null Hypothesis: F(x) = G(y)

Alternative Hypothesis: F(x) <> G(y)

At the 0.05 level, the two distributions are significantly different.
Comparison of HcKCR1 peak & end currents (Fig. 4D)

Wilcoxon Signed Ranks Test (9/21/2022 11:20:07)

Notes

| X-Function | Wilcoxon Signed Ranks Test |
|------------|----------------------------|
| User Name  | egovorunova                |
| Time       | 9/21/2022 11:20:07         |
| Data Filter| No                         |

Input Data

| Data | Range |
|------|-------|
| 1st Data Range | [DataErev]Sheet1!PeakHcKCR1"Peak HcKCR1" [1*:7*] |
| 2nd Data Range | [DataErev]Sheet1!EndHcKCR1"End HcKCR1" [1*:7*] |

Descriptive Statistics

|                          | N | Min | Q1 | Median | Q3 | Max |
|--------------------------|---|-----|----|--------|----|-----|
| "Peak HcKCR1"            | 7 | -90.4 | -89.4 | -87.4 | -85.4 | -84.4 |
| "End HcKCR1"             | 7 | -84.4 | -76.4 | -74.4 | -72.4 | -69.4 |

Ranks

|                          | N | Mean Rank | Sum Rank |
|--------------------------|---|-----------|----------|
| Positive Ranks           | 7 | 4         | 28       |
| Negative Ranks           | 0 | 0         | 0        |

Test Statistics

| W | Z   | Exact Prob>|W| | Asymp. Prob>|W| |
|---|-----|-------------|--------|----------|
| 0 | -2.30257 | 0.01563 | 0.0213 |

Null Hypothesis: F(x) = G(y)
Alternative Hypothesis: F(x) <> G(y)
At the 0.05 level, the two distributions are significantly different.
Comparison of HcCCR peak & end currents (Fig. 4D)

Wilcoxon Signed Ranks Test (9/21/2022 11:20:51)

Notes

| X-Function       | Wilcoxon Signed Ranks Test |
|------------------|---------------------------|
| User Name        | egovorunova               |
| Time             | 9/21/2022 11:20:51        |
| Data Filter      | No                        |

Input Data

| Data              | Range       |
|-------------------|-------------|
| 1st Data Range    | [Peak HcCCR1] |
| 2nd Data Range    | [End HcCCR1] |

Descriptive Statistics

|                      | N | Min | Q1  | Median | Q3  | Max |
|----------------------|---|-----|-----|--------|-----|-----|
| "Peak HcCCR1"        | 8 | 39.6| 42.85| 44.6   | 47.6| 47.6|
| "End HcCCR1"         | 8 | 37.6| 42.6 | 43.6   | 46.85| 48.6|

Ranks

|                      | N  | Mean Rank | Sum Rank |
|----------------------|----|-----------|----------|
| Positive Ranks       | 2  | 2.5       | 5        |
| Negative Ranks       | 5  | 4.6       | 23       |

Test Statistics

|     | W  | Z    | Exact Prob>|W| | Asymp. Prob>|W| |
|-----|----|------|-------------|--------|--------------|--------|
|     | 23 | 1.46584 | 0.17188    | 0.14269 |

Null Hypothesis: F(x) = G(y)
Alternative Hypothesis: F(x) <> G(y)
At the 0.05 level, the two distributions are NOT significantly different.
Sig equals 0 indicates that the difference of the means is not significant at the 0.05 level.

|         | Coeff Var | Root MSE | Data Mean |
|---------|-----------|----------|-----------|
| A       | 96.70833  | 2.83856  | 0.40987   |
| B       | -100.5892 | 2.93165  | 2.06787   |
| C       | -90.30357 | 2.76399  | 5.30212   |
| D       | -69.83333 | 3.16654  | 5.14209   |
| E       | -70.85714 | 3.05136  | 2.06787   |
| F       | -44.54762 | 3.21146  | 5.14209   |
| G       | -11.57143 | 2.93165  | 5.30212   |
| H       | 5.91667   | 2.83856  | 0.40987   |
| I       | 8.88095   | 2.93165  | 5.14209   |
| J       | 5.14209   | 2.83856  | 0.40987   |
| K       | -5.05714  | 2.76399  | 5.30212   |
| L       | -2.16071  | 2.93165  | 5.14209   |
| M       | -5.04167  | 2.76399  | 5.30212   |
| N       | 2.66667   | 2.93165  | 5.14209   |
|      | 1     | 2     | 3     | 4     | 5     | 6     |
|------|-------|-------|-------|-------|-------|-------|
|      |       |       |       |       |       |       |
| Sig equals 0 | indicates that the difference of the means is not significant at the 0.01 level. | Tukey Test | F69L_S73I_T | S73I_T222Y | S73I_HcCCR | TM1_HcCCR |
| D217S |        | TM6   |        |       |       |       |
| T222Y |        |       |       |       |       |       |
| V235I |        | TM6   |        |       |       |       |
| S77C  |        |       |       |       |       |       |
| A66V  |        | TM1   |        |       |       |       |
| V76L  |        | TM2   |        |       |       |       |
| I80M  |        | TM1   |        |       |       |       |
| S73I  |        | TM4   |        |       |       |       |
| TM7   |        | TM6   |        |       |       |       |
| I80M  |        | N     |        |       |       |       |
| TM2   |        | N     |        |       |       |       |
| TM7   |        |       |        |       |       |       |
| V235I |        | TM6   |        |       |       |       |
| S77C  |        |       |       |       |       |       |
| A66V  |        | TM1   |        |       |       |       |
| V76L  |        | TM2   |        |       |       |       |
| I80M  |        | TM1   |        |       |       |       |
| S73I  |        | TM4   |        |       |       |       |
| TM7   |        | TM6   |        |       |       |       |
| I80M  |        | N     |        |       |       |       |
| TM2   |        | N     |        |       |       |       |
| TM7   |        |       |        |       |       |       |
| V235I |        | TM6   |        |       |       |       |
| S77C  |        |       |       |       |       |       |
| A66V  |        | TM1   |        |       |       |       |
| V76L  |        | TM2   |        |       |       |       |
| I80M  |        | TM1   |        |       |       |       |
| S73I  |        | TM4   |        |       |       |       |
| TM7   |        | TM6   |        |       |       |       |
| I80M  |        | N     |        |       |       |       |
| TM2   |        | N     |        |       |       |       |
| TM7   |        |       |        |       |       |       |
| V235I |        | TM6   |        |       |       |       |
| S77C  |        |       |       |       |       |       |
| A66V  |        | TM1   |        |       |       |       |
| V76L  |        | TM2   |        |       |       |       |
| I80M  |        | TM1   |        |       |       |       |
| S73I  |        | TM4   |        |       |       |       |
| TM7   |        | TM6   |        |       |       |       |
| I80M  |        | N     |        |       |       |       |
| TM2   |        | N     |        |       |       |       |
| TM7   |        |       |        |       |       |       |
| V235I |        | TM6   |        |       |       |       |
| S77C  |        |       |       |       |       |       |
| A66V  |        | TM1   |        |       |       |       |
| V76L  |        | TM2   |        |       |       |       |
| I80M  |        | TM1   |        |       |       |       |
| S73I  |        | TM4   |        |       |       |       |
| TM7   |        | TM6   |        |       |       |       |
| I80M  |        | N     |        |       |       |       |
| TM2   |        | N     |        |       |       |       |
| TM7   |        |       |        |       |       |       |
| V235I |        | TM6   |        |       |       |       |
| S77C  |        |       |       |       |       |       |
| A66V  |        | TM1   |        |       |       |       |
| V76L  |        | TM2   |        |       |       |       |
| I80M  |        | TM1   |        |       |       |       |
| S73I  |        | TM4   |        |       |       |       |
| TM7   |        | TM6   |        |       |       |       |
| I80M  |        | N     |        |       |       |       |
| TM2   |        | N     |        |       |       |       |
| TM7   |        |       |        |       |       |       |
| V235I |        | TM6   |        |       |       |       |
| S77C  |        |       |       |       |       |       |
| A66V  |        | TM1   |        |       |       |       |
| V76L  |        | TM2   |        |       |       |       |
| I80M  |        | TM1   |        |       |       |       |
| S73I  |        | TM4   |        |       |       |       |
| TM7   |        | TM6   |        |       |       |       |
| I80M  |        | N     |        |       |       |       |
| TM2   |        | N     |        |       |       |       |
| TM7   |        |       |        |       |       |       |
| V235I |        | TM6   |        |       |       |       |
| S77C  |        |       |       |       |       |       |
| A66V  |        | TM1   |        |       |       |       |
| V76L  |        | TM2   |        |       |       |       |
| I80M  |        | TM1   |        |       |       |       |
| S73I  |        | TM4   |        |       |       |       |
| TM7   |        | TM6   |        |       |       |       |
| I80M  |        | N     |        |       |       |       |
| TM2   |        | N     |        |       |       |       |
| TM7   |        |       |        |       |       |       |
| V235I |        | TM6   |        |       |       |       |
| S77C  |        |       |       |       |       |       |
| A66V  |        | TM1   |        |       |       |       |
| V76L  |        | TM2   |        |       |       |       |
| I80M  |        | TM1   |        |       |       |       |
| S73I  |        | TM4   |        |       |       |       |
| TM7   |        | TM6   |        |       |       |       |
| I80M  |        | N     |        |       |       |       |
| TM2   |        | N     |        |       |       |       |
| TM7   |        |       |        |       |       |       |
| V235I |        | TM6   |        |       |       |       |
| S77C  |        |       |       |       |       |       |
| A66V  |        | TM1   |        |       |       |       |
| V76L  |        | TM2   |        |       |       |       |
| I80M  |        | TM1   |        |       |       |       |
| S73I  |        | TM4   |        |       |       |       |
| TM7   |        | TM6   |        |       |       |       |
| I80M  |        | N     |        |       |       |       |
| TM2   |        | N     |        |       |       |       |
| TM7   |        |       |        |       |       |       |
| V235I |        | TM6   |        |       |       |       |
| S77C  |        |       |       |       |       |       |
| A66V  |        | TM1   |        |       |       |       |
| V76L  |        | TM2   |        |       |       |       |
| I80M  |        | TM1   |        |       |       |       |
| S73I  |        | TM4   |        |       |       |       |
| TM7   |        | TM6   |        |       |       |       |
| I80M  |        | N     |        |       |       |       |
| TM2   |        | N     |        |       |       |       |
| TM7   |        |       |        |       |       |       |
| V235I |        | TM6   |        |       |       |       |
| S77C  |        |       |       |       |       |       |
| A66V  |        | TM1   |        |       |       |       |
| V76L  |        | TM2   |        |       |       |       |
| I80M  |        | TM1   |        |       |       |       |
| S73I  |        | TM4   |        |       |       |       |
| TM7   |        | TM6   |        |       |       |       |
| I80M  |        | N     |        |       |       |       |
| TM2   |        | N     |        |       |       |       |
| TM7   |        |       |        |       |       |       |
Comparison of HcKCR2 & HcKCR2_V73I (text)

Mann-Whitney Test (8/4/2022 14:43:06)

Notes

| X-Function       | Mann-Whitney Test |
|------------------|-------------------|
| User Name        | egovorunova       |
| Time             | 8/4/2022 14:43:06 |
| Data Filter      | No                |

Input Data

|                      | Data                              | Range  |
|----------------------|-----------------------------------|--------|
| 1st Data Range       | [HcKCR2]Sheet1!HcKCR2             | [1*:7*]|
| 2nd Data Range       | [HcKCR2]Sheet1!V73I               | [1*:8*]|

Descriptive Statistics

|          | N  | Min | Q1  | Median | Q3  | Max  |
|----------|----|-----|-----|--------|-----|------|
| HcKCR2   | 7  | -79.4| -77.4| -76.4  | -66.4| -66.4 |
| V73I     | 8  | -83.4| -80.15| -78.9  | -77.4| -74.4 |

Ranks

|          | N   | Mean Rank | Sum Rank |
|----------|------|-----------|----------|
| HcKCR2   | 7    | 10.64286  | 74.5     |
| V73I     | 8    | 5.6875    | 45.5     |

Test Statistics

| U    | Z     | Asymp. Prob>|U| |
|------|-------|------------|---|
| 46.5 | 2.10386| 0.03539    |

Null Hypothesis: F(x) = G(y)
Alternative Hypothesis: F(x) <> G(y)
At the 0.05 level, the two distributions are significantly different.