| Psychometric Variable                  | Estimated difference vs Placebo (p-value) |
|---------------------------------------|------------------------------------------|
|                                       | Variable                                  | 20 mg (Difference, 95% Confidence Intervals) | Contrast p value | 50 mg (Difference, 95% Confidence Intervals) | Contrast p value |
| Karolinska Sleepiness Scale Scale at 8.75 h post-dose | -1.00 (-1.71, -0.29) | 0.006 | -1.17 (-1.88, -0.46) | 0.001 |
| Bond & Lader VAS Derived Factor - Alert - 8.75 h post dose | -45.35 (-78.37, -12.32) | 0.008 | -42.6 (-75.62, -9.57) | 0.012 |
| Derived Factor - Contented - 8.75 h post dose | -22.13 (-37.66, -6.60) | 0.006 | -17.38 (-32.92, -1.85) | 0.029 |
| Derived Factor - Calm - 8.75 h post dose | -2.11 (-11.20, 6.99) | 0.64 | -5.67 (-14.76, 3.43) | 0.22 |
| Body Sway A95% - Eyes Open | -0.084 (-0.215, 0.047) | 0.2009 | -0.019 (-0.153, 0.114) | 0.7696 |
| Length of COP - Eyes Open | -1.141 (-2.393, 0.112) | 0.0727 | -1.188 (-2.440, 0.064) | 0.0621 |
| A95% - Eyes Closed | -0.336 (-0.809, 0.136) | 0.1566 | -0.155 (-0.629, 0.319) | 0.51 |
| Length of COP - Eyes Closed | -0.597 (-2.215, 1.021) | 0.4562 | -1.53 (-3.158, 0.097) | 0.0644 |
| Simple Reaction Time Total Reaction Time (msec) | -14.78 (-39.947, 10.386) | 0.2404 | -13.749 (-38.916, 11.417) | 0.2741 |
| Choice Reaction Time Total Reaction Time (msec) | -12.087 (-41.858, 17.684) | 0.4144 | -4.661 (-34.432, 25.110) | 0.7519 |
| Verbal N-back 1 % correct responses | 0.617 (-0.737, 1.972) | 0.3602 | -0.309 (-1.663, 1.046) | 0.6457 |
| Mean response time for correct responses | -16.213 (-56.949, 24.524) | 0.4235 | -29.771 (-70.508, 10.966) | 0.1464 |
| Verbal N-back 2 % correct responses | 1.235 (-0.807, 3.276) | 0.2271 | 0.772 (-1.270, 2.814) | 0.4471 |
| Mean response time for correct responses | 1.453 (-57.760, 60.666) | 0.9604 | 2.759 (-56.455, 61.972) | 0.925 |
| Verbal N-back 3 % correct responses | -0.232 (-3.153, 2.689) | 0.8727 | 1.003 (-1.918, 3.924) | 0.4893 |
| Mean response time for correct responses | -12.482 (-65.332, 40.368) | 0.6337 | -27.096 (-79.946, 25.754) | 0.3042 |
Supplementary Table 1. Psychometric variables (mean + 95% confidence intervals) and differences between JNJ-48816274 treatment (20 and 50 mg) and placebo.