Checklist of EJN guidelines for the description of statistical methods

– Provide a clear description of the design of your study or experiment; it is often informative to state the null hypothesis.

– Describe and justify the statistical approaches and the selection of statistical tests.

– Justify use of parametric vs. non-parametric tests

– If you report null (or negative) statistical results and attribute significance to such results, describe the methods used to determine adequate statistical power.

– Describe and justify data transformation procedures (e.g. arcsin transformation of percentage data).

– Define all within-subject and between-subject factors.

– Define planned comparisons.

– For multiple comparisons and multiple correlations, define measures taken to reduce Type I errors (e.g. Bonferroni- adjusted alpha levels).

– For repeated measures ANOVAs, define measures taken to control for violation of the sphericity assumption; describe how you report results of corrected degrees of freedom statistics.

– Determine the alpha level used as a significance criterion for your tests.

– State the name and version of the statistical software that was used (also company, city, state, country).

Checklist of EJN guidelines for the reporting of statistical data

– Important descriptive statistics, such as mean and standard deviation (SD), or standard error of the mean (SEM), need to be either represented graphically or numerically in the text.

– All statements concerning significance must be qualified numerically.

– Always report the test statistic, the degrees of freedom, the test value, and the *P*-value that the result occurred at chance under the null hypothesis.

– For tests involving 1 degree of freedom (e.g. Student's t-test), state whether a directional or non-directional test was conducted.

– Round test statistics and individual *P*-value equalities to two significant figures, if applicable.

– To avoid ambiguities, all statistical variables should be italicized (*F, t, P*).

– In accordance with Greenwald et al. (1996) we recommend reporting individual *P*-values as equalities rather than as inequalities in relation to an alpha criterion (e.g. $P = 0.003$ as opposed to $P < 0.01$). However, inequalities may be useful for groups of data (e.g. in Tables or graphics).

– Ensure that all *P*-values defined in Figure legends and Table footnotes are linked (e.g. by symbols such as asterisks) to the corresponding data.

– The format of the description of the statistical results should follow these examples:

$F_{1,32} = 22.32$, $P = 0{:}08$

$t_{27} = 7{:}85$, $P = 0{:}17$

$\chi^2 = 20.32$ ($n = 62$), $P = 0.35$

$r_{28} = 0{:}73$; $P = 0{:}04$

– We recommend the use of parentheses to maintain the readability of statements [e.g. 'Blockade of AMPA receptors attenuated the firing rate of ventral pallidal neurons (main effect of concentration of DNQX: $F_{1,32} = 28.32$, $P = 0.03$). However, the attenuation of firing rate was greater in animals lacking M1 muscarinic receptors when compared to wild type mice (interaction between effects of DNQX and genotype: $F = \ldots$; main effect of genotype: $F = \ldots$').].

– Corrected degrees of freedom statistics (for omnibus repeated measures ANOVAs and if corrections are required because of violation of the sphericity assumption; see above): in order to preserve the transparency of the statistical design, we recommend reporting the uncorrected degrees of freedom together with the corrected test value; authors may also report the correction factor e to indicate the degree of sphericity.