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A farewell to Bonferroni: the problems of low statistical power and publication bias FREE

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Behavioral Ecology, Volume 15, Issue 6, 1 November 2004, Pages 1044–1045,
<https://doi.org/10.1093/beheco/arh107>

Published: 01 November 2004 **Article history** ▼

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Recently, Jennions and Møller (2003) carried out a meta-analysis on statistical power in the field of behavioral ecology and animal behavior, reviewing 10 leading journals including *Behavioral Ecology*. Their results showed dismayingly low average statistical power (note that a meta-analytic review of statistical power is different from post hoc power analysis as criticized in Hoenig and Heisey, 2001). The statistical power of a null hypothesis (H_0) significance test is the probability that the test will reject H_0 when a research hypothesis (H_a) is true. Knowledge of effect size is particularly important for statistical power analysis (for statistical power analysis, see Cohen, 1988; Nakagawa and Foster, in press). There are many kinds of effect size measures available (e.g., Pearson's r , Cohen's d ,...

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