The peer-reviewed research paper remains the main conduit for the exchange of research discoveries. With the growth and diversification of global research, publishing in selected journals and citation metrics are increasingly employed as surrogates for quality in research assessment by granting agencies, evaluation panels and recruitment committees. Consequently, the pressures to publish in only a handful of journals have increased, with the risk of effectively hampering scientific progress. EMBO has implemented a 'transparent process' that ensures fast, fair and informed editorial decisions. Furthermore, there is increasing concern about the actual quality and methodological rigor of published scientific data with the biotech industry claiming, for instance, that a majority of papers on drug targets and pre-clinical cancer research are not reproducible; Leading journals, publishers, including EMBO Press, scientific societies and the NIH itself are now discussing and taking action on these issues, which carry the burden of significant costs, both financial and in terms of patient expectations. I will discuss the transparent editorial process and actions taken to improve data reproducibility and research integrity, including real-life examples.