

Abstract

Title: Patents and Scientific Integrity

The obligations imposed by publishers of peer-reviewed journals on authors of scientific papers resemble those imposed on inventors submitting specifications to patent offices. Many of these obligations flow from fundamental legal and requirements for integrity. Reproducible disclosure is key to scientific endeavor: a published paper must disclose results in sufficient accuracy and with sufficient detail about apparatus and procedures that other skilled workers in independent laboratories can reproduce them, and the same is true in the patent field, the statutory requirement being that the invention shall be disclosed in a manner which is clear enough and complete enough for it to be performed by a person skilled in the art.

Instances of outright fraud such as the Hwang papers on generation of stem cells from cloned embryos are rare. More common are inaccurate data and incompleteness of disclosure by an author or inventor hoping to bask in the glory of publication or enjoy patent protection, while withholding critical details of the technology he or she has created. In the patent field, commercial pressure to obtain a broad scope of protection can lead to claims of irrationally exuberant scope especially for chemical, biological and medical inventions where research is empirical.

Conservative and clearly well-supported claims in these fields can only become acceptable if the patent offices and the courts are willing to abandon the requirement for spurious certainty in the language of patent claims where there can be no certainty in the underlying science, and to adjust the established principles of claim construction to take account of the real difficulties facing inventors and their corporate assignees in these important and difficult research fields.