COMMENTARY

The US patent system is broken

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Abstract In discussions in this issue of RBM Online relating to a patent granted to Auxogyn, Professor Renee Reijo Pera claims this is not about a “broken patent system”. I shall demonstrate how dysfunctional the patent system has become and how much in denial “inventor” Renee Reijo Pera is about her invention differing from a naturally occurring phenomenon.

In discussions in this issue of RBM Online relating to a patent granted to Auxogyn, Professor Renee Reijo Pera claims this is not about a “‘broken patent system’”. I shall demonstrate how dysfunctional the patent system has become and how much in denial ‘inventor’ Renee Reijo Pera is about her invention differing from a naturally occurring phenomenon.

It seems that the current patent system allows the word ‘that’, when simply juxtaposed, to permit Renee Reijo Pera to patent a law of nature. I shall explain. I quote the file wrapper (Figure 1) for the patent at issue US 8,337,387: Claim 38 recites routine well-known steps for culturing, imaging, and measuring cellular parameters of human embryos followed by a step of “identifying that an embryo is more likely to reach the blastocyst stage when said at least one cellular parameter falls within” a recited time duration. The law of nature recited here is the relationship between the time duration of certain cellular functions in a human embryo and the likelihood of the human embryo reaching a blastocyst stage. This is a natural correlation that was discovered and was not invented by the applicant. The claim is not written in such a way that the law of nature is practically applied in a manner that amounts to significantly more than the law of nature itself. The identifying step merely recites what the correlation is: there is no active method step that uses the correlation. The recent supreme court decision in Mayo v. Prometheus Laboratories states “a claim that recites a law of nature or natural correlation, with additional steps that involve well-understood, routine, conventional activity previously engaged in by researchers in the field is not patent-eligible.” The Mayo decision pertains to claims that recite a method of optimizing a therapeutic process wherein the researchers discovered the limits at which a drug concentration becomes either harmful or ineffective. As in the Mayo case, the claims of the current application inform a relevant audience about the law of nature; all of the additional steps consist of well-understood, routine, conventional activity already engaged in by the scientific community, as demonstrated by the cited references’.

It is initially clear to the patent examiner, Catherine C. Burke, that the patent being discussed in the journal is about patenting a “‘law of nature’”. Then, in a remarkable turn about, the patent examiner suggests that, by just juxtaposing the word ‘that’, a claim on a “‘law of nature’” becomes an “‘invention claim’”. I quote here from the continuing discourse between examiner and inventors’ counsel: “During the telephone interview held on July 17th, 2012, the examiner suggested an amendment which would transform the identifying or determining step into an active
method step. For example, "identifying an embryo that is more likely to reach the blastocyst stage..." instead of the current language simply stating "that an embryo is more likely to reach the blastocyst stage..." (my emphasis). While the difference may seem subtle, the former is an active step of identifying or selecting an embryo, while the latter is simply stating a law of nature that applicant has observed." The examiner also notes that in any amendment, "the applicant must also ensure that any practical application of the law of nature must include steps which are sufficient to ensure the claim amounts to significantly more than the law of nature itself. The claim must be narrow enough in scope so that others are not precluded from using the law of nature for future innovation by covering every substantial practical application of the law of nature."

Thereafter, the important claim 38 (1), now becoming the most important independent claim 1 in the issued patent, was corrected from the form that is claiming a "law of nature" i.e. "identifying an embryo that is more likely to reach the blastocyst stage when said at least one cellular parameter for said embryo falls" to the new form that is now claiming a novel "invention": i.e. "identifying an embryo that is more likely to reach the blastocyst stage when at least one cellular parameter for said embryo falls within." It is specious science and patent law to juxtapose the word "that" and thereby convert a claim to a "law of nature" to a supposed "invention" claim.

I have published with Francis Crick, Sydney Brenner and Sir Aaron Klug and worked with Fred Sanger and Bruce Merrifield, all pioneers in molecular biology and Nobel laureates. It is my conviction as a scientist, inventor on patents and patent agent that the patent under discussion here provides an excellent example of how bankrupt the patent system has now become.