

What is an Embryo? The Scientists Reply

We recently reported (What is an embryo? Europe ready to decide) that the Advocate General has provided his opinion to the European Court of Justice (ECJ) on the patentability of embryonic stem cells.

The opinion was generally negative. It held that totipotent cells were unpatentable, as were any pluripotent cells which are obtained by destroying an embryo.

The Advocate General's opinion has dismayed the European scientific community working in the field. A number of prominent workers in the technology have published their concern in a letter to Nature. Their letter is in [Nature 472, 418; 2011](#).

The core of their argument is that the Advocate General has not properly understood the science. They emphasise that induced pluripotent cells are not equivalent to embryonic stem cells. They make the point that the embryonic stem cells currently used in research are derived from surplus – i.e. unwanted – fertilized eggs from fertility treatment.

The scientists emphasise that innovative companies will not be active in Europe in the field, despite its huge potential, without the incentive of patent protection for their innovations.

The scientists conclude their letter as follows:

“The advocate-general's opinion therefore represents a blow to years of effort to derive biomedical applications from embryonic stem cells in areas such as drug development and cell-replacement therapy. If implemented, European discoveries could be translated into applications elsewhere, at a potential cost to the European citizen.... We trust that they [*the judges of the ECJ*] will deliberate on the full implications before making a legally binding ruling.”

We expect that the ECJ will issue the final decision in the next few months, and we will, of course, report it as soon as it issues.