



*Presidenza del Consiglio dei Ministri*

## **NATIONAL BIOETHICS COMMITTEE**

### **BIOETHICAL REMARKS ON THE SO-CALLED "OOTID"**

(15th July 2005)

#### *abstract*

The NBC deals with the issue of so-called "ootids", with specific reference to the ethicality of their being frozen during the course of procedures in medically assisted fertilisation.

The document summarizes the succession of biomolecular events involved in the process of human fertilisation, and specifies that, the factual description of these events is unanimously recognized by the NBC. However, the opposite applies concerning the actual interpretation of the same events, as two different ethical positions have been expressed, from which two different approaches descend regarding the protection of the embryo.

The NBC acknowledges by majority the following evaluations:

The use of the terms "conceived" and "human being" is considered appropriate, as there is no interposition with other semantic specifications and the words themselves are easily understood in everyday language. Conversely, it is considered more appropriate to use the terms zygote or "a one-cell embryo" in place of the expressions "oocyte with 2 pronuclei" (2PN) or even "ootid". It is pointed out that for a precise understanding of the first phases of the human life cycle, the descriptions should not only be based on morphological data but should always be accompanied by the correspondent biochemical and biomolecular analysis.

The process of meeting and penetration of the spermatozoon inside the cytoplasm of the oocyte is considered to be the fundamental event, as it joins and "fuses" two gamete cells and forms a single biological "unity" not previously present, and it is supplied with the genetic structures that carry the necessary information in order to guide each stage of its subsequent development. Once the penetration has taken place, it develops a "continuum" of events which proceed without requiring additional genetic impulses external to the "unity" itself. On a philosophical level, in support of the principle of continuity, it is recognized that the beginning of human life constitutes a "qualitative leap" (a transition from not being to being), once this has taken place, only accidental changes (quantitative) and not substantial changes (qualitative) are made. Therefore, from the moment of "penetration" of the oocyte by the spermatozoon, the conditions have been met to recognise and guarantee dignity and identity to the human being. It follows that, any "manipulation" which is not for the "good" of the human being on which it is carried out exposes the subject to unjustifiable risks. This judgement should also be applied to cryopreservation. Consequently, it is suggested that an intense and appropriate research should be done on the cryopreservation of the "unpenetrated" oocyte.

The document also includes the bioethical position of other members of the NBC who believe that the transition from gamete to embryo involves distinct biological stages, which, despite their constituting a "continuum", are not assimilable on an ontological level. According to this interpretation, the biological data demonstrate that each stage can involve unforeseen alternative developments, which, in the first phases are even reversible. Hence, such data is not adequate to clearly define which segment of the entire process is to be considered crucial to identify the moment of creation of the new personal identity. Consequently, it is considered questionable to indicate the process of meeting and penetration of the spermatozoon inside the oocyte as the moment from which the formed "unity" needs to be protected at all costs.

Therefore, the supporters of this second option believe that cryopreservation of 2PN oocytes should not be considered morally illicit.