

## Human Cloning and the Inimitable Panos Zavos

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Cypriot born reproductive scientist Panos Zavos is up to his old mischief, claiming this time to have cloned 14 human embryos and to have transferred 11 of them into the wombs of four women happy to give birth to cloned babies. This is his third public announcement in six years claiming to have succeeded at the controversial procedure [1]. Zavos, a naturalized American citizen, has fertility clinics in Kentucky and in Cyprus. The British *Independent* reports that his present work took place at a secret laboratory in a country where cloning is legal (it speculates somewhere in the Middle East) [2].

Zavos used the most common method of embryo cloning, called somatic cell nuclear transfer (SCNT). A somatic cell is simply a body cell, such as a skin cell, containing the full genetic code of a person. In SCNT, the nucleus of a somatic cell is removed and transferred into a female oocyte (egg cell) which has had its nucleus removed. The cytoplasm in the egg interacts with the transferred nucleus reprogramming it back to a state of totipotency [3]. Upon reaching the state of totipotency, the nucleus and the egg—having fused together—now constitute a single totipotent human cell, which, by definition, is an embryo. Because the embryo's nucleus contains the genetic material of the donor of the somatic cell, the embryo is a biological clone of the donor. A slight electrical impulse can stimulate the embryo to begin cell division. This is also how Dolly the Sheep was created.

Successful human cloning has been actively pursued for nearly ten years. But the interest in clones has not been to bring to birth a live baby. Cloned embryos have been (and are) desired for their stem cells, which, being genetically identical to the somatic cell donor, would be of considerable clinical value to him or her. Research teams going back to 2001 have claimed they've successfully created early cloned embryos, although it was not till 2008 that credible evidence was published supporting the claim [4]. The grave moral problem with this type of so-called 'therapeutic' cloning is, of course, that the little cloned embryos—which are fully human—are created to be killed for their stem cells.

Dr. Zavos on the other hand is determined to bring a cloned baby to birth; and is convinced it will happen in the next few years. "There is absolutely no doubt about it," he said recently, "the cloned child is coming. There is absolutely no way that it will not happen" [2]. Of the eleven cloned embryos transferred into women, none resulted in a pregnancy. Zavos however intends to continue trying. Desperate parents, he says, contact him every day seeking his reproductive expertise: "To date we have had over 100 enquiries and every enquiry is serious." Although cloning studies in animals have shown repeatedly that cloning is extremely dangerous to the clone, increasing risks of severe and debilitating developmental abnormalities, Zavos is undeterred: "when we get serious about executing things correctly, this



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thing will be very easy to do.”

The condemnation of the Zavos announcement by the American Society for Reproductive Medicine (ASRM) was swift and forceful: “Any attempt to create a cloned human embryo for gestation and birth is ethically, scientifically, and clinically unacceptable.” But don’t let the rhetoric fool you. The ASRM made clear their condemnation stood only “as long as the safety of reproductive SCNT is uncertain” [5]. This indicates that if the science gets ironed out, the ASRM would have no objections to reproductive cloning. Given the radical interventions necessary for SCNT, the science is unlikely ever to guarantee parity between asexual clonal reproduction and natural reproduction.

But even if the science does get perfected, cloning is still a gross violation of human rights. To control the biological identity of another is a terrible injustice. To force on him the genetic identity of someone else, someone who already has a history, who’s established relationships, who’s succeeded and failed and learned, and perhaps also died, is to steal from the clone the God-given liberty to cut his own path through the forest of history, to be taken on his own terms, and rightly to determine the kind of person he will become. To be willing to subject another person to the kinds of physical, psychological, and social harms that are sure to come to cloned men and women, represents a depth of moral perfidy that warrants the severest censure under law. Having said that, it is better than creating clones for the express purpose of killing them for their stem cells.

Dr. Zavos also announced that he had cloned three dead people, including a little girl named Cady who was killed in a car crash. He cloned them, he said, at the request of grieving relatives who earnestly urged him to create clones of their beloved deceased. In these instances Zavos fused somatic cell nuclei from the three cadavers with cow eggs rather than human eggs to create animal-human hybrids. He said he didn’t attempt to implant these embryos, even though his customers were willing to cooperate in uterine transfers. Rather, he created the hybrids to study and perfect the cloning procedure. “We did not want to experiment on human embryos, which is why we developed the hybrid model,” he stated. Ethically admirable, don’t you think?

Notes:

[1] His claims in 2003/2004 and 2006 drew enormous publicity and enormous skepticism. For his 2003 paper see: <http://www.rbmonline.com/4DCGI/Article/Detail?38%091%09=%20924%09> ; on his 2006 claim, see: <http://www.guardian.co.uk/genes/article/0,,1824397,00.html>

[2] <http://www.independent.co.uk/news/science/fertility-expert-i-can-clone-a-human-being-1672095.html>

[3] For a definition of totipotency, see my April 2009 CLF brief “Stem Cells for Dummies”: <http://culture-of-life.org/content/view/551/111/>



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# Briefs

[4]

<http://www3.interscience.wiley.com/journal/121587415/abstract?CRETRY=1&SRTRY=0>

[5] See ABC News report of April 23, 2009:

<http://media.abcnews.com/GMA/Story?id=7406854&page=1>

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