

Correspondence

Human cloning, stem cell research. An Islamic perspective

To the Editor

The article of Dr. Aida Al-Aqeel "Human cloning, stem cell research" is an interesting,¹ and a revealing Islamic perspective in this cumbersome subject. However, there are a few points to be clarified: First, Dr. Al-Aqeel quoted the Fatwa of Islamic Jurisprudence Council on Stem Cell Research (Fatwa No 3, 17th Session Dec 2003) as being produced by the Organization of Islamic Countries.² The Islamic Jurisprudence Council of Islamic World League, Makkah Al-Mukarramah, produced the Fatwa. Dr. Al-Aqeel translated correctly the word "Alaqah" as something that clings. All Arabic lexicons (old, and new) support this meaning. Unfortunately, many of the translations of the Quran chose the word "clot" or "congealed blood", which is incorrect both linguistically, and from embryological facts. As regards "Ensoulement" there is a great deal of misunderstanding. There is no mention in the "Glorious Quran" of the timing of ensoulment, although all the exegetes of the "Glorious Quran," agree that it occurs after the Modghas stage, and quote Sura 23, verses 12-14 namely, "And indeed we created man from a quintessence of clay. Then, we placed him as a small quantity of liquid (Nutfa) in a firm lodging. Then, we have fashioned the "nutfa" into "alaqah" (something that clings), then we made alaqah into "modgha" (chewed lump of flesh), and we made out of "mudgha" bones, and clothed the bones with flesh. And then, we brought it forth into another act of creation. Blessed be God, the best of creators."

"The other act of creation" is considered by all the exegetes of the Quran (Al-Mufasereen) to be the time of ensoulment. The actual timing of ensoulment is mentioned in the Hadith (sayings of the Prophet Mohammed PBUH),^{3,4} which was narrated by the most authentic books of Hadith viz Al-Bokhari, Muslim, Al-Nawawi (40 chosen Hadiths), and so on. Al-Bokhari in his book "Al-Jamee Al-Sahih" (the most important authentic book of Hadith) mentioned this Hadith 4 times in his voluminous reference books viz Kitab Biduo Al Khalq "Start of creation", Kitab Al-Tawheed "book of Unity of God", Kitab Al Anbia, "the book of Prophets," Chapter of Creation of Adam and his Progeny, and Kitab Al-Qadar "book of destiny." The Hadith is narrated through Abdullah ibn Masood (the companion of the prophet) as follows:³ The messenger of Allah, told us, and he is the truthful one; the constituents of each one of you is collected for 40 days in his mother's womb, it becomes something that clings "alaqah" in a similar period (Mithla dhalik), then it becomes a chewed lump

of flesh (modgha) in a similar period (mithla dhalik). And the angel is sent to him with instructions concerning 4 things (words), so the angel writes down his provision (sustenance), his lifespan, his deeds and whether he will be wretched or fortunate. Then the soul is breathed into him. Ibn Hajar Al-Asqalani in his voluminous book "Fathu Albari Sharhu Sahihu Al-Bokhari" Explanations and commentaries of "Sahih Al Bokhari" explains that nutfa is 40 days, Alaqah 40 days, modgha 40 days, and gives evidence from another book of Hadith "Sahihu Abu Awana"² who narrated the same Hadith of ibn Masoud with the addition of 40 days after nutfa.³ Imam ibn Hajar Al-Asqalani said there is consensus among all Islamic scholars that ensoulment (breathing of the soul does not occur before 120 days computed from the moment of conception. Similarly, Imam Nawawi in his voluminous book "Sahihu Muslim Bisharhi Al-Nawawi"⁴ "Explanation of Sahihu Muslim book of Hadith," emphatically says that all Muslim scholars through the ages have agreed that breathing in of the soul in the fetus only occurs after the passing of 120 days from conception.⁴ It is then very strange to find people who have no knowledge of Hadith asking: is computation from the last menstrual period (LMP) or from the moment of conception? It is evident that Muslim scholars all through the ages never discussed LMP. Now as regards the Hadiths of Sahihu Muslim, which was mentioned in Kitab Al-Qadar (book of destiny) we find the following:⁴

First, the Hadith narrated through Abdullah ibn Masood, which is the same as in Al-Bokhari, and others. In Muslim narration the angel first breaths in the soul then he writes his provision, his lifespan, his deeds and whether he is wretched or fortunate. Second, There is another Hadith narrated through Hudhaifa ibn Aseed (another companion of the Prophet). This Hadith is narrated in 3 slightly different narrations viz: a) The angel enters the womb after the nutfa is established in the womb for 40-45 nights and says "O my Lord will he be wretched or fortunate? And both these things are written. The angel then says "My Lord is it male or female?" And both these things are written. Then, the angel writes his deeds, his lifespan, and his sustenance. Then his document of destiny is rolled, and there is no addition to, or subtracts from it. b) When 42 nights pass after the dwelling of nutfa in the womb, God sends an angel, and he gives it, its shape and creates its hearing, its vision, its skin, its flesh, its bones and then says "Is it a male or female?" and God decides whatever he determines, and the angel writes. Then the angel asks what is his lifespan? And God decides, and the angel writes; and the angel asks "What is its livelihood," and

God determines whatever he wants. c) The nutfa dwells in the womb for 40 nights, then the angel enters through climbing the wall of the womb. The angel creates it and then says "O My Lord is it male or female?" and God ordains what it should be. Then, the angel says "O My Lord is it complete or incomplete (creation)?" and God ordains what he wants. Then the angels ask "What is his sustenance?" what is his lifespan?" What is his character?" And then, God ordains whether he is wretched, or fortunate.

In all these different narrations of the Hadith of Huzaifa ibn Aseed, namely. The Hadith of 40 there is no mention at all of ensoulment, namely, the soul being breathed in. Imam Al-Nawawi who explained the Hadiths of Sahih Muslim, and he is one of the great authorities in Hadith says clearly that all Muslim scholars have agreed that the breathing in of the soul does not occur except after the 120 days computed from the moment of conception.⁴ Imam Nawawi alludes to another Hadith mentioned by both Al-Bokhari, and Muslim in their authentic books narrated by Anas ibn Malik (the companion and servant of the Prophet Mohammed PBUH), the Prophet Mohammed said, "God ordered an angel to follow the nutfa and he asks "O my Lord it is a nutfa?" (namely what to do for it), then he asks "O my Lord it is alaqah?" and then he asks "O my Lord it is Modgha?" And then, the angel asks "O my Lord is it male or female?" Is he wretched or fortunate?", "What is his sustenance?", "What is his lifespan?" And it is written while he is in the womb of his mother.⁴ There are similar Hadiths narrated through many of the companions of the Prophet Mohammed, for example, Ibn Omer, Abu Zar (Dhar), Gaber ibn Abdullah, and the wife of the Prophet, Aisha. They are narrated in different books of Hadith. Imam Nawawi says; "The angel follows the nutfa through all its stages viz nutfa, alaqah, modgha, and in each time he (namely, the angel) asks His lord what to do next?

The first stage is when Allah creates it as nutfa to be changed to alaqah, and this is the first time that the angel knows it will be developed into a fetus. This occurs after the first 40 days whereby the angel knows his sustenance, his life span, and whether wretched or fortunate. The angel gives its shape, creates its hearing, vision, skin, muscle, and bone, and whether he is a boy or a girl. Al-Nawawi says "Then the angel has another entrance, and formulation of the fetus and that is at the time of breathing in of the soul which occurs after the fetus completed 4 months."⁴ Ibn Al-Qaiyem, another prominent Islamic scholar mentions, the stages of embryo and fetus in many of his well-known books, namely, *Attibyan fi Aksam Al-Quran*,⁵ and *Tariq Al-Hijrateen wa bab Al-Saadataen*.⁶ Ibn Al-Qaiyem agrees with Imam

Nawawi, and explains that creation and shaping of the embryo passes into 4 stages: 1. Planning of creation. 2. imperceptible creation, which cannot be discerned by senses. 3. A creation, which could be discerned by the senses, but it is not yet complete. 4. Full creation which is followed by breathing in of the soul. This occurs after 120 days from the beginning of conception.

Ibn Al-Qaiyem in his book *Attibyan fi Aksam Al Quran* puts this question "Does the embryo before ensoulment has a life? He answered, "yes, the embryo has the life of growth and nourishment like a growing plant, but once the spirit is breathed in he acquires perception and volition."⁵ Similarly Ibn Hajar Al-Asqalani discussing which organ forms first in the embryo in his voluminous *Fateh ul Bari* says the liver is the first organ formed as it is the site of nutrition and growth. Voluntary movement and perception are acquired only after ensoulment.³ It is interesting to note that organogenesis (namely, formation of organs in the embryo takes place between the fourth and eighth week of conception (computed from fertilization), and reaches it zenith at 42 days. The embryo has unidentified gonad until the end of sixth week, namely, 42 days. It only starts to differentiate in the seventh week of gestation. Similarly, the brain stem starts to function in the seventh week. However, the cerebral hemispheres need a later date to develop. It is only after 120 day from fertilization (134 day from last menstrual period) that synapsis form and work between the higher centers, and the lower ones. Dr. J Koren presented a paper in the conference on Ethics of Organ Transplantation in Ottawa, Canada, August 20-24, 1989,⁷ in which he proved with dissection of many aborted fetuses that synapses between the higher centers of the cerebrum and the lower centers – do not start to work except in the beginning of the twentieth week of pregnancy computed from LMP (134 days) which is equivalent to 120 days computed from moment of conception (fertilization).⁷ It is evident that the Hadith of Huzaifa ibn Aseed, (the 42 days) refers to the development of organs (organogenesis), differentiation of the gonads into testes, or ovaries, and formation of brain stem, while the Hadith of Ibn Masood, the 120 days, speaks of formation of higher centers of the brain and completion of creation of all organs. It is astonishing to find Ibn Al-Qaiyem, and Ibn Hajar Al-Asqalani link ensoulment to the volition and sentience, both of which are a result of the functioning cerebral hemispheres.⁸

Dr. Al-Aqeel quoted the Fatwa on stem cells by Islamic jurisprudence Council of Islamic World League (Makkah Al-Mukarramah),¹ which allowed using left over zygotes from in vitro fertilization clinics, if donated by the parents, and when it is ascertained

that they will not be used in an illegitimate pregnancy. Unfortunately, many physicians call these developing zygotes, embryos. In Arabic language “aljaaneen” has to be hidden in the womb, and the verb “janna” means something that hides or disappears. All the ramifications of this word denotes something being hidden (Jinn: unseen creatures, majanna: cemetery where the bodies are hidden in the ground, majann: the shield which protects the person and hides his face and chest from the blows of the enemy; aljanan: the hidden heart, aljonoon: the loss of the mind, and so on). That is why a fertilized ovum “allaqeeha” in the petri dish, or test tube will never be considered as an embryo, and hence has little sanctity. There is a gradation of sanctity of the developing human embryo. The sanctity starts to build up once the developing zygote (blastula) reaches the uterus and gets implanted. If it is not implanted, and just passes by and comes out with the vaginal secretions, then it has no sanctity, and that is why the intrauterine device for contraception is accepted by Muslim jurists. Abortion is the extraction of the contents of the uterus of a developing human embryo. The sanctity builds up and culminates in ensoulment; whereby the fetus becomes a human being. It is not allowed to abort after the 120 days computed from conception (fertilization) except if continuation of pregnancy is going to endanger the life of the expecting mother.⁹

To sum up, all the Muslim scholars agree that breathing in of the soul (ensoulment) in the developing fetus occurs after the 120 days mentioned by the Hadith of Abdulla ibn Mosood,^{3,4} (narrated by Al Bokhari, Muslim and others) and only in the twentieth century did some physicians start to propogate that ensoulment occurs at the fortieth day according to their interpretation of the Hadith of Huzaifa ibn Aseed (narrated by Muslim). Some of the contemporary jurists were persuaded to take this view. However, the majority of the contemporary jurists still hold to the well-established consensus of all the Muslim scholars (ulema) all through the ages and accept the 120 days as the time of ensoulment.

Mohammed A. Albar

*Islamic Jurisprudence Council of Jeddah and Makkah
Al-Mukarramah (Islamic World League)
Medical Ethics Centre, Jeddah
Kingdom of Saudi Arabia*

Reply from the Author

I agree with Dr. Albar that it is agreed by many Islamic scholars on “Nafkh Al Rouh” inspiration of the soul (spirit) to occur after 120 days embryonic age (from

85. And they ask you (O Muhammad صلى الله عليه وسلم) concerning the *Rūh* (the Spirit); Say: “The *Rūh* (the Spirit) is one of the things, the knowledge of which is only with my Lord. And of knowledge, you (mankind) have been given only a little.”

وَسْتَأْتُونَكَ عَنِ الرُّوحِ قُلِ الرُّوحُ مِنْ أَمْرِ رَبِّي وَمَا أُوتِيتُمْ مِنَ الْعِلْمِ إِلَّا قَلِيلًا ﴿٨٥﴾

(The Quran, Sura 17, verse 85)

Figure 1 - The exact nature of the spirit “Rouh ” is not known, as it is stated in the Holy Quran.

the time of conception).^{1,3,4,11} This is equal to 134 days gestational age (from LMP). As a matter of fact, the scientific knowledge of the human spirit, namely, soul (Rouh) and life and death are and will be deficient, as clearly stated in the Holy Quran, Suraha 17:85 (Figure 1).¹⁰ There is no clear statement in the Holy Quran on the timing of “Nafkh Al Rouh” inspiration of the soul (spirit), although the Islamic scholars (jurists) have agreed that it occurs after the “Modgha stage” when God says “then we brought it forth as another creation” Suraha 23:12-141,¹² which have been agreed on by many Islamic scholars to occur after 120 days embryonic age, from the time of conception.^{1,3,4,11} In the 120 days Hadith narrated by Abdullaha Ibin Masoud, which is in both Sahih Albukhari and Muslim,^{3,4,13} The inspiration of the soul is mentioned, but in the 42 days hadith narrated by Hudhaifa bin Usaid,^{4,13} which is narrated in 3 eligibly different narrations in Kitab Al Qadar.¹³ There is no mention of breathing of the soul. But in one of these narrations it mentions the creation of hearing, vision, skin, flesh, bone, and gender at 42 days, so it mainly refers to organogenesis which takes place after the Magha stage at third, and fourth weeks of embryonic age with formation of all organs at sixth and seventh weeks of embryonic age (42-45 days).^{3,4} It is also important to note that sanctity of God’s creation is from the time of conception in utero until death. Therefore, sanctity for the developing embryo, and then the fetus increases once it is implanted in the uterus, and it is culminated once the soul is breathed in.^{1,3,4,11} However dealing with left over zygotes, or excess embryos (from in vitro fertilization laboratories) at 3-4 days of embryonic age in a test tube or petri dish should not be considered as embryos since they are not already in the uterus and not implanted yet. Therefore, they have little sanctity.¹

Aida Al-Aqeel

*Department of Pediatrics
Riyadh Military Hospital
Riyadh, Kingdom of Saudi Arabia*

References

1. Al-Aqeel AI. Human cloning, stem cell research. An Islamic perspective. *Saudi Med J* 2009; 30: 1507-1514.

2. Muslim World League Islamic Fiqh Council: Resolutions 17th session (19-23 Shawal 1424\13-17 December 2003, Resolution No3, Makka Al-Mukaramah. p. 29-34.
3. Al-Asqalani Ibn-Hajar, editor. Fathu Al Bari, Sharhu Sahih Al Bokhari. Vol 11. Cairo: Al Matbaa Al Salafiyah; 1380H. p. 477-485 (Available in Arabic).
4. Al-Nawawi YI, editor. Sahih Muslim Bishareh Al Nawawi. Vol 8. Beirut: Dar Al Fikar; 1972. p. 189-198 (Available in Arabic).
5. Ibn Al Qaiyem MA, editor. Attibyan Fi Aksam Al Quran. Cairo: Maktabat Al Kahira; p. 250-255 (Available in Arabic).
6. Ibn Al Qaiyem MA, editor. Tariq Al Hijgrateen wabab Al Saadateen. Cairo: Al Matbaa Al Salafiyah; 1376H. p. 72-76.
7. Koren J, editor. Symposium on Ethics of Organ Transplantation; 1989 Aug 20-24; Ottawa, Canada. Book of abstracts
8. Albar MA. Induced abortion from Islamic perspective: is it criminal or just elective. *Journal of Family and Community Medicine* 2001; 8: 25-35.
9. Fatwa of Islamic Jurists Council (Islamic World League). Book of Resolutions of Islamic Jurists Council (from 1st Session to 16th Session). 4th Resolution. KSA: Fatwa of Islamic Jurists Council; 1990: p. 279 (Available in Arabic).
10. Salim AM, editor. Question and Answer of the verses of the Holy Quran. Vol 6. Al-Madina Al Manawara (KSA): Dar Al Jawahara; 1426H. p. 224-239 (Available in Arabic).
11. Al-Aqeel AI. Ethical guidelines in genetics and genomics. An Islamic perspective. *Saudi Med J* 2005; 26: 1862-1870.
12. Al Aqeel AI. Islamic ethical framework for research into and prevention of genetic diseases. *Nat Genet* 2007; 39: 1293-1298.
13. The Hadith Books. Beginning of creation. [updated date 2010 June 1; cited date 2010 January 3]. Available from: http://www.searchtruth.com/hadith_books.php.

Statistics

Excerpts from the Uniform Requirements for Manuscripts Submitted to Biomedical Journals updated November 2003.
Available from www.icmje.org

Describe statistical methods with enough detail to enable a knowledgeable reader with access to the original data to verify the reported results. When possible, quantify findings and present them with appropriate indicators of measurement error or uncertainty (such as confidence intervals). Avoid relying solely on statistical hypothesis testing, such as the use of *P* values, which fails to convey important information about effect size. References for the design of the study and statistical methods should be to standard works when possible (with pages stated). Define statistical terms, abbreviations, and most symbols. Specify the computer software used.