WHAT IS INSIDE THE WOMB? AN ANALYSIS FROM QURAN AND SCIENCE

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Computer-enhanced micro-photographic (imaging) techniques are available today that allow researchers to visualize the step-by-step growth of a fetus while the fetus is still developing inside the mother's womb. In addition, modern genetic technologies have been developed that can identify many biological characteristics of the fetus *in utero*. These developments readily indicate that, in near future, every fetus could be routinely screened for genetic or physiological abnormalities. And, when appropriate, a therapeutic intervention could be made early-on to correct the progression of predictable disease processes thereby leading to manipulate the fate of normal reproductive outcome in human. These scientific data are frequently misunderstood leading to man-made conclusion that everything inside the womb has been known. Such an incorrect conclusion is being drawn sometime to target several Quranic verses including 13:8, 30:22, 31:34, 35:11, 41:47, and 53:32, whose interpretations generally imply that Allah (SWT) knows what is in the womb. It is true that the present day researchers possess a good understanding of hereditary characteristics of a growing fetus. However, genetic research would have been ended if everything regarding what is inside the womb has already been known. In contrast, narrations from Sahih hadith shows that the prophet (peace be upon him) had explained the details regarding the hereditary (genetic) characteristics for a growing fetus, at least 14 centuries ago. The Prophet's (peace be upon him) explanations provided enormous details that have not been interpreted in the light of current scientific understanding. As such, this analysis compares the Quranic understanding with the latest scientific knowledge of human hereditary characteristics which do not show inconsistencies between Al-Qur'an and modern genetics. Surprisingly, these latest scientific find-

ings rather strengthen the Quranic statement that Allah knows what is in the womb.

Introduction:

The biological mechanisms by which an egg turns into a fly or chicken have been a great mystery for a long time in the past. The way human hereditary characteristics transmit from parents to offspring had not been known for the last 3000 years, as is evident from the history of science. One of the earliest attempts to understand what is inside the womb was found in an ancient Egyptian document recorded in 1350 BC. A papyrus described a test in which a pregnant woman could urinate on wheat and barley seeds over the course of several days: "If the barley grows, it means a male child. If the wheat grows, it means a female child. If both do not grow, she will not bear at all." This readily illustrates that people have been curious about the mechanism of human inherited characteristics (male or female) since the ancient time.

The first significant discovery was made in 1677 A.D., when Johan Ham and Anton Van Leeuwenhoek saw, for the first time, the human sperm under a microscope. Their discovery led to the conclusion that each sperm carried a tiny human, a 'homunculus', and that the woman contributed nothing. After about another 100 years, in 1780, Lazzaro Spallanzani conducted artificial insemination experiments in dogs and showed for the first time that both egg and sperm were needed to create a new life. The fact that human conception occurs similarly when the sperm enters the ovum was discovered by physician Martin Berry only in 1843. This brought an end to the long-standing scientific belief that the male implants life into the female. Therefore, after about 3000 years of continuous scientific effort, it was finally established in the nineteenth century that both the male and female contribute equally to create a new life. This nineteenth century scientific finding appears to be amazing! Anyone familiar with the quranic verses would readily admit that such information had always been