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(Letter to editor)

# Iran's Biotechnology Needs to Cross of Bioethics Debates Lags

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## Dear Editor-in-Chief

Biotechnology science is a new achievement for human beings that have a new discovery every day. This achievement is related to the role of biotechnology in food and nutrition (1) plant (2) (3) production of biopharmaceuticals (4) medical (5) and other disciplines. However, biotechnology is one of the most challenging topics in bioethics as well as its achievement. Challenges in medicine (6) debate about human kind (7) his society (6) and marine biotechnology and aquaculture (8) and other disciplines are arising. Although all these issues are challenging for bioethics, the issue of potential risks is far more serious for humankind origin (7). The main question is whether biotechnology is a "catastrophic bioterrorism potential" or that it has numerous benefits to human beings. In addition, other questions in this subject are about individuals or autonomy; beneficence, non-maleficence, and justice (8).

There are enough evidences that biotechnology in Iran has made good progress over the past two decades. It was shown that until 2012 Iran will lead the biotechnology products especially in area of biosimilars in Asia after India in next three years (9). However, it seems that scientific areas in Iran are facing with bioethics lag. This topic has not been discussed as a serious issue. There can be several reasons for this. At first, there is no any theoretical view about the subject. Ethical theories in this field are less taught or considered. In fact, we are faced with some kind of theoretical disregard for this. On the one hand, the topic in Iran has been considered more technologically. From time to time, there are reports of advances in the field of biotechnology. In fact, we are dominated by a technical discourse which only emphasizes on progress regardless of its moral and social dimensions. In addition, science development in Iran has been done in one-dimensional pattern. It means that there is no scientific relationship between scholars from various disciplines. In fact, each of them has different perspectives on the topic that relates just to their own field of expertise. In the same field, some scientific areas are not familiar with the subject and do not look at it as a problem. Finally, In the Islamic world, many personal and social affairs are done based on jurisprudence orders.

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**Table 1:** The declaration

| **Content** |
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| Our actions depend on what it considers to be profitable and the definition of profit is different from the point of view of each according to its worldview. We believe that the most real profit will be achieved by moving towards the laws of creation. Therefore, we need to know the laws of creation, so that we can achieve the true benefit. No one is aware of them as much as the creator of these laws and it expresses the importance of paying attention to content of sciences and religion when we are defining our path of science. Specifically, when we have not reached a certain degree in our empirical sciences and at different times we have seen violations of previous findings. Therefore, the most reliable way is using different sciences seems to be together, so that each one reflects a part of the truth and can approach the truth and act on it. Also, according to our Tawhidi beliefs, we can say that all sciences are part of a single truth, and all of them are created by God Almighty. Therefore, these sciences are by no means separate, and their aggregation brings us closer to Tawhidi thinking. In the absence of a single discipline for a biological subject, and the challenges ahead which are controversial and sometimes doubtful, the correct act is formation a group of specialists from different disciplines including biologists, physicians, ethics experts, Jurisprudence, sociologists, law experts etc., and discuss the details of the subject in a clear and precise manner, avoid bias and disclose their findings and present their law in a transparent and documented manner. Results of separation of these different discourses maybe are not what they should be. We are attendees at the Bioethics Specialist Meeting on May 4 and 5 2017 include university professors, students, specialist, biologists, biotechnology specialists, lawyers, philosopher, sociologists, and medical ethics specialists announce our declaration in the 5 following statements:<br>1. In the field of Figh, it is necessary to have joint working groups with the presence of scholars and university professors with jurisprudence to review the biomedical issues with each other and to direct some of the research activities of seminary disciplines to solving biomedical needs and to form joint meetings between university and seminary experts for exchange their opinion for reaching approximation of their minds.<br>2. In the field of philosophical sciences, since attempts to explain biomedical sciences based on Islamic principles with attention to Western philosophy for study jurisprudential and legal issues is needed, it is necessary to increase the association of these groups with medical science universities and the establishment of such working groups.<br>3. In the field of medical ethics, the formation of think-tanks and highly specialized expertise of various dimensions is essential. The duties of medical ethics department are: presentation of practical ethical codes and codes of practice in various biomedical disciplines, paying attention to the most recent scientific findings and value foundations along with this assessment, and ethical evaluation of the past scientific activities based on update bioethics knowledge.<br>4. The specialized departments of biological and biotechnology should define and develop bioethics course for their students in order to get them acquainted with the ethical challenges and the solutions based on Iranian Islamic culture, as well as to research on its new challenges. Ministry of Health should address the issues urgent for Identifying the shortcomings and needs in the subject and proposing the rules required in this area by interacting with national and international agents which are active in bioethics science from different disciplines.<br>5. It is correct that the Parliament of the Islamic Republic of Iran approve the related laws with presence of a group of experts who mentioned above. However, it should not delay the scientific and research issues until the elaboration of the laws of ethics required by the heads of state. It is therefore necessary to form such working groups' among themselves and examine these issues in order to choose the closest way to the truth, and even submit their results to the responsible authorities, in order to take a step towards quick coding. |

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It seems that jurisprudents have not yet been addressed to the biotechnology as a social issue. Thus we are faced with a bioethics lag in the society.

In order to unlock the subject and confronting with the bioethics lag, Student Research Committee of the Faculty of Pharmacy at Shiraz University of Medical Sciences designed a meeting with some specialists of different disciplines on 4, 5 May 2017. In this active meeting some main questions were presented to participants. After dividing the participants into several groups, they were asked to discuss about the subjects. Two main findings of these meetings were:

1. Each of the scientific disciplines looked at the subject just with their own angles.
2. Some disciplines were not familiar with biotechnology and its challenges.
3. There was no common understanding of the topic between experts from different disciplines.

Generally, we found out that our biotechnology discipline is faced with bioethics lag. It means that biotechnology in Iran is progressing without any attention to its philosophical, ethical, legal and social considerations or with at least attention. Based on this main finding, the declaration was written with main statements in Table 1.

This important point is that, this bioethics lags needs interdisciplinary work with experts from different fields specifically jurisprudence, bioethics, lawyears, and sociologists.

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