Editorial:

Revival of Bio Medical Research in The Muslim World

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There are over 1.8 billion Muslims, constituting nearly 25% world population, currently residing on the surface of this earth. Muslim contribution in the recent scientific inventions does not correspond with available human, economical and natural resources of the Muslim world. Though world witnessed one of the greatest periods of sustained scientific advancement during the medieval period when great centers of learning - places like Baghdad, Cairo, Cordoba and Samarkand, where discoveries were made, ideas nurtured, and methods developed. Islamic scientific attainments before thirteen century included eclectic range of areas exclusively: Medicine, Chemistry, Mathematics, Astronomy and Physics. Muslims remained pioneer in various scientific inventions like; the Cordoban physician Abul-Qasim Al-Zahrawi invented more than 200 surgical instruments - many of which, like forceps and the surgical syringe, are still in use today. Al-Zahrawi was a very famous surgeon in the eleventh century, known in Europe for his work, Concession (Kitab al-Tasrif). The very first book on algebra, called Kitab al-Jabr (from which we derive the word 'algebra'), was written by the 9th century Persian mathematician, Al-Khwarizmi. Then there was the birth of industrial chemistry, with sophisticated scientific methods replacing the haphazard practice of alchemy, and advances in fields such as optics that would not be matched until Newton. In the 9th century, the Abbasid caliph Al-Ma'mun created the House of Wisdom, and built observatories in Baghdad and Damascus. Ma'mun sponsored science projects that made vast improvements in the fields of astronomy and geography. Ibn Sina (d. 1037), better known to the West as Avicenna, was perhaps the greatest physician until the modern era. His famous book, Al-Qanun fi al-Tibb, remained a standard

textbook even in Europe, for over 700 years. Al-Razi, known in the West as Rhazes, the famous physician and scientist, (d. 932) was one of the greatest physicians in the world. He elaborately devised clinical protocols and diagnostic tools for various diseases, also wrote a treatise on hygiene in hospitals. In general, Muslim physicians remained in the forefront of the battle against the spread of disease. As the torchbearer of scientific knowledge, they constantly remained outstanding in scientific innovation and research. Until the end of 15th century Muslim physicians of Middle East, Spain and Central Asia endured the sole source of medical research and innovation. Medical scholars from all over Europe and Asia used to travel to Bukhara, Samarkand, Baghdad, Tashkent, Cairo and Khiva in pursuit of medical knowledge and expertise, until the academic decline of the Muslim world.

The intellectual decline in the Muslims led to progressive European colonialization of the Islamic land and cultural dominancy of non-Muslims. The weakening of the Muslim societies resulted in cultural, economical and political dominancy of the West. In this, West was aided by transfer of intellectual and scientific knowledge from East to West that had already taken place, and which they then utilized and advanced to the utmost. However, what the West in general had failed to do was to acknowledge this debt to Muslim civilization, and thus we find that they even removed Muslim names from the scientific literature. Now these and many other great achievements of Muslim scientists have been largely forgotten.

Yet the situation today is serious but not helpless. Many Muslim physicians and scientists are still paying a vital role in the development of medical knowledge. Despite the great potential in Muslim countries, a research culture which is one of the

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main objectives of the Islamic ideology, does not prevail in the Muslim world due to prolonged subjugation. Nevertheless, Muslim countries have great human, economic and intellectual resources, if employed properly, could have performed miracles. It is thus imperative that the existing potential in the Muslim world is organized, guided and coordinated by the intellectual leadership of Muslim world. Although Muslim physicians are contributing to research and innovation in the West and in other developed countries, yet at the same time Muslim world is suffering from brain drain, causing socioeconomic, technological and political decline in the Muslim countries. This in turn increases dependence on the West for scientific needs. Never-ending political turmoil and economical predicaments in the Muslim countries further create insecurity among Muslim scientists in their own countries. Consequently, some Muslim doctors and bio-medical scientists prefer to research on that health issues, for which they can secure financial and technical grants. In such a milieu, one cannot therefore conceive of any real progress in the field of bio- medical sciences or in any other field.

However, scientific progress and advancement in bio-medical science for improving the human condition, is one aspect of the whole picture. There is also the humanistic aspect, which addresses the moral and ethical needs and the dilemmas that arise in this regard. Its essence is the Islamic ethos of honoring and preserving the sacredness of human life and dignity, its progeny, wealth, intellect and religion. One must be desiring for another, what one would desire for oneself. Rapid advances in biomedical science and technology, have revolutionized medicine and health-care services in different societies, though they have been associated with inevitable ethical challenges. Undoubtedly, these innovations could lead to irreversible disasters if they are not limited by appropriate guidelines. In recent years, great attention has been paid to ethical issues as an inevitable consequence of emerging biomedical advances. There have been ever-increasing discussions about ethical aspects of this new knowledge in different countries of the Muslim world. Accordingly, the propensity in scientific society to look for legitimate solutions to moral dilemmas has led to the involvement of bioethics with the law. Some Muslim countries now have rulings and guidelines on bioethical concerns,

although legislation in some challenging cases such as cloning has produced controversies. The academic efforts of bioethicists to address these modern dilemmas has provided crucial assistance to both political and professional societal leaders. Recently, notable efforts to establish national research ethics guidelines have been made in many Muslim countries. However, compared with international documents, like; the ICHGCP, the CIOMS guidelines, considerable improvement is required to meet the research and innovation challenges in biomedical sciences in the Muslim world.

The revival of scientific innovation and research culture in the Muslim world need aggressive planning and accomplishment. To remain visible on the landscape of world academia our alma mater must look in to the opportunities contingent to actual needs. Thus, coming up with massive research initiatives particularly in the field of biomedical sciences and where we need to set up our indigenous priorities rather than looking for resources from the developed world. We need to develop our educational resources, which encourage free thinking, research, innovation and promote talent. All public and private entrepreneurship must ensure substantial financial provision and encouragement for scientific and technical research in the field of medicine. This can only be accomplished provided an integrated system is build where inventors and their ideas are being cared for to safeguard their scientific research and innovations and translated into practical applications with economic value. Multi centers studies, pooling resources, integrating biomedical researchers, within a country, between countries and global organizations will provide economical, judicious and sustainable research model. CIMCO research journal and FIMA as a representative body of majority of Muslim medical scientists will provide the key to running the engine of the revival of research culture. We must expend our efforts to include public and private institutions as well as community members in this noble cause to meet the challenges of the age. This requires the understanding of the actual spirit behind this move, the code of conduct and ethics that Islam lays down pertaining to our dealings with fellow human beings, which then becomes applicable to all aspects of life including medicine, especially the aims and objectives of biomedical research and innovations.

Further Readings

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