

**THE MUSTAFA <sup>(PBUH)</sup> SCIENCE AND TECHNOLOGY FOUNDATION: A PLATFORM TO DEVELOP SCIENCE AND TECHNOLOGY IN ISLAMIC WORLD**

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**ABSTRACT:** *Mustafa <sup>(pbuh)</sup> Science and Technology Foundation (MSTF) has started its activities within a specifically developed framework to honor the scientists of the Islamic world and appreciate their efforts, along with training future scientists worldwide. The MSTF tries to develop cooperation, synergy, and convergence in the realm of modern sciences and new technologies and also puts effort into making the distinguished figures in science and technology role models. It makes a consolidated effort to improve the general welfare of people worldwide by benefiting from values such as reverence for divine religions, respect and humanity. This venerable Foundation provides values of dignity, trust, a support-structure for the development of science and technology, an educational enterprise for uncovering the truth, assuming social responsibility, and laying down the groundwork for construction of a grand new and contemporary Islamic civilization. This study is an introduction of Mustafa Prize and its Objectives, Salient Features, Services and an effective transfer of the same. Additionally, it looks at the role which can be played to enlarge and enrich Science and technology among Moslem Countries.*

**KEYWORD:** Knowledge Application and Notion for Society (KANS) Scientific Competition, Innovation, Islamic World, Pardis Technology Park, Mustafa Prize, Noor Student Competition, Safir Al-Mustafa <sup>(pbuh)</sup> Science, Technology Transfer, The Mustafa <sup>(pbuh)</sup> Science Center

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## **INTRODUCTION**

There are many prizes established for science all over the world. However, it is felt that the great efforts of Muslim scientists are not acknowledged as they deserve. (Ferdous. F and Athar Uddin. M,2011:9)The Science Magazine pointed out the scope of the Prize and emphasized on the focus of this project on the Islamic World that is open to nonMuslims in Islamic nations too(Ashraf, N., C.F. Camerer, and G. Loewenstein. 2005:14).

According to Islam all forms of knowledge including Science and technology issue forth from the Fountainhead of all knowledge, the All Knowing Allah. The universe is a rationally and methodically created intellectual system which works in perfect precision. This is enough to prove the Divine Intelligence that is basis of this remarkable creation called the universe. In this precise system, the spiritual and the ethical are not mere subjectivisms but are the main features of the cosmic created on perfect math which are enough to show the Power of Allah. In these dark hours of human history, as the recipient of the Last Revelation, the Islamic world has the same responsibility as the torch-bearer in the darkest part of the most dangerous night. It is our duty to create a veritable Islamic science which would not only resuscitate this civilization but also act as a major support for all those over the entire globe who seek a natural source of science and technology that can help men and women to live at peace with themselves, with the natural environment, and, above all, with that Divine Reality Who is the Ontological Source of both man and the cosmos. In this regard, some organizations are available in Islamic Countries.

## THE KAVLI FOUNDATION

The Kavli Foundation, based in Oxnard, California, is dedicated to the goals of advancing science for the benefit of humanity and promoting increased public understanding and support for scientists and their work (UNESCO Institute for Statistics, 2005).

The Foundation's mission is implemented through an international program of research institutes, professorships and symposia in the fields of astrophysics, nanoscience, neuroscience and theoretical physics (Roco M.C., Bainbridge W., eds. 2001).

The Kavli Foundation was established in December 2000 by its founder and benefactor, Fred Kavli (1927-2013), a prominent Californian business leader and noted philanthropist. The Foundation is currently actively involved in establishing major research institutes at leading universities and institutions in the United States, Europe and Asia.

To date, The Kavli Foundation has established and endowed research institutes at leading universities worldwide, focusing on the areas of astrophysics, nanoscience, neuroscience, and theoretical physics. As of today, there are twenty institutes. The Foundation has endowed research institutes in neuroscience at Columbia University, Yale University, the University of California San Diego, the Norwegian University of Science and Technology, Johns Hopkins University, The Rockefeller University, and the University of California, San Francisco. In nanoscience, there are Kavli Institutes at the California Institute of Technology, Cornell University, Harvard University, the Delft University of Technology and the University of California Berkeley. In astrophysics and cosmology, the institutes are at Stanford University, the University of Chicago, Massachusetts Institute of Technology, the University of Cambridge, Peking University and the University of Tokyo. And in theoretical physics, the institutes are at the University of California Santa Barbara and the Chinese Academy of Sciences (Valentine. N, Jason. J & Leland, R, 2013).

The Foundation has also endowed seven university professorial chairs, sponsors, science symposia and workshops. It supports initiatives to engage the public in science and that helps scientists to be better communicators and supports excellence in science journalism. Their activity includes endowing the AAAS Kavli Science Journalism Awards administered by the American Association for the Advancement of Science. The Foundation has also brought together scientists at meetings that facilitate open dialogue and an exchange of ideas. These meetings have precipitated such major initiatives as the Brain Activity Map proposal, which was a major catalyst for President Obama's Brain Research through Advancing Innovative Neuroethologies (BRAIN) Initiative announced in April 2013 (CISMAS, I. ,2011).

## The Nobel Prize

The Nobel Prize in Physics is a yearly award given by the Royal Swedish Academy of Sciences for those who conferred the most outstanding contributions to mankind in the field of physics (Raymond. C, 2011). It is one of the five Nobel Prizes established by the will of Alfred Nobel in 1895 and awarded since 1901; the others being the Nobel Prize in Chemistry, Nobel Prize in Literature, Nobel Peace Prize, and Nobel Prize in Physiology or Medicine (Karensa, E. 2016).

*The Nobel Foundation* The Nobel Foundation was founded as a private organization on 29 June 1900(Wahab, S. (2011), (Orakzai, S.2010), (Matthew, E.2003), (Michelle,N. 2013). Its function is to manage the finances and administration of the Nobel Prizes. In accordance with

Nobel's will, the primary task of the Foundation is to manage the fortune Nobel left. Robert and Ludvig Nobel were involved in the oil business in Azerbaijan, and according to Swedish historian E. Bargengren, who accessed the Nobel family archives; it was this "decision to allow withdrawal of Alfred's money from Baku that became the decisive factor that enabled the Nobel Prizes to be established"

(Raymond,C.2011:12). Another important task of the Nobel Foundation is to market the prizes internationally and to oversee informal administration related to the prizes. The Foundation is not involved in the process of selecting the Nobel laureates. In many ways, the Nobel Foundation is similar to an investment company, in that it invests Nobel's money to create a solid funding base for the prizes and the administrative activities. The Nobel Foundation is exempt from all taxes in Sweden (since 1946) and from investment taxes in the United States (since 1953). Since the 1980s, the Foundation's investments have become more profitable and as of 31 December 2007, the assets controlled by the Nobel Foundation amounted to 3.628 billion Swedish kronor (US\$560 million). According to the statutes, the Foundation consists of a board of five Swedish or Norwegian citizens, with its seat in Stockholm. The Chairman of the Board is appointed by the Swedish King in Council, with the other four members appointed by the trustees of the prize-awarding institutions. An Executive Director is chosen from among the board members, a Deputy Director is appointed by the King in Council, and two deputies are appointed by the trustees. However, since 1995, all the members of the board have been chosen by the trustees, and the Executive Director and the Deputy Director appointed by the board itself (Orakzai, S.2010:11). As well as the board, the Nobel Foundation is made up of the prize-awarding institutions (the Royal Swedish Academy of Sciences, the Nobel Assembly at Karolinska Institute, the Swedish Academy, and the Norwegian Nobel Committee are the trustees and auditors of these institutions (Darwish, A.2003).

### **Medals**

The Nobel Prize medals, minted by Myntverket in Sweden and the Mint of Norway since 1902, are registered trademarks of the Nobel Foundation. Each medal has an image of Alfred Nobel in left profile on the obverse. The Nobel Prize medals for Physics, Chemistry, Physiology or Medicine, and Literature have identical obverses, showing the image of Alfred Nobel and the years of his birth and death (1833–1896) (Shah, S. & Mudassir, A. 2008). Nobel's portrait also appears on the obverse of the Nobel Peace Prize medal and the Medal for the Prize in Economics, but with a slightly different design. The image on the reverse of a medal varies according to the institution awarding the prize. The reverse sides of the Nobel Prize medals for Chemistry and Physics share the same design of Nature, as a Goddess, whose veil is held up by the Genius of Science (Francis

T Dean, Lucy.D,2003). These medals and the ones for Physiology/Medicine and Literature were designed by Erik Lindberg in 1902.

### **Diplomas**

Nobel laureates receive a diploma directly from the hands of the King of Sweden. Each diploma is uniquely designed by the prizeawarding institutions for the laureate that receives it. The diploma contains a picture and text which states the name of the laureate and normally a citation of why they received the prize (Raymond, C. 2011).

### **Award money**

The laureate is also given a sum of money when they receive the Nobel Prize in the form of a document confirming the amount awarded; in 2009, the monetary award was 10 million SEK (US\$1.4 million)

(Valentine. N, Jason. J & Leland, R.2013). Due to budget cuts, in 2012, the amount for each Nobel Prize was 8 million SEK, or US\$1.1 million. The amount may differ depending on how much money the Nobel Foundation can award that year. If there are two laureates in a particular category, the award grant is divided equally between the recipients. If there are three, the awarding committee has the option of dividing the grant equally, or awarding one-half to one recipient and one-quarter to each of the others (UNESCO Institute for Statistics, 2005).

### **Ceremony**

The committee and institution serving as the selection board for the prize typically announce the names of the laureates in October (Kymlicka, W.2007). The prize is then awarded at formal ceremonies held annually in Stockholm Concert Hall on 10 December, the anniversary of Nobel's death. The laureates receive a diploma, a medal and a document confirming the prize amount (Raymond, C.2011).

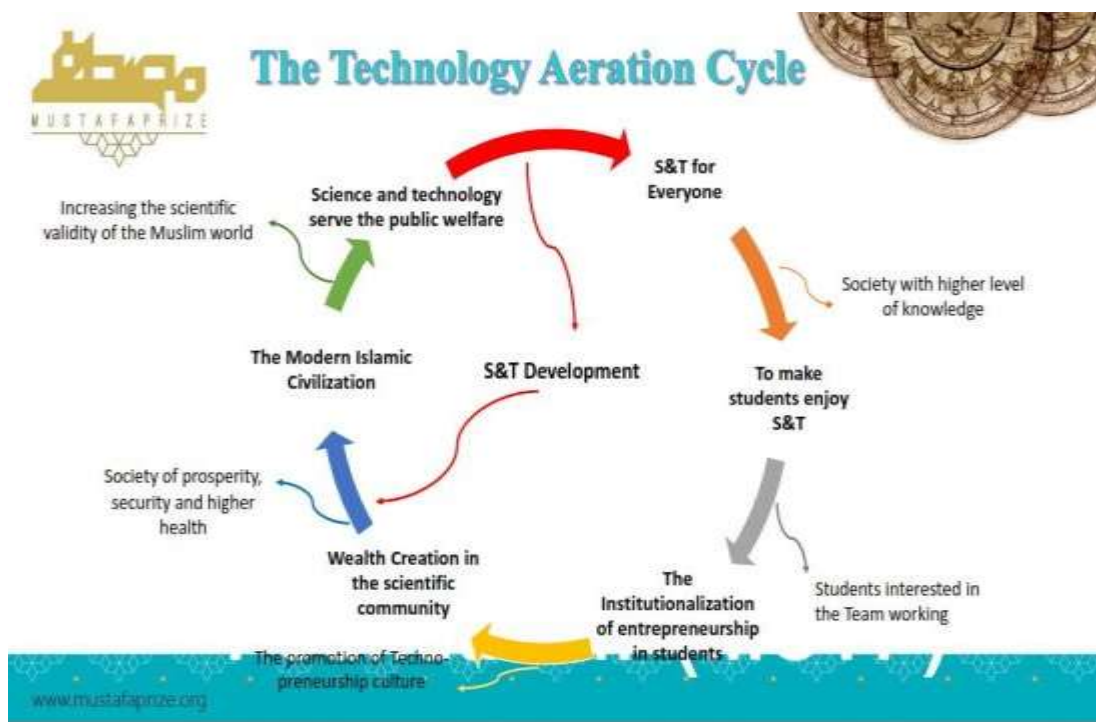
## **MUSTAFA SCIENCE AND TECHNOLOGY FOUNDATION (MSTF)**

The Mustafa <sup>(pbuh)</sup> Prize is a top science and technology award granted biennially to the top researchers and scientists in the Islamic world. Adorned with the name of the Holy

Prophet <sup>(pbuh)</sup> and due to the Holy Prophet's <sup>(pbuh)</sup> emphasis on learning and understanding science, the Prize was named "Mustafa" which means the Chosen One. The Mustafa <sup>(pbuh)</sup> Prize intends to promote and encourage research in Muslim societies through identifying, introducing, and praising the leading figures in science and technology in the Islamic world.

The Mustafa <sup>(pbuh)</sup> Prize nominees are selected from among the scholars of the Islamic world, including citizens of OIC member states and Muslims all over the world in the fields of Nanoscience and Nanotechnology, Life and Medical Science and Technology, Information and Communication Science and Technology, and all other fields of science and technology.

Laureates in each category will be awarded 500,000 USD which is financed through the scientific votive offerings [Nazr] and scientific endowments made to the Prize. The winners will also be adorned with a special medal and a certificate. This Prize is awarded to works which have contributed to the improvement of human life and have innovations within the boundaries of knowledge and technology. The MSTF try to extend its promotional, supportive, and encouraging activities in 6 sections in the Islamic world by focusing on effective points in development of science and technology in society:



**Figure 1: major activity of MSTF**

***Promoting public awareness in science and technology.***

The MSTF’s goals in this section are as follows:

1. Familiarizing the society with the importance of science and technology;
2. Promoting science and technology to be imbibed in the culture in such a way that the society recognizes its importance;
3. Creating a society interested in science and technology;
4. The MSTF’s activities have been determined in order to achieve the mentioned goals. For this purpose, the MSTF tries to extend the range of these activities:
5. Establishing centers to promote public creativity and initiative;
6. Managing and extending media rights for production of scientific, educational, and promotional programs in the realm of science and technology as well as modern Islamic civilization
7. Holding science and technology exhibitions using modern structures
8. Staging artistic events in the form of comic strip, visual event, animation, etc.

### **Improving the dynamics for educational and research atmosphere for students:**

The MSTF will try to accomplish the following goals in short-term, medium term, and long-term intervals:

-To involve the educational system in science by taking a modern approach; -To turn science and technology into entertainment for children and teenagers; -To boost students' self-esteem and developing cooperation among them. In this field, the MSTF will attempt to familiarize students with a different research milieu and scientific atmosphere. Promoting knowledge at student level has always been the most important approach of the MSTF in this field. In so doing, some defined activities have been specified:

- To develop cooperation with educational centers and schools;
- To hold Noor school student competition;
- To hold student festivals;
- To Stage scientific and research events (school trips);
- To establish unique and inspirational centers to provoke the students' curiosity and creativity.

### **Encouraging the scientific community to utilize scientific findings to solve social issues:**

The goals of the MSTF in this section are as follows:

- To create an environment to provide scientific responses to the current needs; -To lead ideas and scientific projects toward effectiveness in society;
- To create a problem-solving attitude in the scientific environment at universities; In order to increase familiarity of university students in the fields of science and technology;

Various activities have been defined and are currently being implemented: -To Form Safir Al-Mustafa<sup>(pbuh)</sup> Club

- To Hold Mustafa<sup>(pbuh)</sup> University competition
- To provide sabbatical opportunities.

### **Supporting the establishment of scientific networks in the Islamic world:**

The MSTF supports researchers of scientific centers in Islamic countries and attempts to upgrade the scientific level of society with the following goals:

- To create a platform to improve interaction and scientific cooperation in order to offer suitable solutions to overcome obstacles hindering scientific development and move towards practical achievements in the different fields of knowledge;
- To support ideas in regard to research and applied projects among Islamic countries at international level;

The following ways are to pursue this goal: -To offer grants on research and applied projects in order to improve researchers' scientific achievements;

- To stage scientific and technological events internationally

### **Identifying distinguished scientists of the Islamic World and benefiting from their potential for the well-being of humanity:**

The MSTF has set its short-term, medium-term, and long-term goals with regard to this matter. The goals are as follows:

- To honor and encouraging the Islamic World's scientists;
- To make the scientists of the Islamic World role models at international levels;
- To produce benefits from the co-operation of the scientists of the Islamic World to promote humanity especially in the Islamic societies;
- To grant the top science and technology award termed "the Mustafa (pbuh) Prize";
- To promote and characterizing scientific activities of scientists especially the Prize laureates in society and publicizing them; -To offer specific services to the Prize laureates on periodic basis and preparing the ground for cooperation of eminent scientists.

### **Developing scientific and technological cooperation with scientific centers at international level:**

The MSTF is working to provide further cooperation with these centers through maintaining and improving its links with scientific centers. Some of MSTF's objectives in this field are as follows:

- To increase synergy among scientists at international level;
- To improve the quality of scientific works done by OIC members;
- Upgrading the level of science and technology in less developed countries (LDCs) especially in the Islamic World; -Some of the predicted actions to be taken in this field include:
  - To support scientific and technological projects among scientific centers of Islamic countries in order to bring LDCs profit; -To establish research centers at universities in cooperation with these scientific centers;
  - To construct conceptual models and proposing strategies for science and technology endowment; -To promote endowment;
  - To increase the activities of the MSTF's financial institution in Islamic countries; Some of the measures taken for the Fund include:
    - To create financial assets and instruments for financing
    - To expand the community of the Khadem Al-Mustafa (pbuh).

### **The Mustafa (pbuh) Science Center**

The MSTF is trying to familiarize the academic community with the prominent Muslim scholars so as to exhort such communities to model themselves after successful science and technology figures. It also tries to create different programs for children and adolescents who

are ready and apt to enter into the fields of science and technology and can be considered as future researchers and theorists at international levels.

The objectives set in pursuit of having the mission of the Mustafa <sup>(pbuh)</sup> Science Center accomplished are as follows: -To find talents and generating enthusiasm in students;

-To motivate scientifically-talented students and educating them;

-To give students targets in science and technology to aim for;

-To familiarize students with the elite community of science and technology; -To create an atmosphere of generating scientific and technological ideas among students and developing them; -To provide a roadmap for students' talents to flourish in the fields of science and technology.

### **Noor Student Competitions**

The term 'Noor' was selected for the MSTF (school) Student Event. The Noor Student Competitions are named after legendary figures in the history of Islamic science or contemporary scholars to inspire the young minds to commemorate them and be proud of their rich culture and heritage. This important event is held to link the ancient and modern Islamic civilization to the young minds of the generation so that they can boost their self-confidence and find their true identity. "Noor Student Competition: Professor Jackie Ying Recognition" was held in 2016 on the theme of making short films about scientific experiments with the participation of Pakistan and Afghanistan.

### **(School) Student Festivals**

In order to introduce and promote science and technology within the student community, a program called the Mustafa <sup>(pbuh)</sup> Student Festival backed by the Mustafa <sup>(pbuh)</sup> Science Center will be held. This event aims to persuade students into science and technology and familiarize the student community with other such topics. The sections of this festival can be divided into the following parts:

1. Exhibit section (displaying the achievements of top students in Noor Student Competition);
2. Science movie section (in children's and adolescents' views);
3. Scientific performance and technology contest section; 4. Television program;
5. Educational aids and teen-reader publishers section;
6. Putting on entertaining shows with the presence of children's and teens' favorite celebrities;

### **(School) Student Adventure Contest**

Creating a unique and inspirational place to stimulate the curiosity and initiative of the students was put on the agenda. Pardis Technology Park, as one of the leading organizations in the development of knowledge-based technologies, will host the winners of these student events.



Some activities planned for this event will be briefly reviewed flowingly:

1. Holding classes on physics, chemistry, mathematics, biology, and programming; 2. Providing educational facilities along with training classes;
3. Getting acquainted with prominent scientific figures (through lectures); 4. Teaching subjects around the relationship between science and the Quran (inform of presentations or scientific activities);
5. Holding research-method courses; 6. Producing research work by students at the end of the course and having it assessed;
7. Visiting knowledge-based companies;
8. Visiting top universities;
9. Holding scientific gatherings (watching movies, etc.);
10. Going on scientific and fun-time visits to natural places of the region.

### **Safir Al-Mustafa <sup>(pbuh)</sup> Club**

The Safir Al-Mustafa <sup>(pbuh)</sup> Club has been founded as one of the activities of the Mustafa <sup>(pbuh)</sup> Science Center, whose members are from academic communities. The Safir Al-Mustafa <sup>(pbuh)</sup> Club belongs to volunteers who are interested in activities in the form of content creation for the latest scientific achievement, and scientific authority relying on scientific diplomacy along with creating a new science and technology discourse. In so doing, the goals for Safir Al-Mustafa <sup>(pbuh)</sup> Club are defined as follows:

- 1) Creating a new discourse on Science and Technology;
- 2) Preparing the ground for scientific synergy and development of science and technology;
- 3) Explaining how to achieve an ideal knowledge-based society; 4) Exploiting the Islamic world scholar's network in scientific communities.

### **Knowledge Application and Notion for Society (KANS) scientific competition**

This competition has been staged with the aim of bouncing ideas around in the academic community to address the problems of the Society. Students, researchers, and professors from universities and scientific centers (less than 45 years of age) all over the world can submit their scientific-technological ideas and achievements in the form of video clips or scientific papers. This competition is held in order to find the best scientific solutions to solve the problems of the Islamic countries in areas of water and environment, energy, health, information technology, and economics. The goals to be considered for this event can be generalized to:

- A. Using capabilities possessed by expert community;
- B. Banking works and ideas for future exploitation;
- C. Enhancing motivation and creativity among young elites;
- D. Preparing the ground for exploring and exchanging scientific and technological ideas;
- E. Having researchers continue their interaction in the created network through cyberspace.

## CONCLUSION

The Mustafa<sup>(pbuh)</sup> Science Center, as one of the subsectors of the MSTF, tries to offer its capacities to elevate the status of the academic community. In the meantime, creating interaction with some of the reputable scientific centers in the world through the prominent scholars in the scientific network of the MSTF can provide an opportunity to enhance capabilities of the academic community.

In order to finance the Mustafa<sup>(pbuh)</sup> Prize and to develop science and technology in the Islamic world enjoying the honorable tradition of endowment, the Mustafa<sup>(pbuh)</sup> Science and Technology Foundation has sought to attract, organize, and target the resources provided by the benevolent benefactors in science and technology. In pursuit of this scientific-cultural movement, the MSTF tries to utilize all the capacities available in the Islamic world and employ various financial instruments under the auspices of ‘votive offering [Nazr] and endowment’ in science and technology. Backing the Prize financially and spiritually, the individual and legal benefactors, as members of Khadem Al-Mustafa<sup>(pbuh)</sup> community, known as “pioneers of endowment development to science and technology” are taking giant steps to promote the level of science and technology in the Islamic world and helping achieve prosperity, security, and health worldwide. In order to develop mutual cooperation with the pioneers of endowment development to science and technology, Khadem AlMustafa<sup>(pbuh)</sup> community was established adopting the motto of “Each person has One Share to Develop Science and Technology in the Islamic World”. In a spirit of goodwill and under the name of the Holy Prophet<sup>(pbuh)</sup> — heavenly, glorious and magnificent is his name— the members of this community fully cooperated with the MSTF in realizing its goals which aim to create a common discourse for development of endowment in science and technology. The members also provide mutual services and contribute to the expansion of this community in the Muslim world in order to have the objectives of the MSTF fulfilled.

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