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INTERNATIONAL COMPETITION AND EXHIBITION OF RESEARCH AND INNOVATION ON ISLAMIC STUDIES AND HUMAN SCIENCES



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ETHICAL HALAL POLICY ON RECOMBINANT COLLAGEN-LIKE PROTEIN: A QUR'ANIC GUIDANCE

Introduction

The recombinant collagen-like protein for this research is using molecular and biochemistry techniques. The gene for collagen-like protein from selected bacteria such as *Rhodospseudomonas palustris* and *Mathylobacterium sp* will be cloned into an *Escherichia coli*, famously called *E. coli*, purified, and characterized. Next, the physical parameter and optimum growth media for the recombinant *E. coli* harbouring collagen-like gene will be identified to be used by another sub-subproject. The lab test has been done by the technical and engineering team from the Kulliyyah of Engineering, IIUM.

Generally, the researcher aims is to study the production process of the recombinant collagen-like protein that suitable for food and nutraceutical as guided by the Qur'an and Sunnah. It is expected that the research is creating an Islamic ethical policy and Halal guidelines based on Qur'anic verses and the Prophet's Ahadith on the production of recombinant collagen-like protein as well as beneficial for any future scientific invention.

Objective

The primary objectives of this paper are relatively straightforward:

- Explored recombinant collagen-like protein and the challenges of producing Halal collagen briefly.
- Derived the guiding principles from the Qur'anic and Prophetic points of view related to recombinant collagen-like protein.
- Identified Shariah critical points on the issue of recombinant collagen-like protein.
- Developed ethical science and Halal policies on producing recombinant collagen-like protein from the Qur'anic and Prophetic perspectives.

Challenges & Issues

ON PRODUCTION OF RECOMBINANT COLLAGEN-LIKE PROTEIN

• The high demands for collagen.

As the fact that the collagen is essential because it is an important source of amino acids, and lack of collagen may cause health problems such as decreased joint elasticity and aging. As well as may boost the health and nutritional value of the human body. The demands of collagen also increasing over the years in food and beverages, cosmetics, and health industries.

• Limited sources of production.

The collagens available in the market nowadays mostly are from animal sources which may cause an immunogenic reaction.

• The status of Halal permissible on collagen-like protein.

This is the most concern issue of Muslim consumers, which the status of *Shari'ah* permissible (*Halal*). This is because the raw materials used in its manufacture could be sourced from porcine or non-Halal slaughtered animals.

• The Halal logo issues.

In this issue, the label has to be clearly indicated the presence of the acceptance quality. Different countries have different *Halal* logo, but some other countries may not have any *Halal* logo, thus complicating Muslim consumers and travelers to choose what to consume. Other than that, *Halal* regulations are also lacking in clear standards where different countries have different definitions and interpretations of *Halal* compliance.

ETHICAL ISSUES IN SCIENTIFIC RESEARCH

• The Common Issues in Laboratory (Material Halal Sources)

Halal certification for medical devices to produce the products is one of the issue need to be taken seriously. Hence, to produce a completely *Halal* product, the utensils, instruments and devices involved in the production also have to be originated from *Halal* sources. Other than that, most scientific research is using animals in harmful ways for experiment purposes is not only cruel but also often ineffective.

• The Common Issues in Publication (Individual Issues)

The ethical issue in science publication of so-called "negative findings" which categorised as violating the ethical science policy by plagiarism, duplication, conflict of interest and falsification.

Solution

• Islamic Guiding Principle.

As this production is deals with human needs for their interests and purposes, this is Muslim's responsibility to perform in their fields in whichever way pleases Allah. It is a must to follow Islamic guidance such as Divine Unity (*at-Tawhid*) and Utilization (*at-Tashkir*), Justice (*al-'Adalah*) and Equilibrium (*al-Tawazun*), Trustworthiness (*al-Amānah*) and Responsibility (*al-Mas'ūliyyah*).

• Islamic Ethical Science Policy.

× Compliance to *Shari'ah* (*Mutābiq li al-Shari'ah*).

Scientific research and exploration of science are one of the purposes of Islamic *Shari'ah*. Everyone is encouraged to have a high degree of obedience to the rules and regulations of God by taking seriously the issues of *Halal* and *Harām* in his career. Obedience to the *Maqā'id Shari'ah* is not harmful to anyone; however, it made an important basis for the work ethic even if it is against the demands of desire because science with religion has a dynamic relationship and are complementary to each other. Bearing in mind, science and *Maqā'id Shari'ah* combination is inevitable. *Maqā'id Shari'ah* can resemble a big umbrella that covers human everyday life routine.

× Emphasis on Humanitarian Aspects and Courtesy (*al-Ihsān*).

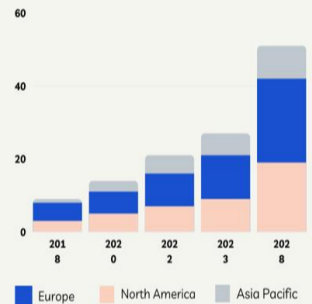
The meaning of scientists are God's caliphs on earth and they are responsible for bringing prosperity and maintaining harmony. In addition, scientists need to implement the practical aspects of spirituality as mentioned by the bounds of the Qur'an and authentic *Hadith*. They need to avoid arbitrarily misconducting nature contents simply to self-interest, material, and wealth. They need to protect the environment, be compassionate and respect human rights and other life to live comfortably with the aim of closeness to Allah through purifying the heart and soul. The five common Islamic ethical policies to bring about the success of this production and harmony with all the creatures are: Honesty, Integrity, Carefulness, Transparency, Openness and Humbleness and the last is Social Responsibility, Human and Animal Protection.

Methodology

This research employed a qualitative methodology and relied on three-language sources; Arabic, English, and Malay texts related to the research topic. It is also a combination of three methods, which are analytical, inductive, and deductive approaches.

Conclusion & Recommendations

From the perspective of worldview, scientist, philosophical and the person who contributes in the production of recombinant collagen-like protein agrees that this product promoting the usage of health products that can beneficial to human bodies in both short and long terms. This production is not focusing on Muslim consumers only while also targeting various cultures of communities. It is foreseen that Malaysia has the potential to master on the production of healthcare product along with the other developed countries such as China, Singapore and South Korea. It also can be a gold opportunity to our country to be an exemplar as a Muslim country and promoting Islam to the world that Islam is a *Din* (way of life) which inspires holistic development in all walks of life.



The chart shown that the health supplements market is growing from year to year and expected to growth at 7.4% by year 2028.

The attractive opportunities for supplements market is can be attributed to the increasing disposable income of consumers and allowing the consumers to spend more on self healthcare products. The registered Nutritionist and Dietitians plays a vital role in introducing new health supplements that can ensure consumers secure enough vital substances the body needs to function as well as help to reduce the risk of disease.



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