JOURNAL OF SOCIAL SCIENCE
Printed ISSN: 2720-9938
Electronic ISSN: 2721-5202
jsss.co.id

# THE APPLICATION OF STEM CELLS IN THE FIELD OF COSMETIC MEDICINE THE ASPECT OF ISLAMIC LAW

**Rizka*, Septarina Budiwati**
Faculty of Law, Universitas Muhammadiyah Surakarta, Indonesia
Email: riz123@ums.ac.id*

**ARTICLE INFO**

Date received : October 27, 2022
Revision date : November 14, 2022
Date received : November 30, 2022

***Keywords:***
*Islam; stem cell research; cosmetic medicine*

**ABSTRACT**

The discovery of stem cells, which are not only utilized in many medical treatments but are also recognized to be beneficial to aesthetic treatments, served as the impetus for this research. It is necessary for anybody who wants to stay beautiful and healthy, free from illness caused by diminished organ performance or damage, that it has the ability to replace dead cells with new cells that are youthful and healthy. The usage of stem cells in the treatment of anti-aging by so many women Because the origin of Stem Ceis remained in the pros and cons, the objective of this study is to find out the legislation on the usage of Stem Cells from an Islamic point of view. This is because the pros and cons of the source of Stem Ceis are still being debated. study employs the library method by ll retrieval to acquire data about stem cells and their uses for beauty and Islamic law from a variety of sources including books and journals. Method is used to collect information. The findings demonstrated that, from the viewpoint of Islamic law, the utilization of stem cells for the purposes of esthetic beauty and anti-aging is forbidden for any reason whatsoever due to the fact that they are exclusively for non-urgent requirements. The utilization of stem cells is typically done for beneficial purposes; it does not violate norms, ethics, or religion; it does not result in damage; and it respects the creation that was made by the Creator.

## INTRODUCTION

One of the scientific developments regarding biotechnology research that is interesting to study is the use of stem cells. At the current world level, stem cells are one of the main focuses in biotechnology research, especially in relation to cell therapy and regenerative medicine. Prior to the use of stem cells, disease treatment was carried out conventionally by administering drugs containing chemical substances (McArdle et al., 2014). Development is a systematic and continuous effort made to realize something that is aspired. Development is a change towards improvement. Changes towards improvement require the mobilization of all human resources and reason to realize what is aspired. In addition, development is also very dependent on the availability of natural resource wealth. The availability of natural resources is one of the keys to economic growth in an area (Shah et al., 2020).

How to Cite: Rizka, & Budiwati, S. (2022). The Application of Stem Cells in the Field of Cosmetic Medicine The Aspect of Islamic Law. *Journal of Social Science. 3*(6). https://doi.org/10.46799/jss.v3i6.439
E-Issn: 2721-5202
Published By: Ridwan Institute

Stem cell technology is now increasingly becoming a trend that is considered to be able to help treatment in the medical field (Ogliari et al., 2014). In Indonesia, the development of stem cell therapy is directed at degenerative and hereditary diseases that are widely found in the community. Advances in science and technology in all fields, increasing people's living standards, increasing attention to the fulfillment of human rights and increasing public awareness of the importance of healthy living have led to increased public demand for quality health services. Stem cell technology needs to be developed as an alternative to disease therapy for the benefit of patients and affordable by the community. Stem cells have great potential in the medical world to be used as cell therapy for various degenerative diseases and cancers that are difficult to cure, including diabetes, heart infarction, stroke, Parkinson's, and so on (Ojeh et al., 2015).

Kalthoff in Analysis of Biological Development explained that Stem cell therapy is not only useful for overcoming various degenerative diseases that have been incurable and incurable, but also very useful for Reverse Aging (returning young), beautiful, attractive, passionate, fit and energetic (Kalthoff, 2001). Its ability to replace dead cells with new, young and healthy cells is needed for anyone who wants to stay beautiful and healthy, away from illness caused by decreased function or damage to organs.

Although it is still relatively expensive, it is undeniable that this stem cell is a new hope in the field of medicine. The important role of embryonic stem cells is for therapy and treatment to reduce the number of sufferers of degenerative diseases, such as neurological, heart and liver diseases (Lo & Parham, 2009). Utilization of stem cells is now not only limited to health, but also beauty. In accordance with the nature of these cells to repair damaged tissue, various skin problems due to aging are also claimed to be treated with stem cells. Some of these health clinics are suspected of practicing illegal medicine. The practice is injecting illegal stem cells into patients.

The perpetrators have carried out the practice of buying and selling stem cells to their victims for USD 16,000 or the equivalent of Rp. 230 million. Stem Cell Serum imported from Japan. The serum was brought to the clinic for immediate injection into the patient. For now, the three arrested people may be subject to Article 204 paragraph (1) of the Criminal Code and or Article 263 of the Criminal Code and or Article 75 paragraph (1), Article 76 of Law No. 29 of 2004 concerning Medical Practice, and/or Article 201 in conjunction with Article 198 in conjunction with Article 108 of the Republic of Indonesia Law no. 36 of 2009 concerning Health and/or Article 8 paragraph (1) letter a of RI Law no. 8 of 1999 concerning Consumer Protection in conjunction with Article 55 and Article 56 of the Criminal Code

What is considered controversial is the process of destroying human embryos when isolating the stem cells so that it becomes a conflict because it causes problems with the human code of ethics and also violations of religious law. To obtain the nature of stem cells that have the ability to develop into all body cells (pluripotency), cells must be taken from the embryo in the blastocyst phase (5-7 days after fertilization) before the implantation process occurs in the uterus (Rendon & Schäkel, 2019). The procedure for taking stem cells is considered as destruction in the early stages of human life. Many argue that like humans who have been born, the embryo has the right to live and develop.

According to the thought that develops among Muhammadiyah scholars, the embryo is formed after conception, meaning that there is already life there. So taking it is the same as having an abortion, Nahdlatul Ulama also believes that embryonic stem cell therapy can only be done when there is no other way to save humans (Wijaya, 2019). Even if the application of embryonic stem cell therapy to humans is carried out, they must be very careful with regard to

their impact on humans, the action must be carried out according to the objectives of Islamic law, namely the preservation of religion, soul, honor, lineage and human property.

Human Stem cells are beneficial for humans, but the lack of clarity on regulations, especially those that regulate them at the research stage and their use, opens the possibility of misuse of Human Stem cells (Liras, 2010). Human stem cells originating from the human body are not a commodity that is prepared for a certain selling value which incidentally only benefits the interests of certain parties. Human stem cells are a wealth of human civilization that should be protected for the sake of human life itself.

The use of stem cell therapy invites many pros and cons, for degenerative diseases it is permitted because it brings the principle of benefit that comes first, it can help human life, but for beauty, fitness and energy, this is what needs to be regulated because the process of taking stem cells is still debated by religious experts (Jensen & Parmar, 2006).

Based on the above background, the problem that will be studied in this research is about the perspective of Islamic law on the use of stem cells for beauty.

## METHOD

This research is qualitative research that is library research which uses books, journals and other literatures as the main object (Creswell & Poth, 2016). The type of research used is qualitative, namely research that produces information in the form of notes and descriptive data contained in the text under study (Sugiyono, 2018). With qualitative research, it is necessary to do descriptive analysis. The descriptive analysis method provides a clear, objective, systematic, analytical and critical description and explanation of the values in Islamic law. The qualitative approach is based on the initial steps taken by collecting the required data, then classification and description are carried out.

## RESULTS AND DISCUSSION

### A. Sources of Stem

#### 1. Stem Cells (embryonic stem cells)

Embryonic are stem cells obtained when an individual's development is still in the embryonic stage. More precisely, these stem cells are the inner cell mass contained within the blastocyst. Inner cell mass is formed when the new embryo is 3 to 5 days old. The time at which the blastocyst forms, and will implant itself into the uterine wall. Embryonic stem cells are the origin of all types of cells in the human body. Embryonic stem cells are classified as pluripotent stem cells. This is the specialty of embryonic stem cells, which are difficult to compete with other types of stem cells. Based on its pluripotent nature, logically there is no single degenerative disease that cannot be treated. The drawbacks of using embryonic stem cells, both in the field of research and in the field of clinical trials on the human body, are related to the ethical value of using embryos as a source of obtaining these cells. Because of this, research around embryonic stem cells generally uses animal embryos, which of course gives results that cannot be compared to human embryos. To carry out human embryonic stem cell research, researchers have tried various methods or methods that are considered not contrary to ethical values, of course including therapeutic cloning. contrary to the prevailing ethical values.

#### 2. Adult stem cells

Adult stem cells are stem cells that are found among other differentiated cells in a mature tissue. Adult stem cells are a group of undifferentiated cells, sometimes even

found in an 'inactive' state in a tissue that already has a specific function in the individual's body. The existence of these stem cells is thought to aim to maintain homeostasis of the tissue in which they are located. Based on the available scientific evidence, the ability to differentiate today's stem cells is classified as multipotent. So today's stem cells have a lower ability to differentiate, when compared to embryonic stem cells, only being able to differentiate into several types of cells, generally belonging to a group. Meanwhile, the drawback of today's stem cells is that their concentrations are relatively much lower when compared to differentiated cells in adult tissues. It was found that, it turns out that almost all tissues and organs in the body that have matured, proved to contain adult stem cells. Thus, today's stem cell classification is carried out based on the organ and or cell group that will be the path of differentiation, such as hematopoietic stem cells, heart stem cells, neural stem cells, mesenchymal stem cells, skin stem cells, and so on. It has been mentioned previously that the differentiation potential of adult stem cells is classified as having only multipotency, but scientific journals in recent years have found evidence that there is transdifferentiation, namely the differentiation of adult stem cells into adult stem cells outside the usual differentiation pathway.

**B. Uses of Stem**

Cells The stem cells in your baby's umbilical cord blood have the potential to be used in the treatment of many diseases today. Stem cells can be used to treat hematopoietic and genetic disorders. In cord blood transplantation, stem cells are infused into the patient's bloodstream where they work - healing and repairing damaged cells and tissues. After successful stem cell engraftment, the patient's blood and immune system will regenerate.

Alongside a number of conditions that are now treatable, the potential for stem cell treatment is of great interest as research continues to uncover new possibilities. The potential and efficacy of stem cells in medicine are real. While Stem Cell Therapy is a very effective therapy to treat degenerative diseases such as Alzheimer's, Parkinson's, stroke, diabetes mellitus, especially Insulin Dependent Diabetes Mellitus (IDDM), atherosclerosis, myocardial infarction and many other degenerative diseases as well as AutoImmune such as Lupus and others.

**C. Clinical Aesthetic Uses of Stem Cells**

As previously explained, stem cells therapeutic option versatile, so they can also be used in the world of beauty. The world of beauty in medicine is a specialty of dermatovenereologist (doctors of skin and venereal diseases). The skin is an organ that is very important for survival, as a protection and prevention of dehydration, as a sensory and thermoregulatory organ, as well as being an active site of vitamin D synthesis and immune cell control.

When the skin is injured, it has a coordinated and organized healing system, which results in healing of the integrity and function of the skin tissue. This process can be inhibited by special conditions which will then lead to chronic (continuous) wounds that do not heal. Conditions that can cause this are arterial and venous insufficiency, diabetes, kidney disease, trauma, old age, and prolonged pressure on an area of the body. Local factors such as tissue hypoxia (lack of oxygen), ischemia (obstructed blood flow), the presence of foreign bodies, tissue maceration, exudates, infection, impaired regulation of the inflammatory process, and systemic factors such as poor nutritional and immune status, can contribute to the development of the immune system. hinder the healing process of the skin.

In this modern era, the number of people with non-communicable diseases is increasing, which in turn can also increase the incidence of chronic wounds like this. stem cell therapy is an option that is becoming more common in skin cases. In general, stem cells are usually taken from organs that have significant cell regeneration, such as bone marrow and skin. Hematopoietic stem cells (HSE), or stem cells that function in blood cell differentiation, usually have high concentrations in bone marrow, umbilical cord, and placental blood. Bone marrow, fat tissue, skin (dermis), and umbilical cord tissue are very rich in stem cells mesenchymal (adult)In addition, the umbilical cord has a low risk of infection and immunogenicity, with a high regeneration power, so it is very beneficial. However, as of today, only HSE from bone marrow and cord blood is allowed for medical use. Usually, HSE is used for blood diseases, genetic and acquired, or tumors that often affect children such as neuroblastoma, neuroblastoma, Wilms tumor, and osteosarcoma.

The definition of 'aesthetic' in the medical world has a broader scope than 'beauty'. According to the KBBI, aesthetics is about beauty, concerning the appreciation of beauty, or having an assessment of beauty. In a recent journal compiled by Ahmadi-Ashtiani et al. (2020), stem cells have many benefits in the field of skin diseases. One of them is congenital skin disease from birth which, although not life-threatening, interferes with aesthetics, namely vitiligo and psoriasis.

Vitiligo is a skin disease caused by the destruction of melanocytes (cells that color the skin) by abnormally functioning immune cells, called cytotoxic T cells. This causes the area of skin where the melanocytes are damaged to be lighter in color than the surrounding area. This disease is closely related to the quality of life and the patient's self-confidence is very low. While psoriasis is an inflammatory skin disease that is also caused by genetics and immune cells. Psoriasis is also closely related to a very low quality of life, because the symptoms interfere with the patient's life. Not only does it have an aesthetic impact, psoriasis also causes pain, itching, and bleeding. therapy stem cell, it is hoped that the patient's quality of life can improve, in terms of symptoms to aesthetics.

The use of stem cells in other clinical aesthetic cases is in anti-aging age-related dysfunction. During the aging process, DNA is damaged and accumulates, causing damage to protein homeostasis, cell function and communication, and normal organ physiology. Another sign of aging is dysregulation or exhaustion of the stem cell in the body, which leads to decreased homeostatic function and repair of damaged tissues. Aging is very closely tied to stem cells;biology stem cell and regenerative medicine is how to use stem cells to reverse aging and the dysfunctions associated with it.

Aging of the skin is caused by damage from ultraviolet (UV) rays, environmental factors, inflammation, and an increase in oxidative stress species compared to antioxidants. Typically, stem cells used are multipotent cells, which are capable of proliferating and reprogramming in the epidermal layer, then creating stem cells in the basal cells, and finally, new keratinocytes.

Stem cells in the field of beauty are indeed very promising, but are often misused. The problem that arises from stem cells in the field of beauty is that stem cells are often advertised misleadingly, because people's knowledge is still not good about stem cells. Drug companies have strategies that are often unfounded, and often exaggerate claims, thereby putting patients at risk. The use of stem cells in fighting aging is also often misused by being promoted as a facelift. The term "stem cell facelift" is also often used, which is a non-surgical procedure that is actually intended for skin tightening and cannot be compared to a facelift. What is usually advertised and promoted as a new and original technique of "stem cell facelifting" is usually only lipofilling enriched with stem cells.

The use of stem cells can be given through several routes, namely systemically via oral and systemic injection, or locally, via local and topical injection. Systemic administration has drawbacks as many cells are affected, not just the target organ (in this context, the skin). Local injection usually has complications related to administration risk and patient compliance, so topical administration is often preferred to stem cells for the skin. Topical administration is an easy route, specific, and has a high probability of patient compliance, without any systemic side effects. Administration of topical medications is easy so that patients can do it themselves;efficacy of stem cells will increase due to low total daily dose by continuous drug input. Topical medications can also be discontinued immediately when needed, for example if side effects occur.

**D. The Application of Stem Cells in the Field of Cosmetic Medicine The Aspect of Islamic Law**

Medical expertise in the problem of rejuvenation known as Stem Cell Therapy is a blessing from Allah SWT to mankind to return to the nature of its most beautiful creation which should be grateful for by using it in its place and not misused to fulfill ungrateful human desires. Therefore, Islam highly glorifies the science of health and medicine as a means of caring for life with the permission of Allah SWT.

There are 2 clear reasons for rejuvenation treatment with stem cell therapy methods, namely for aesthetics and function. Rejuvenation can not only improve skin health, but in certain cases can also have a major impact on a person's environment and career development. In addition, better physical health can lead to a better standard of living. The main goal of rejuvenation with stem cell therapy is to carry out early detection, prevention, treatment, and repair to the original state of various dysfunctions, disorders and diseases associated with aging, as well as its ability to replace dead cells with new, young cells that aim to prolong live in good health.

Body treatment or aging by using stem cell therapy according to Islamic law is permitted, provided that it is in a 'conditional condition', namely: 1. Intention to seek treatment, 2. Within a certain period, 3. With a certain capacity or dose, 4. Does not use embryonic stem cell types, 5. Its use is conscious (not addicted). Reproduction The use of stem cell therapy for reproduction using in vitro fertilization (IVF), according to Islamic religious law, is allowed on the following conditions: 1. Under conditions of necessity (emergency), 2. Fertilization between sperm and ovum comes from a legal husband and wife pair, also called Artificial Insemination Husband (AIH).

Regarding the rejuvenation method used in stem cell therapy, there are still differences of opinion. Moreover, saying that this is an act that is not in accordance with the Shari'ah. Based on the way of taking it, it is clear that stem cells are very contrary to morals and ethics because to take them must damage and kill the embryo in embryonic stem cells. Therefore, this action is an act of murder as described in Al-Maidah: 32 and AlIsra: 33.

The concept of stem cell therapy is categorized as an act that changes Allah's creation, because getting old is an absolute thing that has been ordained. Moreover, it is reinforced by the hadith of the Prophet SAW which clearly prohibits making changes back young for beauty. This is in accordance with the hadith of Rasulullah SAW narrated by Al Bukhari and Muslim.

In the practice of rejuvenation, neither the patient nor the doctor should hesitate in carrying out this treatment. So if any doubts are found in practice, then the youth process must be canceled for good. This goal becomes a necessity for someone if the condition really needs treatment. It aims to normalize or correct abnormalities in the function of the

skin or body that cause premature aging so that it can function optimally so that it can bring benefits and keep away harm.

Before doing this stem cell treatment, one must consider the benefits and risks. These considerations include considerations in terms of physical, psychological and financial benefits. Like the type of treatment in stem cell therapy, it will certainly bring side effects, as well as the type of stem cell therapy treatment. Because the treatment given for bone marrow and stem cell transplantation may be exactly the same as the drugs given for chemotherapy but with higher doses, the side effects that occur may be more severe. This stem cell therapy method is used, although now it is using the oral or capsule method which is cheaper.

Hence with these various risks, do not let the rejuvenation treatment actually create more serious harm, even though it is considered necessary at the beginning. "The law of everything that is harmful is haram." This rule is the opposite of the first rule. The law for medical treatment using goods that are dangerous and harmful to the law is haram. Including haraam treatment with dirty and unclean items such as khamr and blood.

Yusuf Al Qardhawi emphasized the fiqhiyah rule which states that harm (dharar), including danger, destitution, misery and misery, should be eliminated as much as possible (Qardhawi, 1995). However, in the case of eliminating the dharar, it is not permissible to use a larger or equivalent dharar. Minimally removed with a lighter.

Dharar Rejuvenation with the use of embryonic cells for any purpose is not allowed except when the therapy is the only solution for the good of mankind (Negredo et al., 2020). In addition, even if the application of embryonic stem cell therapy in humans is carried out, it must be very careful with regard to its impact on humans. Returning for beauty purposes in the absence of a more important purpose should be avoided. None other than to avoid actions that are prohibited by the Shari'ah so as not to bear sins.

## CONCLUSION

The application of stem cells is viewed from an Islamic point of view as the utilization of stem cells in a manner that is more beneficial, does not contradict norms, ethics, or religion, does not result in damage, and respects creation and The Creator. According to Islamic law, the treatment of the body or the slowing of the aging process through the use of stem cell therapy is permitted, provided that it meets certain "conditional conditions." These conditions are as follows: 1. Intention to seek treatment; 2. Within a specific period of time; 3. With a certain capacity or dose; 4. Does not apply embryonic stem cells; 5. Its use is conscious (not addicted).

## REFERENCES

Ahmadi-Ashtiani, H.-R., Bishe, P., Baldisserotto, A., Buso, P., Manfredini, S., & Vertuani, S. (2020). Stem cells as a target for the delivery of active molecules to skin by topical administration. *International Journal of Molecular Sciences*, *21*(6), 2251. Google Scholar

Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications. Google Scholar

Jensen, J. B., & Parmar, M. (2006). Strengths and limitations of the neurosphere culture system. *Molecular Neurobiology*, *34*(3), 153–161. Google Scholar

Kalthoff, K. (2001). Analysis of Biological Development. *Evenue of TheAmericans*.

Liras, A. (2010). Future research and therapeutic applications of human stem cells: general, regulatory, and bioethical aspects. *Journal of Translational Medicine*, *8*(1), 1–15. Google Scholar

Lo, B., & Parham, L. (2009). Ethical issues in stem cell research. *Endocrine Reviews*, *30*(3), 204–213. Google Scholar

McArdle, A., Senarath-Yapa, K., Walmsley, G. G., Hu, M., Atashroo, D. A., Tevlin, R., Zielins, E., Gurtner, G. C., Wan, D. C., & Longaker, M. T. (2014). The role of stem cells in aesthetic surgery: fact or fiction? *Plastic and Reconstructive Surgery*, *134*(2), 193. Google Scholar

Negredo, P. N., Yeo, R. W., & Brunet, A. (2020). Aging and rejuvenation of neural stem cells and their niches. *Cell Stem Cell*, *27*(2), 202–223. Elsevier

Ogliari, K. S., Marinowic, D., Brum, D. E., & Loth, F. (2014). Stem cells in dermatology. *Anais Brasileiros de Dermatologia*, *89*, 286–291. Google Scholar

Ojeh, N., Pastar, I., Tomic-Canic, M., & Stojadinovic, O. (2015). Stem cells in skin regeneration, wound healing, and their clinical applications. *International Journal of Molecular Sciences*, *16*(10), 25476–25501. Google Scholar

Qardhawi, Y. (1995). *Fatwa-fatwa Kontemporer, Jilid II, Terjemahan*. Asâ€™ ad Yasin. Jakarta: Gema Insani Press. Google Scholar

Rendon, A., & Schäkel, K. (2019). Psoriasis pathogenesis and treatment. *International Journal of Molecular Sciences*, *20*(6), 1475. Google Scholar

Shah, M. M., Sirojuzilam, S., & Maas, L. T. (2020). The Development Impact of PT. Medco E & P Malaka on Economic Aspects in East Aceh Regency. *Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences*, *3*(1), 276–286. Google Scholar

Sugiyono. (2018). *Metode Penelitian Kuantitatif*. Bandung: Alfabeta.

Wijaya, A. (2019). Daya Serap Lembaga-lembaga Fatwa terhadap Masalah-masalah Hukum Kontemporer; Studi Komparatif Lembaga Fatwa MUI, Majelis Tarjih Muhammadiyah dan Bahtsul Masail NU. *Mazahibuna*. Google Scholar