CIVIL LIABILITY OF STEM CELL BANKS

Atef Salem Alawamleh

ABSTRACT

Objective: This research examined the civil liability of stem cell banks. It studied the phenomenon with reference to the Jordanian Civil Code, particularly in the instructions issued under the stem cell system, within the instructions for insurance of stored stem cells and its amendments of 2014.

Method: The descriptive analytical approach was used through extrapolating and analyzing the legal texts regulating the obligations of stem cell banks and the terms of the agreement related to contracts for storing and preserving stem cells, and deriving civil liability provisions accordingly.

Result: The Jordanian legislator did not define the contract for preserving and storing stem cells. It recognized the necessity of financial compensation for damage to stem cells. However, it did not address the obligation to compensate for material or moral damage if the bank breached its obligation to deliver stem cells for the purposes of treatment.

Conclusion: Stem cells are at the forefront of research in the medical fields, as stem cells have been proven to provide solutions to incurable diseases, such as cancer, Alzheimer’s, diabetes, and other diseases.

Keywords: stem cells, civil liability, stem cell banks.

RESPONSABILIDADE CIVIL DOS BANCOS DE CÉLULAS ESTAMINAIS

RESUMO

Objetivo: Este estudo analisou a responsabilidade civil dos bancos de células estaminais. Estudou o fenômeno com referência ao Código Civil Jordaniano, particularmente nas instruções emitidas no âmbito do sistema de células estaminais, nas instruções para seguro de células estaminais armazenadas e suas alterações de 2014.

Método: A abordagem analítica descritiva foi utilizada através da extrapolação e análise dos textos jurídicos que regulam as obrigações dos bancos de células estaminais e os termos do acordo relacionados com os contratos de armazenamento e preservação de células estaminais, e derivando as disposições de responsabilidade civil em conformidade.

Keywords: células estaminais, responsabilidade civil, bancos de células estaminais.
1 INTRODUCTION

International interest in the study of stem cells has obviously expanded. It is no more limited to advanced countries. The importance of these cells stems from the fact that they provide therapeutic solutions that serve humanity, in addition to the advantages that these cells provide as they are the basic component and building block from which human tissues and organs are formed. This motivates scientists and specialists, with the support of governments and the private sector in the world, to continue conducting more research, medical and therapeutic experiments in order to obtain positive results that represent the greatest possible extent of using stem cells in treating diseases, especially incurable diseases, and treating congenital malformations of human fetuses.

This motivated researchers to study the method that should be provided for the purpose of preserving stem cells after extracting them from their various sources. The reason for this is that stem cells have a negative side. They quickly deteriorate if they are not handled with care and placed in a good environment in terms of temperature, density, and humidity, and within special incubators to preserve their characteristics for reuse.

These places and conservative methods cannot be provided by any medical institution, but rather require specialized bodies and significant capital to establish any facility that ensures the preservation and storage of stem cells, and is technically qualified and has a specialized medical staff. In view of the necessity and to limit the use of donors to extract stem cells from them or obtain them from embryos (aborted or surplus through artificial insemination) or resorting to cloning, which has legal, religious and ethical caveats, the first facility concerned with preserving and storing stem cells was inaugurated in Britain in 2004. This was done for the purpose of preserving stem cells until they were processed and purified in the laboratory to clone human organs and tissues for use in experiments or to use them to treat damaged cells.
The Hashemite Kingdom of Jordan is one of the countries that have human expertise in this field, and there is a real desire from public and private medical agencies to keep pace with medical innovations. In this respect, the first private bank for preserving stem cells was established in 2016, and it was called Baby Cord Bank.

It is worth noting that the Jordanian legislator was also a pioneer in the legal regulation of stem cells. This is evident through the issuance of Stem Cell System of 2014. Under this system, several detailed instructions were issued to codify and control issues related to stem cells, whether research, experimental, or therapeutic.

Legislative regulation in the stem cell system includes how to establish stem cell banks and the legal, technical, and professional requirements for establishing these banks, whether in the public sector or the private sector. According to the system, the goal of establishing these banks as a first step is to preserve and store stem cells, after obtaining them from clients who can recover the cells in the future and upon their request for the purposes of use, either by the same client or by any person in the family who is the beneficiary.

Since the process of preserving and storing cells must take place according to the conclusion of a contract between the customer and the bank that stipulates the obligations and rights of both parties, and in light of the presence of legal obligations that are expected to be affected by some irregularities, the civil liability of the party owing the obligation should be highlighted. In this respect, the Jordanian Civil Code regulated the provisions of civil liability, particularly in the instructions issued under the stem cell system, within the instructions for insurance of stored stem cells and its amendments of 2014.

It should be noted that the civil liability provisions mentioned by the legislator are regulated and specific in accordance with the basis of liability, which is the existence of a valid contract. The purpose of preserving and storing stem cells is clearly different from preserving and storing any other movable property. In this respect, the bank's obligation depends on returning it to the customer or beneficiary for the purpose of treatment. In view of this extreme importance, the bank’s civil liability must be distinct and regulated by special provisions that guarantee the benefit, care and the interest of its beneficiary.

Civil liability for stem cell banks raises many issues. This is due to being a new liability. The recent use of stem cells in the medical and research fields, in addition to the recent contracts of preserving and storing stem cells, necessitates conducting studies mainly to know the provisions that regulate the relationship between the contracting
parties. The most prominent of these problems is the extent to which the civil liability provisions of ordinary and customary contracts apply to the civil liability of stem cell banks on the contract for preserving and storing stem cells.

The problem of this study also lies in the type of care required from stem cell banks, whether it is to provide care or achieve results. The bank's responsibility includes compensation for breach of the obligation resulting from it, whether it includes compensation for moral harm or only for material damage, and whether it includes compensation for subsequent loss and lost profits or for direct damage that actually occurred.

The rapid development of the uses of stem cells, the emergence of stem cell banks, and the global trend towards investing in the medical benefits of stem cells, regulating the means of obtaining them, and the means of preserving them through the establishment of stem cell banks, provide this study with great significance. Its importance also stems from the fact that it shows the legal obligations and agreements of stem cell banks in contracts for preserving and storing stem cells. In this regard, the study clarifies the civil liability provisions for stem cell banks in light of the scarcity of specialized research and jurisprudential studies in this field. Thus, the current study is an endeavor to identify the legal provisions and the agreement regulating civil liability for stem cell banks in the contracts concluded by these banks for the purposes of preserving and storing stem cells.

2 THEORETICAL FRAMEWORK

The establishment of stem cell banks preceded the discovery of stem cells. This caused revolutions at the medical, legal and ethical levels. Given the specificity that stem cells enjoy, as human cells, in addition to the technical advantages they enjoy, providing clear definitions of stem cells is required.

Banks’ possible negligence of the scope of services they provide to customers, especially the banks concerned with preserving and storing stem cells, requires defining the nature of these banks. To know what stem cell banks are, it is urging to define stem cells in the following section.
2.1 DEFINITION OF STEM CELLS AND STEM CELL BANKS:

2.1.1 stem cells

A stem cell is the basic cell in the formation and building of the body's organs and tissues. Therefore, in the field of biotechnology, they are called stem cells or foundation cells. In the Jordanian legal system, stem cells are defined according to the stem cell system and the Jordanian Fatwa Department. In this respect, the Jordanian legislator defined stem cells in the second article of the stem cell system as a cell of multiple origins, undifferentiated and unspecialized, that can, under specific and certain circumstances, continue to divide and differentiate into specialized cells that are building blocks for building tissues or organs (Stem Cell Regulation of 2014).

The Jordanian Fatwa Department knew about stem cells before the stem cell system was issued, as a legal issue that directly affects humans. In this respect, the Jordanian Fatwa Department issued a definition of stem cells. This is evident in Fatwa No. 189/9/2013 dated 10/3/2013 which implied that doctors define a stem cell as undifferentiated and unspecialized cells, with multiple sources, that can, under specific and certain circumstances, continue dividing and differentiating into specialized cells to be building blocks for tissues and organs. They are divided according to their source into the following types, and each type has its own legal ruling:

- Type 1: Human embryonic stem cells.
- Type 2: Adult human stem cells.

Some Arab legislation that defined stem cells included UAE Federal Decree No. 5 of 2016, as stated in its first article in its definition of a human organ as a group of interconnected human tissues and cells taken from living or dead, and sharing specific vital functions in the body.

Researchers in this field have given several definitions for stem cells. Some of them defined it as a general characteristic and concept, while others defined it in a specialized and precise manner. This difference in definition occurred due to researchers' different views of the stem cell. Notably, some researchers studied them as the basic cells in the formation of the body's organs and tissues, while others studied them as each cell forming a specialized and specific organ or tissue that constitutes an organ of the body and performs a specific function. Based on this view of the stem cell, some considered it to be the sum of the stem cells that make up the body, while others defined it as part of a whole that constitutes an organ of the body.
Stem cells are also known in their general sense as the main cells in the human body that are constantly renewed and transformed into cells that are the basis for all tissues in the body, its organs, and its immune systems (Al-Mustafa, 2012). They are known as vital units that, under certain circumstances, can continue to divide, reproduce, and renew themselves to give rise to any type of specialized cell (Al-Dajani, 2019). They are also viewed as raw, unspecialized cells capable of developing and differentiating into mature cells specialized in various vital functions, tissues, and organs (Al-Badawi, 2016). Another scholar defined them as specialized cells; pluripotent stem cells. They are obtained from embryos whose age is measured in days. Thus, they are primitive cells that appear 6 to 12 days after fertilization (Al-Ghamdi, 2016).

Stem cells are also known as adult stem cells, which are the most specialized stem cells. They are multipotent and found in children and adults (Abdullah, 2017). They have also been defined as cells characterized by their ability to do three things:

1- The production of cells of different types or their ability to take the form of any other type of cell in the body.

2- Ability to renew itself for very long periods.

3- Ability to migrate within the body to its breeding sites; places you need and compensate for the damaged body on an ongoing basis (Fathalbab, 2022).

By extrapolating the definitions given for stem cells, it becomes clear that stem cells have been defined in the general sense according to the general characteristic of stem cells. Specifically, it has been defined as the source that provides us with stem cells. In this respect, the source may be from aborted embryos, embryos resulting from artificial insemination, umbilical cord blood, bone marrow, liver or kidney tissue, etc. This is after isolating and purifying it in the laboratory.

The Jordanian legislator defined stem cells in Article 2 of the stem cell system as a cell of multiple origins, undifferentiated and unspecialized, that can, under specific and certain circumstances, continue dividing and differentiating into specialized cells that are building blocks for building tissues or organs (Stem Cell Regulation of 2014).

It is noted that the Jordanian legislator, in his definition of stem cells, combined stem cells with their general concept and their specific concept and came up with a definition of stem cells that would accommodate any definition or concept of stem cells, recalling in the same aforementioned article the definition of differentiation as a change in the form of the cell and its function. Differentiation was mentioned with a separate
definition so that there is no conflict in the main definition of a stem cell. Furthermore, the basic idea in defining stem cells is the technical or functional aspect of stem cells, and the technical aspect can be inferred from the source of the stem cells.

Stem cells have received great attention at the global level. In this regard, the International Society for Stem Cell Research (ISSCR) defined them as the foundation cells for all organs and tissues in our bodies and that the highly specialized cells that make up these tissues originally came from an initial group of cells that formed shortly after fertilization (Fathalbab, 2022).

2.1.2 Stem cell banks

Banks are generally defined as financial institutions licensed to provide banking services to customers; current accounts, keeping deposits, granting loans and letters of credit, etc (Jordanian Banking Law of 2000). In this respect, stem cell banks are of a private nature and have no relation to financial and banking services. These public and private banks were established in line with the requirements for dealing with stem cells in terms of storing and preserving them, in order to reuse them for conducting experiments, developing them, or reusing them for medical and therapeutic purposes.

Accordingly, some have defined stem cell banks as a refrigerator or small chemical room used to freeze stem cells using liquid nitrogen. This is because when the cells freeze, all their vital reactions stop. When utilizing them, the temperature is gradually raised until those reactions return and life returns to them once again (Abdel Fattah, 2015).

This definition is criticized by arguing that it does not rise to the level required to define a stem cell bank, whether a linguistic definition or a procedural definition. Significantly, it does not provide a legal definition of the establishment and formation of a stem cell bank. Rather, the definition contained described the method by which stem cells are preserved and stored.

Others defined a stem cell bank as:

- A storehouse of stem cells that can be used when needed.
- Stem cell banks are warehouses that store stem cells taken from depositors in special places.
- It is a specialized center for collecting stem cells. (Al-Ghamdi, 2016).
The Jordanian legislator defined it in Article Two of the Stem Cell System as a stem cell bank licensed in accordance with the provisions of this system. The system also stated in Article (10/B) that (The Minister, upon the recommendation of the committee, may license the establishment of a bank of adult stem cells from the two sources stipulated in Clauses 1 and 2 of Paragraph (B) of Article Three of this system).

Referring to Article (3), Paragraph (B), we find that it lists the sources for obtaining adult stem cells, which the bank may deal with exclusively:

- Umbilical cord blood extracted immediately after birth.
- Baby teeth.

Accordingly, the system will register stem cell banks after licensing them in accordance with the conditions stipulated in the system to deal with specific sources of stem cells.

Upon closer examination of the Jordanian legislator’s definition of stem cell banks, it becomes clear that it is a partial definition, based on its definition of the sources with which the bank may deal. However, it can be concluded that the definition is comprehensive with regard to the purpose for which these banks are established, which is the preservation and storage of stem cells. The conclusion is made based on the legal provisions contained in the system, including:

1- Text of Article (10), Paragraph (B/1): (Laboratory tests specified by the Committee shall be conducted before storage).
2- Paragraph (B/2): (Storage must be carried out within the Kingdom).

This reflects a clear indication that the purpose and goal of establishing stem cell banks is to preserve and store stem cells.

By extrapolating the previous definitions and what was stated in the definition of stem cell banks in the stem cell system, it becomes clear that there are two main elements on which the definition of stem cell banks is based, which are:

1- Formation.
2- Function.

Formation means the formation and establishment of a stem cell bank and the legal and technical conditions that must be met for the purposes of establishing a stem cell bank, whether it is a public bank or a private bank. In this respect, the specific purpose of establishing the stem cell bank is to preserve and store stem cells.
Accordingly, a stem cell bank can be defined as an entity or facility licensed in accordance with the provisions of the law. It works to preserve and store stem cells owned by others in accordance with the contract concluded between the bank and the third party, as per the terms agreed upon between the two parties for a specific or indefinite period in exchange for a fee if it is a private bank.

2.2 DEFINITION OF THE CONTRACT FOR PRESERVING AND STORING STEM CELLS:

The contract is defined as the connection of the offer issued by one of the contracting parties with the acceptance of the other and their agreement in a way that proves its effect on the contracted party and results in each of them committing to what he owed to the other (Article (87) of the Jordanian Civil Law).

Since dealing with stem cells has recently appeared, after discovering their components through conducting studies and experiments, and appreciating their importance in treating diseases, and in view of their positive characteristics by employing them in treatment or explaining the causes of diseases and their negative characteristics, which are represented by their sensitivity and rapid damage, it is necessary for specialists to search for means by which the stem cells are preserved after extraction, while their intrinsic properties remain in order to conduct experiments and studies on them again or use them in treatment for the patient from whom the cells were taken or for one of his relatives; those with similar tissues and stem cells.

Accordingly, a new contract emerged, which is the contract for preserving and storing stem cells. It is one of the latest contracts at the medical level. Since legislation has not yet regulated the provisions of these contracts, it is considered one of the unnamed contracts. Therefore, these contracts must be subject to the general rules of civil law, in addition to the provisions mentioned by the legislator in the legal regulation of stem cells, in a manner that does not contradict the provisions of Islamic Sharia.

Any valid contract is built on a basic pillar; the consent and the conditions for a contract. The consent pillar is held between the two parties to the contract, namely the bank and the customer, whether this customer is the owner of the stem cells or the legal representative of the person from whom the stem cells were extracted. Accordingly, the bank is an established first party in all contracts for preserving and storing stem cells, while the second party is what was stipulated in Article (8) of the Stem Cell Law, which
states: (It is not permissible to obtain or use stem cells except after obtaining informed consent. It is the written consent of the stem cell donor or one of his parents, guardian, or legal guardian…). Thus, the second party is the same stem cell donor or the legal representative of the person from whom the stem cells were taken.

Significantly, the informed consent is based on the doctor's commitment to informing the patient about medical work in all aspects. Some have defined the contract for preserving and storing stem cells as a contract based on the convergence and compatibility of the client’s will with the will of the private bank to preserve the stem cells of the client or one of his family members. This is done after collecting, testing and extracting them, for a specific period of time, according to recognized scientific methods and methods with which these cells can be used when needed in the future for the purposes of treatment or conducting research and medical experiments, in exchange for a specific fee paid by the client (Awad, 2018).

It is necessary to differentiate between the contract concluded between the client and private banks and between the client and public banks, as the contracts concluded by public stem cell banks are most often voluntary contracts on the part of the client. Therefore, the bank has no responsibility towards the customer, since the donation contract expires after the customer donates and delivers the stem cells to the bank. The purpose behind these donation contracts is experimental and research, not for therapeutic purposes.

3 METHODOLOGY

The descriptive analytical approach was used through extrapolating and analyzing the legal texts regulating the obligations of stem cell banks and the terms of the agreement related to contracts for storing and preserving stem cells, and deriving civil liability provisions accordingly. The purpose is to highlight all aspects of the civil liability provisions for stem cell banks.

4 RESULTS AND DISCUSSION

4.1 PROVISIONS OF CIVIL LIABILITY FOR STEM CELL BANKS

Civil liability, with regard to both its contractual and tortious aspects, is considered the penalty imposed on the debtor, as the contractual liability falls on the debtor in the event of his breach of the obligation imposed on him under the contract. The
debtor is liable in tort as he is the perpetrator of the harmful act that causes harm to others, which the Jordanian legislator expressed as responsibility for the harmful act. The harmful act in contractual liability is considered the debtor’s breach of the obligation imposed upon him.

To investigate the provisions of civil liability for stem cell banks, it is necessary to rely on the provisions of contractual and tort liability on the obligation incurred by stem cell banks, especially contractual civil liability, since the basic obligation is borne by the bank and is considered an effect of the contract concluded between the bank and the customer. For the purposes of comprehensively examining the civil liability imposed on stem cell banks, it is necessary to shed light on the provisions of the bank’s liability for a harmful act if its conditions are met, and the extent of the authority of the harmed person to choose between contractual liability and tort liability.

4.2 CONTRACTUAL CIVIL LIABILITY FOR STEM CELL BANKS

Since this study focuses on the contracts concluded by banks for preserving stem cells, contractual responsibility is dealt with in a contract binding on both sides, between the bank and the customer; the owner of the stem cells or the legal representative of their owner, and the beneficiary of the contract for preserving and storing stem cells.

The legal basis for the establishment of contractual liability in any contract is the existence of a valid contract. This applies to contracts for preserving and storing stem cells. Since the subject of our study deals with the civil liability of one of the parties to the contract, which is the bank, we must address the obligations incurred by the bank as follows:

First: Contractual obligations:
These are the voluntary obligations that the customer agrees upon with the bank, and they are a right of the customer or beneficiary and a duty and obligation of the bank, provided that these voluntary agreements are not in violation of the law, public order, public morals, ethics, and Islamic law.

Second: Legal obligations:
These are the obligations imposed on the bank by law and contained in the stem cell system, which are as follows:

1- The bank’s commitment to laboratory tests:
It is stated in Article (10/B/1) of the stem cell system that (Laboratory tests specified by the committee must be conducted before storage).

2- Storing stem cells inside Jordan.

In this regard, Article (10/B/2) of the Stem Cells Regulations stipulates that (storage shall be carried out within Jordan). This indicates that it is not permissible to transfer stem cells outside the territorial borders of Jordan to store them in foreign private banks, whether these banks are affiliated with the Bank of Jordan or that the bank operating in Jordan is a branch of the bank outside Jordan.

3- Not dispensing stem cells except according to a form approved by the committee and upon the request of the treating physician, and keeping a copy of the request in the patient’s file.

The text of Article (13/A/2) states that (Stem cells are disbursed from the bank according to the form approved by the committee based on the request of the treating specialist physician, marked with his name and signature, and a copy of it is kept in the patient’s file).

4- The bank committed to returning the unused stem cells after disbursing them.

In this regard, the text of Article (14) states that (if the stem cells that were disbursed from the bank are not used, they must be returned to the bank to take appropriate action regarding them in accordance with health standards).

5- Ensuring stem cells from being completely or partially damaged or destroyed.

It is stated in Article (6) of the Stem Cell Disbursement Instructions that (The bank shall be responsible for transporting the cells within a designated container in a manner that ensures that they are not damaged during transport).

6- Insurance for stored stem cells.

The bank is obligated to conclude an insurance contract on the stored stem cells and for the benefit of the customer (the owner of the stem cells) or the beneficiary to pay the compensation due to either of them in the event that the bank breaches any of its obligations. In this respect, it is stated in Article (10/B/4) of the Stem Cell Law (that an insurance contract be concluded between the bank and one of the operating insurance companies…).
7- The bank is obligated not to disclose information related to the customer that it obtained under the contract.

It is stated in Article (15) of the Stem Cell Law that (All information and records related to stem cells shall be confidential and may not be disclosed except in cases required by applicable legislation).

Based on the obligations imposed by the stem cell system, in addition to any obligations stipulated by the customer and agreed upon by the bank in the contract to be part of the terms and conditions of the contract, any breach of these obligations entails civil liability on the bank.

The nature of the contract for preserving and storing stem cells is very specific, due to the nature of the place in which the contract is located. The main subject of the contract is stem cells, as they have several characteristics in terms of their source and nature and require that the mechanism for dealing with them be different from any material subject to preservation and storage. Accordingly, the contract for preserving and storing these cells is of a special nature and is distinct in terms of the obligations incurred by the body that maintains the cells, which is the bank. This matter requires special care in preserving and storing stem cells in order for the bank to fulfill its most important obligation towards the customer or beneficiary.

The contract for preserving and storing stem cells is considered a consensual contract. But the stem cell system requires that there be informed consent from the donor for the purposes of permissibility of obtaining and dealing with stem cells or for them to be suitable as the subject of any contract, whether a treatment contract or a contract to conduct experiments or preserve and store. Article 8 of the Stem Cell Law states that it is not permissible to obtain or use stem cells except after obtaining informed consent, which is the written consent of the cell donor or one of his parents, guardian, or legal guardian.

Thus, the written approval of those mentioned in Article 8 is an essential element in the contractor’s consent. Otherwise, the consent will not be fully achieved and the contract will not be concluded.

Despite this, this legal condition does not make the contract for preserving and storing stem cells a formal contract. The reason is that if the legislator had wanted that, it would have stipulated it explicitly. However, due to the nature of the contract for preserving and storing stem cells and the details it contains in practical reality, we find
that the contract for preserving and storing stem cells is a documented and written contract between the two parties, and the writing is for the purposes of proof, not contract.

The pillars of contractual liability for any contract are based on three pillars:

First: The contractual error.

Second: Damage.

Third: The causal relationship between the error and the damage.

Given the special nature of the stem cell preservation and storage contract, in terms of the location in which the contract is located and the obligations incurred by the bank that were mentioned previously, this requires research into every aspect of the contractual responsibility, as follows:

First: The element of contractual error:

The contractual error, with respect to the Stem Cell Bank, arises in the event of the bank breaching any of its obligations, whether the obligations agreed upon between the bank and the customer or the bank breaching the obligations stipulated by the legislator in the stem cell system.

A contractual error is defined as the debtor’s failure to implement his obligation arising from the contract. The debtor has committed to the contract and must implement his obligation, considering the contract as the law of the contracting parties. If the debtor in the contract does not fulfill his obligation, this is a contractual error (Al-Far & Malkawi, 2018).

It is also defined as a positive or negative deviation in the debtor’s behavior that leads to his being held accountable (Sultan, 2021). Some have defined it more accurately as a breach of a contractual obligation, which is embodied in the failure to implement an obligation arising from the contract, and delay in implementation; partial or defective implementation (Al-Sarhan & Khater, 2005).

We can define a contractual error as the debtor’s failure to comply with a contractual obligation in specific implementation in accordance with the terms of the contract, or the partial or complete performance of his obligation, but in a defective manner, or the delay in performing the implementation of his obligation vis-à-vis the creditor.

According to the obligations incurred by the bank in the contract for preserving and storing stem cells, it is conceivable that the bank will not implement some or all of its obligations under the contract. In this respect, one of the most important forms of
breach of the bank’s obligations, which relate directly to the customer, is the bank’s failure to preserve the stem cells stored in it or not providing special care to maintain the integrity of the stem cells. This leads to its complete or partial damage, making it unusable for use by the customer or beneficiary upon request. This makes the bank’s obligation to return the stem cells when requested by the treating physician, its owner, or its beneficiary impossible or useless.

It is also believed that the bank implemented a flawed implementation by returning and delivering the stem cells stored in it to the customer or beneficiary. However, it is delivered incomplete and does not meet the need required for the medical procedure on it. It may also be delivered damaged due to an error in its preservation and storage, defective due to failure to observe the technical principles that must be followed to preserve its characteristics, or the bank does not take the special care required to preserve the stem cells such that it cannot be used for the purposes of reuse and treatment with them.

Therefore, the bank’s responsibility towards the customer (the owner of the stem cells or the beneficiary) arises when requesting them until they are recovered and used. The contractual error is revealed by the bank not committing to return it, or by returning it damaged or incomplete, such that it does not serve the purpose of preserving it, or the contractual error appears before requesting its return, that is, before it is needed, during the validity of the contract, whether that is by the bank informing the customer that the cells have been exposed to an accident that is not possible with it. It is delivered upon request, or it is delivered incomplete or defective, or through the control exercised by the relevant government agencies, and it becomes apparent that there is a defect in the preservation and storage of stem cells, which makes them unfit for use or would cause damage when transported to the person to be treated with them due to their damage.

Second: The damage element:

The occurrence of damage based on a contractual error is an essential element for the establishment of civil liability, as there is no liability if the damage does not occur. In this respect, there must be damage for this liability to arise from the debtor. The creditor is the one who bears the burden of proving the damage because he is the one who claims the stem cells. Significantly, damage is not presumed to have occurred just because a contractual error has been proven, as the debtor may not fulfill his obligation. However,
the creditor is not harmed. Therefore, the creditor must prove damage in addition to proving fault (Al-Far & Malkawi, 2018).

Damage is the harm that befalls the creditor as a result of the debtor's breach of a contractual obligation. In this regard, the harm affects the right or legitimate interest of the creditor arising from the contract, since the contractual liability and its cause revolve around the existence and non-existence of the harm. Thus, there is no contractual liability without harm, no matter how serious the error is, since the error must be accompanied by harm to the creditor, so that contractual responsibility falls on the debtor (Al-Sarhan & Khater, 2005).

The damage can be either material or moral. Material damage is the damage that befalls a person to his body or property, or his breach of an interest of financial value (Al-Mutairi, 2016). It can also be the damage that befalls a person to his financial liability or to his body (Sultan, 2021).

Contrastingly, moral damage is defined as damage that befalls a person in his emotions, feelings, and feelings, or damage that causes a person psychological or physical pain and does not affect his financial liability (Al-Mutairi, 2016).

In this respect, the Jordanian legislator defined moral damage in Article (267) of the Civil Code by saying as (…every infringement on another’s freedom, honor, reputation, social status, or financial consideration that makes the infringer responsible for the guarantee).

The Jordanian legislator defined cases of potential damage in the event of the use of stem cells. This is done by stipulating stem cells within the insurance instructions. It stated in Article (10) that the damage is death, total disability, or partial disability, and the resulting moral damages. For either of them, the costs of medical treatment incurred by the affected person, the duration of disability, losses and damage caused by the affected person to the property of others, and/or damage to the stem cells, in whole or in part, stored at the bank, whether when storing, transporting, or disbursing them (Instructions for insurance of stored stem cells and its amendments of 2014).

According to the general provisions in the Jordanian legal system, compensation in contractual liability focuses on the current damage, that is, the damage that has actually occurred (Jordanian Court of Cassation Decision No. 7860 of 2022). As for moral damage, it cannot be compensated for. This also applies to lost earnings.
It also focuses on the physical damage that befalls the harmed party. As for compensation for moral damage, it is still a matter of dispute in the area of contractual liability (Al-Far & Malkawi, 2018).

As a result, the Jordanian legislator noticed that the general provisions in the civil law and the provisions of the Jordanian judiciary only compensate for contractual liability for the damage actually caused and for material damage, not moral damage (Court of Cassation Decision No. 6671 of 2021). Therefore, the legislator provided a regulatory text specifically for contractual civil liability and provisions for compensation for material damage with regard to contracts related to stem cells, which is considered a departure from the rules of contractual civil liability (Court of Cassation Decision 6108 of 2022).

By extrapolating the text of Article 10 of the Stem Cell Insurance Instructions, it becomes clear that the compensation provisions are as follows:

1. Material damage resulting from death, total disability, or partial disability.
2. Moral damage resulting from death, total disability, or partial disability.
3. Material damage related to the costs of medical treatment incurred by the affected person.
4. Material damage for the period of disability of the affected person.
5. Damage caused by the injured party to the property of others.
6. Damage resulting from complete or partial damage to stem cells stored at the bank, whether this occurred when these cells were stored, damaged, or disbursed from the bank.

It is obvious that the Jordanian legislator has expanded the scope of compensation for damage in contractual liability, but this expansion has not reached the required and hoped-for extent.

Therefore, we find that the legislator approved compensation for moral damage only in the event of death and total or partial disability. Despite this approval of compensation, the legislator did not specify who is entitled to this compensation, which brings us back to investigating the general rules in these cases.

In the event of death, to determine who is entitled to compensation for moral damage, one can rely on what is stated in the text of Article (267/2), which stipulates that “It is permissible to provide compensation to spouses and relatives of the family for the moral damage that befalls them due to the death of the affected person.”
If the person from whom the stem cells were taken or the person to whom the stem cells were transferred dies and his spouse or relatives suffer moral damage, they are entitled to compensation. However, if a person, who has been harmed by stored stem cells, becomes completely or partially disabled, he is entitled to compensation for the moral harm he has suffered.

Except for these cases, it is noted that the Jordanian legal system does not grant the harmed party the right to claim compensation for moral damage. This is considered a legislative deficiency that the legislator must avoid.

Financial compensation shall be in cases of death, total disability, disability, or partial disability, and the costs of medical treatment incurred by the injured person. There will also be financial compensation for damage to stem cells, in whole or in part, stored at the bank, whether when storing, transporting, or dispensing them.

Since compensation for material damage is linked to the occurrence of the damage, we find in this case that the damage actually occurred, as it turns out that the violation committed by the bank occurred during the storage, transportation, or disbursement of the stem cells, that is, during the bank’s implementation of its obligation to preserve and store.

In most cases, no damage has occurred to the owner of the stem cells or the beneficiary of the contract for preserving and storing stem cells, which results in the absence of financial compensation. This is based on the general rule in the Civil Code, which is stated in accordance with the text of Article (363), (If the guarantee was not estimated in the law or in the contract, so the court estimated it at what was equal to the damage actually caused when it occurred).

Since the burden of proving damage falls on the client creditor, it is extremely difficult to prove damage that has not yet been proven. Therefore, compensation is not required despite the bank’s contractual error, which results in the total or partial destruction of the stem cells after they are delivered to the bank.

The legislator also stipulated a responsibility that falls on the bank towards third parties who are not a party to the contract or the beneficiary of the contract. This is done by requiring financial compensation for what is caused by the original harmed person in the contract of preserving and storing stem cells for others as a result of his suffering the damage. In this regard, Article (10) of the Stem Cell Insurance Instructions states: (e – Damage caused by the affected person to the property of others).
Thus, there are two victims, according to the text of Article 10 of the Stem Cell Insurance Instructions, towards whom the bank is responsible. The first victim is the customer or beneficiary of the stem cell preservation and storage contract, while the second victim is the one who suffers harm from an act issued by the first victim, so the bank is responsible for compensation for both those affected.

As for the first person harmed, who is the customer or beneficiary, the bank’s responsibility falls to the extent appropriate to the law and the contract, while the other party acquires the right to compensation for the harm he suffered by confronting the person who caused the damage, based on responsibility for the harmful act (tort liability). This party can also seek compensation for the damage caused by the customer to the bank based on the law. Thus, the legal text has granted the affected third party a direct right to confront the bank. He can file a direct lawsuit against the bank for compensation for the material, not moral, damage to his property as a result of the client’s action.

Third: The causal relationship between the contractual error and the damage:

The causal connection is the basis of civil liability. Therefore, it is not possible to imagine damage resulting from an error unless there is a causal relationship that makes the error the cause of the damage and the reason for its occurrence. Therefore, the basis and essence of responsibility is the causal link (Al-Hiyari, 2005).

It is not enough for there to be an error and damage, but the error must also be the cause of the damage. This means that there is a causal relationship between this error and this damage. There may be an error on the part of the debtor, and there may be damage to the creditor, without that error being the cause of this damage (Al-Far & Malkawi, 2018).

In the event that the damage resulting from a contractual error occurs as a result of the debtor’s breach, the presumption of causation is considered a complete element. This means that the contractual error attributed to the debtor resulted in harm to the harmed party, and the harmed party is not required to prove the causal relationship. But when the debtor wants to deny responsibility for himself, the burden of proof falls on him by denying the causal link. This means that he denies that his contractual error resulted in this damage (Article (261) of the Jordanian Civil Code).

Thus, the bank is responsible for contractual civil liability merely because the damage resulting from its contractual error has been achieved by breaching its obligations, without requiring the customer or the beneficiary to prove the causal link.
between the contractual error and the damage as it is a presumption linked to them. It is an existing presumption that accepts proof of the opposite in accordance with Article (261) of the Jordanian Civil Law.

4.3 NON-CONTRACTUAL CIVIL LIABILITY FOR STEM CELL BANKS

The Jordanian legislator established tort liability provisions for harmful action and malice (Article (256) of the Jordanian Civil Code). Unlike some other laws that established liability on the basis of error, Article (163) of the Egyptian Civil Code, established this liability in accordance with the provisions of Islamic jurisprudence regarding liability (Bani Atta, 2016), based on the saying of the Messenger, may God bless him and grant him peace: (There should be neither harm nor malice).

Tort liability (liability for a harmful act) according to Jordanian legislation is based on three pillars:
1- The harmful act.
2- The damage.
3- The causal relationship between the harmful act and the damage.

A harmful act is defined as every act that results in harm, whether directly, if no other act separates it from the occurrence of the damage, or indirectly (Bani Atta, 2016), which is when another act separates it from the occurrence of the damage, leading to the damage without preventing the damage from being attributed to it (Article (257) of the Jordanian Civil Code).

The harmful act is considered harmful whether it was committed by a person with legal capacity, lacking legal capacity, or even without legal capacity. It also counts if it occurred intentionally or unintentionally or if it was based on some form of error. Forms of error are negligence, lack of caution, and failure to observe laws and regulations.

Likewise, the harmful act is taken into account whether it was committed by a natural person or by a legal entity. Liability for the harmful act occurs if the act was committed by a natural person with a degree of clarity and directness. If the act was issued by a legal person, then the responsibility comes from the law, as the legal person carries out his actions and activities through a natural person. In this respect, the natural person is in fact the one who commits the harmful act.

As for the damage element, it includes material damage and moral damage. Harm that befalls a person regarding one of his rights or a legitimate interest, whether that right
or interest is related to the safety of his body, affection, money, freedom, honor, reputation, or anything else (BaniAtta, 2016).

However, by extrapolating the provisions of the damage that is compensated for in tort liability, it becomes clear that it is broader in scope than contractual liability. In this regard, compensation for damage based on a contractual error in contractual liability is compensated for by the current direct material damage, not the moral damage. As for compensation for damage based on a harmful act in tort, it compensates for material damage. It also compensates in the field of material damage for missed opportunity, lost profit, and vacation, and differentiates between missed opportunity and potential damage.

This is because the issue of opportunity is a possible matter. However, missing it is considered inevitable. Therefore, it must be compensated. In this respect, compensation is not about the subject of the opportunity because it is a matter of possibility, but rather about missing the opportunity itself. In estimating compensation, the extent of the possibility of the gain that the injured party lost as a result of missing the opportunity is taken into account (Sultan, 2021). Thus, there is compensation for the damage in all its aspects, including compensation for the moral damage that befell the harmed party (Article (266) of the Jordanian Civil Code).

The third element is the causal relationship, meaning that it is not enough to commit a harmful act and cause harm unless there is a causal link between the harmful act and the harm. The Jordanian law clarified the provisions of the causal link in Article (257), stating that if the act was direct from the one who caused the harm and this act led to the consequence of the harm, or if his act was by causing it, it is required that the one who caused the harm be trespasser or intentional, or that the harmful act committed leads to harm. Furthermore, if the causal link does not exist or if the perpetrator of the act is able to deny it, he will not be responsible for guaranteeing the damage.

The original rule is to exclude the application of tort liability provisions in the presence of a contractual bond and the damage resulting from a contractual error has been achieved. However, in light of the expansion of jurisprudence and some judicial rulings based on the harmed person’s request, the harmed party has the right to obtain full compensation for all aspects of damage. In some cases, the elements of tort liability can be fulfilled, even if the basis and source of the damage is a contractual relationship. Accordingly, jurisprudence and the judiciary allow the harmed party to choose to claim compensation for the damage in accordance with the provisions of contractual liability or
in accordance with the provisions of tort without combining both if one of the following cases exists:

First: If the contract is invalid:

The Jordanian legislator defined a void contract in Article (168) as (a contract that is not legitimate in its origin and description, as its element, place, purpose, or form that the law imposed for its conclusion is defective, and it does not have any effect and may not be followed).

This means that the contract only exists in terms of form, so it has no legal existence. Hence, it is nothingness, and nothingness does not produce an effect. The invalid contract has no ruling at all because the ruling is for the existing one. This contract does not exist except in terms of form. Therefore, it has no effect and it is not permissible to follow it. This means that no contracting party has the right to force the other to implement it. If one of the contracting parties performs it voluntarily, whether he knows of the invalidity or not, he has the right to recover what he delivered in implementation of the contract (Al-Far & Malkawi, 2018).

The basic principle is that a void contract does not produce any effect, whether between the contracting parties or for third parties, for them or against them. However, it is conceivable that the reason for the invalidation of the contract is the bank. This means that the stem cell bank did not adhere to the legal requirements for the validity of concluding a contract for preserving and storing stem cells. For example, the bank concludes contracts before obtaining the necessary approvals and licenses from any competent authorities, meaning that it is not legally authorized to conclude any contracts, and it concludes a contract for the preservation and storage of stem cells with a client. In this case, the contract is invalid.

The contract may also be void if the bank obtains a source from the customer that the law does not permit him to store and preserve these cells from this source, for example the bank obtains stem cells from embryos aborted from artificial insemination, or aborted embryos, or from any source that violates what is stated in Article (3) of the Legal Cells System.

This also includes that the bank has obtained a permissible source, but the intended reason and purpose of the storage is to conduct experiments and studies or use them to clone other stem cells from these stem cells that the customer delivered to the bank and not to preserve the cells for the purposes of using them in treatment (Al-Gamal, 2008).
There are other cases that are not permitted by law in the contract for preserving and storing stem cells, which makes the contract invalid according to the law. If the bank is the reason for the invalidation of the contract because it did not comply with any of the conditions required by the law, is it sufficient to follow the general rules resulting from the invalid contract, which is to restore the situation to what it was before the contract was concluded? What happens if exceptional consequences result in harm to the customer? Can the customer ask the bank for compensation for that damage?

By following the provisions of contractual liability, which were discussed previously, it becomes clear that the basic pillar of the condition for the establishment of contractual liability in the first place is the existence of a valid contract. If this is not available, then the bank is not responsible.

As for tort liability, after clarifying its elements, and considering the error in forming the contract on the basis of which the law stipulated the invalidation is due to the bank, the bank’s action is the basis for invalidating the contract. In this regard, we can consider the bank’s action in violation of the provisions of the law and its failure to observe the legal requirements for concluding the contract in compliance with the provisions of the law, and the provisions of harmful action (tort liability) apply to it. Therefore, the bank is responsible for its harmful action and the harm this action caused towards the customer.

This means that the bank is responsible and has the responsibility to compensate the customer for the harm he has suffered if the law determines its invalidity or rules it invalid. However, if the invalidation was shared between the bank and the customer and damage occurred to the customer, the bank will not be responsible for this damage due to the positive role played by the customer in invalidating the contract.

If the contract is ruled invalid as stated above, it is not sufficient to apply the original effect of the invalid contract, which is ruling its invalidity and not having any effects on it and restoring the situation to what it was. Rather, it also includes an incidental effect resulting from the bank, which is compensating the customer for the harm he sustains as a result of the invalidity of the contract.

Second: If the bank commits fraud and causes serious harm to the customer or beneficiary:

The basic principle in the specific implementation of obligations resulting from contracts is to observe good faith when implementing them. If the bank does not fulfill
its obligation to confront the customer or beneficiary in a manner consistent with good faith in implementation, by committing intentional acts for the purposes of obtaining benefits not approved by the contract or the law, or committing acts intending to harm the customer or beneficiary, or committing a criminal act, it deserves criminal confrontation.

Fraud, as a material condition committed by the contractor, violates and is not consistent with the principle of good faith. In this respect, the contract for preserving and storing stem cells is of a special nature, so the application of the principle of good faith is also of a special nature in application compared to the rest of the other contracts, as most contracts stipulate that the application of the principle of good faith is only in implementation. However, in applying the provisions of the principle of good faith to the contract for preserving and storing stem cells, this principle must be taken into account even in the stages that precede the conclusion of the contract, whether they are the preliminary or negotiating stages that precede the conclusion of the contract. This principle continues to be applied and observed when the contract is concluded and implemented in accordance with the legal provisions and the agreement.

Among the cases of this contract in applying the principle of good faith is the silence of the bank or the treating physician affiliated with the bank in giving essential information to the donor, giving him false information about the donation and its nature, or exaggeration in giving the results on which the client bases his informed consent. These matters deviate from the application of the principle of good faith at any stage, whether in the negotiating stages, the convening stage, or the implementation stage.

In the cases mentioned, for example, which could be imagined to be committed by the bank, and these harmful actions result in serious harm to the customer or beneficiary, the customer or beneficiary is not only confronted with the bank for contractual liability, because contractual liability results in the event of a contractual error on the part of the bank.

This error should not be based on the cases mentioned or cases that are united with them in the cause. Therefore, the harm caused to the customer or beneficiary by the bank’s action has gone beyond the concept of damage expected from contractual liability. This matter requires holding the bank accountable for committing a harmful act in accordance with the provisions of tort. It necessitates expanding the determination of compensation for the harmed person, whether the customer, the beneficiary, or a third party, in accordance with the provisions on compensation for damage in tort.
5 CONCLUSION

This study discussed the provisions of liability for stem cell banks, based on the contract for preserving and storing stem cells concluded between the bank and the client. It highlighted the contractual and legal obligations of the stem cell bank, and the contractual liability resulting from the bank in the event of a breach of the contractual obligation. It also sought to find out whether it is possible to apply tort liability provisions.

It was found that the Jordanian legislator did not define the contract for preserving and storing stem cells. It merely specified some cases of damage requiring compensation under contractual liability. Significantly, it expanded compensation for damage contrary to what was stipulated under traditional contractual liability. Furthermore, it approved compensation for moral damage in contractual liability, by approving compensation for moral damage in the event of death, total disability, or partial disability. But compensation for moral damage to the harmed party was not approved in the remaining cases of damage.

Besides, the Jordanian legislator recognized the necessity of financial compensation for damage to stem cells, in whole or in part, stored at the bank, whether when storing, transporting, or dispensing them. However, it did not address the obligation to compensate for material or moral damage if the bank breached its obligation to deliver stem cells for the purposes of treatment. Therefore, the client or beneficiary missed the opportunity to receive stem cell treatment, which is essentially the primary purpose of preserving and storing stem cells at the bank.

This study suggests that the Jordanian legislator define the contract for preserving and storing stem cells, and organize its main provisions, since the contract can only be concluded by organizing it with a specialized governmental body, to guarantee the rights of the customer, so that the bank is not arbitrary in some conditions. It also suggests that the Jordanian legislator approve compensation for moral damage in all cases of breach of contractual obligations by the bank, as long as the moral damage is realised. The burden of proving it falls on the harmed party, given the nature of the subject of the contract and its impact on treatment.

Significantly, this study recommends that the Jordanian legislator approve financial compensation for all cases of breach of contractual obligations, specifically financial compensation for missing the opportunity, since the occurrence of a contractual mistake leads to missing the opportunity for stem cell treatment. It also suggests to the Jordanian legislator that guarantee should not be limited to the stem cell contract and the
obligations contained therein, but rather extend to cases of damage if the conditions for applying tort liability provisions are met.
REFERENCES


Instructions for insurance of stored stem cells and its amendments No. (1) of 2014.
Instructions for issuing stem cells from licensed stem cell banks No. (6) of 2014.
Jordanian Civil Law No. (43) of 1976.

Stem Cell Regulation No. (10) of 2014.