

## Importance of evidence of DNA

*(In perspective of Islamic Jurisprudence)*

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### **ABSTRACT**

DNA or Genetic fingerprinting technology is the topic of the day. It has revolutionized the forensic science. Islamic Jurisprudence has its own procedure and priorities of evidences, which mainly depend upon eyewitness, personal evidence and testimony. It was introduced in 1984. It is used in the identification of parentage, forensic sciences, treatment and diagnosis of diseases. The sequence of base pairs varies from person to person and the relativity of persons is identified by identifying the matching of base pairs.

The Contemporary International Institutions of Collective Ijtihād have launched heavy discussions on this new evidence and reviewed relevant serious law making efforts based on it, which results in very valuable Fatawā and resolutions, regarding the use of DNA techniques, as evidence in criminal cases and its limitations and scope in Islamic Jurisprudence.

This article discusses and concludes that the genetic fingerprinting technique should be used for the attestation of the cases related to it, along with the traditional way to acquire evidences, even though, it does not have self-sustaining priority, but depends upon other evidences for making a judicial verdict. Like other forensic evidences, it has also errors and intervening factors that limit its accuracy.

Therefore, the decisions of crimes liable to Ḥudūd, Qiṣāṣ and Diyyat should not depend only upon DNA fingerprinting. Thus, we can say that in the absence of stipulated evidences, rebuking punishment may be sentenced on the basis the evidence of DNA.

**Keywords:** *DNA, Genetic Fingerprint, Al-Baṣmah Al-Warāthiyah, Crimes, Ḥudūd, Qiṣāṣ.*

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## Introduction:

DNA profiling technique was introduced in 1984 by Sir Alec Jeffrey's at the University of Leicester in England and now several countries have organized national database of DNA.<sup>(1)</sup> It is a process of identification of a person that may be helpful in forensic science and has revolutionized the whole society. It is a process of identification of the Divine Code that Allāh had hidden in the form of genes in our cells. Like all other inventions, this invention also raised many questions about its implementation, validity, reliability and objectivity. Synonyms of this invention are DNA profiling, DNA testing, DNA typing and Genetic Fingerprinting. In Arabic it is known as (البصمة الوراثية) *al-Baṣmah al-Warāthiyah*. It is used in the identification of parentage, forensic sciences, treatment and diagnosis of diseases.<sup>(2)</sup> The sequence of base pairs varies from person to person and the relativity of persons is identified by identifying the matching of base pairs. The loci of variable number tandem repeats (VNTRs) are closer to near relatives.<sup>(3)</sup>

In the term "DNA fingerprinting" the relation of "finger" is not specific to finger, but it is as common as other body parts and is used only to describe the uniqueness of a person's identity as was done in the past by the fingerprints. Sample for DNA test can be taken from any body part. The Arabic word (البصمة الوراثية) *al-Baṣmah al-Warāthiyah* is a word to word translation of "Genetic Fingerprinting"<sup>(4)</sup>. Dr Aḥmad Mukhtār describes it as "*analysis of DNA from body tissues or body fluids so that a person can be identified*"<sup>(5)</sup>. Medically it is defined as, "*It is a technique used especially for identification (as for forensic purposes) by extracting and identifying the base-pair pattern of an individual's DNA*".<sup>(6)</sup>

In this process DNA molecule is extracted from samples collected from a crime site, then cut by enzyme scissors, analyzed and compared with

(1) Diana M. Concannon, Kidnapping: An Investigator's Guide (London: Newnes Ltd., 2013) p150.

(2) Linda Forst John Dempsey, An Introduction to Policing Cengage Learning. (New York City: Cengage Learning, 2010) 469

(3) Adrian Linacre William Goodwin, Sibte Hadi, An Introduction to Forensic Genetics (Chichester, West Sussex, UK: John Wiley & Sons, 2007) p 12

(4) Reinhart Pieter Anne Dozy, Takmilah al-Ma'ājim al-'Arabiyyah (Baghdad: Wazārah al-Thaqāfah wa al-'Ālam, Democratic Republic of Iraq, 1979-2000 AD) 361.

(5) Dr. Aḥmad Mukhtār 'Abd al-Ḥamīd 'Umar, Mu"jam al-Lughāt'l 'Arabiyyah al-Mu'assrah, 1, (Cairo: 'Ālim al-Kutub, 2008) 214.

(6) Merriam Webster. Accessed Dec 19, 2014,

the already analyzed base pair sequence of the accused or a relative of the accused.<sup>(1)</sup>

All the living organisms are formed by tiny units called cells. Most of the cells have a nucleus that controls all the activities of the cell and hence becomes a control center for the cell. It has chromosomes in it that have DNA (Deoxyribonucleic Acid) and every DNA has genes that control specific characteristic of a person. These chromosomes are in the form of pairs, half of them are gained from the mother and half are gained from father and thus the person becomes an intersection of paternal and maternal characteristics. Although he or she may possess some characteristics quite different from both the parents, which is a direct result of genetic mutation or recessive traits of one of the parents that may become dominant by combining the genes of the same type from both parents. Recessive traits may not appear in parents and may appear in their child as is directed by the holy Prophet Muhammad ((S.W.A )):

Ḥaḍrat Abū Hurayrah Narrates that a man came to the Prophet ((S.W.A)) and said, "O Allāh's Apostle! A black child has been born to me." The Prophet ((S.W.A)) asked him, "Have you got camels?" The man said, "Yes." The Prophet ((S.W.A)) asked him, "What colour are they?" The man replied, "Red." The Prophet ((S.W.A)) said, "Is there a grey one among them?" The man replied, "Yes." The Prophet ((S.W.A)) said, "Whence comes that?" He said, "May be it is because of heredity." The Prophet ((S.W.A)) said, "May be your latest son has this colour because of heredity"<sup>(2)</sup>.

About this Ḥaḍīth, *Imām Nisā'ī* said:

*"Consequently, it is a decision made by The prophet ((S.W.A )) not to deny the parentage of a child that is born at his bed except he claims that he has seen a dishonesty"<sup>(3)</sup>.*

On the basis of DNA, cells are divided into somatic cells and germ cells. Somatic cells have same hereditary material from both the parents, but

(1) Encyclopedia.com, "Encyclopedia.com," (2005) Accessed Dec 19, 2014

[http://www.encyclopedia.com/topic/DNA\\_fingerprinting.aspx](http://www.encyclopedia.com/topic/DNA_fingerprinting.aspx)

(2) Abū 'Abdu'llāh Muḥammad bin Ismā'īl al-Bukhārī, Ṣaḥīḥ al-Bukhārī, 7, (Damacus: Dār Tawq al-Nijāt, 1422AH) P53, Ḥaḍīth No. 5305; Ya'qūb bin Ish'āq bin Ibrāhīm al-Isfrānī (D 316 AH) Abū 'Awānah, Mustakhrij Abī 'Awānah, 3 (Beirut: Dār al-Ma'rifah, 1998) 216, Ḥaḍīth No. 4725.

(3) Abū Abd al-Raḥmān Aḥmad bin Shu'yb bin 'Alī al-Khurasānī (D 303 AH) al-Nisā'ī, Sunan al-Nisā'ī, 6 (Aleppo: Maktabah al-Maṭbū'āt al-Islāmiyah, 1986 AH) 179, Ḥaḍīth No. 3460.

germ cells have a half number of chromosomes. Human genome consists of approximately 25000 genes that contain about 3,000,000,000 base pairs and they all form 46 chromosomes that are present in every somatic cell of a human. <sup>(1)</sup> The location specified for a gene is called a loci and every gene represents a specific trait or sometimes linked to more than one trait and some traits are controlled by more than one gene. <sup>(2)</sup> DNA covers a small room in the microscopic cell and if it is extracted out from the nucleus, it may be two to three meters long. <sup>(3)</sup>

Any cell from body parts that has nucleus can serve as a sample which may be taken from spit, semen, blood, flesh, tissues, hair etc. Forensics sample is generally taken from body liquids present on body, clothes or weapons. <sup>(4)</sup>

### **Accuracy of DNA:**

Human DNA resembles 99.9% and the part that differs is very small in ratio (only 0.1%) that differentiates every person. This technique is so accurate that the chance of resemblance between two persons is only one out of 70 trillion except homozygous twins, <sup>(5)</sup> whereas, human population is only six billion at this time. It is much more accurate and easy as compared to fingerprints. <sup>(6)</sup> Its laboratory trials show its accuracy 99.9 %, but the real life accuracy may be reduced as several intervening variables (Biases, affiliation, hatred, enmities) may involve. However its accuracy may be improved using multiple results and neutral laboratories. <sup>(7)</sup> Therefore, in the presence of social intervening variables, the result of highly accurate laboratories is also considered 99.5% accurate, however, it may further reduce in the countries of the third world, where corruption and social evils are common.

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- (1) Nora Kearney & Alison Richardson, *Nursing Patients with Cancer: Principles and Practice: Genetic Basis of Cancer* (London UK: Elsevier Corporation, Kings College, 2006) 74.
  - (2) Peter S. Harper, *Landmarks in Medical Genetics: Classic Papers with Commentaries, Human Gene Mapping* (London UK: Oxford University Press, 2004) 144
  - (3) Horace Drew Chris R. Calladine, *Understanding DNA: The Molecule and How it Work* (Cambridge, UK: Academic Press, 2004)105.
  - (4) Rajesh Bardale, *Principles of Forensic Medicine and Toxicology* (New Delhi: Jaypee Brothers Medical Publishers Ltd., 2011) 116
  - (5) James Norman Spuhler, *Genetic diversity and human behavior* (London Uk: Transaction Publishers, 2009) 54
  - (6) Muḥammad Anīd al-Arwādī, *al-Baṣmah al-Warāsiyah* (Beirut: Dār al-Fatwā fī al-Jamhūriyah al-Lebononiyah, Beirut University). 04.
  - (7) Edited by U S Congress, *Congressional Record*, V. 149, PT. 1, January 7 2003 to January 17 (Washington DC: Proceedings and debates of 108th congress, 2003. ). 499

In the Islamic Judicial system, confession and eyewitness is considered the base of decision, while it has also a probability of falseness. It can be replied that whenever doubt involves in Judicial procedure, the benefit goes to the accused, it is a principle rule of the Islamic judicial system derived from a *hadith*:

(1) ((ادْفَعُوا الْحُدُودَ مَا وَجَدْتُمْ لَهُ مَدْفَعًا))

*Ward off the legal punishments as much as you can.*

In order to control the intervening variables *Islamic Organization of Medical Science (IOMS)* has chalked out the following guiding principles:

1. The DNA test should be carried out at least at two laboratories and it should be ensured that one laboratory should not be aware of the result of the other.
2. Such laboratories should be in the control of government, or if not possible these laboratories should fulfil the terms and conditions of government and should fulfil the required standard of skill and local terms and conditions.
3. The lab technicians working in these laboratories should possess good moral character and desired skill and they should not have any relationship (blood, social or political) with the accused or the claimer.<sup>(2)</sup>

### **Limitations of DNA Fingerprinting:**

Only in the case of homozygous twins the DNA resembles a lot as their first cell and its hereditary material was extremely same that was copied in every somatic cell. That is why their physique, appearance, habits, even likes and dislikes are same. However, this resemblance is not 100%, there is always a bit difference between the homozygous twins that can be found by examining millions of base pairs and this process needs too much money and time. It is estimated that in such a situation the expenses may reach 10 million euro.<sup>(3)</sup> In an ordinary DNA test, approximately 400 nucleotides are examined, in the case of homozygous twins there may be billions of nucleotides to be examined costing more than 10 million euro<sup>(4)</sup>.

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(1) Abū ‘Abdu’llāh Muḥammad bin Yazīd al-Qizvīnī Ibn Mājah, Sunan Ibn Mājah, 3, (International: Dār al-Risālāh al-‘Ālamīyah, 1430 AH, 2009 AD.). 579, Ḥadīth No. 2544 -

(2) Al-Aejaz, "Islamic vision of some contemporary medical problems," (2014). Accessed Dec 18, 2014

(3) Bardale, Principles of Forensic Medicine and Toxicology . 116

(4) BBC, "Twin DNA Sex Crime," (2013) Accessed Dec 17, 2014

It is common among humans, as they are social beings, that they carry samples of several persons on their body that may cause ambiguity in taking samples. For example, a murdered person may carry the DNA of his wife / her husband, friends, children, murderer, provider of first aid, policemen, ambulance squad, and many more. So, it is necessary to consider other evidences while making a judicial decision. It is the reason that the *Council of Islamic Ideology* and other colleges of collective Ijtihād are unanimous in the opinion that in the case of *Hudūd* and *Qisās* (Divine Legal Penalties, legal vengeance) the base evidence should be eyewitness and DNA can be considered as a supporting witness, not base witness, however, *Ta'zīr* (supplementary rebuke) can be sentenced in such cases where eyewitness is not available and the judge is sure by other evidences. DNA can be an important evidence for crimes other than *Hudūd* and *Qisās*, therefore a judge can force the accused for DNA fingerprinting, so that, more accurate evidences may be obtained.

### **The Role of DNA in Investigating the Crimes:**

Now a days DNA fingerprint technique is used world widely to solve the criminal cases that may be very difficult to solve without it. The DNA test is only a part of biological evidences that are very important in the solution of a criminal case. No doubt. A judge can make a decision only if he has surety about the occurrence of the crime and the persons involved in it. For the identification of the culprit, the judge may order for forensic test of samples collected by an investigating officer. Now question is that to what extent a judge can depend upon forensic evidences in the solution of the crimes of *Hudūd*, *Qisās* and *Diyyat*.

The Prove of a crime depends upon three steps:

1. Collection of the evidences and other elements of the crime.
2. Initial investigation, DNA and Forensic test, of samples collected from the site and their matching with the accused persons.
3. In the light of the forensic evidences, and other evidences (especially confession or eyewitness) making a decision that who was involved in the crime? This process needs surety, not ambiguity.

In Islamic Jurisprudence, such evidences are considered as expert opinion and evidences can be classified into the following categories:

1. Word evidence, i.e. Confession.
2. Evidence of eyewitness who should be honest and reliable. (*ʿĀdil and Ṣādiq*).
3. Rationale evidences provided during the hearing of a case.

4. Material evidences obtained by samples from the site and their forensic test.

These material evidences are speechless and non-intelligent evidences, consequently, cannot tell a lie, hence, have great importance. Such evidences are not new, and are being used throughout the history, although modified with the development of awareness and technology and hence, their status of accuracy is also increasing day by day. It is also a fact that with the development of such instruments the standard of observation is also decreasing, which has resulted in the low standard of eyewitness. Therefore, now, the judges are being granted with the independence in legal evidences e.g., in the Egyptian Law, under clause No. 302, it is said that “*In a legal procedure the Judge will make decision according to his own belief with full independence<sup>(1)</sup>*”.

That is why, now, it is common in judiciary not to bind the judge with specific legal evidences, and hence, independence in legal evidences is gradually coming common, so that, the judge may come to an accurate and certain evidence. In the same way, *Palestine* has granted the same freedom of evidences to the judges under the clause 1/273<sup>(2)</sup> and *Al-Jazzier* has granted it under the clause 150<sup>(3)</sup>. The purpose of this freedom of evidence is not to restrict the performance of judge by making him sticky with certain evidences, but it aims at maximizing the surety of his decision. Legal evidences should be rational and logical and should fulfil the following two conditions:

1. The betterment of society by ensuring equality and justice.
2. Passion of betterment and restoration of convicted by ensuring his self-esteem.

The duty of a judge is to maintain equilibrium between the both the interests.

If there is DNA of a single person on the body of the victim or in the environment of a crime, it is about to sure that the person leaving this DNA sample is accused (and this is very rare), but if the victim or the environment carries DNA samples of several persons, the situation becomes doubtful. The person leaving DNA may be there before the occurrence of the crime or

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(1) Farkad 'Abū al-'Ārḍī, al-Waṣf al-Qānūnī fī al-Jarīmah, Egyptian Law,3: 406, (Majmū'ah al-Qawā'id al-Qānūniyah, 12 June ,1939) 575

(2) Govt. of Palestine, Palestinian Law, No. 03 (Palestine: Govt. Press 2001 AD)

(3) A. B al-A'liah al-Brahīn, Arkan al-Jarīmah wa Ṭuruq al-Ithbatiyah fī al-Qānūnī al-'Aqūbah al-Jazāirī (al-Jazzier,: Dār al-Khuldūniyah li al-Nashr wa al-Tawzī', al-Qubah Al-Qadīmah, 2007AD) 191-192.

reached after the occurrence of the crime, or any other reason is sufficient to make it doubtful.<sup>(1)</sup>

The most important thing is the identification of the offender and the victim after the occurrence of a crime. In the Islamic judicial system, the evidences to identify the offender or the victim are of three types:

1. Specific Identifying marks.
2. Resemblance with a person.
3. Tracing, (Qiyāfah)

Every person has some identifying marks that other don't carry and these marks make him unique and identifiable in the society. These identities are also used in the identification of the offender or the victim. Sometimes, a large number of victims die at one spot and bodies become so much deformed that their identity becomes difficult e.g. in the case of the companion of Prophet *Muhammad* (S.W.A) , *Anas bin Naḍar* (انس بن نضر) was martyred and his body had received more than 80 wounds of spear, sword and arrows. Moreover, the polytheists of *Makah* deformed his body that made his identity difficult. Even the companions of Prophet *Muhammad* (S.W.A) could not identify him, until his sister came and identified him with the help of his fingertips.<sup>(2)</sup>

Amongst these identifying elements, the most important throughout the history is the fingerprints. The modern forensic development has brought more reliable techniques in this field. In addition to it, blood analysis and DNA test are becoming more common because of their accuracy. DNA fingerprints are much more accurate than fingerprints, hence, has more ability to take the place of common fingerprint in the Islamic evidence system.

In the Islamic evidence system, the apparent resemblance is also an important judicial reason *مناط شرعي Manāṭ-e-Shar'ī*. *Umm al-Muminīn, Umm-e-Salamah* narrates: "*Um-e-Sulaym* said, 'O Allāh's Apostle! Allāh does not refrain from saying the truth! Is it obligatory for a woman to take a bath after she gets nocturnal discharge?' He said, 'Yes, if she notices the water (i.e. discharge).' *Um-e-Salamah* smiled and said, 'Does a woman get discharged?' Allāh's Apostle said. 'Then why does a child resemble (his or her mother)<sup>(3)</sup>'?"

(1) IOMS, "al-Munazzamah al-Islāmiyah li al-'Ulūm al-Ṭibbiyah." Accessed Jan 2, 2014

(2) Al-Bukhārī, Ṣaḥīḥ al-Bukhārī.V. 04, 19, Ḥadīth No. 2805.

(3) Ibid. V 04, P 132, Ḥadīth No. 3328.

It shows that in *Hadith*, genetic resemblance is also considered to some extent, although it is not such a strong evidence as may become base of several legal decisions. The Islamic judicial system does not depend upon a doubtful evidence and according to the Islamic jurisprudence, in case of doubt, the benefit goes to the accused. In other words, in the presence of stronger evidence, the weaker or doubtful evidence if contradicts becomes less important. In the case of parentage, the evidence of the marriage bed and acceptance of child from the owner of the bed is the strongest evidence in the Islamic judicial system. In the same way, it occurred in the case of *Hilāl bin Umayyah*. 'Abdu'llāh Ibn 'Abbās narrates that *Hilāl bin Umayyah* accused his wife of committing illegal sexual intercourse with *Sharīk bin Saḥmah* and filed the case before the Prophet ((S.W.A )) . The Prophet ((S.W.A )) said (to *Hilāl*), "Either you bring forth a proof (four witnesses) or you will receive the legal punishment (lashes) on your back." *Hilāl* said, "O Allāh's Apostle! If anyone of us (S.W.A ) a man over his wife, would he go to seek after witnesses?" The Prophet ((S.W.A )) kept on saying, "Either you bring forth the witnesses or you will receive the legal punishment (lashes) on your back." *Hilāl* then said, "By Him, Who sent you with the Truth, I am telling the truth and Allāh will reveal to you what will save my back from legal punishment." Then Gabriel came down and revealed to the prophet ((S.W.A )),

﴿وَالَّذِينَ يَرْمُونَ أَزْوَاجَهُمْ﴾<sup>(1)</sup>

*As for those who accuse their wives...' The Prophet  
((S.W.A ))recited it till he reached*

﴿إِنْ كَانَ مِنَ الصَّادِقِينَ﴾<sup>(2)</sup>

*(her accuser) is telling the truth.'*

Then the Prophet (S.W.A) left and sent for the woman, and *Hilāl* went (and brought) her and then took the oaths (confirming the claim). The Prophet (S.W.A) was saying, "Allāh knows that one of you is a liar, so will any of you repent?" Then the woman got up and took the oaths and when she was going to take the fifth one, the people stopped her and said, "It (the fifth oath) will definitely bring Allāh's curse on you (if you are guilty)." So she hesitated and recoiled (from taking the oath) so much that we thought that she would withdraw her denial. But then she said, "I will not dishonor my family all through these days," and carried on (the process of taking

(1) Al-Qur'ān, al-Nūr, 24:06

(2) Ibid. 09

oaths). The Prophet (S.W.A) then said, "Watch her; if she delivers a black-eyed child with big hips and fat shins, then, it is *Sharīk bin Saḥmah* s child."

Later she delivered a child of that description. So the Prophet ((S.W.A )) said, "If the case was not settled by Allāh's Law, I would punish her severely.<sup>(1)</sup> "

In this Hadith *The prophet* ((S.W.A )) described the resemblance of a child, but, didn't decide according to it, as Allāh's order about *Li'ān* has already been revealed. This incident shows that apparent resemblance as compared to the marriage bed or eyewitnesses is a weaker evidence as the sacredness of the marriage bed is determined by *Allāh*, until one claims seeing fornication (i.e., *Li'ān*).

In this case, the eyewitness of *Hilāl bin Umayyah* was a stronger evidence than resemblance, which cut off the parentage of the child and the resemblance of the child further stamped the decision to be true. We are not discussing about the affirmation of parentage, but we are discussing about criminal cases. In crimes apparent resemblance is not sufficient to prove a person as an offender of the crime and needs additional evidences. If an eyewitness provides only an evidence of the resemblance of a person and he has no surety about the identification, then, the judge can issue an order for the DNA test for comparison with the samples, collected from the body of the victim. If the accused, seeing such evidences, confess the crime, then, we may say that the proof of the crime depends upon his confession, not on the DNA test, as the DNA test is only an additional and supporting evidence. In the absence of confession and insufficient evidences, the judge should not issue the order of *Hadd* or *Qisās* (legal penalty, vengeance) but he can issue the order of *Ta'zīr* (rebuking punishment). In short DNA should not be preferred to the Divine Legal evidences, however, it has importance in our judicial system and should be given due importance.

Like apparent resemblance there is also a doubt in tracing (*Qiyāfah*), however, it is also an important legal evidence and the majority of A'immah, the classical Islamic jurists accept it, although Hanafites do not accept is because of its doubtfulness. Those, who accept it, do accept it until higher evidence predominate it, as in the case of Mujāziz Mudlajī (who was a famous tracer of Arab) declared that Usāmah bin Zayd was the son of Zayd bin Hārithah, The prophet ((S.W.A )) felt joy on this incident that he told the quotation of Mujāziz to Ḥaḍrat 'Ā'ishah. The colour of Zayd bin Thābit was white, but Usāmah was dark-skinned as his mother was a dark-skinned but the people started pointing at the parentage of Usāmah bin Zayd for that the prophet ((S.W.A )) felt grief, because these father and son both

(1) Al-Bukhārī, Ṣaḥīḥ al-Bukhārī. V.6, 100, Ḥadīth No. 4747.

were loved by the prophet ((S.W.A.)). The parentage of Usāmah was sure because of a stronger evidence that was the marriage bed, however the saying of Mujāziz Mudlajī caused strength to it that made the prophet ((S.W.A.)) merry.<sup>(1)</sup> The DNA test as compared with tracing is much more accurate and therefore, where tracing can't be accepted as a legal evidence, DNA can be accepted unless any of the stronger Divine Legal evidence predominate it.

### **Identification of the Victim:**

Sometimes it becomes important to identify the victim, as in the cases of bomb blasts or accidents when a corpse becomes defaced and unidentifiable. In such cases, a sample from the body of the victim is collected and analyzed for DNA matching with the pre-existing library, if record is found and DNA matches, the victim is identified, otherwise, sometimes later on, the record of the kith and kin becomes available and matches the victim; in case of the death of a victim, the decision about the heritage becomes implemented. It is the authority of the judge to issue order for DNA test of the corpses for the identification of deceased persons, so that, their heritage may be divided between his heirs. Without the legal order and laboratory identification, neither heritage should be distributed, not his wives should be allowed to marry another person.

Sometimes, the identification of the victim becomes more important to reach the offender of the crime, because in criminal cases, crime is knotted with pre-existing reasons, and commonly the offenders are found amongst his near and dear.

### **Identification of Missing Persons:**

DNA has gained importance in the identification of missing persons, especially, in the cases of bomb blasts, sudden death at an unknown place, deaths in natural disasters, identification of unknown deceased persons, etc.

At times missing person reaches home after a long time when there is no person alive to identify him, (i.e. his peers have passed away) then his identification may be done by DNA matching.

After so long a period, the return of a person is considered exceptional and the Islamic jurisprudence does not consider exceptional cases according to the legal principle “لا عبرة للنادر” *la 'Ibrata li al-Nādir* (exceptional case should not be considered), however, DNA test may be able to reduce the status of exceptional to regular. However, this issue is

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(1) Ibid. V 04, 189, Hadith No. 3555

researchable and has, yet, not been discussed in any college of collective jurisprudence (*Al-Majma' al-Fiqhī*).

### **Role of DNA in the Exculpating an Accused:**

In the criminal cases, the Islamic principle is “*al-Aṣl al-Barā'at al-dhimmah*”<sup>(1)</sup> (الأصل براءة الذمة) (primarily every person is exculpated from any liability), and an accused is exculpated until there are sufficient evidences available to prove him a culprit. It is necessary for a judge to try his best to save a clean-handed person from false accusation. DNA test may be helpful in proving that the person was not there at the place of crime, even if other biological evidences were available in a sufficient amount to solve the case or to prove another person as an offender. Every person is considered exculpated from a crime until sufficient evidences are available to prove him an offender.

At times DNA test identifies a person which results in the exculpating the clean-handed persons from accusation. The criminal record has several examples when a person proves guiltless after the imprisonment of several years, after the invention of DNA test, whether the accused was sentenced to punishment, and later on DNA test proved that the culprit was another person. For example a person in Idaho, a state in the USA, was sentenced to death in the case of killing a young girl after rape. After spending 18 years in jail, when DNA test revolutionized the forensic science, he requested the court to conduct the DNA test, and match with the samples of semen taken from the corpse of the deceased girl. Moreover, while resisting the murderer, the samples of the hair of the murderer were also found in the nails of the girl. After analysing, it was found that both the samples did not belong to that person, that proved him exonerate from the said crime.<sup>(2)</sup> In the absence of DNA test, the said person has to wait for 18 years in jail for his exoneration.

This happens often in the cases of rape when samples from vagina carry the semen of a specific person and the accused has no DNA matching with the samples. Therefore, DNA test is necessary for saving a guiltless person from the accusations of prostitutes, who try to blackmail the wealthy gentlemen in order to deprive them of their wealth.

(1) A Committee of Scholars and Jurisprudents of Othaman Kaliphate, *Mujallah al-Aḥkām al-'Adliyah*, 1 (Karachi: Nūr Muḥammad Kārkhānah-e-Kutub, Ārām Bāgh) 17.

(2) Allison Jackson, "Mint Press News," (2014)

<http://www.mintpressnews.com/people-spent-decades-jail-crimes-didnt-commit/190555/> (18-12-2014)

### **DNA in the Quest of Offender:**

In criminal cases to save an exonerate person is as important as to search the offender, so that, he may be brought to the due punishment. Several countries have developed libraries of DNA of suspicious persons, which is easy to compare to find the offender of the crime. Pakistan is also working to establish such library. However, it should be an additional evidence, not the primary evidence, as is described in the above lines.

### **Liability and Conditions of DNA Test:**

A person can request for his own DNA test only on the advice of a doctor to diagnose a genetic disease, and the laboratory should be bound to reveal only the desired information, so that the society may be saved from deterioration by divulging the hidden realities, i.e., parentage, etc. According to the Islamic Law, in the criminal cases, this authority is handed over to the judges and no other person can order or request for a DNA test. In the cases of crimes, the governments should establish an independent organization with highly qualified experts and machinery for DNA tests, to obtain maximum accuracy, and this organization should be monitored by a committee of senior judges, forensic scholars, and researchers of high moral character. For a legal decision the report from at least two laboratories should be considered, if it matches without consulting each other, otherwise, the result is doubted and cannot become base for a legal decision. At present, only one forensic laboratory is working in Pakistan, which is an alarming situation. The staff of the laboratory should not be told the nature of case to save the result from intervening variables. The staff of the laboratory should not have any relation with the accused, offender or victim.

### **The Status of DNA Test in the Legal Evidences:**

In the traditional Islamic judicial system, following are the evidences accepted in the courts:

- 1- confession 2- eyewitness 3- oath 4- personal knowledge of judge
- 5- convincing presumption 6- consulting with other judges for a decision 7- tracing/ *Qiyāfah* 8- insight 9- expert opinion
- 10- *Istishāb-e-Hāl* (maintaining the current situation) 11- tradition
- 12- habit 13- toss.

Amongst the evidences confession and eyewitness are superior to DNA test. However, the DNA test is superior to oath-taking, personal knowledge of the judge, consultation with other judges, tracing, insight and toss, because, all these evidences have doubt, greater than the DNA test. It could be considered parallel to convincing presumption "*Qarīnah Qāfi'ah*"

(قرينه فاطمه), or expert opinion. If confession or eyewitness is available, then they should be preferred to DNA test. But all other evidences have less importance than the DNA test. The *Islamic Organization of Medical Science* has issued the following decision:

“DNA test should not be kept in place of tracing which stands on insight and guess, therefore it is a weak admeasurement “*Qiṣāṣ*” (قياس) and not to depend upon only DNA test in the proof of parentage is because of invisibility of this matter <sup>(1)</sup>

*Dr. Saeed Buvezary* <sup>(2)</sup> and *Dr. Wahbah al-Zuhaylī* <sup>(3)</sup> also consider it as a convincing presumption.

### Expert Opinion from Non-Believers:

In criminal cases, sometimes, expert opinion becomes inevitable and the experts in a relevant field are available only amongst the non-believers, as European nations are leading in science and technology these days. Islam gives permission of asking for expert opinion from non-believer with some terms and conditions, if this action is not insulting for Islam or Muslims and the secrets or flaws of Muslims should not be told to non-believers. That was why, the non-believer experts attended the conferences of the *Islamic Organization of Medical Science*, held in *Kuwait*. In this respect *‘Allāmah Ibn ‘Abd al-Barr* says:

“And this indicates at its permissibility to consult with unbeliever in the field of medicine, if he is an expert in it”<sup>(4)</sup>.

The prophet ((S.W.A)) also ordered *Sa’d bin Abī Waqās*, to consult a unbeliever medical expert, as he was an expert in it.<sup>(5)</sup>

The Islamic judicial system divides the crimes into the following categories:

1. Crimes liable to the Divine penalties (*Hudūd*).

(1) IOMS, "al-Munazzamah al-Islāmiyah li al-'Ulūm al-Ṭibbiyah."

<http://islamset.net/arabic/abioethics/basma/basma1.html> (Summary of Discussion Group) (18-12-2014)

(2) Saeed Bowaziri, *Nazrāh fi Qarārāt al-Mu'tamirāt wa al-Majāme' al-Fiḥiyyah al-Muta'allaq bi al-Qaḍāyā al-Ṭibbiyah* (Tizi Ouzou: Jami'ah Mawlūd Muāmirī, Kuliyyah al-Ḥuqūq) 12.

(3) al-Zuhaylī. Dr. Wahba, *Qaḍāyā al-Fiḥ wa al-Fikr al-Mu'assir* (Damascus, Dār al-Fikr, 1427AH, 2006 AD) 428

(4) Muḥammad 'Abd al-Ḥayy bin 'Abd al-Kabīr ibn Muḥammad al-Hussaynī (D 1382AH) *Al-Katānī, al-Trāṭib al-IDāriyah*, 01 (Beirut: Dār al-Arqam, 1346 AD) 352.

(5) Abū 'Umar Yūsuf bin 'Abdu'llāh bin Muḥammad Ibn 'Abd al-Barr, *al-Istī'āb fi Ma'rifah al-Aṣḥāb*, 1 (Beirut: Dār al-Jīl, 1412 AH, 1992 AD) 283.

2. Crimes liable to the Divine Legal vengeance (*Qisās*) or Blood money (*Diyyat*).
3. Crimes liable to supplementary rebukes (*Ta'zīr*).

### **Use of DNA Test in the Crimes Liable to Divine Penalties (*al-Ḥudūd*):**

These are the crimes on which *Allāh* has declared the legal punishment as “The boundaries of Allāh” (حدود الله) *Ḥudūdu'llāh*, i.e. Fornication, liquoring, theft, etc. Islam has defined specific legal evidences to prove such crimes, and once a crime is proved by the predefined standard of evidences, judge, commander, ruler or Muslim subjects cannot forgive the proved crime and the divine punishment becomes compulsory to be implemented.<sup>(1)</sup> Although such crimes can be proved by DNA test or other ordinary forensic or laboratory methods, however, the Divine penalty can't be sentenced, but the nature of crime should be descended to the supplementary rebuke-able (*Ta'zīr*) crime. For example, if four eyewitnesses did not observe the penetration during fornication, the Divine penalty could not be sentenced, however, if DNA proves that the fornication occurred between the said two persons, the judge may sentence supplementary rebuke to save the society from such destructive actions.<sup>(2)</sup> It is also possible that this rebuking punishment (*Ta'zīr*) may be equal to or near to equal the divine penalty, as it happened in the decision made by *Umar*, who sentenced the rebuking punishment equal to the divine penalty to a woman, who came with the pregnancy, while she was unmarried. This was not a divine penalty, because the Islamic principle is “*al-Ḥudūd Tudra'u bi al-Shubuhāt*”<sup>(3)</sup> (الْحُدُودُ تُدْرَأُ بِالشُّبُهَاتِ, The divine penalties are repulsed by the doubt).

### **Use of the DNA test in the Crimes liable to the Divine Legal vengeance (*Qisās*) or Blood money (*Diyyat*):**

Divine legal vengeance or blood money belongs to the rights of human beings and the human beings are allowed to forgive their rights. In such cases, DNA and other forensic evidences are accepted to ensure the sacredness and to preserve the lives and wealth of people. But in the absence of divine legal evidences, supplementary rebuking punishment should be sentenced.

(1) A Committee of Scholars, *al-Mu'assisah al-Fiqhiyyah al-Kuwaytiyah*, 04 (Kuwait: Wazārah al-Awqāf wa al-Sha'un, 1404 - 1427AD) 245.

(2) Dr. Shaima 'Ata Allāh, "Dawr al-Baṣmah al-Warāsiyyah fi al-Ithbāt al-Nasab," (2012) Accessed Dec 18, 2014, <http://www.shaimaaatalla.com/vb/showthread.php?t=14012>

(3) Muḥammad Amīn bin 'Umar Ibn 'Ābidīn, *Radd al-Moḥtār 'Alā al-Durr al-Mukhtār* (Beirut: Dār al-Fikr, 1992) V 6, 549.

## Use of DNA Fingerprinting in the Crimes Liable to

### Supplementary Rebukes (*Ta'zīr*):

All other crimes that are not discussed in the *Qur'ān* and *Sunnah*, are left to the opinion of the judge and ruler and such crimes are liable to supplementary rebuke. DNA test and all other evidenced are used in such cases not only to prove the crime but also to sentence a punishment. The Islamic jurisprudence has defined minimum and maximum supplementary rebukes according to the nature of crime considering the situation, habit, traditions and certainties of the period.

“It is the legal undefined quantity of punishment that becomes compulsory for the right of Allāh or the right of man in almost certainly all crimes not liable to divine legal vengeance, blood money or compensation.<sup>(1)</sup>”

When we classify the types of crime, we come to know that in all types of crimes, the DNA test is used as a legal evidence, however, the nature of every crime makes its importance more or less and the nature of penalty becomes different because of the nature of crime. However, the DNA test when used with the combination of other evidences gathers more importance. *'Allāmah Ibn 'Ābidīn* has discussed in detail the difference between the crimes liable to divine penalty and supplementary rebuke.<sup>(2)</sup>

### A Comparative Study of International Institutions of Collective Ijtihād (مجمع الاجتهاد الجماعي) in the Use of DNA Fingerprinting:

Al-Munazzamah al-Islamiyah li al-‘Ulūm al-Ṭibbiyah (IOMS, Kuwait), in its eleventh seminar, held on 13 October 1992, discussed the said topic and also formed a debate group for more research, in which it suggested some points to achieve the highest standard of accuracy to be used in the legal procedure. This institute allotted this technique a status higher than Qiyāfah (tracing).<sup>(3)</sup> According to IOMS:

“There is surety if on the body of the victim or in the environment of the crime the DNA of a single person is found, but it becomes doubted when more than one person’s DNAs are found on a single article, and there is probability that the person whose DNA is found there

(1) Scholars, Al-Mu'assisah al-Fiqhiyyah al-Kuwaytiyah, V 12, 254.

(2) Ibn 'Ābidīn, Radd al-Mohtār 'Alā al-Durr al-Mukhtār. V06, 549.

(3) Bowaizri, al-Nazrah fi Qararāt al-Motamirāt wa al-Majama' al-Fiqhiyyah al-Muta'aliqah bi al-Qaḍāyah al-Ṭibbiyyah. 12.

may reached there after the occurrence of the crime, or there may be any other type of doubt”<sup>(1)</sup>.

It is clear from the resolution of IOMS that DNA test is not equal even to the eyewitness as it is composed of the observation of a mindful person.

“The process of DNA fingerprinting is a mechanical process, therefore it can’t be measured parallel to the eyewitness, as the witness is saying of a human, therefore, the number of repetitions of the process of DNA is determined higher than an eyewitness, it is suggested three times or higher, contrary to the eyewitness, that is of two male persons, majority of Mālkiyah say that the eyewitness should be with the word of “I witness” and all this can’t happen with DNA test”<sup>(2)</sup>.

IOMS describes it as a convincing presumption, if it is used with the combination of other evidences and terms and conditions. Its status is much higher than tracing (*Qiyāfah*). In criminal cases, if DNA fingerprinting can’t prove a person offender of the crime, then maintaining the current status (*استصحاب الحال*) “*Istiṣhāb al-Ḥāl*” he should be exculpated. In the Islamic world, DNA fingerprinting has not yet obtained the status of custom and tradition of the society.<sup>(3)</sup>

In its 16<sup>th</sup> conference, held from 5-10 January 2002, *Al-Majma’ al-Fiqhī al-Islāmī, Makkah*, passed resolutions about the use of DNA in family lineage and relating to its accuracy. The suggestions to obtain a higher standard of accuracy were mainly borrowed from IOMS, however, about criminal cases this institute suggested the following resolution:

“There is no legal prohibition, from an Islamic perspective, for the use of DNA fingerprinting in deciding the criminal cases. It can be used in the crimes other than Ḥudūd or Qiṣās, as hadith forbids sentencing divine legal penalties because of doubts, “ادروا الحدود بالشبهات” *Idraū al-Ḥudūd bi al-Shubuhāt*. Its use will assure justice in the society, crime ratio will decrease, criminal will be punished and who is not guilty will be exculpated and it is one of the main objective of the Islamic Law”.<sup>(4)</sup>

(1) IOMS, "al-Munazzamah al-Islāmiyah li al-'Ulūm al-Ṭibbiyyah." Accessed Oct 10, 2013, <http://islamset.net/arabic/abioethics/basma/basma1.html>

(2) Ibid.

(3) Ibid.

(4) A Committee of Scholars, *Qararāh al-Majma' al-Fiqhī al-Islāmī*, Mecca, from 1st to 17th Conference (Mecca: Majma' Fiqhī al-Islāmī, 2004.AD) 343-345.

From the above resolution it is clear that this college of collective jurisprudence also believes in the issuance of divine legal penalties on eyewitness and confession, however, supplementary rebukes may be sentenced depending upon DNA fingerprinting.

*Islamic Fiqh Academy, India*, passed resolutions pertaining to DNA fingerprinting in its 15<sup>th</sup> summit held on 11-13 March 2006:

“The crimes liable to divine Legal vengeance (*Qīṣāṣ*), Blood money (*Diyyat*) or divine legal penalties should not be decided only on the base of DNA fingerprinting. However, while deciding crimes other than *Hudūd* and *Qīṣāṣ*, the judge can get help from it and if necessary, can enforce for this<sup>(1)</sup> .

This institute, in its summit held in *Al-Jazirah*, on 13-18 September 2012, explained the types of presumptions that included DNA test and its types, pictures, recorded voices and emails, etc. This summit proposed to decide to use confession, eyewitness, oath, etc., but, if these evidences are not available, then, convincing presumptions other than the above mentioned stipulated evidences, should be used. This summit proposed to make decisions using the convincing presumptions in all cases other than the cases of *Hudūd*, *Qīṣāṣ* or *Diyyat*, during proceeding any other clue, should not be present that may contradict these evidences. To prove the rights of humans, the uncertain presumptions may also be used if the judge has surety about his decision<sup>(2)</sup>. In short *Al-Majma' al-Fiqhī al-Islāmī, Jeddah* also agreed with the decision of IOMS, Kuwait.<sup>(3)</sup>

According to the *Hudūd Law of Pakistan* act 06 and act 17, the punishment of stoning should be sentenced only if the raper confesses it, or four eyewitness provide the witness. *Islamic council of Ideology* explained that in the cases of rape the punishment of stoning could not be sentenced on the only evidence of DNA fingerprinting. However, it may be used to verify the central evidence.<sup>(4)</sup>

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- (1) IFA, Naey Masā'il or Fiqh Academy kay Faysalay (New Delhi: IFA Publications, 2013 AD) 216.
  - (2) Dr. Ramdhan, "Qararāt wa Tawṣīyah Majma' al-Fiqh al-Islāmī." <http://goo.gl/8f3lhZ> (19-12-2014)
  - (3) Prof. Ibrāhīm Bashīr al-Ghawīl, "al-Damocratah wa al-Ulmāniyah," *Mujallah al-Majma' al-Fiqh al-Islāmī Under al-Mu'tamar al-Islāmī, Jeddah* (1982) P1079- 1084, Vol 11.
  - (4) The Dawn, 18, September 2013.

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**Conclusion:**

DNA fingerprinting is not directly associated with the traditional evidences of confession, oath, personal knowledge, opinion of other judges, tossing, insight, custom and tradition, however, it may be able to help the above stated evidences. It resembles with forensic evidences, convincing presumptions and expert opinion. Nevertheless, proving the crime or the identification of the victim or the identification of the criminal, other factors should not be ignored. The factors that may limit its accuracy and objectivity include errors in collecting the samples, laboratory errors, chimerism, erroneous interpretation and contradiction with other evidences. Therefore, it is necessary not to punish any person only on the basis of DNA fingerprinting, until other evidences attest it. It should be considered the first strong clue in the decision making on which the investigation will proceed successfully. However, in some crimes, i.e. rape or fornication, etc., it becomes even stronger attesting evidence for the eyewitness, which may create the surety for the judge to sentence stoning or whipping to the accused, however, the sole DNA test is not a sufficient evidence for the divine legal punishment (*Hudūd*), however, supplementary rebuke (*taa'zeer*) may be sentenced. All the colleges of collective jurisprudence are agreed on presenting it as a conclusive evidence only if other evidences affirm it and judge becomes sure about the case. In the cases of *Huddod*, *Qisās* and *Diyyat* it should be considered as a supporting evidence, not the primary evidence, however, in the absence of stipulated evidences, rebuking punishment may be given.

