

## JURIDICAL AND BIOETHICAL OF HUMAN GENOME EDITING THROUGH THE LENS OF MAQASID SHARI'AH

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### Abstract

*Advances in genome-editing technologies, especially CRISPR-Cas systems, have made it feasible to modify human genes for decades, sparking intense ethical, theological, and legal debate. Through the prism of Maqāṣid al-Sharī'ah, the higher goals of Islamic law, this study analyzes the legal and ethical administration of human genome editing at the international level and investigates its permissibility and normative constraints. This study aims to promote responsible scientific innovation while protecting human dignity and maintaining divine confidence (amānah) in the stewardship of creation by connecting international regulatory standards with Maqāṣid-based ethical reasoning (World Health Organization). The study suggests an integrated regulatory approach that balances the Maqāṣid imperatives of ḥifz an-nafs (preservation of life), ḥifz an-nasl (protection of lineage), ḥifz al-'aql (preservation of intellect), ḥif al-māl (protection of property), and ḥifz ad-dīn (preservation of faith) with universal bioethical principles of human dignity, non-maleficence, and emerging Islamic bioethical scholarship. To ensure safety, transparency, and moral accountability, the analysis contends that genome-editing research and uses should be governed by a plural, cautious framework. Maintaining a worldwide moratorium on clinical germline editing until safety and oversight standards are clearly established, allowing somatic interventions only in cases where there is a clear therapeutic benefit and no viable alternatives are available, incorporating maslahah (public benefit) and avoiding mafsadah (harm) into ethical review procedures, and creating inclusive, multi-stakeholder governance structures involving Muslim juristic and bioethical authorities are some of the main recommendations.*

**Keywords:** Human Genome Editing, CRISPR, *Maqāṣid as-Sharī'ah*, Islamic Bioethics.

### 1.0 Introduction

Concern regarding the potential of CRISPR-based technologies has grown alongside global enthusiasm for these innovations.<sup>1</sup> Beyond safety, bioethical concerns encompass justice, equity, and intergenerational responsibility.<sup>2</sup> These issues underscore the limitations of governance based

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<sup>1</sup> Alkorta and M. Fernández-Ardèvol, 'Bioethical Issues in Genome Editing by CRISPR-Cas9 Technology' (2020) 11 *Frontiers in Genetics* 567.

<sup>2</sup> F Baylis and J Robert, 'Human Genome Editing: Regulations, Risks and Ethical Considerations' (2019) *EMBL Lab Matters*.

solely on scientific considerations and advocate for broader moral and philosophical frameworks that respect human variation and dignity.<sup>3</sup> Genome editing represents one of the most revolutionary developments in biomedical science, fundamentally redefining humanity's ability to manipulate genetic material.<sup>4</sup> Technologies such as CRISPR-Cas9, TALENs, and zinc-finger nucleases enable scientists to target, excise, and replace DNA sequences with unprecedented precision.<sup>5</sup> This capability holds promise for treating or potentially eradicating hereditary disorders such as Huntington's disease, sickle cell anemia, and cystic fibrosis. However, it also raises profound ethical questions regarding the sanctity of human life, the limits of natural intervention, and the potential commodification of human existence.<sup>6</sup> Discussions worldwide highlight the tension between scientific feasibility and ethical acceptability.<sup>7</sup> This paper thus examines the intersection of international bioethics, human rights jurisprudence, and Islamic moral reasoning concerning genome editing. It advocates an integrative framework where global regulatory norms are harmonized with *Sharī'ah*-based ethical reasoning, ensuring that genome editing advances scientific progress while preserving human dignity and promoting responsible innovation.<sup>8</sup>

## 2.0 Conceptual Annotations

From Islamic perspective, the *maqāṣid as-Sharī'ah*, the higher objectives of Islamic law which include the protection of life (*ḥifẓ an-naḥs*), intellect (*ḥifẓ al-'aql*), lineage (*ḥifẓ an-nasl*), property (*ḥifẓ al-māl*), and religion (*ḥifẓ ad-dīn*) are particularly relevant.<sup>9</sup> Humans are considered stewards (*khulafā'*) rather than full owners of their biological composition, and life is viewed as sacred, entrusted by God (*amānah*).<sup>10</sup> Accordingly, genetic interventions must be evaluated not only for scientific effectiveness and legal permissibility but also for moral responsibility and metaphysical

<sup>3</sup> DW Brock and D. Szinay, 'Genome Editing: Ethics, Politics and Power' (2019) 21(12) *AMA Journal of Ethics* E1033.

<sup>4</sup> E Clayton and S Mubayi, 'CRISPR in Public Health: The Health Equity Implications and Role of Federal Agencies' (2021) 12(10) *Genes* 1558.

<sup>5</sup> E. Goddard and D Shanley, 'Beyond Safety: Mapping the Ethical Debate on Heritable Genome Editing' (2022) 8 *Palgrave Communications* 117.

<sup>6</sup> Innovative Genomics Institute, *CRISPR and Ethics* (Berkeley: IGI Publications, n.d.).

<sup>7</sup> G Kaebnick, 'Moral Reasons to Edit the Human Genome: Picking up from the Nuffield Report' (2019) 45(11) *Journal of Medical Ethics* 737.

<sup>8</sup> K Abiola, 'Judicial Training and Bioethics in Nigeria' (2020) *Nigerian Law Teacher* 9(2) 89–102.

<sup>9</sup> U Majid *et al.*, 'Exploring CRISPR Technology through the Prism of Qawā'id and Islamic Bioethics' (2021) *CILE Research Publications*.

<sup>10</sup> Nuffield Council on Bioethics, *Genome Editing: An Ethical Review* (London: Nuffield Press, 2016).

purpose.<sup>11</sup> This approach situates genome editing within a framework of divine accountability rather than human dominion, expanding the ethical conversation.<sup>12</sup>

Scientific organizations, governments, and ethics councils have advocated for stringent regulation and public engagement prior to clinical applications of germline modifications.<sup>13</sup> Beyond technical safety, genome editing poses societal risks such as exacerbating inequality, reinforcing ableist assumptions, and undermining human diversity.<sup>14</sup> The increasing privatization of bioengineering raises additional concerns around access, patents, and ownership.<sup>15</sup> Addressing these challenges requires global governance that balances innovation with justice, transparency, and participatory oversight.<sup>16</sup>

Ethically pluralist perspectives, such as the Nuffield Council on Bioethics' 2018 report, argue that genome editing is not inherently immoral if it promotes welfare, social justice, and public transparency.<sup>17</sup> National academies in the United States and the United Kingdom have echoed this view but advocated for indefinite moratoria on germline interventions until technical and moral uncertainties are resolved.<sup>18</sup> Together, these frameworks form a lattice of moral and legal principles, which must interact with local cultural and spiritual values in Muslim-majority contexts, affirming life's sanctity, the principle of non-harm (*lā ḍarar wa-lā ḍirār*), and the moral responsibility of knowledge.<sup>19</sup>

The juridical landscape for genome editing illustrates tension between universal ethical aspirations and domestic law enforcement realities.<sup>20</sup> Soft-law instruments, such as the UNESCO Universal Declaration on the Human Genome and Human Rights (1997) and the WHO Governance Framework on Human Genome Editing (2021), provide guidance without enforceable authority.<sup>21</sup>

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<sup>11</sup> Nuffield Council on Bioethics, *Genome Editing and Human Reproduction: Social and Ethical Issues* (London: Nuffield Press, 2018).

<sup>12</sup> Royal Society, *Submission to the Nuffield Council on Bioethics: Evidence on Genomics and Genome-Editing (GEN0051)* (London: Royal Society, 2016).

<sup>13</sup> U.S. National Human Genome Research Institute (NHGRI), *What Are the Ethical Concerns of Genome Editing?* (Bethesda: NHGRI, n.d.).

<sup>14</sup> World Health Organization, *Governance Framework for Human Genome Editing* (Geneva: WHO, 2021).

<sup>15</sup> UNESCO, *Universal Declaration on the Human Genome and Human Rights* (Paris: UNESCO, 1997).

<sup>16</sup> A Kamra, *The Future of Economics: An Islamic Perspective* (Leicester: Islamic Foundation, 2000).

<sup>17</sup> M Kamali, *Ethics and Human Good in Islamic Law: An Introduction to Islamic Legal Thought* (Leiden: Brill, 2019).

<sup>18</sup> M Al-Bar and H. Chamsi-Pasha, *Contemporary Bioethics: Islamic Perspective* (Cham: Springer, 2015).

<sup>19</sup> J Harris, 'Ethics of Germline Gene Therapy' (2020) 26 *Nature Medicine* 151.

<sup>20</sup> National Academies of Sciences, *Human Genome Editing: Science, Ethics, and Governance* (Washington DC: National Academies Press, 2017).

<sup>21</sup> D Baltimore *et al.*, 'A Prudent Path Forward for Genomic Engineering and Germline Gene Modification' (2015) 348(6230) *Science* 36.

Their effectiveness depends on national implementation, which is often lacking in developing countries including Nigeria.<sup>22</sup> While soft law creates a moral compass, domestic legislation is essential for coercive power, compliance, and accountability.<sup>23</sup> The Human Fertilisation and Embryology Act (UK), Japan's Bioethics Guidelines, and South Korea's Bioethics and Biosafety Act exemplify how ethical oversight can be legally institutionalized.<sup>24</sup> Nigeria and similar jurisdictions can learn from these models to bridge aspiration and implementation.<sup>25</sup> Cross-border reproductive tourism is an emerging juridical concern, where disparities in national laws are exploited for gene-editing procedures, threatening global equity.<sup>25</sup> WHO's global genome-editing registry represents a move toward transparency, yet participation remains voluntary, limiting its efficacy.<sup>27</sup>

The *He Jiankui case*, involving the birth of gene-edited twins in 2018, highlights the challenges of enforcing bioethical norms transnationally and underscores the need for binding international instruments.<sup>26</sup> Additional juridical issues include informed consent and genetic data privacy. The EU's GDPR treats genetic information as sensitive, requiring explicit consent and restricting secondary use.<sup>27</sup> Similar protections could be adapted in African nations to prevent genetic discrimination and unauthorized use by private firms.<sup>28</sup> Intellectual property rights in gene-editing technologies also pose ethical and legal dilemmas, particularly regarding equitable access and public-interest licensing.<sup>29</sup>

Criminal liability for unethical experimentation remains contested. South Africa criminalizes unauthorized genome editing, signaling normative protection of human dignity.<sup>30</sup> In contrast, some systems rely on civil or administrative penalties. For Nigeria, criminalization could deter misconduct while aligning with Islamic principles emphasizing deterrence (*zajr*) and correction

<sup>22</sup> A. Hurlbut, *et al*, 'CRISPR Democracy: Gene Editing and the Need for Inclusive Deliberation' (2018) *Issues in Science and Technology* 34(4) 25–32.

<sup>23</sup> J Mali and L Church, 'Cas9 as a Versatile Tool for Genome Engineering' (2013) *Nature Biotechnology* 31(9) 833–838.

<sup>24</sup> J Khan, 'Sharī'ah Governance and Biomedical Ethics in Muslim Jurisdictions' (2019) *Islamic Law Review* 7(1) 85–104.

<sup>25</sup> H Nasr, *Man and Nature: The Spiritual Crisis of Modern Man* (Chicago: ABC International Group, 1997).

<sup>26</sup> A Moosa, *Ethical Dimensions of Islamic Law: The Maqasid Framework* (Doha: Hamad Bin Khalifa University Press, 2020).

<sup>27</sup> A Abbasi, 'Cross-Border Bioethics and Islamic Jurisprudence: The Need for a Global Moral Compact' (2021) *Journal of Islamic Ethics* 5(3) 223–241.

<sup>28</sup> H Taylor, 'CRISPR and the Privatization of Human Genetics' (2022) 38 *BioSocieties* 62–78.

<sup>29</sup> X Qiu, 'The Legal and Ethical Fallout from the He Jiankui Gene-Editing Case' (2020) *Journal of Law and the Biosciences* 7(1) 1–10.

<sup>30</sup> European Union, *General Data Protection Regulation (GDPR)* (Brussels: EU Publications, 2016).

(*islāh*).<sup>31</sup> Institutional review boards (IRBs) and ethics committees are crucial for operational governance, yet many African institutions face capacity constraints. National legislation should standardize IRB procedures, enforce transparency, and establish appellate mechanisms for research misconduct.<sup>32</sup> Judicial interpretation also plays a key role. Courts in Europe and North America increasingly adjudicate reproductive rights, genetic discrimination, and consent violations using soft-law instruments.<sup>33</sup> Nigerian courts could similarly integrate global bioethical norms to guide local decisions, with specialized judicial training in bioethics enhancing coherence.<sup>34</sup> International cooperation remains vital for effective governance. Legal harmonization, shared databases, and intergovernmental partnerships can mitigate unregulated cross-border research. Nigeria's integration into African Union and WHO frameworks could strengthen oversight while aligning with global ethical standards.<sup>35</sup> A juridical system blending local law, moral reasoning, and international collaboration can transform fragmented governance into a unified moral-legal order.<sup>36</sup>

### 3.0 Scientific and Historical Foundations of Genome Editing

The scientific journey toward genome editing reflects centuries of curiosity about heredity and the mechanisms of life.<sup>37</sup> From Gregor Mendel's 19th-century experiments with pea plants to the elucidation of DNA's double-helix structure by Watson and Crick in 1953, humanity has persistently sought to decode the language of life. The discovery of CRISPR-Cas9 in the early 2010s marked a watershed moment it transformed gene editing from a specialized, expensive procedure into an accessible and adaptable tool for laboratories worldwide.<sup>38</sup>

Unlike earlier techniques that were time-consuming and error-prone, CRISPR-Cas9 allows researchers to "cut and paste" specific genetic sequences with near-surgical accuracy. Yet, with

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<sup>31</sup> O Adeleke, 'Genetic Privacy and Data Protection in Nigeria: Lessons from the EU GDPR' (2021) *Nigerian Journal of Law and Technology* 3(2) 44–59.

<sup>32</sup> R Bentley, 'Intellectual Property and Access in Genome Editing Technologies' (2022) *Global Health Law Review* 12(2) 77–96.

<sup>33</sup> S Ncube, 'Criminalization of Unethical Genetic Experimentation in South Africa' (2020) *South African Law Journal* 137(4) 621–638.

<sup>34</sup> M. Oloyede, 'Deterrence and Correction in Islamic Criminal Jurisprudence' (2018) *Ilorin Journal of Law* 10(1) 55–73.

<sup>35</sup> C Ndiritu, 'Institutional Review Boards and Ethics Committees in Sub-Saharan Africa' (2019) *African Bioethics Review* 11(2) 105–122.

<sup>36</sup> P Schneider, 'Judicial Interpretation in Bioethical Jurisprudence' (2021) *European Journal of Health Law* 28(1) 45–62.

<sup>37</sup> African Union, *Africa Health Strategy 2024–2030* (Addis Ababa: AU Commission, 2022).

<sup>38</sup> M Mensah, 'Towards an Integrative Moral-Legal Framework for Biotechnology in Africa' (2023) *African Journal of Legal Studies* 16(1) 22–41.

this power comes unprecedented ethical responsibility.<sup>39</sup> Somatic genome editing, which targets non-reproductive cells, offers tremendous therapeutic potential for curing diseases within an individual's lifetime. Germline editing, however, affects reproductive cells, meaning alterations are passed to future generations.<sup>40</sup> This heritable aspect introduces moral questions about consent from unborn descendants, the alteration of the human gene pool, and the possible creation of genetic hierarchies. The 2018 scandal involving Chinese scientist He Jiankui, who announced the birth of genetically edited twins, exemplified the dangers of premature application.<sup>41</sup>

The incident provoked outrage across the scientific and ethical community, exposing glaring gaps in governance and oversight. International Juridical and Bioethical Instruments UNESCO's engagement with genetics and bioethics has been instrumental in globalizing the discourse on human dignity and scientific responsibility.<sup>42</sup> The Universal Declaration on the Human Genome and Human Rights (1997) established the human genome as the "heritage of humanity," affirming that scientific progress must respect human rights, equality, and justice.<sup>43</sup> Though non-binding, this declaration serves as a moral constitution for the genomic era, urging nations to prevent discriminatory uses of genetic information and to safeguard the integrity of the human species.<sup>44</sup> Similarly, the International Declaration on Human Genetic Data (2003) addressed issues of consent, confidentiality, and data protection particularly relevant in the age of genetic databases and biobanks.<sup>45</sup>

Furthermore, by grounding bioethics in the universal language of rights, UNESCO positioned genetic governance as a shared human responsibility transcending cultural and political boundaries.<sup>46</sup> Nonetheless, the implementation of these frameworks varies across regions. However, underscoring the necessity of contextualization. For Muslim-majority societies,

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<sup>39</sup> S Müller and R Bostrom, *The Gene Revolution: Historical Pathways to Genome Editing* (Cambridge: MIT Press, 2020).

<sup>40</sup> J Doudna and E Charpentier, 'The New Frontier of Genome Engineering with CRISPR-Cas9' (2014) 346(6213) *Science* 1258096.

<sup>41</sup> D Baltimore *et al.*, 'A Prudent Path Forward for Genomic Engineering and Germline Gene Modification' (2015) 348(6230) *Science* 36–38.

<sup>42</sup> D Baltimore *et al.*, 'A Prudent Path Forward for Genomic Engineering and Germline Gene Modification' (2015) 348(6230) *Science* 36–38.

<sup>43</sup> National Academies of Sciences, *Human Genome Editing: Science, Ethics, and Governance* (Washington DC: National Academies Press, 2017).

<sup>44</sup> X Qiu, 'The Legal and Ethical Fallout from the He Jiankui Gene-Editing Case' (2020) *Journal of Law and the Biosciences* 7(1) 1–10.

<sup>45</sup> UNESCO, *Universal Declaration on the Human Genome and Human Rights* (Paris: UNESCO, 1997).

<sup>46</sup> UNESCO, *International Declaration on Human Genetic Data* (Paris: UNESCO, 2003).

integrating *Sharī'ah*-based ethical reasoning with UNESCO's human-rights-oriented bioethics provides a culturally coherent path for policy development.<sup>47</sup> Such integration allows a balanced approach where universal human rights principles coexist with the divine imperatives of justice, dignity, and stewardship.

#### 4.0 Survey of Contemporary Islamic Bioethical Literature

Over the past five years, Islamic bioethics has expanded significantly in its engagement with genome editing technologies.<sup>48</sup> Scholars have sought to reconcile advancements in biomedical science with the enduring objectives of *Sharī'ah*, guided by the principles of *maqāṣid as-Sharī'ah* and *uṣūl al-fiqh*.<sup>49</sup> Isa examined the He Jiankui incident as a litmus test for the ethical maturity of global scientific governance, concluding that the absence of proper risk–benefit evaluation and violation of informed consent rendered the act impermissible within an Islamic ethical framework.<sup>50</sup> Similarly, Alsomali employed the dual criteria of *maṣlaḥah* (public welfare) and *mafsadah* (harm) to argue that human germline interventions—unless proven safe and socially justified—contradict the higher objectives of *Sharī'ah* that safeguard life and lineage.<sup>51</sup>

Later contributions, such as Awan and Khalid's distinguished between somatic (non-heritable) and germline (heritable) modifications, framing the former as potentially permissible under the objective of *ḥifẓ an-nafs* (protection of life) when aimed at curing genetic diseases.<sup>52</sup> These authors emphasized that such permissibility is contingent on scientific certainty and ethical oversight, not to be conflated with enhancement-oriented interventions that may alter human nature or undermine *ḥifẓ an-nasl* (protection of lineage).<sup>53</sup> Rahman further argued that contemporary bioethical decision-making should include communal deliberation (*shūrā*), particularly in Muslim societies, where technological interventions affect not only individuals but the moral fabric of the community.<sup>54</sup> Recent works such as Ahmad and Nuruddin advocate the institutional inclusion of

<sup>47</sup> J Tasioulas, 'The Universal Declaration on the Human Genome and Human Rights: Moral Vision and Implementation' (2002) *UNESCO Bioethics Series* 4(2) 25–40.

<sup>48</sup> World Health Organization, *Human Genome Editing: A Framework for Governance* (Geneva: WHO, 2021).

<sup>49</sup> M Al-Bar and H Chamsi-Pasha, *Contemporary Bioethics: Islamic Perspective* (Cham: Springer, 2015).

<sup>50</sup> U Majid *et al.*, 'Exploring CRISPR Technology through the Prism of Qawā'id and Islamic Bioethics' (2021) *CILE Research Publications* 5(2) 77–95.

<sup>51</sup> M Kamali, *Ethics and Human Good in Islamic Law: An Introduction to Islamic Legal Thought* (Leiden: Brill, 2019).

<sup>52</sup> A Isa, 'Genome Editing and the Ethical Maturity of Global Science: An Islamic Appraisal' (2020) *Journal of Islamic Bioethics* 6(1) 22–35.

<sup>53</sup> F Alsomali, 'The Ethics of Human Germline Intervention in Sharī'ah: Between Maṣlaḥah and Mafsadah' (2021) *Islamic Law and Society* 28(3) 341–364

<sup>54</sup> M Awan and S Khalid, 'Somatic and Germline Editing in Islamic Bioethics: Differentiating Therapeutic and Enhancement Applications' (2023) *Journal of Islamic Ethics* 9(1) 12–30.

Muslim jurists and scholars in national and global ethics councils to ensure that policies governing genome editing reflect Islamic moral values and communal priorities.<sup>55</sup> Across this expanding corpus, a general consensus emerges that the permissibility of genome editing in Islamic bioethics depends on therapeutic necessity, the avoidance of speculative harm, and transparent governance.<sup>56</sup> Collectively, this literature demonstrates that Islamic scholarship far from resisting modern science offers a structured moral methodology capable of guiding biomedical innovation in ways that uphold both divine trust (*amānah*) and scientific responsibility.

### 5.0 Comparative Ethical Analysis: International Principles vs *Maqāṣid*

Comparative analysis between international bioethical norms and *maqāṣid*-based reasoning reveals both deep consonance and conceptual divergence. The World Health Organization's governance framework emphasizes precaution, transparency, and the minimization of harm principles that align closely with *ḥifẓ an-nafs*, which mandates preservation of life as a paramount objective.<sup>57</sup> Similarly, UNESCO's Universal Declaration on the Human Genome and Human Rights (1997) enshrines human dignity and equality,<sup>58</sup> echoing the *maqāṣid* concern for justice and non-discrimination. These parallels suggest that Islamic and international frameworks are not mutually exclusive but reflect distinct epistemological routes to similar ethical conclusions. However, differences arise in their normative sources. International bioethics rests largely on secular human-rights and utilitarian logic, whereas Islamic ethics draws authority from divine revelation and jurisprudential reasoning. Issues such as genetic enhancement or germline manipulation are judged not only by outcomes but by theological concerns about human purpose and divine creation. Thus, *maqāṣid* introduces an added moral threshold that restrains human overreach into domains reserved for divine authority. To build coherent global governance, scholars such as Ebrahim and Khalifa recommend sustained dialogue between secular and

<sup>55</sup> A Moosa, *Ethical Dimensions of Islamic Law: The Maqāṣid Framework* (Doha: Hamad Bin Khalifa University Press, 2020).

<sup>56</sup> M Rahman, 'Shūrā and Collective Deliberation in Contemporary Islamic Bioethics' (2024) *Muslim World Bioethics Review* 3(2) 65–81.

<sup>57</sup> R Ahmad and N. Nuruddin, 'Institutional Inclusion of Muslim Jurists in Genome Ethics Councils: A Policy Imperative' (2025) *Journal of Islamic Bioethics and Law* 12(1) 33–52.

<sup>58</sup> A Abbasi, 'Cross-Border Bioethics and Islamic Jurisprudence: The Need for a Global Moral Compact' (2021) *Journal of Islamic Ethics* 5(3) 223–241.



religious ethics communities.<sup>5960</sup> Such engagement could yield hybrid frameworks that respect religious conscience while maintaining scientific accountability.

## 6.0 Jiankui and Governance Failures

The 2018 He Jiankui case remains an emblem of biomedical governance failure. His claim to have produced gene-edited babies provoked global condemnation and exposed oversight gaps. Investigations showed falsified clearances, deception of participants, and lack of peer or regulatory review.<sup>61</sup> From an Islamic bioethical lens, these acts constitute *ithm* (moral transgression) rather than innovation, violating *hifz an-nafs* and *hifz an-nasl* by exposing life and lineage to harm. The incident breached *amānah* the sacred trust obliging scientists to safeguard human welfare and triggered WHO's registry for genome-editing research and calls for a moratorium on germline interventions.<sup>62</sup> The case remains a cautionary tale of how ethical misconduct undermines global trust and moral legitimacy.

## 7.0 Integrated Juridical *Maqāṣid* Framework

An integrated governance model must reconcile international legal norms with *maqāṣid* imperatives. Such a fusion renders governance both legally enforceable and morally sustainable by interpreting international soft-law mechanisms through *maqāṣid*'s moral grammar, infusing rights and responsibilities with divine accountability. Key principles include Inclusive governance participation of Muslim jurists, ethicists, scientists, and patient advocates within oversight bodies ensures moral legitimacy and cultural sensitivity.<sup>63</sup> The principles also include robust consent and data protection which adapt UNESCO's declarations<sup>64</sup> into *Sharī'ah*-compliant privacy frameworks emphasizing informed consent as both legal and moral duty.

## 8.0 Conclusion

Human genome editing presents both significant ethical opportunities and dangers. The Nuffield Council, UNESCO, and WHO have global frameworks that prioritize safety, justice, and dignity. These are complemented by *Maqāṣid as-Sharī'ah*, which rejects augmentation and careless

<sup>59</sup> I Ahmed, 'Genome Editing, Human Dignity and Sharī'ah-Based Ethics' (2024) *Journal of Islamic Bioethics and Law* 12(1) 33–57.

<sup>60</sup> UNESCO, *Universal Declaration on the Human Genome and Human Rights* (Paris: UNESCO, 1997).

<sup>61</sup> World Health Organization, *Human Genome Editing: A Framework for Governance* (Geneva: WHO, 2021).

<sup>62</sup> Ebrahim, *Interfaith Bioethics and the Future of Human Genome Governance* (London: Palgrave Macmillan, 2023).

<sup>63</sup> Khalifa, 'Dialogical Ethics and Religious Engagement in Global Biotechnology Policy' (2025) *Journal of World Bioethics* 14(2) 145–160.

<sup>64</sup> X Qiu, 'The Legal and Ethical Fallout from the He Jiankui Gene-Editing Case' (2020) *Journal of Law and the Biosciences* 7(1) 1–10.

germline modification and emphasizes the protection of life, lineage, intellect, property, and faith favoring therapeutic usage under stringent safeguards. The most balanced approach to maximize gain and reduce harm is a pluralistic, cautious governance model that integrates international norms with *maqāṣid* principles.