

ABSTRACT

Examining a regulatory pathway for 3D bioprinting: An investigation into its relationship with intellectual property and human rights

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3D bioprinting comprises printing of organic material like bones, organs, and skin using one's own cells as bioink. These synthetic replicas have the potential to cure disease or illness, provide an alternative to live donor transplantation, and increase the accuracy of research on the human body (Vermeulen et al., 2017; Murphy & Atala, 2014). Although a recent and still emerging technology as a derivative of 3D printing, research into the potential benefits and disadvantages of 3D bioprinting is growing. As a new and beneficial innovation, 3D bioprinting is arguably subject to intellectual property protection. Research in the field of biotechnology highlights the need to strike a balance between encouraging scientific research and development, while protecting the rights of the public (Andrews & Nelkin, 1998). However, studies that have examined the patentability of 3D bioprinting rarely address specific human rights concerns. Furthermore, investigation around the interaction of 3D bioprinting with other forms of intellectual property is lacking. This presentation will provide a brief introduction to the science of 3D bioprinting and how it affects numerous human rights. This will be followed by an examination of whether the current intellectual property system is suitable for regulation of this invention. Doctrinal methodology is the primary research method employed to examine applicable law and legal regimes relating to 3D bioprinting, intellectual property and human rights. This research expands on existing literature and contributes to addressing the gap in the knowledge base. By analysing the interface of 3D bioprinting, intellectual property and human rights, this study aims to shed light on potential implications of intellectual property protection for 3D bioprinting technology and to offer potential pathways for ensuring that any regulatory measures prioritise and support human rights.

References

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