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# Foreword

When the human genome program was completed and we started to understand the genetic makeup of human beings, the theoretical possibility of manipulating the genetic structure also emerged. In the debates on how much and what kind of interventions are ethically acceptable, only a few resulted in widespread agreement, and one of them was on the prohibition of modifying the genome of future generations. In Europe, under Article 13 of the Oviedo Convention, an intervention seeking to alter the human genome may only be undertaken for preventive, diagnostic, or therapeutic purposes and only if its aim is not to change the genome of descendants. The Oviedo Convention is more than 20 years old, but its ethical principles are considered the standard setting even beyond the European continent. With the introduction of preimplantation gene editing, it seems that the distinction between germ line and somatic line is getting blurred. Therefore, it is crucial to explore and take stock of the manifold legal challenges of preimplantation genetic interventions on a global scale.

Pin Lean Lau's book provides an excellent review of this field, and it is unique in that it discusses preimplantation genetic interventions in a multidisciplinary and comparative context. Many layers of analysis complement each other: besides discussing the philosophical understanding of reproduction and enhancement, the book also explores the ethical principles formed in the debates on the status of the human embryo, on abortion, on early prenatal testing technologies, and on genetic interventions, and it engages with various legal theories as well on the fundamental rights and constitutional rights and on the role of regulation. Pin Lean Lau's work also challenges the notion that European or Western ethical principles and moral values are considered universally valid. The traditional focus on European bioethical discourses is reframed within a rich comparative ethical and legal context: the book analyzes a wide landscape of jurisdictions, including Malaysia, Thailand, and Australia, besides the United States and the United Kingdom. As the field of biomedical research itself becomes more and more global and new technological advances are reported increasingly from Asian countries, it is essential that the philosophical, ethical, and legal analysis of genetic research and interventions also develops a comparative one on a global focus.

As Sheila Jasanoff stated in her work *Reframing Rights: Bioconstitutionalism in the Genetic Age*, “Two encyclopedic bodies of writing—one social, the other scientific—define the meaning of life in our era. Encompassing, respectively, law and biology, these intertwined, mutually supporting, indeed coproducing textual projects frame the possibilities, limits, rights, and responsibilities of being alive—most especially for the species we call human.” In the above quote, Sheila Jasanoff distinguishes between the two bodies of writing, the social and the biological, and claims that the two are now linked more than ever before. Although the two domains, law and science, have developed separately, the new textuality of genetics brings much closer the two disciplines than ever before. Now, we simply cannot escape the multidisciplinary studies in this field.

This multidisciplinary and comparative perspective is clearly shown in the structure of the book: after a rich introduction, it discusses the legacy of eugenics in contemporary law, the legal and ethical debates in embryo selection, the regulatory framework in biomedical technologies, the international biomedical laws in the field of genetic, and also the dynamics of basic constitutional rights in different jurisdictions. The bibliography also reflects this multidisciplinary approach, and the references to the American, British, Australian, Malaysian, and Thai legal doctrines promise to be a rich source of material for further research.

Pin Lean Lau eloquently demonstrates that working in the field of contemporary biomedical law and bioethics requires passion and patience: passion to understand the multiplicity of philosophical, ethical, and legal issues related to genetic research and the technologies of genetic interventions and patience to develop a consistent comparative analysis of a wide variety of ethical values and legal jurisdictions. Without such passion and patience, it would not be possible to work in this dynamic field, where new scientific challenges can shake the existing normative framework every day. The book shows that science, law, and ethics consist of not just dry texts that need to be collected, assessed, and compared, but it could also be formulated eloquently. I believe that it will be an important source book for lawyers, scientists, professors, students, and different kinds of stakeholders within the biomedical industry.

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# Abbreviations

AHEC	Australian Health Ethics Committee
AHRC	Australian Human Rights Commission
AHRD	ASEAN Human Rights Declaration
ARTs	Assisted Reproductive Technologies
ASEAN	Association of Southeast Asian Nations
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
CRISPR	Clustered Regularly Interspaced Short Palindromic Repeats
DNA	Deoxyribonucleic Acid
ECHR	European Convention on Human Rights
ECtHR	European Court of Human Rights
EMA	European Medicines Agency
EU	European Union
FSA	Fertility Society of Australia
GDP	Gross Domestic Product
HFEA Act	Human Fertilization and Embryology Authority Act
HFEA	Human Fertilization and Embryology Authority
HLA	Human Leukocyte Antigen
HRA	Human Rights Act 1998
HRBA	Human Rights-Based Approach
HRCM Act	Human Rights Commission of Malaysia Act 1999
IBC	International Bioethics Committee
ICCPR	International Covenant on Civil and Political Rights
ICESCR	International Covenant on Economic, Social and Cultural Rights
ICPD	International Conference on Population and Development
IDHGD	International Declaration on Human Genetic Data 2003
IVF	In Vitro Fertilization
JRC	Joint Research Centre for Science and Policy
LF	Legal Foresighting
NHMRC	National Health and Medical Research Council
NHRC	National Human Rights Committee

NHSCB	National Health Service Commissioning Board
NIH	National Institutes of Health
OECD	Organization for Economic Co-operation and Development
OHCHR	Office of the High Commissioner for Human Rights
PGD	Preimplantation Genetic Diagnosis
PGS	Preimplantation Genetic Screening
RRI	Responsible Research Innovation
RTAC	Reproductive Technology Accreditation Committee
SUHAKAM	Human Rights Commission of Malaysia
UDBHR	Universal Declaration on Bioethics and Human Rights 2005
UDHG	Universal Declaration on the Human Genome and Human Rights 1997
UDHR	Universal Declaration on Human Rights 1948
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHO	World Health Organization
WMA	World Medical Association