**MIPLC Studies** 22

Ali Seyhan Uğurlu

# Bioethics and the Patent Eligibility of Human Embryonic Stem Cells-Related Inventions in Europe



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#### Foreword

This work corresponds to the thesis submitted to the Munich Intellectual Property Law Center in partial satisfaction of the requirements for the degree of Master of Laws in Intellectual Property (LL.M. IP) in September 2012.

The patent eligibility of hESC-related inventions creating a tempestuous nexus between patent law and stem cell technology is analyzed in this research with a special focus on the situation in Europe. Achievements in the biotechnology industry related to the stem cell technology are quite important. This is also recognized by the Nobel Prize Committee by awarding the Nobel Prize in Physiology or Medicine 2012 to John B. Gurdon and Shinya Yamanaka for the discovery that mature cells can be reprogrammed to become pluripotent. In line with the pace of development in the stem cell technology, awaited judiciary development at the submission date of the thesis has reached to a result and the update has been done accordingly for the publication purpose as of the situation in November 2013.

It is needless to say that the completion of this research is not the sole achievement of the author. I would like to express my deepest and sincere gratitude to Prof. Dr. h.c Joseph Straus for his valuable guidance and support for the completion of this thesis. It was an immense pleasure working under his supervision. I am thankful to Dr. Gintarė Surblytė and Seth I. Ericsson for keeping open their door to answer any question during the whole LL.M program. I thank to my tutors, Andrea Hüllmandel and Eugenio Hoss for their mentorship, assistance and encouragement during the coursework. I acknowledge the endless help of the MIPLC team to facilitate our stay at MIPLC. I would like to acknowledge the financial support of the Max Planck Institute for Intellectual Property and Competition Law for the publication of this work. Last but not least, I am thankful to my parents who supported and endorsed me during my stay in Munich. This book is dedicated to my grandmothers.

Munich, November 2013

Ali Seyhan Uğurlu

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# Acronyms and Abbreviations

AG Advocate General

Apr. April
Art. Article
Aug. August

BGH Bundesgerichtshof

Biotech Directive Directive 98/44/EC of the European Parliament and of the Council

on the Legal Protection of Biotechnological Inventions

BPatG Bundespatentgericht

CJEU Court of Justice of European Union

Dec. December

DNA Deoxyribonucleic Acid EBA Enlarged Board of Appeal

EC European Council

ECHR European Court of Human Rights

ECJ European Court of Justice
EPC European Patent Convention
EPO European Patent Organisation

ESC Embryonic Stem Cell

EU European Union

Feb. February

GPA German Patent Act

GRUR Gewerblicher Rechtsschutz und Urheberrecht

hESC Human Embryonic Stem Cell

IIC International Review of Intellectual Property and Competition Law

iPSCs Induced Pluripotent Stem Cells

Jan. January
Mar. March
Nov. November

NGO Non-Governmental Organisation

Oct. October

OD Opposition Division

#### Acronyms and Abbreviations

SCNT Somatic Cell Nuclear Transfer

TRIPs Agreement on Trade Related Aspects of Intellectual Property Rights

WTO World Trade Organisation

para paragraph

R&D Research and Development

StZG Stammzellgesetz (German Stem Cell Act)

TBA Technical Board of Appeal

TFEU Treaty on the Functioning of the European Union

U.K. The United Kingdom

UK IPO United Kingdom Intellectual Property Office
WARF Wisconsin Alumni Research Foundation

WTO World Trade Organisation