Reproductive Technologies and the Law

Reproductive Technologies and the Law

THIRD EDITION

Judith Daar

Ambassador Patricia L. Herbold Dean and Professor of Law Salmon P. Chase College of Law, Northern Kentucky University

I. Glenn Cohen

Deputy Dean and James A. Attwood and Leslie Williams
Professor of Law
Harvard Law School
Faculty Director, Petrie-Flom Center for Health Law Policy
Biotechnology & Bioethics

Seema Mohapatra

MD Anderson Professor in Health Law SMU Dedman School of Law

Sonia M. Suter

The Kahan Family Research Professor The George Washington University Law School Founding Director, Health Law Initiative



Copyright © 2022 Carolina Academic Press, LLC All Rights Reserved

ISBN 978-1-5310-1525-1 e-ISBN 978-1-5310-1526-8 LCCN 2021948366

Carolina Academic Press 700 Kent Street Durham, NC 27701 (919) 489-7486 www.cap-press.com

Printed in the United States of America

JD: For Leah, first of the future

IGC: For Eli Adashi and Peter Barton Hutt, who both taught me so much in these areas

SM: For Asha and Aleena, the biggest source of joy

SS: For Michael, Ariana, Mateo, and Kelsey, who enrich my life

Contents

Table of Cases	xxiii
Preface to the Third Edition	xxix
Preface to the Second Edition	xxxi
Preface to the First Edition	xxxiii
Acknowledgments	XXXV
Chapter 1 • Human Reproduction: Natural and Assisted Methods	
of Conception	3
Section I: The Wonders of Human Reproduction	3
A. Natural Conception	4
Natural Reproduction and Reproduction-Aiding Technologies,	
Lawrence J. Kaplan & Carolyn M. Kaplan	4
Notes and Questions	8
B. Infertility: When Natural Conception Does Not Occur	12
1. Defining the Causes of Infertility	13
The New York State Task Force on Life and the Law, Assisted	
Reproductive Technologies: Analysis and Recommendations	
for Public Policy	13
2. Defining the Incidence of Infertility	14
Notes and Questions	16
Section II: Judicial Perspectives on the Modern Role of Reproduction	20
A. An Introductory Case	20
Bragdon v. Abbott	20
Notes and Questions	25
Section III: Assisted Conception	28
A. A Brief History of ART	28
1. The Earliest Years	28
2. Human Artificial Insemination	29
Gursky v. Gursky	30
Notes and Questions	34
B. Conception in the Laboratory — In Vitro Fertilization	36
1. Investigating the Possibility of Conception Outside the Body	36
2. Advances in IVF and the Future of ART	38
C. Successes and Failures in ART Medicine	40
1. Is ART Effective?	40
Notes and Ouestions	43

viii CONTENTS

2. Is ART Safe for Children and Adults?	45
a. Safety to Children	45
Growth and Development of Children Born After In Vitro	
Fertilization, Manon Ceelen, Mirjam M. Van Weissenbruch,	
Jan P.W. Vermeiden, Flora E. Van Leeuwen, and Henriette A.	
Delemarre-van de Wall	45
Do Assisted Reproductive Technologies Cause Adverse Fetal	
Outcomes?, George Kovalevsky, Paolo Rinaudo, and	
Christos Coutifaris	48
Notes and Questions	49
b. Safety to Adults	54
Funding In Vitro Fertilization Treatment for Persistent	
Subfertility: The Pain and the Politics, Edward G. Hughes	
and Mita Giacomini	55
Notes and Questions	56
Section IV: What Is the Nature and Status of the Human Embryo?	57
A. The Biological Status of the Human Embryo	58
What Is an Embryo?, Howard W. Jones Jr. and Lucinda Veeck	58
Notes and Questions	60
B. The Legal Status of the Human Embryo	62
1. An Introductory Case	62
Davis v. Davis	62
Notes and Questions	69
2. Legal Responses to the Status of the Human Embryo	70
Rights of Embryo and Foetus in Private Law,	
Timothy Stoltzfus Jost	71
Notes and Questions	73
C. The Moral Status of the Human Embryo	74
Notes and Questions	75
Chapter 2 • Procreational Liberty: Constitutional Jurisprudence	
and the Right to Reproduce	81
Section I: Traditional Reproduction and the Constitution	82
A. Establishing Reproduction as a Fundamental Right	82
1. The Early Cases	82
Meyer v. Nebraska	82
Notes and Questions	84
Skinner v. Oklahoma	87
Notes and Questions	89
2. State Support for Mandatory Sterilization	92
Buck v. Bell	92
Notes and Questions	94
Facing Carrie Buck, Paul A. Lombardo	96
B. The Right to Avoid Procreation	100
1. Emerging Advances in Human Contraception	100
Griswold v Connecticut	100

CONTENTS ix

Notes and Questions	104
Eisenstadt v. Baird	107
Notes and Questions	109
2. Abortion	113
a. The Seminal Case	113
Roe v. Wade	113
Notes and Questions	119
b. The <i>Roe</i> Progeny	121
Webster v. Reproductive Health Services	121
Planned Parenthood of Southeastern Pennsylvania v. Casey	124
Notes and Questions	129
c. Banning an Abortion Procedure	133
Gonzales v. Carhart	134
Notes and Questions	137
d. Revisiting the Undue Burden Standard	140
Whole Woman's Health v. Hellerstedt	141
Notes and Questions	145
e. Revisiting the Undue Burden Standard Yet Again	146
June Medical Services v. Russo	147
Notes and Questions	151
Section II: Assisted Reproduction as a Fundamental Right	153
A. Arguments for Recognizing ART as a Fundamental Right	153
CHILDREN OF CHOICE: FREEDOM AND THE NEW	
Reproductive Technologies, John A. Robertson	154
B. Arguments against Recognizing ART as a Fundamental Right	161
Constitutional Misconceptions, Radhika Rao	161
Regulating Choice: A Constitutional Law Response to	
Professor John A. Robertson's Children of Choice,	
Ann MacLean Massie	166
Notes and Questions	169
C. Other Constitutional Frameworks to Assess Whether ART Is a	
Fundamental Right	171
The "Repugnance" Lens of Gonzales v. Carhart and Other	
Theories of Reproductive Rights: Evaluating Advanced	
Reproductive Technologies, Sonia M. Suter	172
Notes and Questions	179
D. Judicial Perspectives on ART as a Fundamental Right	179
1. Equating ART and Natural Conception	180
Lifchez v. Hartigan	180
Kass v. Kass	183
Notes and Questions	186
2. Distinguishing ART from Natural Conception	187
Davis v. Davis	187
Notes and Questions	193
McQueen v. Gadberry	195
Notes and Questions	200

x CONTENTS

Chapter 3 • The Business of ART: Selling, Donating, and Insuring	
Assisted Reproduction	205
Section I: Understanding the Market for Reproductive Technologies	205
A. Fertility Clinics as Providers of ART Services	205
1. A Patient's Perspective	205
Notes and Questions	206
2. The Physician's Perspective	212
Financial "Risk-Sharing" or Refund Programs in Assisted Reproduction:	
An Ethics Committee Opinion, Ethics Committee of the American	
Society for Reproductive Medicine	212
B. Profiles of ART Clients	216
Race and the New Reproduction, Dorothy E. Roberts	217
Section II: Sperm and Egg "Donors"	222
A. Sperm Donations: Assessing Risks and Benefits	223
1. Donor Disclosure: A Child's Perspective	226
Notes and Problems	228
2. The Pitfalls of Sperm Donation	232
Johnson v. Superior Court	232
Notes and Questions	240
B. Egg Donations: Assessing Risks and Benefits	242
1. The Business of Egg Donation	244
Ova-Compensating?; Women Who Donate Eggs To Infertile	
Couples Earn a Reward — But Pay a Price, Martha Frase-Blunt	244
Physical Beauty Is Only Egg Deep, Judith Daar	249
Notes and Questions	249
2. The Ethics of Egg Donation	251
Financial Compensation of Oocyte Donors: An Ethics	
Committee Opinion, Ethics Committee of the American	
Society for Reproductive Medicine	251
Notes and Questions	256
3. Informed Consent and Egg Donation	259
a. Informing Egg Donors of Risks and Benefits	259
Eggs for Sale: How Much Is Too Much?, Gregory Stock	260
Regulating the Fiction of Informed Consent in ART	
Medicine, Judith Daar	262
Notes and Questions	263
b. Informing Donors About Gamete Placement	264
Litowitz v. Litowitz	265
Notes and Questions	268
Section III: The Benefits and Burdens of an ART Market	269
A. Should We Ban a Market for the Sale of Gametes?	269
1. Arguments for Market Inalienability	269
Collaboration and Commodification in Assisted Procreation:	
Reflections on an Open Market and Anonymous Donation	
in Human Sperm and Eggs, Mary Lyndon Shanley	270

CONTENTS xi

Notes and Questions	271
2. Arguments In Support of a Gamete Market	272
The Ethics and Economics of Enforcing Contracts of	
Surrogate Motherhood, Richard A. Posner	273
B. Should the ART Market Be Open to All Willing Buyers and Sellers?	277
1. Exclusions Based on Age	277
Death of Aging Mother Raises More Questions About	
IVF Rules, Judith Daar	277
Oocyte or Embryo Donation to Women of Advanced	
Reproductive Age: An Ethics Committee Opinion, Ethics	
Committee of the American Society for Reproductive	
Medicine	279
Notes and Questions	283
2. Exclusions Based on Health Status	283
Human Immunodeficiency Virus and Infertility Treatment:	
An Ethics Opinion, Ethics Committee of the American	
Society for Reproductive Medicine	285
Notes and Problems	289
3. Exclusions Based on Marital Status and Sexual Orientation	293
North Coast Women's Care Medical Group, Inc. v. San Diego	
County Superior Court	293
Notes and Questions	298
Section IV: Insuring ART Services	299
A. The Market Landscape	299
1. The Status of Infertility Insurance Coverage	299
a. Statutory Law	299
Mandate to Offer, Texas Insurance Code § 1366.003-005	301
Mandate to Provide, Mass. Gen. Laws Ann. ch. 176A, § 8K	301
b. Case Law	304
Can Money Buy Happiness? An Examination of the Coverage	
of Infertility Services Under HMO Contracts, Lisa M. Kerr	304
Notes and Questions	307
Saks v. Franklin Covey	309
Notes and Questions	317
2. The Politics of ART Insurance Coverage	319
Funding In Vitro Fertilization Treatment for Persistent	
Subfertility: The Pain and the Politics, Edward G. Hughes	
& Mita Giacomini	319
Fertility Preservation for Medical Reasons and Reproductive	
<i>Justice</i> , Seema Mohapatra	319
Racial and Ethnic Disparities in Assisted Reproductive	
Technology Access and Outcomes, Molly Quinn and	
Victor Fujimoto	320
Questions	322
B. ART Insurance Coverage and the Effect on Clinical Outcomes	323

xii CONTENTS

Problem	325
Chapter 4 • Choosing Our Children's Traits: Genetic Selection	
in ART	327
Section I: The Current State of the Technology	331
Prenatal Testing	331
Preimplantation Genetic Testing (PGT)	333
Section II: The Various Applications of the Technology	338
A. Choosing a Child's Genetic Makeup to Prevent Disease	339
1. Using Preimplantation Genetic Testing (PGT) to Avoid Illness	339
a. PGT and the Meaning of Disability	340
Notes and Questions	341
b. PGT and Adult-Onset Diseases	345
Use of Preimplantation Genetic Testing for Monogenetic	
Defects (PGT-M) for Adult-Onset Conditions: An Ethics	
Committee Opinion, The Ethics Committee of the	246
American Society of Reproductive Medicine	346
Notes and Questions	349
2. Using Preimplantation Genetic Testing to Cure Illness in Others	354
Notes and Questions	355
Using Preimplantation Genetic Diagnosis to Create a Stem	
Cell Donor: Issues, Guidelines & Limits, Susan M. Wolf,	257
Jeffrey P. Kahn, and John E. Wagner	357 363
Notes and Questions B. Using Preimplantation Genetic Testing to Help Achieve Pregnancy	368
C. Using PGT to Select for Sex and Other Nonmedical Traits	370
1. Choosing a Child's Sex	370
a. Post-Conception Sex Selection	370
Notes and Questions	374
b. Preconception Sex Selection	377
Notes and Questions	380
c. Sex Selection for Nonmedical Reasons	383
Use of Reproductive Technology for Sex Selection for	000
Nonmedical Reasons, The Ethics Committee of the	
American Society of Reproductive Medicine	384
Notes and Questions	389
2. Using PGT for Nonmedical Traits Other than Sex	395
The Law of Above Averages: Leveling the New Genetic	
Enhancement Playing Field, Maxwell J. Mehlman	397
Notes and Questions	400
D. Using PGT to Select for Medical Conditions	402
Notes and Questions	408
Section III: The Current State of the Law	409
Preimplantation Genetic Diagnosis: A Discussion of	
Challenges, Concerns, and Preliminary Options Related	

CONTENTS xiii

to the Genetic Testing of Human Embryos, Genetics &	
Public Policy Center	409
Notes and Questions	413
Section IV: Legal Debate Surrounding Genetic Selection	416
A. Constitutional Analysis	416
Is There a Constitutional Right to Preconception Sex Selection?,	
Carl H. Coleman	417
The "Repugnance" Lens of Gonzales v. Carhart and Other	
Theories of Reproductive Rights: Evaluating Advanced	
Reproductive Technologies, Sonia M. Suter	419
Notes and Questions	426
B. Legal Dilemmas Surrounding Genetic Selection	430
Grossbaum v. Genesis Genetics Institute, LLC	430
Notes and Questions	435
Problem	439
Chapter 5 • Family Law Issues in ART: Questions of Parentage and	
Parental Rights	441
Section I: Early Dilemmas in Family Law	442
A. Determining Paternity in AID Families	442
Strnad v. Strnad	442
Notes and Questions	442
People v. Sorensen	443
Notes and Questions	447
B. Early Changes in the Law	448
Uniform Parentage Act (1973)	448
Jhordan C. v. Mary K.	450
Notes and Questions	454
C. The Problem of Known Donors	455
Ferguson v. McKiernan	456
Notes and Questions	464
Section II: Building Families through Surrogacy	466
A. An Introductory Case	466
In the Matter of Baby M	466
Notes and Questions	477
B. Distinguishing "Traditional" and "Gestational" Surrogacy	479
1. Traditional Surrogacy	480
R.R. v. M.H.	480
Notes and Questions	485
2. Gestational Surrogacy	487
Johnson v. Calvert	487
Notes and Questions	493
A.H.W. v. G.H.B.	499
Notes and Questions	501
3. Profiles in Surrogate Parenting Arrangements	503

xiv CONTENTS

a. Profile of a Traditional Surrogate Mother	504
One Surrogate's Experience	504
b. Profile of a Gestational Surrogate Mother	506
The Experience of a Lifetime	506
c. Profile of an Intended Mother	507
Thoughts on Becoming a Mommy	507
Notes and Questions	508
C. Statutory Responses to Surrogate Parenting Arrangements	511
1. Laws Regulating Surrogacy	511
a. Individual State Laws	512
State Surrogacy Laws	512
Florida Statutes Annotated, Title XLIII	517
Iowa Code Annotated, Title XVI. Criminal Law and	
Procedure	518
Nebraska Revised Statutes, Chapter 25. Courts;	
Civil Procedure	519
Notes and Questions	519
b. Uniform Laws on Surrogacy	520
Uniform Status of Children of Assisted Conception Act 1988	520
Uniform Parentage Act (amended 2017)	523
Notes and Questions	526
2. Constitutionality of Surrogacy Laws	528
J.R., M.R. and W.K.J. v. Utah	528
Notes and Questions	536
Section III: Building Families through the Use of Donor Gametes	537
A. The State of the Art in Donor Gametes	537
B. The State of the Law in Donor Gametes	539
1. Judicial Perspectives	539
In re Marriage of Buzzanca	539
Notes and Questions	545
2. Statutory Perspectives on Donor Gametes	547
Vernon's Texas Statutes and Codes Annotated, Family	
Code \$160.754	550
Code of Virginia, Title 20. Domestic Relations	550
Florida Statutes Annotated Title XLIII. Domestic Relations	551
Questions	552
Section IV: Building Families in the LGBTQ Community	552
A. The Prevalence of Same-Sex Parents	552
B. Pre-Marriage Equality: Family Law Dilemmas for Same-Sex Parents	555
1. Determining Paternity	555
C.O. v. W.S.	555
Lamaritata v. Lucas	557
Notes and Questions	558
2. Determining Maternity	560

CONTENTS xv

White v. White	560
Adoption of Tammy	562
Notes and Questions	567
K.M. v. E.G.	569
Notes and Questions	574
C. ART in an Era of Marriage Equality	577
Obergefell v. Hodges	578
Notes and Questions	582
D. Transgender Family Formation	583
Access to Fertility Services by Transgender and Nonbinary	
Persons, Ethics Committee of the American Society for	
Reproductive Medicine	583
Notes and Questions	585
Section V: Mishaps in the Laboratory: The Children of ART Gamete	
Mix-Ups	586
A. Defining the Problem	586
B. Judicial Perspectives on Gamete Mix-Ups	588
1. The Case of Physician Malfeasance	588
Prato-Morrison v. Doe	588
Notes and Questions	592
2. Cases of Physician Negligence	594
Robert B. v. Susan B.	594
Notes and Questions	597
Perry-Rogers v. Fasano	598
Genes, Parents, and Assisted Reproductive Technologies:	
ARTs, Mistakes, Sex, Race, & Law, Leslie Bender	602
Notes and Questions	604
C. Legislative Perspectives on Gamete Mix-Ups	605
California Penal Code	606
Uncommon Misconceptions: Holding Physicians	
Accountable for Insemination Fraud, Jody Lynee Madeira	608
Note	609
Chapter 6 • Life after Death: Postmortem Reproduction	611
Section I: The Possibilities for Postmortem Reproduction	612
A. Freezing Sperm	612
1. Sperm Retrieval During Life	612
a. Sperm Freezing — Past and Present	612
b. Emerging Legal Disputes Over Frozen Sperm	614
Hall v. Fertility Institute of New Orleans	615
Notes and Questions	618
Posthumous Reproduction, John Robertson	621
Notes and Questions	622
2. Sperm Retrieval After Death	622

xvi CONTENTS

Posthumous Conception by Presumed Consent: A	
Pragmatic Position for a Rare but Ethically Challenging	
Dilemma, Kelton Tremellen and Julian Savulescu	624
Matter of Zhu	626
Notes and Questions	628
B. Freezing Eggs: Retrieval During Life and After Death	632
Notes and Questions	634
C. Freezing Embryos	635
Section II: Legal Dilemmas in Postmortem Reproduction	637
A. Family Law Questions: Who Is a Parent?	637
In re Estate of Kolacy	639
Notes and Questions	643
B. Probate Law: Awarding Inheritance Rights and Death Benefits	644
Woodward v. Commissioner of Social Security	644
Notes and Questions	650
Posthumously Conceived Children and the U.S. Supreme	
Court	654
Section III: Statutory Frameworks for Evaluating the Rights of	
Postmortem Conception Children	656
A. Uniform Laws Governing Postmortem Reproduction	657
1. The Uniform Parentage Act	657
Notes and Questions	659
2. The Uniform Probate Code	660
Notes and Questions	661
B. A Closer Look at One Jurisdiction: California	662
California Probate Code	663
Notes and Questions	664
C. Model Laws and Task Force Reports	666
1. The ABA Model Act	666
Model Act Governing Assisted Reproduction Section of	
Family Law, American Bar Association	666
2. The New York State Task Force on Life and the Law	667
Questions	667
Chapter 7 • ART and Divorce: Disputes over Frozen Embryos	669
Section I: The Popularity and Frailty of Embryo Cryopreservation	670
Frisina v. Woman and Infant Hospital of Rhode Island	671
Miller v. American Infertility Group of Illinois, S.C.	676
Notes and Questions	678
York v. Jones	686
Notes and Questions	690
Problem	691
Section II: The Legal Landscape Surrounding Frozen Embryo Disputes	691
A. An Introductory Case	691
Davis v. Davis	691

CONTERNIE	••
CONTENTS	XV11

Notes and Questions	695
B. The Contractual Approach	698
Kass v. Kass	698
Notes and Questions	704
Problems	715
C. A Procreation Avoidance Approach	716
A.Z. v. B.Z.	716
Notes and Questions	721
D. Procreation Permitted?	728
Reber v. Reiss	728
Notes and Questions	733
Problem	739
E. The Question of Parental Rights	739
Problem	742
Section III: The Problem of Excess and Abandoned Embryos	742
A. Excess Embryos and Patient Decision Making	744
1. Donate the Embryos for Research	744
a. Type of Research	744
b. State Law Prohibitions on Embryo Research	746
2. Discard the Embryos After a Designated Time Frame	747
3. Maintain the Embryos in Frozen Storage	747
4. Donate the Embryos to Another Couple	748
B. Excess Embryos and Lack of Patient Decision Making:	
The Problem of Abandonment	752
Notes and Questions	755
Chapter 8 • Regulating Reproductive Technologies	757
Section I: The Legal Landscape for ART: An Introduction	758
A. The Goals of Regulation	758
Regulating Reproductive Technologies: Panacea or Paper	
Tiger?, Judith Daar	758
Notes and Questions	759
B. The Current State of Regulation	761
1. Direct Regulation by the Federal Government	762
2. Indirect Regulation by the Federal Government	764
3. Direct Regulation by State Governments	766
4. Indirect Regulation by State Governments	767
5. Self-Regulation by the Fertility Industry	768
Notes and Questions	770
Section II: Is (Increased) ART Regulation Necessary?	771
A. Protecting ART Patients	772
1. Luring Patients: False Advertising and Deceptive Statements	772
Karlin v. IVF America, Inc.	772
Notes and Questions	775
2. Lack of Informed Consent	776

xviii CONTENTS

Elements to Be Considered in Obtaining Informed Consent	
for ART	776
3. Treatment Errors: Negligence, Theft, and Fraud	778
4. Protecting Patient Health	781
B. Protecting ART Offspring	785
Doolan v. IVF America (MA), Inc.	785
Notes and Questions	788
C. Protecting ART Physicians	791
1. Enhancing Public Confidence	791
2. Authorizing Treatment Denials	792
Child-Rearing Ability and the Provision of Fertility Services,	
The Ethics Committee of the American Society for	
Reproductive Medicine	792
Notes and Questions	798
Section III: Proposed Regulatory Schemes	799
Reproduction & Responsibility: The Regulation of New	
Biotechnologies, President's Council on Bioethics	801
Notes and Questions	806
Chapter 9 • Human Embryonic Stem Cell Research	811
Section I: The Science of Embryonic Stem Cell Research	812
A. Introduction to the Terms	812
Stem Cell Research: Is the Law Preventing Progress?,	
Jennifer L. Enmon	812
Notes and Questions	814
B. Human and Animal Stem Cell Studies	819
Problem	825
C. Framing the Debate Over Stem Cell Research	826
Monitoring Stem Cell Research, The President's Council	
on Bioethics	826
Section II: The Legal Framework Surrounding Stem Cell Research	828
A. Laws Relating to Embryos as Sources of Stem Cells	828
1. Federal Law Relating to Embryos as Sources of Stem Cells	828
Stem Cell Division: Abortion Law and Its Influence on the	
Adoption of Radically Different Embryonic Stem Cell	
Legislation in the United States, the United Kingdom, and	
Germany, Kara L. Belew	828
Notes and Questions	832
Doe v. Shalala	834
Question	839
2. State Laws Relating to Embryos as Sources of Stem Cells	839
Ethical Issues in Human Stem Cell Research, National	
Bioethics Advisory Commission	839
Notes and Questions	841
Section III: Government Funding of Stem Cell Research	843

CONTENTS xix

A. Federal Funding of Stem Cell Research	844
1. The First Presidential Proclamation: August 9, 2001	844
Remarks by the President on Stem Cell Research	845
Notes and Questions	847
2. Defending and Questioning the Bush Administration Policy	850
The Pedagogical Significance of the Bush Stem Cell Policy:	
A Window into Bioethical Regulation in the United States,	
O. Carter Snead	850
An Ethical Defense of Federal Funding for Human Embryonic	
Stem Cell Research, James F. Childress	854
Notes and Questions	856
Problem	857
3. President Obama and a New Era of Stem Cell Research Policy	858
THE WHITE HOUSE, EXECUTIVE ORDER	858
Notes and Questions	859
Sherley v. Sebelius	862
B. State Funding of Stem Cell Research	866
1. California	867
2. New Jersey	869
3. Other State Activities	871
Problem	872
Section IV: International and Cross-Cultural Perspectives on Stem Cell	
Research	872
A. International Perspectives	872
Australia	874
Canada	875
Chile	876
China	876
Costa Rica	878
France	878
Germany	878
Italy	879
Japan	880
The Netherlands	882
Norway	882
Singapore	883
South Korea	883
United Kingdom	884
Notes and Questions	885
B. Religious Perspectives on Embryonic Stem Cell Research	886
Ethical Issues In Human Stem Cell Research, National	
Bioethics Advisory Commission Summary of	
Presentations on Religious Perspectives Relating to Research	
Involving Human Stem Cells	887
Notes and Questions	894

xx CONTENTS

Chapter 10 • The Cutting Edge of Reproductive Technologies:	
Human Reproductive Cloning, Mitochondrial	
Replacement Techniques, Germline Gene Editing, and	
In Vitro Gametogenesis	897
Section I: Human Reproductive Cloning	897
A. The Science of Cloning	898
1. Reproductive Cloning	899
2. Safety and Efficacy Concerns	900
B. Inroads Into Human Cloning	902
Human Somatic Cell Nuclear Transfer and Reproductive	
Cloning: An Ethics Committee Opinion, Ethics Committee	
of the American Society for Reproductive Medicine	904
Notes and Questions	908
C. The Politics of Human Cloning	909
1. Presidential Commissions and Cloning	909
Human Cloning and Human Dignity, The President's	
Council on Bioethics	910
Notes and Questions	913
2. Legislative Responses to Cloning	914
The Threat of Human Cloning — Part 4, Cloning Policy	
in the United States, Witherspoon Council on Ethics	
and the Integrity of Science	915
Notes and Questions	919
Problem	920
D. Constitutional Aspects of Human Cloning	921
1. Cloning and Procreational Autonomy	922
Human Cloning and the Right to Reproduce,	
Elizabeth Price Foley	923
Is There a Constitutional Right to Clone?, Cass Sunstein	929
Notes and Questions	934
2. Cloning and the Right to Scientific Inquiry	935
The Naked Clone, John Charles Kunich	935
Notes and Questions	939
Section II: Mitochondrial Replacement Techniques	941
A. The Science of MRT	941
1. Current MRT Techniques and Research	941
Mitochondrial Replacement Techniques: Ethical, Social,	
and Policy Considerations, Committee on the Ethical	
and Social Policy Considerations of Novel Techniques for	
Prevention of Maternal Transmission of Mitochondrial	
DNA Diseases	941
2. What's in a Name?	946
Mitochondrial Replacement Techniques: Egg Donation,	
Genealogy and Eugenics, César Palacios-González	946
B. Legal Status of MRT	949

CONTENTS xxi

1. Current State of MRT Regulation	950
Emerging Governance of Mitochondrial Replacement	,,,,
Therapy: Assessing Coherence Between Scientific	
Evidence and Policy Outcomes, Katherine Drabiak	950
Circumvention Medical Tourism and Cutting Edge Medicine:	
The Case of Mitochondrial Replacement Therapy,	
I. Glenn Cohen	957
2. Legal Implications of MRT	964
Multi-Party Parenting in Genetics and Law: A View from	,,,
Succession, Judith Daar	964
Notes and Questions	970
C. The Ethics of MRT Beyond Mitochondrial Disease	973
Lesbian Motherhood and Mitochondrial Replacement	713
Techniques: Reproductive Freedom and Genetic Kinship,	
Giulia Cavaliere & César Palacios-González	974
'No' to Lesbian Motherhood Using Human Nuclear Genome	7/4
Transfer, Françoise Baylis	983
'Yes' to Mitochondrial Replacement Techniques and Lesbian	703
Motherhood: A Reply to Françoise Baylis, Giulia Cavaliere	
& César Palacios-González	987
Notes and Questions	989
Section III: Germline Gene Editing	990
A. The Science of Germline Gene Editing	991
The Development of Gene Editing	991
CRISPR'd Babies: Human Germline Genome Editing in the	991
'He Jiankui Affair,' Henry T. Greely	995
Notes	996
2. Germline or Heritable Gene Editing	996
3. Safety and Efficacy	997
4. Potential Uses of Germline Gene Editing	1002
Human Genome Editing: Science, Ethics, and Governance,	1002
National Academies of Sciences, Engineering,	
AND MEDICINE	1002
	1002
B. Ethical Debate Surrounding Germline Gene Editing Genetically Modified Humans? Seven Reasons to Say	1004
"No", Center for Genetics and Society	1005
Beyond Nature? Genomics Modification and the Future	1003
· · · · · · · · · · · · · · · · · · ·	1007
of Humanity, Julia D. Mahoney & Gil Siegal	1007
Notes and Questions C. Regulation and Legal Issues	
č č	1021
1. The Current State of Germline Gene Editing Regulation	1022
The Art of Regulating ART, Naomi Cahn & Sonia M. Suter	1022 1026
2. Alternative Approaches to Regulating Germline Gene Editing <i>The Art of Regulating ART</i> , Naomi Cahn & Sonia M. Suter	
Notes and Questions	1026 1030
INDIES AND QUESTIONS	1020

xxii CONTENTS

3. Constitutional Aspects of Germline Gene Editing	1038
Human Genome Editing: Science, Ethics, and Governance,	
NATIONAL ACADEMIES OF SCIENCES, ENGINEERING,	
and Medicine	1039
Notes and Questions	1040
4. Legal Dilemmas Surrounding Germline Gene Editing	1042
Wrongful Life in the Age of CRISPR-CAS: Using the Legal	
Fiction of "The Conceptual Being" to Redress Wrongful	
Gamete Manipulation, Barbara P. Billauer	1043
Notes and Questions	1044
Section IV: In Vitro Gametogenesis (IVG)	1049
A. The Science of In Vitro Gametogenesis	1049
1. The Technology Generally	1049
In Vitro Gametogenesis: Just Another Way to Have a Baby?,	
Sonia M. Suter	1049
Notes and Questions	1052
B. The Potential Uses of In Vitro Gametogenesis	1053
In Vitro Gametogenesis: Just Another Way to Have a Baby?,	
Sonia M. Suter	1053
Notes and Questions	1057
C. The Ethical Debates Surrounding In Vitro Gametogenesis	1061
1. The Ethics of IVG to Assist Reproduction	1061
Drawing the Line on In Vitro Gametogenesis, Lauren Notini,	
Christopher Gyngell & Julian Savulescu	1061
In Vitro Gametogenesis: Just Another Way to Have a Baby?,	
Sonia M. Suter	1074
Notes and Questions	1082
2. The Ethics of IVG to Perfect Reproduction	1086
In Vitro Gametogenesis: Just Another Way to Have a Baby?,	
Sonia M. Suter	1086
Notes and Questions	1090
D. Legal Issues Associated with In Vitro Gametogenesis	1092
After Sex, Courtney M. Cahill	1092
Notes and Questions	1100
Glossary of Terms	1109
Index	1121

Table of Cases

A.H.W. v. G.H.B., 499 Bolger v. Youngs Drug Prods. Corp., A.Z. v. B.Z., 716 Adoption of (see name of party) Bolling v. Sharpe, 111 Alexandria S. v. Pac. Fertility Med. Bowers v. Hardwick, 90 Box v. Planned Parenthood of Ind. & Ctr., 559 Allen v. Wright, 837 Ky., Inc., 95, 429 Am. Coll. of Obstetricians & Bragdon v. Abbott, 20, 289, 309, 313 Gynecologists v. United States Buck v. Bell, 88 FDA, 152 Burwell v. Hobby Lobby Stores, Inc., Amen v. Astrue, 643 106 American Academy of Pediatrics v. Buzzanca, In re Marriage of, 539, 723 Lungren, 238 Byrn v. New York City Health & Hosps. Corp., 701 Anderson v. Liberty Lobby, Inc., 310 Anna J. v. Mark C., 495 Application of (see name of party) C.K.G, C.L.G & C.L.G., In re, 447, Association of Data Processing Serv. 547 C.M. v. C.C. (1977), 556 Orgs. v. Camp, 837 Astrue v. Capato, 655 C.O. v. W.S., 555 Cal. Family Bioethics Council, L.L.C. B.B. v. Astrue, Bosco ex rel., 653 v. Cal. Inst. for Regenerative Med., B.L.V.B. and E.L.V.B, Adoptions of, 869, 870 567 Capato v. Comm'r of Soc. Sec., 655 Baby Girl L.J., In re, 478 Carey v. Population Services Int'l, Baby M, Matter of, 466, 499, 500, 515, 110, 125, 180, 181, 189 532 Castellano v. City of New York, 313 Baird, Commonwealth v., 107 Cleveland Board of Education v. Baker v. Carr, 837 LaFleur, 189, 721 Cole v. Gene by Gene, Ltd., 1106 Becker v. Schwartz, 438 Crandall v. Woodard, 688 Beeler v. Astrue, 652, 655 Bellotti v. Baird, 189 Creditors Service v. Sadri, 236 Belsito v. Clark, 496, 516 Cruzan v. Director, Missouri Bendix Autolite Corp. v. Midwesco Department of Health, 90 Enterprises, Inc., 149 Culliton v. Beth Isr. Deaconess Med. Berman v. Allan, 432 Ctr., 497, 498, 514, 650 Curlender v. Bio-Science Board of Trustees of University of Alabama v. Garrett, 95 Laboratories, 438

D'Ambra v. United States, 672
Dahl & Angle, In re Marriage of, 736
Daniels v. Williams, 125
Davis v. Davis, 183, 187, 193, 198, 199, 200, 673, 691, 700, 701, 729, 736
Dobbs v. Jackson Women's Health
Organization, 153
Doe v. Bolton, 113, 144, 181, 182
Doe v. Doe (A.2d 1998), 486
Doe v. Doe (N.E.2d 1974), 721
Doe v. Irvine Sci. Sales Co., 681
Doe v. Kelley, 477
Doe v. Shalala, 834
Doolan v. IVF America (MA) Inc., 436, 437, 778, 785, 1045

E.A.G. v. R.W.S., 486
EEOC v. Staten Island Savings Bank, 316
Egert v. Conn. Gen. Life Ins. Co., 27, 305
Eisenstadt v. Baird, 107, 109, 114, 116, 181, 189, 199, 416, 417, 531, 921
Employment Division v. Smith, 1102
EMW Women's Surgical Ctr. P.S.C. v. Friedlander, 152
Eng Khabbaz v. Comm'r, Soc. Sec. Admin., 652
Estate of (see name of party)
Ex rel. (see name of relator)

Fabos & Olsen, In re Marriage of, 737
Ferguson v. McKiernan, 456, 459
Findley v. Lee, 201
Finley v. Astrue, 652
Fla. Dep't of Children & Families v.
X.X.G., 568
Food and Drug Admin. v. Am. Coll.
of Obstetricians & Gynecologists,
152

Ford v. Schering-Plough Corp., 316 Frisina v. Woman and Infant Hospital of Rhode Island, 671, 679

George, In re Application of, 593

Gerber v. Hickman, 202
Gillett-Netting v. Barnhart, 655
Gonzales v. Carhart, 134, 137, 138, 139, 141, 142, 149
Goodridge v. Department of Public Health, 563, 577
Greenberg v. Miami Child.'s Hosp. Rsch. Inst., Inc., 895, 1106
Griswold v. Connecticut, 100, 114, 181, 188, 189, 418
Grossbaum v. Genesis Genetics Institute, LLC, 430
Gursky v. Gursky, 30, 443, 446

Harper v. Wausau Ins. Co., 236
Harris v. McRae, 122
Hatch v. Riggs National Bank, 836
Hawkins v. Scituate Oil, 674
Hecht v. Superior Court, 70, 619
Hill v. National Collegiate Athletic
Assn, 238
Hodas v. Morin, 498
Hopkins v. Jegley, 152
Huddleston v. Infertility Ctr. of Am.,
494
Hymowitz v. Eli Lilly & Co., 1048

In re (see name of party) Int'l Shoe Co. v. Wash., 187 Interest of (see name of party)

J.F. v. D.B., 496, 516, 547
J.M.K. and D.R.K., In re Parentage of, 464
J.M.K., In re Parentage of, 740
J.R. v. Utah, 516, 528
Jacob v. Shultz-Jacob, 559
Jacobson v. Massachusetts, 93
Janicki v. Hosp. of St. Raphael, 69, 70
Janis, Estate of, 660
Jhordan C. v. Mary K., 450, 559
Johnson v. Calvert, 487, 499, 512, 539, 541, 568, 572, 573, 574, 596, 600
Johnson v. Superior Court, 232, 240
June Med. Servs. v. Russo, 146, 147

June Medical Services v. Kliebert, 147, 151

K.M. v. E.G., 569
K.M.H., Interest of, 465
Karin T. v. Michael T., 585
Karlin v. IVF America, Inc., 772
Kass v. Kass, 69, 698, 719, 772
Kerrigan v. Comm'r of Public Health, 577
Kesler v. Weniger, 459, 733
Kievernagel, In re, 619
Kinzie v. Physician's Liab. Ins. Co., 27, 306
Kraisinger v. Kraisinger, 733
Krauel v. Iowa Methodist Med. Ctr., 308
Kristine H. v. Lisa R., 575

L Teaching Hosps NHS v. Mr. A., 604
L.A.L. v. D.A.L., 557
Lamaritata v. Lucas, 557
Lawrence v. Texas, 90, 166
Leonard F. v. Israel Discount Bank of
New York, 317
Lifchez v. Hartigan, 180
Litowitz v. Litowitz, 69, 195
Little Rock Family Planning Servs. v.
Rutledge, 152
Lockyer v. City & Cnty. of S.F., 567
Lofton v. Sec'y of the Dep't of
Children & Family Servs., 568
Loving v. Virginia, 116

Maher v. Roe, 121
Mansfield v. Hyde, 237
Marchetti v. Parsons, 673
Margaret S. v. Edwards, 939
Marks v. United States, 152
Marriage Cases, In re, 567, 577
Marriage of (see name of party)
Marrs v. Motorola, Inc., 148
Marsh v. Reserve Life Insurance Co., 305
Martin B., Matter of, 652

Matter of (see name of party) Matthew B., Adoption of, In re, 486 McDonald v. McDonald, 546 McFall v. Shimp, 356, 593 McGraw v. Sears Roebuck & Co., 315 McIntyre v. Crouch, 556 McNulty v. McDowell, 787 Meyer v. Nebraska, 82, 101 Miccolis v. Amica Mutual Insurance Co., 672, 673, 680 Michael H. v. Gerald D., 90, 1041 Mid-South Ins. Co. v. Doe, 516 Miller v. American Infertility Group of Illinois, S.C., 676 Miller v. Elliott, 33 Molloy v. Meier, 436 Moore v. East Cleveland, 721 Moore v. Regents of the Univ. of Cal., 268, 895, 1106 Morgan v. Christman, 778 Morris v. Hamilton, 688 Murphy v. United Parcel Service, 314

NAACP v. Alabama, 102 New Jersey v. T. L. O., 149 North Coast Women's Care Medical Group, Inc. v. San Diego County Superior Court, 293, 799

O.G.M., In re, 740, 741 Obergefell v. Hodges, 90, 133, 166, 179, 578, 934 Olmstead v. United States, 188 Oswego Laborers' Local 214 Pension Fund v. Marine Midland Bank, 775

Parentage of (see name of party)
Paretta v. Med. Offices for Human
Reprod., 437, 788
Patsone v. Pennsylvania, 88
Payton v. Abbott Labs, 786
Peerenboom v. Perlmutter, 1106
People v. Sorensen, 443, 539
Perry-Rogers v. Fasano, 598

Perry-Rogers v. Obasaju, 681
Phillips v. United States, 786
Pierce v. Society of Sisters, 101, 116, 189
Planned Parenthood of Ind. & Ky. v. Box, 152, 429
Planned Parenthood of Missouri v. Danforth, 181, 198, 722
Planned Parenthood of Southeastern Pennsylvania v. Casey, 90, 121, 124, 129, 133, 136, 140, 141, 143, 147, 148, 150, 198, 418, 722
Poelker v. Doe, 127
Pope v. Moore, 601
Prato-Morrison v. Doe, 588, 596
Prince v. Massachusetts, 116, 189

R.C., Interest of, 556 R.R. v. M.H., 480, 514, 721 Raftopol v. Ramey, 486, 513 Rains v. Belsh, 238 Ramos v. Louisiana, 153 Reber v. Reiss, 201, 697, 728, 737 Reed v. Reed, 108, 109 Regents of the Univ. of Cal. v. Bakke, Reilly v. Blue Cross & Blue Shield United, 307 Reilly v. United States, 674 Reuss v. Time Insurance Co., 304 Robert B. v. Susan B., 594, 780 Roberto D.B., In re, 496, 514 Roberts v. Furst, 733 Robertson v. Saadat, 620 Roe v. Casey, 836 Roe v. Wade, 67, 113, 121, 124, 129, 141, 180, 181, 189, 197, 418, 432, 701, 836 Roman v. Roman, 725, 736 Roni D. v. Stephen K., 722 Rook v. Rook, 69 Rooks, In re Marriage of, 697, 734, Royster Guano Co. v. Virginia, 108

Saks v. Franklin Covey, 309

Schafer v. Astrue, 655 Schenk v. Schenk, 729 Seaman v. Colvin, 643 Sharon S. v. Superior Court, 576 Sherley v. Sebelius, 862 Shin v. Kong, 455 Singleton v. Wulf, 181 Sisters of the Poor Saint Peters & Paul Home v. Penn, 106 Skinner v. Oklahoma, 87, 133, 188, 418, 475, 477, 530, 922 Smith v. Brown, 499 Smith v. Organization of Foster Families for Equality and Reform, 530 Soos v. Superior Court, 512, 536, 537 Stanley v. Illinois, 530 State v. O'Brien, 197, 198 Stenberg v. Carhart, 133 Stephen K. v. Roni L., 543 Stone v. Regents of University of California, 589 Strnad v. Strnad, 32, 34, 442, 443, Surrogate Parenting Assocs., Inc. v. Commonwealth, 477 Sutton v. United Air Lines, 26 Syrkowski v. Appleyard, 477

T.M.H. v. D.M.T., 576
Tammy, Adoption of, 562
Tennessee v. Lane, 95
Terrell v. Torres, 201, 713, 714, 737
Teuscher v. CCB-NWB, 232
Thornburgh v. American College of
Obstetricians and Gynecologists,
65

Szafranski v. Dunston, 697, 735, 737

Tuan Anh Nguyen v. INS, 971 Tunkl v. Regents of the Univ. of Cal., 679

Twigg v. Mays, 601

United States Gypsum Co., United States v., 151

United States v. (see name of defendant)

V.L. v. E.L., 576 Vanterpool v. Patton, 741, 742 Varnum v. Brien, 577, 578 Vernof v. Astrue, 623 Viccaro v. Milunsky, 786

Walker v. Rinck, 787 Washington v. Glucksberg, 89, 132, 133, 135, 925, 1041 Webster v. Reproductive Health Services, 121, 123, 127, 189 West v. Superior Court, 596 White v. White, 560 Whole Woman's Health v.
Hellerstedt, 140, 141, 147
Whole Woman's Health v. Paxton,
152
Winn v. Aleda Construction Co., 689
Wisconsin v. Yoder, 189
Witt v. Yale-New Haven Hosp., 681
Woodward v. Commissioner of
Social Security, 644

Yick Wo v. Hopkins, 89 York v. Jones, 67, 686

Zablocki v. Redhail, 94 Zhu, Matter of, 626

Preface to the Third Edition

The chief goal of reproductive technologies is addition. In the realm of family formation, people turn to assisted reproductive technologies (ART) to add children to their lives. When used in a medical or scientific realm, reproductive technologies add value to the health of an existing or emerging life. In the spirit of addition, this new edition welcomes three co-authors who add tremendous expertise, experience and enthusiasm to our joyful project. Each has taught, researched and written extensively in the ART field for many years, and each brings a unique perspective to the evolving range of issues and topics that cluster around reproductive medicine. Our new team is excited to launch this updated work in a field that is constantly evolving, beckoning us to keep pace with the law, science and policy surrounding reproductive technologies.

At last count, the world has welcomed over 8 million children born via ART. In some countries, conception and birth following in vitro fertilization accounts for 4 of every 100 babies born and worldwide usage grows each day. The increasing uptake of ART is addressed throughout the pages that follow by a host of new cases, statutes, policies and scholarly analyses. Along a parallel track, developments in the medical and scientific applications of reproductive technologies have surged, prompting us to add materials on emerging techniques such as germline gene editing, in vitro gametogenesis and mitochondrial replacement therapy. Public debate over the potential merits and harms of these technologies has swelled as well, a dialog we document in condensed fashion throughout the text. Since the last edition was published in 2013, the U.S. Supreme Court has upheld the fundamental right to marriage equality, a legal and social advancement inextricably linked to family formation through assisted conception. These and other changes in our field inspire us to continue teaching and learning about ART's impact on society.

We are very grateful to a talented cadre of supporters who joined our efforts to complete this edition. Many hours of research, editing, drafting and listening were performed collectively by the following individuals, together one great team. Heartfelt thanks to Jenny Du, Asia Evans, Isaac Green, Matt Kelly, Sophie Leff, Alexandra Marshall, Priya Menon, Stamatia Papakirk, Andrew Schaengold, Nikole Seay, Shamieka Seburn, and Heather Skrabak. We give special thanks to our fearless editor, Elisabeth Ebben, whose steady support has stewarded this book project since it was a mere twinkle over 15 year ago.

The four of us give thanks and love to our partners, offspring and dear ones who endured our fretting over each word, each page, each decision. And most

importantly, we thank our students who supply us with the awesome opportunity to engage with you on these profound matters.

Judith Daar I. Glenn Cohen Seema Mohapatra Sonia M. Suter February 2022

Preface to the Second Edition

Tracking a field that is in constant motion poses unique challenges and opportunities. In the six years since the first edition of this book appeared, the field of assisted reproductive technologies (ART) has, at the same time, advanced, matured, stabilized and stalled. Each of these trajectories is explored alongside the particular area to which they attach. This new edition invites readers to plumb the origins of the world of assisted conception and then trace its development to the present day. Now that the world has welcomed more than 5 million children born via ART, and nearly 3 out of every 100 babies born in the United States are the product of assisted conception, the impact and import of the field cannot be overstated.

While the book contains an array of new cases, statutes, policies and commentaries, the fundamentals remain largely unchanged. ART continues to develop as an interdisciplinary field in which physicians and scientists work to create and improve techniques for family formation, and more recently medical therapy, while lawyers and lawmakers strive to understand and organize society's response to each new development. As more ART laws pepper the legal landscape, and demand for the technologies grow, so too will the need for informed practitioners who can represent the interests and needs of each stakeholder in the complicated equation. This book is designed to pique interest in ART as an academic discipline, as well as a robust and satisfying practice option.

This new edition is the work product of many generous students, colleagues, assistants and readers who have contributed their insights and efforts to help produce a book that is worthy of today's ART enthusiast. First, I want to thank the countless students who have pondered the book's material and reached out to share their thoughts and comments, many of which are incorporated throughout the pages that follow. Next, enormous credit and gratitude go to my tireless research assistants who have exhibited nothing but good cheer is responding to myriad requests over several years. My sincere thanks to Gerrick Warrington, Megan Emmer, Michael Ruttle and Nelly Ispiryan, all RAs extraordinaire. Finally, our institution is enormously benefitted by the services of an outstanding staff, including two members who worked with me throughout the writing process. Special thanks to Jennifer Maniscalco for her consistently superb administrative assistance and Rosalie Robles for her keen editing eye. Above all, any modicum of success this book or its author enjoys is made possible by the loving support of my husband Eric and our four sons. You are the light in my life.

Judith Daar May 2012

Preface to the First Edition

The world of assisted reproductive technologies is a relative newcomer to the law school curriculum, making its perceptible entrance only within the past two decades or so. Yet the discipline mixing law and assisted conception seems to have established firm roots, sustained by a nearly daily dose of activity somewhere around the globe. The study of reproductive technologies has branched out from its founding in the late 1970s with the introduction of in vitro fertilization, to a field that includes such emerging topics as posthumous reproduction, embryonic stem cell research and human cloning. These topics often take center stage in our political and social world, making them ideal for dissection in the law school classroom.

This casebook is designed to introduce our students to the essentials in science, medicine, law and ethics that underpin and shape each of the topics that combine to form the law of reproductive technologies. As each new technology is introduced, an effort is made to fully inform the reader about the clinical application of the technique—that is, how the procedure is used to treat patients facing infertility or produce advances in medical research. Once comfortable with the science, students can then contemplate the legal parameters that do or should accompany the technology. Since so much of the law in this area is either nascent or wholly unformed, students are free, and indeed encouraged, to design legal systems that meet the needs of patients, parents, children and society at large—participants all in the world of assisted reproduction.

A cautionary note about the intensity of feelings that often attaches to discussions about the essential core of this book. At the heart of reproductive technologies beats the debate over the moral status of the early human embryo, and no book could do justice to the topic without fully exposing the depth and complexity of that debate. Early on, and continuing throughout the book, students are asked to contemplate, and even reveal, their views on the status of early human life so as to shape the various lenses through which the class will see the panoply of issues that implicate embryonic development. In my experience, this classroom discussion has been among the richest, often displaying a wide range of views yet always breeding respect for difference and the rights of expression that follow.

Writing this book has been nothing short of glorious. The mysterious world of a law professor is filled with many joys, from watching students blossom in the classroom to advancing one's own fund of knowledge through dialogue with gifted colleagues. For my already ideal academic world, the experience of preparing this casebook added an exquisite dimension that served to buoy my enthusiasm for this subject and for the art of writing in general. Though writing is a solitary sport, its very existence rests in the good graces of the many who patiently support the writer in her pursuit of the perfect turn of phrase. For me, those supporters were many and my gratitude is deep.

I want to first thank my dear friend Stacy Herman who assured me that she did indeed want to read the entire manuscript as each page slowly emerged from the printer. In her precious spare time, she diligently read every word, editing and making suggestions that undoubtedly added to the overall quality of the work. In life, such friends are rare and to be zealously cherished. Equal thanks are due Rosalie Robles, my law school assistant, who aided throughout the writing process, showing particular strength in helping secure permission to include works from the many folks whose writing I have relied upon to present a comprehensive view of the field.

Finally, and most importantly, I am profoundly grateful to my husband Eric, whose unconditional love and abiding support has been the pillar of my existence for nearly a quarter century. Together we have been blessed with the privilege of reproduction four times over, and with the birth of each son I gained a further appreciation for the quest of parenthood that, when elusive, can shake one to the core. I hope this book helps and inspires our students to probe deeply into that quest, whether for academic or personal satisfaction.

Judith Daar May 2005

Acknowledgments

The authors acknowledge the permissions kindly granted to reproduce excerpts from, or illustrations of, the materials indicated below.

Books and Articles

- Baylis, Françoise. 'No' to Lesbian Motherhood Using Human Nuclear Genome Transfer, 44 J. Med. Ethics 865, 865–66 (2018). Reprinted by permission of BMJ Publishing Group Ltd.
- Belew, Kara L., Stem Cell Division: Abortion Law and its Influence on the Adoption of Radically Different Embryonic Stem Cell Legislation in the United States, the United Kingdom, and Germany, 39 Texas Int'l Law Journal 479, 499–506 (2004). Copyright © 2004 by the Texas International Law Journal. Reprinted by permission of the author and the Texas International Law Journal.
- Bender, Leslie, *Genes, Parents, and Assisted Reproductive Technologies: ARTs, Mistakes, Sex, Race & Law,* 12 Colum. J. Gender & L. 1, 33-36 (2003). Copyright © 2003 by Leslie Bender. Reprinted by permission of the author.
- Billauer, Barbara P. Wrongful Life in the Age of CRISPR-CAS: Using the Legal Fiction of "The Conceptual Being" to Redress Wrongful Gamete Manipulation, 124 PA. St. L. Rev. 435, 438–39 (2020). Reprinted by permission of the Penn State Law Review.
- Cahill, Courtney M. *After Sex*, 97 Neb. L. Rev. 1, 3–8, 20–21, 53–64 (2018). Reprinted by permission of the author.
- Cahn, Naomi & Sonia M. Suter. *The Art of Regulating ART*, 96 CHI.-KENT L. REV. 29 (2021).
- California Cryobank Donor Essays. Copyright © 2012 by the California Cryobank, Inc. Reprinted by permission of the California Cryobank, Inc.
- Carpenter, Benjamin C., A Chip Off the Old Iceblock: How Cryopreservation Has Changed Estate Law, Why Attempts to Address the Issue Have Fallen Short, and How to Fix It, 21 Cornell J.L. & Pub. Pol'y 347, 389–91 (2011). Reprinted by permission of the Cornell Journal of Law and Public Policy.
- Cavaliere, Giulia & César Palacios-González. *'Yes' to Mitochondrial Replacement Techniques and Lesbian Motherhood: A Reply to Françoise Baylis*, 45 J. Med. Ethics 280, 280–81 (2019). Reprinted by permission of Reprinted by permission of BMJ Publishing Group Ltd.
- Ceelen, Manon, Mirjam M. Van Weissenbruch, Jan P.W. Vermeiden, Flora E. Van Ieeuwen & Henriette A. Delemarre-Vande Wall, *Growth and Development of*

- Children Born After In Vitro Fertilization, 90 Fertility & Sterility 1662 (2008). Copyright © 2008 by the American Society for Reproductive Medicine. Reprinted by permission of Elsevier, Inc.
- Center for Genetics and Society, Genetically Modified Humans? Seven Reasons to Say "No." May 7, 2015. Reprinted by permission of the Center for Genetics and Society.
- Childress, James F., *An Ethical Defense of Federal Funding for Human Embryonic Stem Cell Research*, 2 Yale J. Health Policy, Law & Ethics 157 (2001). Copyright © 2001 by the Yale Journal of Health Policy, Law & Ethics. Reprinted by permission of the author.
- Cohen, I. Glenn, *The Right Not to Be a Genetic Parent?*, 81 S. CAL. L. REV. 1115, 1169–81 (2008). Reprinted by permission of the Southern California Law Review.
- ______, Circumvention Medical Tourism and Cutting Edge Medicine: The Case of Mitochondrial Replacement Therapy, 25 Ind. J. Global Leg. Stud. 439 (2018). Reprinted by permission of the author.
- Coleman, Carl H., *Procreative Liberty and Contemporaneous Choice: An Inalienable Rights Approach to Frozen Embryo Disputes*, 84 MINN. L. Rev. 55, 56–57 (1999). Reprinted by permission of the Minnesota Law Review.
- Jis There A Constitutional Right To Preconception Sex Selection?, 1 Am. J. Bioethics 27 (2001). Copyright © 2001 American Journal of Bioethics. Reprinted by permission of the author and Taylor & Francis, Inc., http://www.taylorandfrancis.com.
- Daar, Judith, Regulating Reproductive Technologies: Panacea or Paper Tiger? 34 Hous. L. Rev. 609, 646-9 (1997). Copyright © 1997 by Judith F. Daar.
- _____, *Physical Beauty Is Only Egg Deep*, Los Angeles Times, October 28, 1999 at B11. Copyright © 1999 by Judith F. Daar.
- ______, Frozen Embryo Disputes Revisited: A Trilogy of Procreation-Avoidance Approaches, 29 J Law Med & Ethics 197, 198-199 (2001). Copyright © 2001 by the Journal of Law Medicine & Ethics. Reprinted by permission of the author and the Journal of Law, Medicine & Ethics.
- _____, *Death of Aging Mother Raises More Questions About IVF Rules*, Los Angeles Daily Journal, July 29, 2009. Copyright © 2009 by Judith F. Daar.
- Multi-Party Parenting in Genetics and Law: A View from Succession, 49 FAM. L.Q. 71 (2015). Reprinted by permission of the author.
- Drabiak, Katherine. *Emerging Governance of Mitochondrial Replacement Therapy:*Assessing Coherence between Scientific Evidence and Policy Outcomes, 20 DEPAUL
 J. HEALTH CARE L. 1 (2018). Reprinted by permission of the DePaul Journal of Health Care Law.

Enmon, Jennifer L., Stem Cell Research: Is The Law Preventing Progress? Utah Law Review 621, 622-628 (2002). Copyright © 2002 by the Utah Law Review. Reprinted by permission of the author and the Utah Law Review. Ethics Committee of the American Society for Reproductive Medicine, Disposition of Abandoned Embryos: A Committee Opinion. Copyright © 2013 by the American Society for Reproductive Medicine. Reprinted by permission of the American Society for Reproductive Medicine. _, Human Immunodeficiency Virus and Infertility Treatment: An Ethics Opinion. Copyright ©2015 by the American Society for Reproductive Medicine. Reprinted by permission of the American Society for Reproductive Medicine. _, Human Somatic Cell Nuclear Transfer and Reproductive Cloning: An Ethics Committee Opinion. Copyright ©2015 by the American Society for Reproductive Medicine. Reprinted by permission of the American Society for Reproductive Medicine. ___, Use of Reproductive Technology for Sex Selection for Nonmedical Reasons. Copyright ©2015 by the American Society for Reproductive Medicine. Reprinted by permission of the American Society for Reproductive Medicine. , Financial Compensation of Oocyte Donors: An Ethics Committee Opinion. Copyright ©2016 by the American Society for Reproductive Medicine. Reprinted by permission of the American Society for Reproductive Medicine. __, Financial "Risk-Sharing" or Refund Programs in Assisted Reproduction: An Ethics Committee Opinion, Copyright ©2016 by the American Society for Reproductive Medicine. Reprinted by permission of the American Society for Reproductive Medicine. _, Oocyte or Embryo Donation to Women of Advanced Reproductive Age: An Ethics Committee Opinion. Copyright ©2016 by the American Society for Reproductive Medicine. Reprinted by permission of the American Society for Reproductive Medicine. _, Child-Rearing Ability and the Provision of Fertility Services. Copyright ©2017 by the American Society for Reproductive Medicine. Reprinted by permission of the American Society for Reproductive Medicine. , Transferring Embryos with Genetic Anomalies Detected in Preimplantation Testing: An Ethics Committee Opinion. Copyright ©2017 by the American Society for Reproductive Medicine. Reprinted by permission of the American Society for Reproductive Medicine. J. Informing Offspring of their Conception by Gamete Donation: An Ethics

Committee Opinion. Copyright ©2018 by the American Society for Reproductive Medicine. Reprinted by permission of the American Society for Reproductive

Medicine.

- ______, Use of Preimplantation Genetic Testing for Monogenetic Defects (PGT-M) for Adult-Onset Conditions: An Ethics Committee Opinion. Copyright ©2018 by the American Society for Reproductive Medicine. Reprinted by permission of the American Society for Reproductive Medicine.
- Access to Fertility Services by Transgender and Nonbinary Persons. Copyright ©2021 by the American Society for Reproductive Medicine. Reprinted by permission of the American Society for Reproductive Medicine.
- Frase-Blunt, Martha, *Ova-Compensating? Women Who Donate Eggs to Infertile Couples Earn a Reward—But Pay a Price*, Washington Post Dec. 4, 2001, at F1. Copyright © 2001 by Martha Frase-Blunt. Reprinted by permission of the author.
- Genetics and Public Policy Center, *Preimplantation Genetic Diagnosis: A Discussion of Challenges, Concerns, and Preliminary Options Related to the Genetic Testing of Human Embryos*, Jan. 2004, pp. 7-10. Copyright © 2004 by the Genetics & Public Policy Center/The Pew Charitable Trusts. Reprinted by permission of the Genetics and Public Policy Center.
- Greely, Henry T., *CRISPR'd Babies: Human Germline Genome Editing in the 'He Jiankui Affair*', 6 J. L. Biosci. 111, 120–22 (2019). Reprinted by permission of the Journal of Law and the Biosciences.
- Hughes, Edward G. & Mita Giacomini, *Funding In Vitro Fertilization Treatment For Persistent Subfertility: The Pain and the Politics*, Vol. 76, No. 3 Fertility & Sterility 434, 436 (2001). Copyright © 2001 by the American Society for Reproductive Medicine. Reprinted by permission of Elsevier, Inc.
- Jones, Jr., Howard J. & Lucinda Veeck, *What Is An Embryo?*, Vol. 77, no. 4 Fertility & Sterility 658-659 (2002). Copyright © 2002 by the American Society for Reproductive Medicine. Reprinted by permission of Elsevier, Inc.
- Jost, Timothy, *Rights of Embryo and Fetus in Private Law*, 50 Am. J. Comp Law 633 (2002). Copyright © 2002 by the American Journal of Comparative Law. Reprinted by permission of the author and the American Journal of Comparative Law.
- Kaplan, Lawrence & Carolyn Kaplan, *The Ethics of Reproductive Technology* pp.15-19 (1992). Copyright © 1992 by Oxford University Press, Inc. Reprinted by permission of the author and Oxford University Press.
- Kerr, Lisa M., Can Money Buy Happiness? An Examination of the Coverage of Infertility Services Under HMO Contracts, 49 Case W. Res. L. Rev. 599 (1999). Copyright © 1999 by Case Western Reserve University Law Review. Reprinted by permission of Case Western Reserve University.
- Kettering, Kalena. Note, "Is Down Always Out?": The Right of Icelandic Parents to Use Preimplantation Genetic Diagnosis to Select for a Disability, 51 GEO. WASH. INT'L L. REV. 1 (2019). Reprinted by permission of the George Washington University International Law Review.

- Kovalevsky, George, Paolo Rinaudo, Christos Coutifaris, *Do Assisted Reproductive Technologies Cause Adverse Fetal Outcomes?* Vol. 79, no. 6 Fertility & Sterility 1270-1272 (2003). Copyright © 2003 by the American Society for Reproductive Medicine. Reprinted by permission of Elsevier, Inc.
- Kunich, John Charles, *The Naked Clone*, 91 Kentucky L. J. 1, 48-55 (2002). Copyright © 2002 by the Kentucky Law Journal. Reprinted by permission of the author and the Kentucky Law Journal.
- Lombardo, Paul, *Facing Carrie Buck*, 33 Hastings Center Report 14 (March-April 2003). Copyright © 2004 by The Hastings Center. Reprinted by permission of the author and The Hastings Center.
- Madeira, Jody Lynee, *Uncommon Misconceptions: Holding Physicians Accountable for Insemination Fraud*, 37 L. & INEQ. 45 (2019). Reprinted by permission of the author.
- Mahoney, Julia D. & Gil Siegal, *Beyond Nature? Genomics Modification and the Future of Humanity*, 81 L. & CONTEMP. PROBS. 195, 204–10 (2018). Reprinted by permission of the authors.
- Massie, Ann M., Regulating Choice: A Constitutional Law Response to Professor John A. Robertson's Children of Choice, 52 Wash. & Lee Law Rev. 135 (1995). Copyright © 1995 by Washington and Lee Law Review. Reprinted by permission of the author and the Washington and Lee Law Review.
- Mehlman, Maxwell, *The Law of Above Averages: Leveling the New Genetic Enhancement Playing Field*, 85 Iowa L. Rev. 517 (2000). Copyright © 2000 by Iowa Law Review. Reprinted by permission of the author and the Iowa Law Review.
- Mohapatra, Seema, Fertility Preservation for Medical Reasons and Reproductive Justice, Harv. J. Racial & Ethnic Just., 632–33, Vol. 30 (2014). Reprinted by permission of the author.
- National Academies of Sciences, Engineering, and Medicine. *Mitochondrial Replacement Techniques: Ethical, Social, and Policy Considerations.* Copyright © 2016. Reproduced with permission from the National Academy of Sciences, Courtesy of the National Academies Press, Washington, D.C.
- ______, *Human Genome Editing: Science, Ethics, and Governance* 113–16 (2017). Copyright © 2017. Reproduced with permission from the National Academy of Sciences, Courtesy of the National Academies Press, Washington, D.C.
- New York State Task Force on Life and the Law, *Assisted Reproductive Technologies: Analysis and Recommendations for Public Policy*, pp. 8-10 (1998). NY State Dep't. of Health. Reprinted with permission from the New York State Department of Health.
- Posner, Richard A., *The Ethics and Economics of Enforcing Contracts of Surrogate Motherhood*, 5 J. Cont. Health Law & Policy 21 (1989). Copyright © 1989 by Richard A. Posner. Reprinted by permission of the author.

- Price Foley, Elizabeth, *Human Cloning and the Right to Reproduce*, 65 Albany L. Rev. 625, 638-46 (2002). Copyright © 2002 by the Albany Law Review Association. Reprinted by permission of the author and the Albany Law Review.
- Quinn, Molly & Victor Fujimoto, *Racial and Ethnic Disparities in Assisted Reproductive Technology Access and Outcomes*, 105 FERTILITY & STERILITY 1120–1121 (2016). Reprinted by permission of Elsevier Inc.
- Rao, Radhika, *Constitutional Misconceptions*, 93 Michigan Law Review 1473 (1995). Copyright © 1995 by the Michigan Law Review Association. Reprinted by permission of the author and the Michigan Law Review.
- _____, *Property, Privacy, and the Human Body*, 80 B.U. L. Rev. 359, 414–15 (2000). Reprinted by permission of the author and the Boston University Law Review.
- Roberts, Dorothy E., *Race and the New Reproduction*, 47 Hast. L. Journal 935 (1996). Copyright © 1996 by University of California, Hastings College of Law. Reprinted by permission of the author and The Hastings Law Journal.
- Roberts, Jason Christopher, Customizing Conception: A Survey of Preimplantation Genetic Diagnosis and the Resulting Social, Ethical, and Legal Dilemmas, 2002 DUKE L. & TECH. REV. 12, 38–39. Reprinted by permission of the Duke Law & Technology Review.
- Robertson, John, *Children of Choice: Freedom and the New Reproductive Technologies*, pp. 22-42 (1994). Copyright © 1994 by Princeton University Press. Reprinted by permission of the author and Princeton University Press.
- ______, *Posthumous Reproduction*, IND. L.J. 1027, 1028 (1994). Reprinted by permission of the Indiana Law Journal.
- Snead, O. Carter, *The Pedagogical Significance of the Bush Stem Cell Policy: A Window into Bioethical Regulation on the United States*, 5 Yale Journal of Health Policy, Law & Ethics 491 (2005). Copyright © 2005 by the Yale Journal of Health Policy, Law & Ethics. Reprinted by permission of the author.
- Stock, Gregory, *Eggs For Sale: How Much Is Too Much?* 1 Am. J. Bioethics 26 (2001). Copyright © 2001 by Taylor & Francis, Inc. Reprinted by permission of Taylor & Francis, Inc., http://www.taylorandfrancis.com.
- Sunstein, Cass, *Is There a Constitutional Right to Clone?* 57 HASTINGS L.J. 987, 992–1001 (2002). Reprinted by permission of the Hastings Law Journal.
- Surrogacy.com, *One Surrogate's Experience*. Reprinted by permission of www.sur rogacy.com.
- _____, *Surrogate's Diary*. Reprinted by permission of www.surrogacy.com.
- _____, *Thoughts On Becoming A Mommy*. Reprinted by permission of www.sur rogacy.com.
- Suter, Sonia M., "The "Repugnance" Lens of Gonzales v. Carhart and Other Theories of Reproductive Rights: Evaluating Advanced Reproductive Technologies 76 Geo.

- Wash. U. L. Rev. 1514, 1540-62 (2008). Reprinted by permission of the George Washington University Law Review.
- _____, *In Vitro Gametogenesis: Just Another Way to Have a Baby?* 3 J. L. & BIOSCI. 87, 88–91 (2016). Reprinted by permission of the author.
- ______, Reproductive Autonomy and BRCA Testing: The Challenges of Reproductive Testing for Heritable Breast and Ovarian Cancer [draft]. Reprinted by permission of the author.
- Tremellen, Kelton & Julian Savulescu, *Posthumous Conception by Presumed Consent: A Pragmatic Positions for a Rare but Ethically Challenging Dilemma*, 3 Reprod. BIOMED. Soc'y Online, 26–29 (2016). Reprinted by permission of Elsevier Inc.
- Witherspoon Council on Ethics and the Integrity of Science, *The Threat of Human Cloning—Part 4, Cloning Policy in the United States*, 46 New Atlantis: J. Tech. & Sci. 74–81 (2015). Reprinted by permission of The New Atlantis.
- Wolf, Susan M., Jeffrey P. Kahn & John E. Wagner, *Using Preimplantation Genetic Diagnosis to Create a Stem Cell Donor: Issues, Guidelines & Limits*, 31 J. L., MED. & ETHICS 327 (2003). Reprinted by permission of the authors and the Journal of Law. Medicine & Ethics.

Photographs and Illustrations

- Blackmun, Harry. Photograph of Justice Harry A. Blackmun. Harris & Ewing Collection of the Supreme Court of the United States. Reproduced by permission.
- Blastocyst. Photograph. Reproduced by permission of Shutterstock.
- Brennan, William. Photograph of Justice William Brennan. Collection of the Supreme Court of the United States. Reproduced by permission.
- Brown, Louise. Photograph by Jonathan Brady-PA Images. Reproduced by permission of Getty Images.
- Buck, Carrie, and her mother. Photograph. Arthur Estabrook Papers, M.E. Grenander Department of Special Collections and Archives, University at Albany, SUNY. Reproduced by permission.
- Comstock, Anthony. Vintage line drawing. Reproduced by permission of Shutterstock.
- Dobbs, Alice, with Carrie baby Vivian. Photograph. Arthur Estabrook Papers, M.E. Grenander Department of Special Collections and Archives, University at Albany, SUNY. Reproduced by permission.
- Douglas, William. Photograph of Justice William O. Douglas. Collection of the Supreme Court of the United States. Reproduced by permission.
- Ginsburg, Ruth Bader. Official Photograph of Justice Ruth Bader Ginsburg. Courtesy of the Supreme Court of the United States. Reproduced by permission.
- Holmes, Oliver Wendell. Photograph of Justice Oliver Wendell Holmes. Collection of the Supreme Court of the United States. Reproduced by permission.

- John, Elton and David Furnish. Photograph taken February 26, 2017. Reprinted by permission of Shutterstock.
- Kennedy, Anthony M. Official Photograph of Justice Anthony M. Kennedy. Reproduced by permission of Shutterstock.
- McReynolds, James. Official Portrait of Justice James C. McReynolds. Vic Boswell, National Geographic Society, Courtesy of the Supreme Court of the United States. Reproduced by permission.
- Mendel, Gregor. Gregor Mendel pictured on a postage stamp printed in Vatican City, circa 1984. Reproduced by permission of Shutterstock.
- National Academy of Medicine, National Academy of Sciences, and the Royal Society, Heritable Human Genome Editing, at 54, Fig. 2–5. (2020). Reprinted by permission of National Academy of Medicine, National Academy of Sciences, and the Royal Society.
- ______, Heritable Human Genome Editing, Figure: Comparing NHEJ versus HDR Repair. Reprinted by permission of National Academy of Medicine, National Academy of Sciences, and the Royal Society.
- Heritable Human Genome Editing, 69, Fig. 2–8 (2020). Reprinted by permission of National Academy of Medicine, National Academy of Sciences, and the Royal Society.
- Heritable Human Genome Editing 79, Fig. 2–9 (2020). Reprinted by permission of National Academy of Medicine, National Academy of Sciences, and the Royal Society.
- National Human Genome Research Institute. Photograph of karyotype. Reproduced courtesy of National Human Genome Research Institute, www.genome. gov.
- O'Connor, Sandra Day. Photograph of Justice Sandra Day O'Connor. Dane Penland, Smithsonian Institute, Courtesy of the Supreme Court of the United States. Reproduced by permission.
- Ovulation Calculator. Graphic: Pathway of the egg as it is expelled from the ovary through fertilization and implantation in the uterus. Copyright © 2020. Reproduced by permission of Ovulation Calculator, www.ovulationcalculator.com.
- Parikh,. Firuza R. et al., Photographs: Biopsy techniques: (a) Blastomere biopsy (b) trophectoderm biopsy (c) polar body biopsy. *Preimplantation Genetic Testing: Its Evolution, Where Are We Today?*, 11 J. Human Repro. Sci. 306 (2018). Reproduced with permission of Wolters Kluwer Health.
- Rehnquist, William. Official Photograph of Chief Justice William H. Rehnquist. Dane Penland, Smithsonian Institute, Courtesy of the Supreme Court of the United States. Reproduced by permission.
- Richardson, J., L. Irving, L. A. Hyslop, M. Choudhary, A. Murdoch, D. M. Turnbull & M. Herbert. 2015. Graphic: Figure 2-5. Modified figures. Concise reviews:

Assisted reproductive technologies to prevent transmission of mitochondrial DNA disease. Stem Cells 33(3):639–645. Licensed via Creative Commons, information available at: http://creativecommons.org/licenses/by/4.0.

2015. Graphic: Figure 2-6. Modified figures. Concise reviews: Assisted reproductive technologies to prevent transmission of mitochondrial DNA disease. Stem Cells 33(3):639–645. Licensed via Creative Commons, information available at: http://creativecommons.org/licenses/by/4.0.

Roberts, John. Official Photograph of Chief Justice John Roberts. Reproduced by permission of Shutterstock.

Steptoe, Patrick, and Robert Edwards. Photograph by Hulton Deutsch. Reproduced by permission of Getty Images.

Thomas, Clarence. Official Photograph of Justice Clarence Thomas. Reproduced by permission of Shutterstock.

Werlin, Lawrence. Eight-Celled Embryo. Photograph by Dr. Lawrence Werlin. Reproduced by permission of Dr. Lawrence Werlin.

Zygote. Photograph. Reproduced by permission of Shutterstock.