

Curriculum Vitae

Marilyn E. Coors, Ph.D.

PERSONAL HISTORY

Current Position:

Associate Professor Emerita of Bioethics
Associate Professor of Bioethics and Genetics 13080 E. 19th Avenue, B13
Center for Bioethics and Humanities Aurora, Colorado 80045
Department of Psychiatry Email: marilyn.coors@ucdenver .edu
Division of Substance Dependence
Division of Biomedical Informatics and Personalized Medicine
Fax: 303-724-3997
University of Colorado Anschutz Medical Campus

EDUCATION

<u>School/Program</u>	<u>Degree</u>	<u>Date</u>
Cornell University	B.S.	1965-1969
University of Denver	M.S.	1969-1971
University of Denver	M.A.	1988-1991
University of Denver	Ph.D.	1991-1998
University of Colorado Health Sciences Center	Post Doctoral Fellowship Bioethics and Human Medical Genetics	1998-2000

ACADENIC APPOINTMENTS

<u>Institution</u>	<u>Rank:</u>	<u>Dates:</u>
University of Colorado Health Sciences Center	Assistant Professor	2000-2007
University of Colorado Anschutz Med Campus	Associate Professor	2007-2022
University of Colorado, Department of Psychiatry	Associate Professor	2000-2022
University of Colorado Division of Substance Dependence	Affiliate Member	2008-2022
University of Colorado Institute of Behavioral Genetics	Faculty Fellow	2010-2022
University of Colorado Department of Medicine, Division of Biomedical Informatics and Personalized Medicine	Faculty	2017-2022

HONORS, SPECIAL RECOGNITIONS AND AWARDS

1991 Honorary Doctor of Public Service
Regis University
1998 Mary Sinclair Ware Award for Outstanding Doctoral Dissertation
University of Denver
2006 Alumnae Achievement Award,
Kappa Kappa Gamma Sorority

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

1998-Present American Society of Bioethics and Humanities
2000-2004 American Society of Human Genetics

MAJOR COMMITTEE AND SERVICE RESPONSIBILITIES

University and Hospital

1995-2000 Saint Joseph Hospital Ethics Committee, *Member*
1996-2006 Colorado Children's Hospital Ethics Committee, *Member*
Colorado Children's Hospital Ethics Consultation Subcommittee, *Member*
1998-2011 University of Colorado Hospital Ethics Committee, *Member*
University of Colorado Hospital Ethics Consultation Subcommittee, *Member*
1999-2006 Colorado Multiple Institution Review Board, *Panel Member*
2006-Present Colorado Multiple Institution Review Board, *Consultant*
2001-2003 UCDHSC Cancer Committee, *Ethics Representative*
2004-2009 UCDHSC Data Safety Monitoring Board, Human Islet Transplant Trial, *Member*
2007-2009 UCDHSC Data Safety Monitoring Board, Ontologics Fully-Implantable MET™
Ossicular Stimulator, *Member*
2007-2022 UCAMC Institutional Animal Care and Use Committee, *Member*
2010-2022 Colorado Clinical and Translational Science Institute, Director of Research
Ethics; *Executive Committee*
Research Ethics Consultation Service, *Chairperson*
2013-2022 UCAMC Research Advisory Committee (RAC), *Member*
2014-2022 Observational Study Monitoring Board (OSMB) for the Studies of the
Epidemiology of Rheumatoid Arthritis (SERA), *Member*
2014-2022 Biomedical Informatics and Personalized Medicine Institute, *Member Steering
Committee*
2015-present Gates Center for Regenerative Medicine Advisory Board, *Member*
2016-2022 Colorado Longitudinal Study Board of Directors, *Member*
2016-2022 Pharmacogenomics Implementation Committee Colorado, PICColo, *Member*
2016-2022 Data Safety Monitoring Board, Randomized, Double Blind, Placebo-Controlled
Crossover study of Tolerability and Efficacy of Cannabidiol (CBD) on Tremor in
Parkinson's disease, *Member*

State and National

1990-1996 Trinity Forum, Board of Trustees, *Member*
1996-2000 Trinity Forum, *Moderator*
2000-2004 Caring for Colorado Foundation Board of Trustees, *Member*
2000-2005 Colorado State Genetics Advisory Committee, Colorado Department of Health
and Environment, *Member*
2000-Present National Catholic Bioethics Center Board of Trustees, *Member*

- 2002-2017 Ethical, Legal & Social Issues (ELSI) Working Group of the Alpha-1 Foundation, *Member; Chairperson (2013-2017)*
- 2003-2007 Colorado BioScience Association, Public Affairs and Government Relations Committee, *Member*
- 2004-2007 National Human Genome Research Institute, Advisory Council, *Member*
- 2004-Present Educating on the Nature and Dignity of Women (ENDOW) Board of Trustees, *Chairperson, 2005-2011; Member 2011-Present*
- 2005-2006 Body Worlds Advisory Committee, Denver Museum of Nature & Science, *Member*
- 2006-2022 Saint John Vianney Seminary Board of Trustees, *Member*
- 2007-2008 Translating ELSI: Global Perspectives on Ethical, Legal and Social Implication of Human Genome Research, National Human Genome Research Institute Conference Organizing Committee, *Member*
- 2012-2016 Jerome Lejeune Foundation USA Board of Directors, *Member*
- 2013-2015 Alpha-1 Foundation Ethical, Legal and Social Issues Working Group, *Chairperson*
- 2013-2018 Alpha-1 Medical and Scientific Advisory Committee, *Member*
- 2014-2016 COPD Foundation Patient-Powered Research Network Governing Board, *Member*
- 2016-Present Augustine Institute, *Board Member*

Local

- 1991-1997 The Children's Hospital Foundation Board of Trustees, *Member*
- 1995-2005 Regis University Board of Trustees, *Member*
- 1996-1999 Eleanor Roosevelt Institute Board of Trustees, *Member*
- 1996-2001 Denver Foundation, *Member of the Health Committee*

REVIEW AND REFEREE WORK

- 2009 National Human Genome Research Institute Special Emphasis Panel, Centers for Excellence in Ethics Research
- 2010 National Human Genome Research Institute, Site Evaluations for Centers of Excellence in Ethics Research
- 2011 National Institute of Environmental Health Sciences Special Emphasis Panel on Research on Ethics and Integrity of Human and or Animal Subjects
- 2017 National Institute of Health, Special Emphasis Panel/Scientific Review Group on Community Influences on Health Behavior

INVITED EXTRAMURAL LECTURES AND PRESENTATIONS

Local

Patterson D, Coors ME, Green C. (March 2000). Panel: "The New Genetics: Does *Can* Mean *Should?*" Dilemmas in Healthcare: A Community Dialogue; Denver, Colorado.

Coors ME. (March 2001). Speaker: “The New Genetics: Does CAN Mean SHOULD?” Dilemmas in Healthcare: A Community Dialogue; Denver, Colorado.

Coors ME.; Spritz R. (September 2002). Testimony: “Cloning and Bioethics,” Testimony to the Health Care Task Force Committee of the Colorado State Senate; Denver, Colorado.

Alter CA, Kaluk N, Coors ME, Bortz L. (April 2002). Panel: “Medical Ethics: Slow Down, You Move Too Fast?” University of Denver Graduate School of Social Work; Denver, Colorado.

Coors ME. (February 2003). Speaker: “Genetic Research and Cloning,” University Perspective Program, University of Colorado; Aurora, Colorado.

Coors ME. (April 2003). Speaker: “Ethics at the Frontier of Genetics: *Now, Next, Never,*” Rotary Club of Denver; Denver, Colorado.

Coors ME. (April 2006). Speaker: “The Ethics of Stem Cell Research,” Molecular Biology Mini Symposium: Stem Cell Biology Progress and Potential, University of Colorado Health Sciences Center Molecular Biology Program.

Coors ME. (November 2008) Speaker: “Ethical Issues: Psychiatric Genetic Research with Adolescents,” Division of Substance Dependence Seminar, University of Colorado Denver, Aurora, CO.

Coors ME. (March 2009). Speaker: “Ethical Issues in Pediatric Behavioral Health Research,” The Children’s Hospital Annual Ethics Conference, Denver, CO.

Coors ME. (September 2009). Speaker: “Women’s Issues in Bioethics,” 4th Annual ENDOW Conference for Women, Denver, CO.

Coors ME. (October 2009). Speaker: “Babies are Begotten not Made,” National Catholic Bioethics Center Seminar, Denver, CO.

Coors ME. (May 2010). Moderator of Panel: “Diagnostic Information, Connectedness, and Drugs: Systems Infrastructures”. Panelists: George Post, Ph.D., Jay Wohlgemuth, M.D., Don Jones. M.B.A., David Snow. GoldLab Inaugural Symposium, Boulder CO.

Coors ME. (January 2011). Speaker: “Genetics and Addiction,” Denver Eclectics, Denver, CO.

Coors ME. (April 2012). Speaker: “Interdisciplinary Catholic Approach to Bioethical Topics,” Catholic Medical Association, Denver, CO.

Regional

Coors ME. (February 2000). Speaker: “The Genetic Revolution and Ethics,” Rocky Mountain College Wheatley Lecture; Billings, Montana.

Yarborough Mark, Coors ME. (July 2000). Panel: “Genetics and Medicine,” Eleanor Roosevelt Institute and University of Colorado Conference on Genetics & Ethics in the 21st Century; Aspen, Colorado.

Coors ME, Yarborough MA, Krauter K. (September 2000). Panel: “Responsibilities to Future Generations,” The Given Institute of the University of Colorado; Aspen, Colorado.

Coors ME. (September 2002). Speaker: “Bioconsumerism and Bioethics,” Foundation for Research on Economics and the Environment, a Seminar for Federal Judges; Big Sky, Montana.

Coors ME. (September 2003). Speaker: “Genetics and Ethics on the Frontiers of Aging: for Better or Maybe for Worse?” Colorado Springs Osteopathic Foundation 2nd Annual Aging Medicine Conference; Colorado Springs, Colorado.

Coors ME. (February 2003). Panel: “Ethics in the Genomic Era,” Boulder Valley Rotary; Boulder, Colorado.

Coors ME. (April 2003). Speaker: “Genetics and Ethics at the Beginning of the 21st Century.” 3rd Forum on Perinatal/Neonatal Ethical Issues; Colorado Springs, Colorado.

Coors ME. (March 2003). Speaker: “Thousands of Proteins: Can Ethics Capture the Issues?” Somalogics; Boulder, Colorado.

Coors ME, Sikela J. (February 2003). Speaker: “Ethics at the Frontiers of Genetics,” Colorado Endowment for the Humanities Dilemmas in Health Care Community Forum, Mesa State College; Grand Junction, Colorado.

Coors ME. (September 2004). Speaker: “Will Genetic Medicine Exacerbate the Problem or Provide the Cure?” and Speaker: “Is Ethics an Impediment to Solving Our Health Care Crisis?” A Hastings Center Seminar: American Confronts the Brave New World of Health Care; Keystone, Colorado.

Coors ME. (July 2007). Speaker: “Ethical Issues in Behavioral Genetics,” Mountain States Genetic Regional Collaborative Center; Denver, Colorado.

Coors ME. (April 2008). Speaker: “The Interface of Bioethics and Psychiatric Genetic Research,” Institute for Behavioral Genetics, University of Colorado; Boulder, Colorado.

Barnes K, Coors ME, Smith P, Axell L, Lowrey J. (April 2019). Panel Member: “Personalized Medicine in the Clinic: The Promise and the Pitfalls,” Colorado Healthcare Ethics Forum; Thornton, Colorado.

National and International

Coors ME, McDonald A. (September 2000). Moderator: “When No One Sees: The Importance of Character in an Age of Image.” Trinity Forum; Belfast, Northern Ireland.

Coors ME. (May 2007). Speaker: “Ethical Issues related to the Critical Neonate with *Osteogenesis Imperfecta*.” 3rd OI Clinical Meeting sponsored by the Kennedy Krieger Institute at Johns Hopkins University; Baltimore, Maryland.

Coors ME, Haas J. (October 2008). Speaker: “Biomedical Engineering and the Human Person.” Seton Hall University; South Orange, New Jersey.

Coors ME. (April 2009). Speaker: “Genetics and Morality in the 21st Century.” Pope John Paul II Cultural Center, Washington, D.C.

Coors ME, Glover JJ. (March 2012). Speaker: “Ethical Issues in Using Transgenic Non-human Primates to Study What Makes Us Human.” National Undergraduate Bioethics Conference, University of Denver, Denver, Colorado.

Coors ME. (June 2012). Speaker: “Ethical Issues in Broad Data Sharing for Genomic Addiction Research: Best Practices.” National Institute on Drug Abuse (NIDA), Bethesda, Maryland.

Coors ME. (April 2014). Speaker: “Interdisciplinary Approach to Bioethics.” Christendom College, Front Royal, Virginia.

Coors ME (January 2017). Speaker: “Bioethics Across the Lifespan.” SEEK Conference Fellowship of Catholic University Students, San Antonio, Texas.

TEACHING RECORD

Interdisciplinary

- Steering Committee, Ethics in the Health Professions (PRMD 5000): 1998-2013.
- Steering Committee, Responsible Conduct of Research Ethics Course: 2012-Present.
- Facilitator and Ethics Curriculum Task Force Member (IPED5001-2): 2014-2015.

School of Medicine

- Professionalism Issues in Short White Coats: Clerkship Coping Strategies, Transitions to Third Year: 2005-2008
- Campus Wide Orientation on Professionalism, 2002-Present
- Cadaver as First Patient (IDPT5001), Human Body Block, 2005-Present
- Stem Cells and Ethics (IDPT5002) Molecules to Medicine Block Bench to Bedside, 2005
- Research Ethics (IDPT5002), Molecules to Medicine Block Bench to Bedside, 2005-2021
- Animal Research Ethics (IDPT5002), Molecules to Medicine Block Bench to Bedside, 2005-2008
- Back to Basics (IDPT8005), Frontiers in Medicine: Reality and Hope for Stem Cells and Gene Therapy, 2008

- Integrated Clinician's Course (IDPT8005), Transition to Residency and Beyond, 2008-2018
- Mentored Scholarly Activities Program (IDPT8090), 2008-2022
- Molecules to Medicine Research Ethics Session (IDPT 5002), 2013-2022
- Culturally Effective Medicine Thread, Reflective Writing (ICC 8004), 2016-2018

Residents

- Professional Ethics in Psychiatry for PGY II Resident (Department of Psychiatry Residency Training Program): 2006-2020; *Director*.
- Professional Ethics in Psychiatry for PGY III Residents (Department of Psychiatry Residency Training Program): 2004-2007; *Co-Director*.
- Research Pathway: Cases in Research Ethics for Medicine Residents (Residency Training Program of Internal Medicine): 2013-2015

College of Nursing

- Ethics and Genetics Online: Caring for Children with Disabilities and Chronic Conditions (NURS6483): 2002, 2004, 2006, 2008, 2010, 2012.

Graduate School for Basic Science

- Ethics in Research (PHCL 7605): 2004-2021
- Genomics and Ethics (HMGP7620): 2002-2005
- Intensive Advanced Bioethics and Responsible Conduct of Research (CLSC 7155): Summer 2005
- Practical Application of Molecular and Cell Biology Techniques for the Clinical Investigator (CLSC7500): 2003
- Ethics in Bioinformatics (CBPS 7605): 2011-2021; *Co-Director*
- Ethics in Research ((PHC1): 2011-2021, *Instructor*
- Stem Cell Biology to Regenerative Medicine (IDPT), 2016-2018, *Lecturer*

School of Public Health

- DrPH Research Ethics Seminar (PUBH 6842): 2010

Undergraduates

- GEMS/LABCOATS: 2010-2012
- Short Term Training Program, Bioinformatics: 2013-2018.
- CoSIBS, Biostatistics: 2016-2017.

Continuing Education and Grand Rounds

- Stem Cells, Ethics, Embryos: Wednesday Noon Forum; Saint Joseph Hospital, Denver, 2001.
- Promises and Precepts of Genetic Medicine; Colorado Medical Society, 2002.
- Research Ethics Hexamethonium Case; Colorado Multiple Institutional Review Board, University of Colorado Health Sciences Center, 2002.

- Ethical Principles in Bedside Delivery of Care; Medicine Grand Rounds, University of Colorado Health Sciences Center, 2002.
- An Ethicist's View of Case Studies and Vulnerable Subjects: Lead-Based Paint Study and Gene Therapy Trial; Colorado Multiple Institutional Review Board; University of Colorado Health Sciences Center, 2002.
- Ethics and Clinical Genetics; Hospital Wide Ethics Rounds University of Colorado Hospital, 2004.
- Ethics on the Frontiers of Aging; Hospital Wide Ethics Rounds, Penrose Hospital, Colorado Springs, 2004
- The Practical and Ethical Consideration of Genetic Testing for Family Medicine: Why Should You Care? Department of Family Medicine Grand Rounds, University of Colorado Health Sciences Center, 2005.
- Ethical Issues in Medical Research in Developing Countries: 2nd Annual Global Health Symposium, Continuing the Global Conversation, University of Colorado Denver, 2009.
- The Fuzzy Line between Research and Clinical Practice: Patients and Researchers; Hospital Wide Ethics Rounds; University of Colorado Hospital, May 2011.
- Ethical Challenges in Surrogate Consent: Research in the ICU; Hospital Wide Ethics Rounds, University of Colorado Hospital, May 2012.
- Breaching Confidentiality on the Web: A Case Report Resulting in Sanction; Department of Psychiatry Grand Rounds, University of Colorado Anschutz Medical Campus, 2013.
- Ethics on the Borderland: Research vs. QI; Hospital Wide Ethics Grand Rounds, University of Colorado Hospital, May 2014.
- Personalized Medicine Program: Ethical Issues, Hospital Wide Ethics Grand Rounds, University of Colorado Hospital, May 2015
- CRISPR Genome Editing: Past, Present and Future, Robert T. Bailey and Marilyn E. Coors, Ethics Bites, Center for Bioethics and Humanities, UCAMC, May 2016.
- Personalized Medicine Program II: Ethical Issues, Hospital Wide Ethics Grand Rounds, University of Colorado Hospital, May 2017.
- Appropriate Retention Strategies in Clinical Research: Where do we cross the line from retention to coercion? Hospital Wide Ethics Grand Rounds, University of Colorado Hospital, May 2018.
- Surrogate Pregnancy and Research: Whose Consent Is It Anyway?

Conferences

Coors, ME. (2002-2013). Chairperson: *Genetics and Ethics in the 21st Century*, A Conference Series; Given Institute of the University of Colorado, Aspen Colorado (2002-2007); Breckenridge CO (2009), Stanley Hotel, Estes Park, Colorado (2010-Present).

- 2002: Commercializing the Genome: Patents, Access, and Cures
- 2003: Personal Responsibility in the Era of Predictive Genetic Medicine
- 2004: Genes, Race, and Ethnicity
- 2005: Direct to Consumer Marketing of Genetic Services and Genetic Tests
- 2006: Engineering Immortality: The End of Death

- 2007: DNA Identification and the Law: New Horizons and Outer Limits
- 2009: Genomics and Personalized Medicine: Facts, Fiction, Future
- 2010: Genomic Diversity and Health Disparities
- 2013: Addiction, A Biological Disorder: Implications for Personal Responsibility and How We View the Addict.

Coors ME. (2011-Present). Chairperson: *Annual CCTSI Research Ethics Conference*; University of Colorado Anschutz Medical Campus.

- 2010: Financial Conflicts of Interest in Clinical Research: Ethical and Regulatory Issues
- 2011: Cradle to Grave: Ethical issues in Lifespan Research
- 2012: Sharing Health Data for Research: How Much Should They Know about You?
- 2013: The Rate Limiting Step: Recruitment and Retention of Clinical Research Participants
- 2014: Protecting Research Participants' Privacy: Is it Possible? Should We Care?
- 2015: How Informed is Informed Consent: Protecting Participants or Creating Barriers
- 2016: Return of Research Results: What Do We Owe Patients?
- 2017: Racial, Ethnic, and Gender Disparities in Research: Addressing Ethical and Logistical Challenges
- 2018: Risky Research: What Keeps You Awake at Night?
- 2019: Stepping on Tight Rope of Sensitive Research: Navigating the Ethics/Regulations When the Stakes Are High
- 2021: Covid 19 Research in the News: What Ethical Issues Does This Raise?

Coors ME. (2010, 2014). Moderator: GoldLab Annual Symposium, Boulder, CO.

GRANT SUPPORT

Completed Grant Support

U2CCA252979. Claus E, Kwan B (Co-PIs) 9/21/2021-8/31/2025

National Cancer Institute. Total Direct Costs: \$10,761,114.

OPTimizing engageMent in discovery of molecUlar evolution of low grade glioma (OPTIMUM).

Role: Co-Investigator, Bioethicist, 10%

UL1TR002535, KL2TR002534, TL1TR002533. Sokol R (PI) 5/1/2018-4/30/2023

NIH/NCATS, Total Costs year 1: 5,829,717, Total Costs 5 years: 46, 500,000.

Colorado Clinical Translational Sciences Institute

The program incorporates a broad reaching intra and inter-institutional comprehensive program to enhance clinical and translational research and science, training of clinical and translational scientists, and collaboration with the communities of the state of Colorado and the surrounding region.

Role, Director, Research Ethics, 10%

University of Colorado School of Medicine Transformational Research Grant (Ho, Kutner, Schilling, Kahn) 7/1/2016-6/30/2021

Data Science to Patient Value (D2V)

Role: Co-Investigator, 20%

To make the University of Colorado Anschutz Medical Campus School of Medicine a national and global leader in the development, implementation and dissemination of person-centered, high value health care by advancing innovations in data and health systems science to improve the lives of patient, families, and communities.

UL1 TR001082, TL1TR001081, KL2TR001080 Sokol R (PI) 09/26/2013-04/30/2018
NIH/NCATS, Total costs year 1: \$8,574,303, Total Costs 5 years: \$51,656,921

Colorado Clinical Translational Sciences Institute

Role: Director, Research Ethics, 15%

The Clinical and Translational Science Award (3 grants) to the University of Colorado Denver will support the institutional academic home for research and training in clinical and translational sciences. This award is for continuation of the CCTSI during 2013-2018. The program incorporates a broad reaching intra and inter-institutional comprehensive program to enhance translational clinical research, training of clinical translational scientists, and collaboration with the communities of the state of Colorado and the surrounding region. The ethics core provides ongoing education, consulting and mentoring to support the mission of the Institute.

Personalized Medicine Implementation Project (Coors ME) PI 05/10/2015-12/30/2015
Center for Biomedical Informatics and Personal Medicine, Total costs: \$34,429

Bootcamp for Biobanks

Role: Principal Investigator, 10% effort

Bootcamp translation is an in-depth process that combines knowledge and action to foster trust and improve community health. Anticipated outcomes include: (1) members of the community who will be knowledgeable about the targeted healthcare or research topic; (2) community-relevant educational materials about the topic in English and Spanish (3) dissemination plans for the educational materials; (4) improved engagement with communities throughout the region.

5 RO1 DA029258-01 (Coors ME) PI 03/15/10-08/28/13
NIH/NIDA \$232,800 annual direct costs

Ethical Issues in Broad Data Sharing for Addiction Research: Best Practices

Role: Principal Investigator (35% effort)

The project: (1) identified risks to participants in broadly shared biobanks; (2) attained as much insight as possible about how persons with addictions process information and make decisions about enrolling in risky research; (3) will make recommendations for informed consent and best research practices that take into account the differences in risk taking propensity in persons with addictions.

5 P60 DA011015-14 (Hewitt J) PI 05/01/09-02/28/14
NIH/NIDA \$138,043 annual direct costs

Center on Antisocial Drug Dependence: The Genetics of HIV Risk Behaviors

Role: Co-Investigator (12% effort).

Center representing the University of Colorado's Institute for Behavioral Genetics, Division of Substance Dependence and Molecular, Cellular, and Developmental Biology.

This center conducts research in antisocial drug dependence, human behavioral genetics and HIV Risk Behaviors.

8 UL1 TR0000154-05 (Sokol R) PI 05/19/08-09/30/13
NIH/NCRR \$11,651,498 annual direct costs

Colorado Clinical Translational Sciences Institute

Role: Director, Research Ethics (15% effort)

The program incorporates a broad reaching intra and inter-institutional comprehensive program to enhance translational clinical research, training of clinical translational scientists, and collaboration with the communities of the state of Colorado and the surrounding region. The ethics core provides ongoing education, consulting and mentoring to support the mission of the Institute.

5 RO1HG4500-2 (Sharp RR) PI 05/12/2008-04/30/2011
NIH/NHGRI

Presenting Diagnostic Results from Large-Scale Clinical Mutation Testing.

Role: Co-Investigator (5 % effort)

This study aims to: (1) describe the attitudes and beliefs of patients and genetic professionals regarding the types of diagnostic possibilities that should be discussed with patients prior to large-scale clinical mutation testing, (2) characterize the attitudes and beliefs of patients and genetic professionals regarding the types of diagnostic results that should be returned following large-scale clinical mutation testing, and (3) develop practice recommendations for introducing novel genomic testing technologies into patient care in an ethical manner. These empirical results will be used to develop evidence-based recommendations for presenting diagnostic results from large-scale clinical mutation testing.

Research Grant (Coors ME) PI 08/2007-07/2010
Alpha 1 Foundation \$129,000

Alpha-1 genetic testing of at risk children: the ethical, legal and social components of informed consent.

Role: Principal Investigator (30% effort)

The major goals of this project are: (1) identify current medical practice standards and what physicians indicate standards should be regarding disclosure of ethical, legal, and social (ELS) information during informed consent when testing children; (2) identify what parents and adults tested as children retrospectively report as the medical practice regarding disclosure of ELS information during informed consent and what they indicate should be disclosed when testing children, (3) identify the ELS benefits and harms of testing children that participants report that they have witnessed or experienced, and (4) develop recommendations on what ELS information should be disclosed to parents and children considering testing.

2 P60 DA 011015 (Crowley TJ) PI 08/01/1997-04/30/2008
NIH/NIDA \$\$\$\$

Pilot Grant \$20,000 08/2006-07/2007
Center for Antisocial Drug Dependence Comp 6 Pilot Projects
Ethics infrastructure for substance use disorder research: Cross disciplinary research
Role: Investigator (20% effort) 7/05-7/06

Research Grant (Sharp RR) PI 02/01-06/02
Alpha-1 Foundation
Patient perspectives on the role of consumer advocacy groups
Role: Co-Investigator (10% effort)

Research Grant (Coors ME) PI 07/01-06/02
Alpha-1 Foundation \$25,000
An evidence based approach to informed consent in alpha-1
Role: Principal Investigator (20% effort)

Unrestricted Educational Support Grants

Coors, Chairperson 07/05-7/07
Affymetrix, Inc., Unrestricted Educational Support: \$20,000
Genetics & Ethics in the 21st Century, A Conference Series
Role: (5% effort)

Coors, Chairperson 07/07
Department of Justice, Unrestricted Educational Support: \$20,000
Genetics & Ethics in the 21st Century, A Conference Series
Role: (5% effort)

BIBLIOGRAPHY

Peer Reviewed Articles

1. Bandom WF, Saccomanno G, Archer VE, Archer G, Coors ME. (1972). Chromosome aberrations in uranium miners occupationally exposed to 222 radon. *Radiation Research* 52 (1): 204-15.
2. Coors ME. Is it ethical to choose the genetic characteristics of your children? In *The Befuddled Stork, Helping Persons of Faith Debate Beginning of Life Issues*. Edited by Donald Messer and Sally Geis. Nashville, Tennessee. Abbingdon Press, 2000.
3. Coors ME. (2002). Therapeutic cloning: From consequences to contradictions. *The Journal of Medicine and Philosophy* 27 (3): 297-317.
4. Coors ME. (2003). A foucauldian foray into the new genetics. *Journal of Medical Humanities* 24 (3 and 4): 279-289.
5. Coors, ME. and Hunter L. (2005). Evaluation of genetic enhancement: Will

human wisdom properly acknowledge the value of evolution? *The American Journal of Bioethics* 5(3): 21-22.

6. Coors ME, and Townsend, S. (2006). Supporting pregnant women through difficult decisions: A case of prenatal diagnosis of Osteogenesis Imperfecta. *The Journal of Clinical Ethics* 17 (3): 266-274.

7. Coors, ME. (2006). Considering chimeras: The confluence of science and ethics. *National Catholic BioEthics Quarterly* 6 (1): 75-87.

8. Coors ME, Levinson A, Huitt G. (2008). Anxiety related to genetic testing for alpha-1 antitrypsin deficiency and cystic fibrosis in COPD and/or bronchiectasis patients. *Community Genetics* 11 (3): 135-140.

9. Coors ME, Mikulich-Gilbertson SK, Raymond KM, Stover SK., Tapert SF, Brown SA, Crowley TJ. (2008). Directives for retained DNA: preferences of adolescent patients with substance and conduct problems and their siblings. *American Journal of Bioethics*, 8, (10):77-79.

10. Coors ME, Raymond KM. (2009). Substance use disorder genetic research: investigators and participants grapple with the ethical issues. *Psychiatric Genetics* 19 (2): 83-90.

11. Coors ME, Glover JJ., Juengst ET, Sikela JM. (2010). The ethics of using transgenic non-human primates to study what makes us human. *Nature Reviews Genetics* 11 (9): 658-661.

12. Coors M E, Moseley R, McGooray S. (2011). Informed consent process in Alpha-1 testing of at-risk children: views of parents and adults tested as children. *Journal of Chronic Obstructive Pulmonary Disease* 8 (1):1-9.

13. Badesh DB, Coors ME, McCollister DH, Bull T, Lakin A. (2011). The potential for therapeutic misconception in pulmonary arterial hypertension clinical trials: A case-based discussion. *Advances in Pulmonary Hypertension* 9 (4):220-222.

14. Hunter LE, Hopfer C, Terry SF, Coors ME. (2012). Reporting actionable research results: shared secrets can save lives. *Science Translational Research*, 4 (141-44):18-21.

15. Chin TL, Moore EE, Coors ME, Chandler JG, Ghasabyan A, Harr JN, Stringham JR, Ramos Cr, Ammons S, Banerjee A, Sauai A. (2015). Exploring ethical conflicts in emergency trauma research: The COMBAT (Control of Major Bleeding after Trauma) study experience. *Surgery* 157(1):10-19.

16. Coors ME, Raymond KM, McWilliams SK, Hopfer CJ, Mikulich- Gilbertson SK. (2015). What adolescents enrolled in genomic addiction research want to know about conflicts of interest. *Drug and Alcohol Dependence* 147:272-5. doi: 10.1016/j.drugalcdep.2014.12.004. Epub 2014 Dec 15.

17. Coors ME, Raymond KM, McWilliams SK, Hopfer CJ, Mikulich- Gilbertson SK. (2015). Adolescent perspectives on the return of individual results in genomic addiction research. *Psychiatric Genetics* 25(3):127-30.
18. Sharp RR, Taylor HA, Brinich MA, Boyle MM, Cho M, Coors ME, Davis M, Havard M, Magnus D, Wilfond B. (2015). Research ethics consultation: ethical and professional practice challenges and recommendations. *Academic Medicine* 90(5):615-20.
19. Coors ME, Matthew T, Matthew D. (2015). Ethical precepts for medical volunteerism: including local voices and values to guide RHD surgery in Rwanda. *Journal of Medical Ethics* 41:814-819.
20. Coors ME, Raymond KM, Hopfer CJ, Sakai J, McWilliams SK, Young S, Mikulich- Gilbertson SK. (2016). Adolescents with Substance use disorder and assent/consent: empirical data on understanding biobank risks in genomic research (2016). *Drug and Alcohol Dependence*, 159:267-271.
21. Westfall N, Coors ME, Zittleman L, Taylor M, Westfall J. (2016). Biobanking for personalized precision medicine: an annotated bibliography. *Journal of Precision Medicine*, May/June: 34-47.
22. Daddato A, Walk HL, Horney C, Fairclough DL, Leister EC, Coors M, Boxer RS. (2017). A randomized trial of heart failure disease management in skilled nursing facilities (SNF Connect): Lessons learned. *Clinical Trials* 14(3):308-313.
23. Coors ME, Bauer L, Edward K, Erickson K, Goldenberg A, Goodale J, Goodman K, Grady C, Mannino D, Wanner A, Wilson T, Yarborough M, Zirkle M. (2017). Ethical issues related to clinical research and rare diseases. *Translational Science of Rare Diseases*, 18,2(3-4):175-194.
24. Coors ME, Westfall N, Zittleman L, Taylor M, Westfall JM. (2017). Biobank information in participant-centered language using boot camp translation. *Biopreservation and Biobanking*, 16(1):1-5.
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- Coors, Marilyn E. Paper: The wondrous egg: Autonomy, assistance, and feminist bioethics.

2. Coors ME. (2000). Paper: The matrix: An ethical perspective on genetic medicine; Second World Congress of Philosophy of Medicine. Jagiellonian University, Krakow, Poland.

3. Jones T, Coors ME. (2001). Panel: Bioethics after Foucault: Reconceiving the clinic; American Society of Bioethics and Humanities 3rd Annual Meeting, Nashville, Tennessee.

- Coors ME. Paper: "A Foucauldian foray into the new genetics."

4. Coors ME. (2001). Poster: Genes in families: Attitudes toward testing and treatment options; American Society of Human Genetics, San Diego, California.

5. Coors ME. (2002). Poster: An evidence based approach to genetic testing for alpha-1 antitrypsin deficiency testing; Butcher Symposium on Genomics and Biotechnology, University of Colorado, Boulder.

6. Coors ME. (2006). Paper: Disparate perspectives on the ethical implications of genetic research on substance use disorder (SUD); American Society of Bioethics and Humanities 8th Annual Meeting, Denver, Colorado.

7. Coors ME, Beirut LJ, Uhl GR, Koenig BA. (2006). Chairperson of Panel: Genomic approaches to alcohol addiction: Scientific opportunities, ethical challenges; Research Society on Alcoholism, Baltimore, Maryland.

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8. Coors ME, Raymond KM. (2006). Poster: "Ethical implications of genetic research in substance use disorders: Why can't we all just get along?" College for Problems in Drug Dependence, Scottsdale, Arizona.

9. Coors ME, Mikulich-Gilbertson S, Raymond KM, Stover S, Crowley TJ. (2008). Paper: Consent for Use of Retained DNA in Psychiatric Genetic Research: Role of Empirical Data in a Risk Prone Population; Translating ELSI: Global Perspectives on Ethical Legal and Social Implication of Genomics, National Human Genome Research Institute Ethical, Legal and Social

Implications Research Program; Conference hosted by Case Western Reserve University; Cleveland, Ohio.

10. Coors ME, Moseley R, McGorray S. (2011). Paper: Informed Consent Process in Alpha-1 Testing of At-risk Children: Views of Parents and Adults Tested as Children; Exploring the ELSI Universe: National Human Genome Research Institute Ethical, Legal and Social Implications Research Program, Conference hosted by University of North Carolina at Chapel Hill; Chapel Hill.

11. Coors ME, Mikulich-Gilbertson SK, Raymond KM, McWilliams SK, Hopfer CJ. (2012). Poster: Empirical Ethics Analysis: Data Describing Participants' Perspectives on Return of Individual Genomic Research Results and Disclosure of Conflicts of Interest; American Academy of Child and Adolescent Psychiatry; San Francisco, California.

Biosketch

Marilyn E. Coors is Associate Professor Emerita of Bioethics at the Center for Bioethics and Humanities at the University of Colorado Anschutz Medical Campus for over twenty years. The ethical issues in clinical and behavioral genomic research were the foci of her research, teaching, and professional service.

Research interests pursued by Dr. Coors include the ethics of human genetic modification, ethical issues in genomic research in adolescents with substance use disorder and their parents, and community based participatory research on informed consent for biobanking. As the Director of Research Ethics for the Colorado Clinical and Translational Science Institute, she was directly involved in research ethics consultation and cross disciplinary ethics education. Coors was an Affiliate member of Colorado University Division of Substance Dependence, and Affiliate Faculty of the Division of Biomedical Informatics and Personalized Medicine, and a Faculty Fellow of Colorado University Institute of Behavioral Genetics.

Dr. Coors received her undergraduate education from Cornell University where she majored in biological sciences. She then attended the University of Denver, earning a M.S. in cytogenetics, a M.A. in ethics and religion, and a Ph.D. in bioethics. Coors serves on the Gates Institute for Regenerative Medicine Advisory Board, the National Catholic Bioethics Center, and Educating on the Nature and Dignity of Women (ENDOW) Boards of Directors.