

## **Pilar Nicole Ossorio, Ph.D., JD**

University of Wisconsin Law School  
975 Bascom Mall, rm. 9103  
Madison, WI 53706-1399

phone: (608) 263 – 4387  
pnossorio@wisc.edu

Morgridge Institute for Research  
330 N. Orchard St  
Madison, WI 53715

phone: (608) 316 – 4650  
possorio@morgridgeinstitute.org

### **CURRENT POSITION**

Professor of Law and Bioethics, University of Wisconsin; Bioethics Scholar-in-Residence at the Morgridge Institute for Research (a non-profit biomedical research institute associated with the University of Wisconsin)

### **UNIVERSITY OF WISCONSIN-MADISON AND MORGRIDGE INSTITUTE FOR RESEARCH**

Trainer, Computation and Informatics in Biology and Medicine (CIBM) training program, 2017 – present

Co-Director, Research Ethics Consultation Service, 2013 – present

Trainer, Neuroscience Training Program, 2012 – present

Professor of Law and Bioethics, University of Wisconsin, 2012 – present

Inaugural Bioethics Scholar-in-Residence, Morgridge Institute for Research, 2011 – present

Associate Professor of Law and Bioethics, 2006 – 2011

Program Faculty, Graduate Program in Population Health, 2004 – present

Assistant Professor of Law and Bioethics, 2000 – 2006

Faculty Associate, Center for the Study of Race and Ethnicity in Medicine, 2000 – 2002

#### Teaching:

Torts

Biotechnology Regulation and Ethics

Ethics for Data Scientists

Patent Law

Law, Science & Biotechnology

Clinical Ethics

Concepts of Race in Medicine

Introduction to Intellectual Property

Law and Medicine

Biotechnology Patent Law Seminar

Service at the University of Wisconsin and the Morgridge Institute for Research:

School of Medicine and Public Health, Basic Sciences Strategic Leadership Committee, 2021 – present

School of Medicine and Public Health and UW Health, Committee on Implementing Clinical AI and Predictive Analytics, 2021 – present

Chair, Search Committee for a bioethics faculty member and Morgridge Investigator, 2021 – 2022

Law School Clinical Hiring and Promotions Committee, 2021 – 2022

Law School Graduate Programs Committee, 2017 – 2018; 2020 - 2021

University of Wisconsin, Committee on Faculty Rights and Responsibilities (elected university-wide position), 2016 - 2019

School of Medicine and Public Health, Basic Science Strategic Plan Implementation Committee, 2017 – 2021

Runs a research ethics cartooning competition, 2017 – present

Law School Admissions and Financial Aid Committee, 2016 – 2018

Law School Student Petitions Committee, 2016 - 2018

School of Medicine and Public Health, Genomics Task Force, 2016 – 2017

School of Medicine and Public Health, Search Committee for the Associate Dean for Basic Research, 2016 - 2017

School of Medicine and Public Health, Strategic Plan Implementation Committee, 2015 - 2017

University of Wisconsin Advisory Committee for the Office of Equity and Diversity, 2014 – 2016

Law School Tenure and Promotions Committee, 2014 – 2016, 2019 - 2020

Chair, Committee on Ethical, Legal, and Social Implications of Human Genome Research and Clinical Genomics, 2013 – 2016

Morgridge Conflicts of Interest Committee, 2013 – present

Law School, Clinical Appointments Committee, 2012 – 2015

UW Stem Cell Research Oversight Committee, 2010 – present

Law School Academic Planning Council, 2010 – 2013

University of Wisconsin's Committee for the Five-Year Review of the Law School Dean, 2010

Law School Appointments Committee, 2007 – 2011, 2013 – 2014

Search committee for various positions, department of Medical History and Bioethics, 2004 – 2008; 2021

School of Medicine and Public Health, search committee for Chair of the Dept. of Medicine, 2005 - 2006

Law School Curriculum Committee, 2004 – 2005, 2008 – 2010 (chair 2009 – 2010), 2015 - 2016  
Law School Research Committee, 2004, 2005, 2007 – 2008  
Law School Retentions Committee, 2004 – 2005  
Mentor, Chancellor’s Scholar’s Program, 2003 – 2015  
Health Sciences Institutional Review Board, 2003 – 2014  
UW Hospital Ethics Committee, 2003 – 2010  
Law School Representative to the Faculty Senate, 2001 – 2003; alternate 2019 - 2020  
Medical School Admissions Committee, 2000 – 2003  
Hastie Fellows Committee, 2002 – 2005

### **BIOETHICS AND LAW PUBLICATIONS (PEER-REVIEWED ARTICLES AND PEER-REVIEWED BOOK CHAPTERS)**

Goldstein E.M., Nervik K., Hagen S., Hilliard F., Turnquist A., Bakhrieva L.N., McDonald R., **Ossorio P.N.**, Lo J., Zgierska A.E., *A Socioecological Framework for Engaging Pregnant Substance-Using Women in Research: Multi-Stakeholder Perspectives*, *Neurotoxicology and Teratology*, 87: 106997 (2021).

**Ossorio P.N.**, *Polygenic Risk in a Diverse World*, in Jones, K.M., Cook-Deegan, R., Rotimi, C.N., Callier, S.L., Bently, A.R., Stevens, H., Philips, K.A., Jansen, J.P., Weyant, C.F., Roberts, D.E., Zielinski, D., Erlich, Y., Garrison, N.A., Carroll, S.R., Ossorio, P.N., Moreau, Y., Wang, M. *Complicated Legacies: The Human Genome at 20*, *Science* 371: 564 – 569 (2021).

Bakhrieva L.N., Nebeker C., **Ossorio P.**, Angal J., Thomason M.E., Croff J.M., *Inclusion of Native Americans and Alaska Natives in Large National Studies: Ethical Considerations and Implications for Biospecimen Collection in the HEALthy Brain and Child Development Study*, *Adversity and Resilience Science* 1: 285 - 294 (2020).

Wolf S.M., **Ossorio P.N.**, Berry S.A., Greely H.T., McGuire A.L., Penny M.A., Terry S.F., for the LawSeq™ Framework Task Force, *Integrating Rules for Genomic Research, Clinical Care, Public Health & DTC Testing: Creating Translational Law for Translational Genomics*, *Journal of Law, Medicine and Ethics* 48(1): 69 - 86 (2020).

B. Evans B., Javitt G., Hall R., Robertson M., **Ossorio P.**, Wolf S.M., Morgan T., Clayton E.W. for the LawSeq Quality Working Group, *How Can Law and Policy Advance Quality in Genomic Analysis and Interpretation for Clinical Care*, *Journal of Law, Medicine and Ethics* 48: 44 – 68 (2020).

**Ossorio, P.N.** & Zhou, Y., *FMT and Microbial Medical Products: Generating High-Quality Evidence through Good Governance*, *Journal of Law, Medicine and Ethics* 47: 505 - 523 (2020).

Wiens J., Saria S., Sendak M., Ghassemi M., Liu V., Finale D., Jung K., Heller K., Kale D., Caruana R., Saeed J., **Ossorio P.**, Thadaney-Israni S., Goldenberg A., *Do No Harm – A Roadmap for Responsible Machine Learning for Healthcare*, *Nature Medicine* 25:1337 – 1340 (2019), at <https://doi.org/10.1038/s41591-019-0548-6>.

**Ossorio P.N.** & Zhou Y., *Regulating Stool for Microbiota Transplantation*, *Gut Microbes* 10: 105 - 108 (2019).

Evans B.A. & **Ossorio P.N.**, *The Challenge of Regulating Clinical Decision Support Software After 21<sup>st</sup> Century Cures*, *Journal of Law, Medicine and Ethics* 44: 237 – 251 (2018), available at [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3142822](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3142822).

Das T., Saha K., and **Ossorio P.N.**, *Fairness in Manufacturing Cellular Therapies*, *American Journal of Bioethics*, 18: 68 - 70 (2018).

**Ossorio P.N.** & Mailick M.R., *Genotype-Driven Research Recruitment Without Deception*, *American Journal of Bioethics* 17: 60 - 61 (2017).

**Ossorio P.N.**, *The Ethics of Translating High-Throughput Science Into Clinical Practice*, *Hastings Center Report* 44: 8 - 11 (2014) (re-published in: *The ETHICAL CHALLENGES OF EMERGING MEDICAL TECHNOLOGIES*, eds. A.L. Caplan and B. Parent, Ashgate, 2016).

Fujimura J.H., Bolnick, D.A., Fajagopalan R., Kaufman J.S., Lewontin R.C., Duster T., **Ossorio P.**, Marks J., *Clines Without Classes: How to Make Sense of Human Variation*, *Sociological Theory* 32 (3): 208 - 227 (2014).

**Ossorio P.N.**, *Repositories for Sharing Human Data in Stem Cell Research*, in *REGENERATIVE MEDICINE ETHICS: GOVERNING RESEARCH AND KNOWLEDGE PRACTICES* (Linda Hogle ed., Springer Press, 2014).

**Ossorio P.N.** & Kelleher J.P., *Why We Should Not Use the Affordable Care Act to Encourage Widespread Whole Genome Sequencing*, *Journal of Health Politics, Policy and Law* 39: 247 - 258 (2014). PMID: 24193611

Caulfield T., Evans J., McGuire A., McCabe C., Bubela T., Cook-Deegan R., Fishman J., Hogarth S., Miller F.A., Ravitsky V., Biesecker B., Borry P., Cho M.K., Carroll J.C., Etchegary H., Joly Y., Kato K., Lee S.S.-J., Rothenberg K., Sankar, P., **Ossorio P.**, Pullman D., Rousseau, F., Ungar W.J., Wilson B., *Reflections on the Cost of “Low-Cost” Whole Genome Sequencing: Framing the Health Policy Debate*, *PLoS Biology* 11:e1001699. Doi: 10.1371/journal.pbio.1001699 (2013). PMID: 24223516, PMCID: PMC3818164

Shapiro R.B. & **Ossorio P.N.**, *Regulation of Online Social Network Studies*, *SCIENCE* 339: 144 - 146 (2013). PMID:23307724

Shapiro R.B. & **Ossorio P.N.**, *Ethics for Design-based Research in Online Social Networks*, *CSCL PROCEEDINGS* 1: 422 - 426 (2013).

**Ossorio P.N.**, *Taking Aims Seriously: Repository Research and Limits on the Duty to Return Individual Research Findings*, *Genetics in Medicine* 14: 461 - 466 (2012). PMID: 22402758; PMCID 3940279

Wolf S.M. *et al.*, *Managing Incidental Findings and Research Results in Genomic Research Involving Biobanks and Archived Datasets*, *Genetics in Medicine* 14: 361 - 384 (2012). PMID: 22436882, PMCID: PMC3597341

**Ossorio P.N.**, *Bodies of Data: Genomic Data and Bioscience Data Sharing*, *Journal of Social Research* 78: 907 - 932 (2011). PMCID: PMC3984581

**Ossorio P.N.**, *Myth and Mystification: The Science of Race and IQ*, in *RACE AND THE GENETIC REVOLUTION* (Sheldon Krimsky ed., Columbia University Press, 2011).

Fujimura J., Rajagopalan R., **Ossorio P.N.** & Docksum K.A., *Race and Ancestry: Operationalizing Populations in Human Genetic Variation Studies*, in *WHAT’S THE USE OF RACE: MODERN GOVERNANCE AND THE BIOLOGY OF DIFFERENCE* (Ian Whitmarsh & David S. Jones eds., MIT Press, 2010).

- Lee S.S., Bolnick D.A., Duster T., **Ossorio P.N.** & TallBear K., *The Illusive Gold Standard in Genetic Ancestry Testing*, *Science* 325: 38 - 39 (2009). PMID: 19574373
- Bolnick D.A. Fullwiley D., Duster T., Cooper R.S., Fujimura J.H., Kahn J., Kaufman J.S., Marks J., Morning A., Nelson A., **Ossorio P.**, Reardon J., Reverby S.M., Tallbear K., *The Science and Business of Genetic Ancestry Testing*, *Science* 318: 399 - 400 (2007). PMID: 17947567
- Ossorio P.N.**, *The Human Genome As Common Heritage: Common Sense or Legal Nonsense?*, *Journal of Law, Medicine & Ethics* 35: 425 - 439 (2007). PMID: 17714252
- Ossorio P.N.**, *Letting the Gene Out of the Bottle? A Comment on Returning Individual Research Results to Participants*, *American Journal of Bioethics* 6: 24 - 25 (2006). PMID: 17085399
- Ossorio P.N.**, *About Face: Forensic Genetic Profiling for Race and Visible Traits*, *Journal of Law, Medicine & Ethics* 34(2): 277 - 292 (2006). PMID: 16789949
- Ossorio P.N.** & Duster, T., *Race and Genetics: Controversies in Biomedical, Behavioral, and Forensic Sciences*, *American Psychologist* 60: 115 - 128 (2005). PMID: 15641926
- Ossorio P.N.**, *Race, Genetic Variation, and the Haplotype Mapping Project*, *Louisiana Law Review* 41: 131 - 144 (2005).
- Ossorio P.N.**, *Societal and Ethical Issues in Pharmacogenomics*, in *PHARMACOGENOMICS: APPLICATIONS TO PATIENT CARE* (Richard T. Scheife ed., AACP, 2004).
- Ossorio P.N.**, *Inheritable Genetic Modifications: Do We Owe Them To Our Children?*, in *DESIGNING OUR DESCENDANTS* (Mark Frankel & Audrey Chapman eds., AAAS, 2003).
- Ossorio P.N.**, *Property and Human Bodies*, in *WHO OWNS LIFE* (David Magnus, Arthur Caplan & Glenn McGee eds., Prometheus, 2002).
- Ossorio P.N.**, *Not Taking, Just Borrowing: Government Use of Patented Drugs*, *American Journal of Bioethics* 2: 51 - 52 (2002). PMID: 12230861
- Ossorio P.N.**, *Legal and Ethical Issues in Biotechnology Patenting*, in *A COMPANION TO GENETHICS: PHILOSOPHY AND THE GENETIC REVOLUTION* (Justine Burley & John Harris eds., Oxford Press, 2002).
- Ossorio P.N.**, *Pills, Bills, and Research Shills: Physician-Researchers' Conflicts of Interest*, *Widener Law Journal* 8: 76 - 92 (2001).
- Ossorio P.N.**, *Product Liability for Predictive Genetic Tests*, *Jurimetrics* 41: 239 - 260 (2001).
- Ossorio P.N.**, *Prenatal Genetic Testing and the Courts*, in *PRENATAL GENETIC TESTING* (Eric Parens ed., 2000).
- Ossorio P.N.**, *Health By Law: The Influence of Labor and Employment Law on Workers' Health*, *Journal of Gender-Specific Medicine* 3: 45 - 49 (2000).
- Ossorio P.N.**, *Dead Men Tell Tales: Disclosure of Genetic Information Discovered at Autopsy*, *Society of Pathologists Report* 11: 3 - 5 (2000).
- Ossorio P.N.**, *Common Heritage Arguments and the Patenting of Human DNA*, in *PERSPECTIVES ON GENETIC PATENTING: RELIGION, SCIENCE AND INDUSTRY IN DIALOGUE* (Audrey Chapman ed., AAAS, 1999).
- Ossorio P.N.**, *No Boys Allowed? Hiring Men into Ob-Gyn Practices*, *Journal of Gender-Specific Medicine* 2: 34 - 40 (1999). PMID: 11252859
- Ossorio P.N.**, *Ethics in Forensic Pathology*, *American Medical News* 422: 6 - 8 (1999).
- Ossorio P.N.**, *Breast Cancer Genetic Testing*, *American Medical News* 394: 4 - 5 (1997).

Asch A. & **Ossorio P.N.**, *In Sickness and in Health... More Than Purgatory, Less Than Paradise?* (a review of the President Clinton's health care reform plan), *Women's Review of Books* 11: 3 - 7 (1994).

Yesley M.S. & **Ossorio P.N.**, *ELSI BIBLIOGRAPHY* (1994).

**Ossorio P.N.**, *Eugenics, Human Genetics, and Human Failings* (book review), *Disability Studies Quarterly*, Summer: 28 - 30 (1993).

### **Manuscripts currently under review**

McCoy, Matthew; Allen, Anita; Kopp, Katherina; Mello, Michelle; **Ossorio, Pilar**; Patil, DJ; Joffe, Steven; Emanuel, Ezekiel. *Ethical Responsibilities for Companies that Process Personal Data*, submitted to the Hastings Center Report in December of 2021.

Hilliard F., Goldstein E., Nervik K., Croes K, **Ossorio P.N.**, Zgierska A.E., *Voices of Women with Lived Experience of Substance Use During Pregnancy: A Qualitative Study of Motivators and Barriers to Recruitment and Retention in Research*, manuscript submitted to *Family and Community Health* in Nov. 2021.

### **COMMITTEE REPORTS AND COMMISSIONED PAPERS**

INDUSTRIALIZING BIOLOGY: A ROADMAP TO ACCELERATE THE INDUSTRIAL MANUFACTURING OF CHEMICALS, Committee on Industrializing Biology, National Research Council (National Academies Press, 2015).

PROPERTY AND INTELLECTUAL PROPERTY CONSIDERATIONS AFFECTING DISPOSITION OF THE ARMED FORCES INSTITUTE OF PATHOLOGY'S TISSUE REPOSITORY FOLLOWING ITS TRANSFER TO THE JOINT PATHOLOGY CENTER, Committee on the Appropriate Uses of AFIP's Tissue Repository Following its Transfer to the Joint Pathology Center, Institute of Medicine (National Academies Press, 2012).

2008 AMENDMENTS TO THE NATIONAL ACADEMIES' GUIDELINES FOR HUMAN EMBRYONIC STEM CELL RESEARCH, Human Embryonic Stem Cell Research Advisory Committee, National Research Council (National Academies Press, 2008).

2007 AMENDMENTS TO THE NATIONAL ACADEMIES' GUIDELINES FOR HUMAN EMBRYONIC STEM CELL RESEARCH, Human Embryonic Stem Cell Research Advisory Committee, National Research Council (National Academies Press, 2007).

A PATENT SYSTEM FOR THE 21<sup>ST</sup> CENTURY, Committee on Intellectual Property Rights in the Knowledge Based Economy, National Research Council (National Academies Press, 2004).

PATENTS IN THE KNOWLEDGE-BASED ECONOMY, Committee on Intellectual Property Rights in the Knowledge Based Economy, National Research Council (National Academies Press, 2003).

RESPONSIBLE RESEARCH: A SYSTEMS APPROACH TO PROTECTING RESEARCH PARTICIPANTS, Committee on Assessing the System for Protecting Human Research Subjects, Institute of Medicine (National Academies Press, 2002).

FULFILLING THE POTENTIAL OF CANCER PREVENTION AND EARLY DETECTION, National Cancer Policy Board, Institute of Medicine (National Academies Press, 2002).

MAMMOGRAPHY AND BEYOND: DEVELOPING TECHNOLOGIES FOR THE EARLY DETECTION OF BREAST CANCER, National Cancer Policy Board, Institute of Medicine (National Academies Press, 2001).

PRESERVING THE PUBLIC TRUST: ACCREDITATION AND HUMAN RESEARCH PARTICIPANT PROTECTION PROGRAMS, Committee on Assessing the System for Protecting Human Research Subjects, Institute of Medicine (National Academies Press, 2001).

IMPROVING PALLIATIVE CARE FOR CANCER, National Cancer Policy Board, Institute of Medicine (National Academies Press, 2001).

ENHANCING DATA SYSTEMS TO IMPROVE THE QUALITY OF CANCER CARE, National Cancer Policy Board, Institute of Medicine (National Academies Press, 2000).

### **SCIENTIFIC PUBLICATIONS**

The 1000 Genomes Project Consortium, *A Global Reference for Human Genetic Variation*, Nature, 526: 68 – 74 (2015). PMID: 26432245 (**Ossorio** was a member of the 1000 Genomes Consortium)

The 1000 Genomes Project Consortium, *An Integrated Map of Genetic Variation from 1092 Human Genomes*, Nature 491: 56-65 (2012). PMID: 23128226, PMCID: PMC3498066. (**Ossorio** was a member of the 1000 Genomes Consortium)

The 1000 Genomes Project Consortium, *A Map of Human Genome Variation from Population-Scale Sequencing*, Nature 467: 1061-1073 (2010). PMID: 20981092, PMCID: PMC3042601. (**Ossorio** was a member of the 1000 Genomes Consortium)

The International HapMap Consortium, *Integrating Ethics and Science in the International HapMap Project*, Nature Reviews Genetics 5: 467-475 (2004). PMID: 15153999, PMCID: PMC2271136 (**Ossorio** was a member of the International HapMap Consortium)

International HapMap Consortium, *The International HapMap Project*, Nature 426: 789-796 (2003). PMID: 14685227 (**Ossorio** was a member of the International HapMap Consortium)

**Ossorio, P.N.**, Dubremetz, J.F. & Joiner, K.A., *A Soluble Secretory Protein of the Intracellular Parasite Toxoplasma gondii Associates with the Parasitophorous Vacuole Membrane through Hydrophobic Interactions*, Journal of Biological Chemistry 269: 15350-15357 (1994). PMID: 8195173

Joiner, K.A., Beckers, C.J.M., Bermudes, D., **Ossorio, P.N.**, Schwab, C.J. & Dubremetz, J.F., *Structure and Function of the Parasitophorous Vacuole Membrane Surrounding Toxoplasma gondii*, Annals of the New York Academy of Science 730: 1-6 (1994). PMID: 8080165

**Ossorio, P.N.**, Schwartzman, J.D. & Boothroyd, J.C., *A Toxoplasma gondii Rhoptyr Protein Associated with Host Cell Penetration Has Unusual Charge Asymmetry*, Molecular Biochemical Parasitology 50: 1-16 (1992). PMID: 1542304

**Ossorio, P.N.**, Sibley, L.D. & Boothroyd, J.C., *Mitochondrial-like DNA Sequences Flanked by Direct and Inverted Repeats in the Nuclear Genome of Toxoplasma gondii*, Journal of Molecular Biology 222: 525-536 (1991). PMID: 1660924

**Ossorio, P.N.**, (doctoral dissertation) CHARACTERIZATION OF A RHOPTRY PROTEIN GENE IN TOXOPLASMA, AND THE DISCOVERY OF MITOCHONDRIAL-LIKE SEQUENCES IN ITS NUCLEAR GENOME (Stanford University Press, 1990).

Broothroyd, J.C., Burg, J.L., Nagel, S.D., **Ossorio, P.N.**, Perelman, D., Kasper, L.H., Ware, P.L., Prince, J., Sharma, S. & Remington, J., *Antigen and Tubulin Genes of Toxoplasma gondii*, in MOLECULAR STRATEGIES OF PARASITIC INVASION, UCLA SYMPOSIUM ON MOLECULAR & CELLULAR BIOLOGY, VOL. 42 (Agabain, N., Goodman, H & Noguiera, N. eds., 1987).

## **PRIOR EMPLOYMENT**

**BERKELEY LAW, UNIVERSITY OF CALIFORNIA, Berkeley, CA**  
Visiting Professor of Law, 2006

**UNIVERSITY OF CHICAGO SCHOOL OF LAW, Chicago, IL**  
Adjunct Professor of Law, 1998 – 2000

**AMERICAN MEDICAL ASSOCIATION, Chicago, IL**  
Director, Genetics Section, Institute for Ethics, 1997 – 2000

**MORRISON AND FOERSTER, LLP, Palo Alto, CA**  
Summer Associate, then Associate, 1995 – 1997

**PILLSBURY MADISON & SUTRO, San Francisco, CA**  
Summer Associate, June – Sept. 1995, Aug. 1996

**UNITED STATES DEPARTMENT OF ENERGY, Los Alamos, NM**  
Bioethics Research Associate, Program on Ethical, Legal, and Social Implications of the Human Genome Project, January 1994 – August 1994

**WHITE HOUSE, Washington, DC**  
Special Government Employee working on health care reform with the Bioethics Working Group, 1993

## **EDUCATION AND TRAINING**

**UNIVERSITY OF CALIFORNIA AT BERKELEY SCHOOL OF LAW, J.D.** **1997**  
Elected to Order of the Coif (legal honor society, lifetime membership), 1997  
Articles Editor, Berkeley Technology Law Journal, 1996 – 1997  
Elected student representative to the appointments committee, 1995 – 1997  
Research Assistant for professor Robert Merges, 1995 – 1996  
Jurisprudence Awards (highest grade in class): Critical Race Theory; Substantive Legal Theory; Rights, Justice & Utility in Liberal Theory  
Prosser Awards (second highest grade in class): Torts; Patent Law and Policy; Legal Ethics  
Commendation in Moot Court



**YALE UNIVERSITY SCHOOL OF MEDICINE, Postdoctoral Fellowship** **1990 – 1993**  
 Identified and characterized a parasitophorous vacuole membrane protein of the parasite  
*Toxoplasma gondii*  
 Trained medical fellows, medical students, and graduate students  
 Supervised two technicians  
 Successfully obtained three competitive grants

**STANFORD UNIVERSITY**

Ph.D., Microbiology and Immunology **1990**

B.S., Biology **1983**

Ph.D. thesis examined molecular mechanisms of host cell invasion employed by the eukaryotic parasite *Toxoplasma gondii*

Predocctoral National Research Service Award, 1988 – 1990

Qualified for Ph.D. with exams in bacterial genetics, bacterial physiology, medical microbiology, virology, and immunology

Student representative to the appointments committee in Microbiology and Immunology, 1988 – 1989

Student representative to the graduate school diversity committee, 1986 – 1989

Rape Prevention Education Project, treasurer 1980 – 1982

**SELECTED PROFESSIONAL ACTIVITIES – ADVISORY COMMITTEES AND WORKING GROUPS**

Scientific Advisory Board, NIH's Environmental Influences on Child Health Outcomes (ECHO)	2022 – cont.
Center for ELSI Resources and Analysis (CERA) Advisory Committee	2021 – cont.
External Ethics Advisor, Data Collective Board for NIH's Helping End Addiction Long-term initiative (HEAL)	2021 – cont.
Novel and Exceptional Technologies and Research Advisory Committee (NExTRAC), (an HHS appointment); co-chair of NExTRAC subcommittee on data sharing and data science.	2019 – cont.
External Scientific Advisory Board, RADx™ Radical program and Data Coordinating Center (MPIs Ohno-Machado (UCSD), Spencer (UCSD), and Xu (UT))	2020 – cont.
External Expert Panel (EEP) for the NIH's Kidney Precision Medicine Initiative (KPMP).	2019 – cont.
Scientific Advisory Board, SUNY Upstate Medical University in Syracuse	2017 - 2019
Board of Reviewing Editors, Science <sub>AAAS</sub>	2016 – cont.

Working Group Member and Legal Frameworks Taskforce Leader for LawSeq™: Building a Sound Legal Framework for Translating Genomics to Clinical Applications	2016 - 2020
Ethics Committee, American Society for Gene & Cell Therapy	2016 – 2022.
Ethics Committee, American Association of Anthropological Genetics	2015 – 2018
National Heart, Lung, and Blood Advisory Council, an HHS appointment	2015 – 2018
Organizing Committee Member, International Summit on Human Gene Editing, a National Academies of Sciences, Engineering, and Medicine Committee	2015
Committee on Industrialization of Biology: A Roadmap to Accelerate Advanced Manufacturing of Chemicals, a committee of the Board on Chemical Sciences and Technology and the Board on the Life Sciences, National Research Council, NASEM	2014 – 2015
State of Wisconsin Umbrella Committee on Newborn Screening, Advisory to the State Dept. of Public Health	2014 – cont.
Secretary’s Advisory Committee on Human Research Protections, an HHS appointment	2012 – 2016
Working Group on the Federal Regulation of Probiotics (Diane Hoffman, PI), U. of MD Law School	2011 – 2012
Working Group on Returning Research Results and Incidental Findings (Susan Wolf, PI), U. MN Law School	2010 – 2012
Gene-Environment Interaction Project (Alexandra Shields, PI), Harvard University	2010 – 2012
International Advisory Committee to the Human Microbiome Project, National Institutes of Health (NIH)	2009 – 2012
Working Group on Translating Addiction Genomics Research into Practice: Ethics and Policy (Barbara Koenig and Jennifer McCormick, PIs), Mayo Clinic	2009 – 2012
National Advisory Council for Human Genome Research, an HHS appointment	2008 – 2011
Medical Sequencing Advisory Committee, National Human Genome Research Institute (NHGRI)	2008 – 2011
Working Group on Genetics Research in Indigenous Communities (Rebecca Tsosie and Kimberley Tallbear, PIs), ASU Law School	2008 – 2010
Working Group on Forensic Genetics (Pamela Sankar, PI), University of Pennsylvania	2008 – 2010
ELSI Assessment Committee (EAP) for the NHGRI: conducted a comprehensive evaluation of the program on the Ethical, Legal and Social Implications of the Human Genome Project (ELSI), and advised the Director on possible changes to the program	2007 – 2008

Steering Committee and Samples and ELSI Subcommittee of the 1000 Genomes Project, an international project to sequence the whole genomes of approximately 1500 people	2007 – 2014
Member, site visit team for Centers for Excellence in Genome Ethics	2007
Informed Consent Advisory Committee (Chair) and Umbrella Protocol Advisory Committee, Human Microbiome Project, NIH	2007
Human Embryonic Stem Cell Research Advisory Committee, a committee of the Board on Life Sciences and the Board on Health and Science Policy of the National Academy of Sciences	2006 – 2009
Technical Advisory Group for the Genetic Association Information Network of the Foundation for the National Institutes of Health	2006
Study Section (grant proposal review) for Ethical, Legal and Social (ELS) Implications of Human Genetics, National Institutes of Health	2006 – 2008
Toward a Comprehensive Genomic Analysis of Cancer: A Roundtable and Workshop (conference chair and speaker), National Cancer Institute and NHGRI	2005
Workshop on the Future of the NHGRI Large-Scale Sequencing Program	2005, 2008, 2009
Workshop on Whole-Genome DNA Sequencing, NHGRI	2005
International Advisory Committee, Center for Excellence in Ethics Research, Case Western Reserve University. Cleveland, OH	2004 – 2010
Advisory board for the National Center for Bioethics. Tuskegee, AL	2003 – 2007
Advisory board for “New Definitions of Merit,” a project on law school admissions criteria, Berkeley Law. Berkeley, CA	2003 – 2009
Advisor to the National Library of Medicine, Bioethics Working Group	2003 – 2004
Lasker Foundation Forum on Ethical Issues in Biomedical Research and Practice	2003
Editorial Board, American Journal of Bioethics	2002 – 2006
Advisory Committee for the Latino Community Engagement Project (Amelie Raimerez, PI), Baylor University	2002 – 2004
Advisory committee for the Food and Drug Administration, Center for Devices and Radiological Health (CDER)	2002 – 2004
Working Group for Research on Human Germline Genetic Interventions (Rebecca Dresser, PI), Washington University. St. Louis, MO	2002 – 2004
Working Group on Equity in Newborn Screening, a joint project of the Hastings Center for Bioethics and the Health Services Research Administration (HRSA)	2002 – 2003
Liaison to the Committee on Intellectual Property Rights, National Research Council, National Academy of Sciences	2000 – 2003
Liaison to the Committee on Assessing the System for Protecting Human Research Subjects, Institute of Medicine, National Academy of Sciences	2000 – 2002
National Cancer Policy Board, Institute of Medicine, National Academy of Sciences	1999 – 2002

Co-chair, Working Group on Germ-line Genetic Intervention, American Association for the Advancement of Science (AAAS) 1998 – 2000

### **EXPERT WORK**

Consulted on the regulation of human subjects research for the Havasupai Tribe in its litigation against the Arizona Board of Regents. Wrote briefs, participated in mediation, and prepared an opinion letter for settlement negotiations. 2005 – 2010.

### **SELECTED OTHER PROFESSIONAL AND PUBLIC EDUCATION ACTIVITIES**

Consulted on development of the Smithsonian’s public materials on “Race Medicine” and was an “on screen” personality in one video	2021
Organizer and faculty member for the Summer Institute for Indigenous Peoples in Genomics (SING)	2013 – cont.
Consulted on the development and implementation of human subjects research oversight processes for the Hopi Tribe of Arizona	2010 – 2013
Advisor and interviewee for the PBS television series <i>Race—The Power of an Illusion</i> , produced by California Newsreel productions, Christine Herbes-Sommers, program producer, and Larry Adelman, executive producer	2001 – 2004
Advisor for the DNAFiles radio series produced by SoundVision Productions (winner of the 2000 Dupont Award, 2001 Peabody Award, 2002 Robert Wood Johnson Award for outstanding reporting in health and medicine, and the 2002 AAAS Pinnacle of Excellence Award for science reporting), Bari Scott, executive producer	1998 – 2003, & 2009 – 2011

### **AWARDS AND HONORS, 2000 AND LATER**

Appointed by the Secretary of Health and Human Services to the Novel and Exceptional Technologies and Research Advisory Committee for NIH (an HHS Appointment, 2019 - present)

Appointed by the Secretary of Health and Human Services to the National Heart, Lung, and Blood Advisory Council, 2015 - 2019

Appointed by the Secretary of Health and Human Services to the Secretary’s Advisory Committee on Human Research Protections, 2012 – 2016

Distinguished Academic Alumni Award from Stanford University, 2010

Appointed by the Secretary of Health and Human Services to the National Advisory Council for Human Genome Research, 2008 – 2011

Elected to national office in the American Association for the Advancement of Science (AAAS) as Member-at-Large representing the Section on Societal Impacts of Science and Engineering, 2001 – 2004

Elected to national office in AAAS as a member of the Electorate Nominating Committee,  
1998 – 2001

Elected fellow of the AAAS, 2000