

Saskia Hendriks

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<https://www.cc.nih.gov/meet-our-doctors/shendriks.html>

EDUCATION

- 11/19/2017 **Ph.D.**, Faculty of Medicine, University of Amsterdam.
Towards the responsible clinical implementation of stem cell-
based fertility treatments.
- 5/31/2017 **M.D.**, University of Amsterdam.
- 7/31/2012 **BSc** Liberal Arts and Sciences, Amsterdam University College (*summa
cum laude*)

PROFESSIONAL APPOINTMENTS

- 9/1/2019-
current **Bioethicist (Faculty)**, Department of Bioethics, Clinical Center, National
Institutes of Health
- 6/1/2023 – Current: Acting head of the NIH Bioethics Consultation Service
- 9/1/2019-
current **Neuroethics Consultant (Faculty)**, Neuroethics Program, Office of the
Director, The National Institute of Neurological Disorders and Stroke
- 9/11/2017-
8/31/2019 **Postdoctoral fellow**, Department of Bioethics, Clinical Center, National
Institutes of Health

PUBLICATIONS

Hendriks S, Li X, Grady C, Kim, SYH. Public views on whether the use of pharmaceutical neuroenhancements should be allowed. *Neurology*, 2024;103(4):e209681.

Hendriks S, Grady C. Ethics and Highly Innovative Research on Brain Diseases. *New England Journal of Medicine*, 2024;390:2133-2136.

Dasgupta I, Klein E, Cabrera LY, Chiong W, Feinsinger A, Fins JJ, Haeusermann T, **Hendriks S**, Lázaro-Muñoz G, Kubu C, Mayberg H, Ramos K, Roskies A, Sankary L, Walton A, Widge AS, Goering S. What Happens After a Neural Implant Study? Neuroethics Expert Workshop on Post-Trial Obligations. *Neuroethics* 2024;17(2): 22.

Hendriks S, Althaus J, Atkinson MA, Baschat AA, Berkman BE, Grady C, Wasserman D, Wendler D, Miller JL. Precarious hope: ethical considerations for offering experimental fetal therapies outside of research after initial studies in humans. *Prenatal Diagnosis*. 2024; 44(2):180-186.

Hendriks S*, Hsu N*, Beckel-Mitchener AC, Ngai J, Grady C. Continuing trial responsibilities for implantable neural devices. *Neuron*. 2023; 111(20):3143-3149.

Patch K, Huang C, **Hendriks S**, Wasserman D, Parrish M, Grady C. "It's Pretty Sad If You Get Used to It": A Qualitative Study of First Responder Experiences with Opioid Overdose Emergencies. *Prehosp Emerg Care*. 2023 Jul 18:1-8.

Mumford K, **Hendriks S**, Gomez-Lobo V. Should Ovarian Tissue Cryopreservation in Pediatric Patients with Turner Syndrome Be Limited to the Research Setting? *J Pediatr Adolesc Gynecol*. 2023;25:S1083-3188(23)00393-5.

Das J, Forlini C, Porcello DM, Rommelfanger KS, Salles A, Akter GNSDN, Rachel A, Araki T, Arie F, Asakawa T, Bennett AJ, Bitsch L, Carter O, Forlini C, Fukuda M, Fukushi T, **Hendriks S**, Herrera-Ferra K, Ienca M, Illes J, Jeong SJ, Syd JL, Jones PH, Kim SY, Leach J, Maruyama M, McMahon A, Montojo C, Morita K, Nakamura K, Nakazawa E, O'Connor C, Poo MM, Ramos K, Richards L, Sadato N, Shimizu R, Smith B, Uh S, Wang H, White S, Yi W, Wang Y, Yin J. Neuroscience is ready for neuroethics engagement. *Frontiers in Communication* 2022: 7.

Hendriks S, Grady C, Ramos KM. Survey of Investigators About Sharing Human Research Data in the Neurosciences. *Neurology* 2022, 99 (12) e1314-e1325.

Hendriks S, Grady C, Wasserman D, Wendler D, Bianchi DW, Berkman B. A new ethical framework to determine acceptable risks in fetal therapy trials. *Prenatal Diagnosis* 2022; 42(8):962-969.

Hendriks S, Grady C, Wasserman D, Wendler D, Bianchi DW, Berkman B. A new ethical framework for assessing the unique challenges of fetal therapy trials. *The American Journal of Bioethics*, 2022;22(3):45-61.

Hendriks S, Grady C, Wasserman D, Wendler D, Bianchi DW, Berkman B. A New Ethical Framework for Assessing the Unique Challenges of Fetal Therapy Trials: Response to Commentaries. *The American Journal of Bioethics*, 2022;22(3):W1-W3.**

Hsu N*, **Hendriks S***, Ramos KM, Grady C. Commentary: COVID-related adjustments to clinical research: ethical considerations for investigators. *Nature Medicine* 2021;27,191–193.

Iyer AA, Saade D, Bharucha-Goebel DX, Foley AR, Averion G, Paredes E, Gray S, Bonnemann CG, Grady C, **Hendriks S**, Rid A. Ethical challenges Ethical Challenges for a New Wave of Early-Phase Pediatric Gene Therapy Trials. *Genetics in Medicine*, 2021;23(11): 2057-2066.

Hendriks S, Pearson SD. Assessing potential cures: are there distinctive elements of value beyond health gain? *Journal of Comparative Effectiveness Research*, 2021;10(4):255–65.

Van Dijke I, van Wely M, Berkman B.E., Bredenoord A.L., Henneman L., Vliegthart R., Repping S, **Hendriks S**. Should germline genome editing be allowed? The effect of treatment characteristics on public acceptability. *Human Reproduction*, 2020;36(2):465-478.

Iyer A, **Hendriks S**, Rid A. The Challenge of Selecting Participants Fairly in High-Demand Clinical Trials. *The American Journal of Bioethics* 2020; 20(2): 35-38.**

Iyer AA*, **Hendriks S***, Rid A. Advantages of Using Lotteries to Select Among Eligible Patients in High-Demand COVID-19 Treatment Trials. *Ethics & Human Research*, 2020;42(4):35-40.

Hendriks S*, Grady C*, Ramos KM, Chiong W, Fins JJ, Ford P, Goering S, Greely HT, Hutchison K, Kelly ML, Kim SYH, Klein E, Lisanby SH, Mayberg H, Maslen H, Miller FG, Rommelfanger K, Sheth SA, Wexler A. Ethical Challenges of Risk, Informed Consent, and Posttrial Responsibilities in Human Research With Neural Devices: A Review. *JAMA Neurology*, 2019;76(12):1506–1514.

Hendriks S, van Wely M, D’Hooghe TMSH, Mol F, Meissner A, Peeraer K, Repping S, Dancet EAF. The relative importance of genetic parenthood. *Reproductive Biomedicine Online*, 2019;39(1):103-110.

Hendriks S, Pearson SD. A proposed framework for strengthening regulatory review of innovative reproductive techniques in the United States. *Fertility and Sterility Dialogue*, 2018, e-pub September 19.

Van Dijke I, Bosch L, Bredenoord AL, Cornel M, Repping S, **Hendriks S**. The ethics of clinical applications of germline genome modification: a systematic review of reasons. *Human Reproduction*, 2018;33(9):1777-1796.

Hendriks S, Giesbertz NAA, Bredenoord AL, Repping S. Reasons for being in favor of or against genome modification: a survey of the Dutch general public. *Human Reproduction Open*, 2018;3: 1-12.

Hendriks S, Vliegthart R, Repping S, Dancet EAF. Broad support for regulating the clinical implementation of future reproductive techniques. *Human Reproduction*, 2018; 33(1): 39-46.

Hendriks S, Peeraer K, Bos H, Repping S, Dancet EAF. The importance of genetic parenthood for infertile men and women. *Human Reproduction*, 2017;39(10):2076–2087.

Hendriks S, Dancet EAF, Vliegthart R, Repping S. The acceptability of stem cell-based fertility treatments for various indications. *Molecular Human Reproduction*, 2017;23(12):855-863.

Hendriks S, Hessel M, Mochtar MH, Meissner A, F van der Veen F, Repping S, Dancet, EAF. Couples with non-obstructive azoospermia are interested in future treatments with artificial gametes. *Human Reproduction*, 2016;31(8):1738-1748.

Hendriks S, Dancet EAF, van Pelt AM, Hamer G, Repping S. Artificial gametes: a systematic review of biological progress towards clinical application. *Human Reproduction Update*. 2015;21(3):285-296

Hendriks S, Dondorp W, de Wert G, Hamer G, Repping S, Dancet EAF. Potential consequences of clinical application of artificial gametes: a systematic review of stakeholder views. *Human Reproduction Update*. 2015;21(3):297-309.

Hendriks S, Dancet EAF, Meissner A, van der Veen F, Mochtar MH, Repping S. Perspectives of infertile men on future stem cell treatments for non-obstructive azoospermia. *Reproductive Biomedicine Online*. 2014;28(5):650–657.

* Authors contributed to this work equally

** Not peer-reviewed.

ORAL PRESENTATIONS AS INVITED SPEAKER

- 2024 Ethical considerations for tools predicting individuals' risk of SUDEP. CURE Epilepsy SUDEP workshop. 10/24/2024.
- 2024 Ethical considerations for experimental fetal interventions. 13th International Pediatric Intestinal Failure and Rehabilitation Symposium. 9/27/2024.
- 2024 Non-therapeutic Research in Terminally Ill Patients. NINDS Clinical Research Faculty Retreat. 4/29/2024.
- 2023 Ethical considerations for offering experimental fetal therapies outside of research after initial studies in humans. The North American Fetal Therapy Network Meeting. Virtual, 10/19/2023 (postponed to 11/20).
- 2023 Ethical considerations for experimental prenatal cell and gene therapies. American Society of Gene and Cell Therapy Insights symposium. Virtual, 10/19/2023.
- 2023 Posttrial responsibilities to participants in neural device research. Ethics Grand Rounds at UT Southwestern. Dallas, Texas, 10/10/2023.
- 2023 Ethics of sharing individual-level data from research with human subjects. Office of Human Subjects Research Protections (OHSRP) Education Series. Bethesda, MD, 5/4/2023.
- 2023 Ethical challenges in pediatric neurology: clinical care, innovative care, and research. Frontiers in Pediatric Neurology, Dallas, Texas (virtual talk), 4/14/2023
- 2020 Ethical and legal considerations for persons with epilepsy and neurocognitive conditions. Annual meeting of the American Epilepsy Society, virtual meeting, 12/7/2020.
- 2020 Posttrial responsibility for investigational brain implants. Annual meeting of the International Neuroethics society, virtual meeting, 10/23/2020.
- 2020 Ethics of the development, use, and implementation of emerging technologies. American Physician Scientists Association, virtual panel, 9/30/2020.
- 2020 (When) should germline genome editing be allowed? Public views on acceptability. Symposium of Dutch Society for Clinical Embryology, Driebergen, 1/7/2020.
- 2019 Ethical challenges in research with invasive and non-invasive neural devices in humans. 7th Annual Neuroscience Virtual Conference, virtual meeting, 3/13/2019.
- 2019 Neuroethics: An Essential Partner for Neuroscience. 7th Annual Neuroscience Virtual Conference, virtual meeting, 3/13/2019.

- 2019 Stem cell therapies for infertility and the importance of genetic parenthood. Bioethics Rounds McGill University, Montreal, 1/28/2019.
- 2018 The importance of genetic parenthood for infertile men and women. 22nd Thai Society of Reproductive Medicine Annual Scientific Meeting, Bangkok, 3/15/2018.
- 2018 Artificial gametes: stakeholders' perspectives on clinical introduction. 22nd Thai society of Reproductive Medicine Annual Scientific Meeting, Bangkok, 3/15/2018.
- 2017 The clinical introduction of stem cell-based fertility treatments. *Keynote Speaker* at 19th World Congress on In Vitro Fertilization, Antalya, 10/4/2017.
- 2017 Introduction of novel techniques into the practice: Lessons from the past, recommendations for tomorrow. 19th World Congress on In Vitro Fertilization, Antalya, 10/4/2017.
- 2017 Artificial gametes: stakeholders' perspectives. Ethics and Regulation of In Vitro Gametogenesis, London, 9/14/2017.
- 2017 Artificial gametes to overcome infertility. European Society of Human Reproduction and Embryology, Geneva, 7/2/2017.
- 2017 Germline modification: stakeholders' perspectives. Dutch-Flemish IGO conference, Rotterdam, 4/4/2017.
- 2017 Will artificial gametes restore fertility? Oral presentation at Best of ASRM and ESHRE, Paris, 2/24/2017.
- 2016 Negotiating research methods for studying public perspectives on innovative technologies. Public participation in ethical, social and health policy issues of new genomic technologies, Geneva, 12/8/2016.
- 2016 Artificial gametes: progress from biological research towards clinical application. Nordic IVF Laboratory Society Meeting, Gothenburg, 8/27/2016.
- 2016 Artificial gametes. 2nd Lucerne Fertility Symposium, Lucerne, 5/21/2016.
- 2016 Clinical implementation of stem cell-based fertility treatments: biological progress and stakeholders' perspectives. Oral presentation at Brocher Foundation, Geneva, 2/4/2016.
- 2015 Artificial gametes: biology, implications, and patient perspectives. European Society of Human Reproduction and Embryology, Lisbon, 6/15/2015.
- 2015 Why couples with non-obstructive azoospermia (NOA) would use artificial gametes. Dutch Society of Obstetrics and Gynecology, Apeldoorn, 5/28/2015.
- 2013 Perspectives of infertile men on future stem cell treatments for non-obstructive azoospermia (NOA). Artificial Gametes Conference, Maastricht, 9/12/2013.

PEER-REVIEWED PRESENTATIONS

- 2024 Precarious hope: Ethical considerations for offering experimental fetal therapies outside of research after initial studies in humans. International Society of Prenatal Diagnosis, Boston, 9/7/2024 (poster)
- 2024 "When these studies are over, they're not over": continuing trial responsibilities for implantable neural device trials. International Neuroethics Society, Baltimore, 4/17/2024 (poster)
- 2024 The US public perspective on what should influence neuroenhancement policies. International Neuroethics Society, Baltimore, 4/17/2024 (poster)

- 2023 “When these studies are over, they’re not over”: continuing trial responsibilities for implantable neural device trials. Annual Conference of the American Society for Bioethics and Humanities, Baltimore, 10/14/2023 (oral)
- 2023 Beyond effects on the users: the US public thinks neuroenhancement policy should consider justice and societal impact. Annual Conference of the American Society for Bioethics and Humanities, Baltimore, 10/13/2023 (oral)
- 2023 A new ethical framework to determine acceptable risks in fetal therapy trials. 27th Annual meeting of the International Society for Prenatal Diagnosis, virtual, 6/19/2023 (poster)
- 2022 Sharing individual level human data in the neurosciences: a survey of investigator practices and views. International Neuroethics Society, virtual, 11/3/2022 (poster)
- 2020 Cutting edge science raises cutting edge ethical questions: an analysis of ethical questions that may arise in the NIH BRAIN Initiative scientific portfolio. Annual meeting of the International Neuroethics Society, virtual meeting, 10/22/2020 (oral)
- 2020 A new ethical framework for assessing the unique challenges of fetal therapy trials. Annual Conference of the American Society for Bioethics and Humanities, virtual meeting, 10/26/2020 (oral)
- 2020 A new ethical framework for assessing the unique challenges of fetal therapy trials. World Congress of Bioethics, virtual meeting, 6/29/2020 (poster)
- 2019 Ethical issues in human research with invasive and non-invasive neural devices. International Neuroethics Society, Chicago, 10/16/2019 (poster)
- 2018 A prioritized global research agenda following systematic review of evidence addressing fertility care and infertility interventions. American Society of Reproductive Medicine, Denver, 10/6/2018 (poster)
- 2017 The importance of genetic parenthood for infertile men and women. European Society of Human Reproduction and Embryology, Geneva, 7/2/2017 (poster)
- 2016 The general public’s opinion on stem cell-based fertility treatments: who should decide and on what? European Society of Human Reproduction and Embryology, Helsinki, 6/3/2016 (poster)
- 2015 The interest of gynecologists in potential future fertility treatments involving artificial gametes for couples with ovarian failure. European Society of Human Reproduction and Embryology, Lisbon, 6/15/2015 (poster)
- 2015 Why couples with non-obstructive azoospermia (NOA) would use artificial gametes. European MD-PhD conference, Groningen, 6/6/2015 (poster)
- 2014 Stem cell-based therapies for non-obstructive azoospermia: key treatment characteristics according to infertile couples. European Society of Human Reproduction and Embryology, München, 6/24/2014 (poster)
- 2013 Perspectives of infertile men on future stem cell treatments for non-obstructive azoospermia (NOA). European Society of Human Reproduction and Embryology, London, 7/9/2013 (oral)

*** Posters presentations only listed if I am the first author.

BIOETHICS CONSULTATION SERVICE

2023-current Acting chief, Bioethics consultation service, Clinical Center, National Institutes of Health.

- 2023-current Attending, Bioethics consultation service, Clinical Center, National Institutes of Health.
- 2020-current Attending and co-founder, Neuroethics Consultation Service, National Institute of Neurological Disorders and Stroke and the NIH BRAIN Initiative
- 2018-2019 Fellow-on-call, Bioethics consultation service, Clinical Center, National Institutes of Health.
- 2017-2018 Observer, Bioethics consultation service, Clinical Center, National Institutes of Health.

AWARDS AND HONORS

- 2023 NINDS Director's Award. For meaningful engagement and exemplary leadership with people with lived experience and their advocates in setting priorities, planning, and conducting research (group award).
- 2022 NINDS Director's Award. For exceptional management and leadership of the NINDS and NIH BRAIN Initiative Neuroethics Programs (with Dr. Nina Hsu).
- 2020 NINDS Director's Award. For conceptualizing and launching the Neuroethics Consultation Service (with Dr. Khara Ramos).
- 2020 NINDS Director's Award. For reestablishing and revitalizing a cross-cutting group focused on the intersection of data science and neuroscience in extramural NINDS (group award).
- 2017 Licensed physician, Dutch Ministry of Health, Welfare and Sport, BIG registration number: 59922581001 (expired as of 2023)
- 2016 Clinical Investigator License, Dutch Federation of Academic Medical Centers
- 2016 Visiting Scholar at Brocher Foundation (1 month).
- 2015 Best poster pitch award, the European MD/Ph.D. Association.

RESEARCH GRANTS

- 2016 Ph.D. scholarship, Amsterdam Reproduction & Development, Amsterdam, the Netherlands. [Funding for a Ph.D. student, Ms. van Dijke, 2017-2021. Co-writer of application and primary supervisor on two projects]
- 2016 Project funding for interdisciplinary research (€10.000), with Drs. Repping, Vliegthart, and Bredenoord, Young Academy, Royal Netherlands Academy of Arts and Sciences.
- 2016 Ph.D. Grant (£3.000), Parkes Foundation, University of Cambridge, Cambridge, UK. [Project funding]
- 2015 Project funding for interdisciplinary research (€8.000), Drs. Repping and Vliegthart, Young Academy, Royal Netherlands Academy of Arts and Sciences.
- 2013 MD-PhD scholarship (departmental funding), Academic Medical Center, University of Amsterdam.

TEACHING AND MENTORING

- 2020-current Lecturer on various courses at the National Institute of Health (“Introduction to Bioethics”, “Ethical and Regulatory Aspects of Clinical Research”, “Empirical Research Lab”), Bethesda, MD.
- 2020-2023 Convenor and lecturer: public speaking training for fellows at the Department of Bioethics (annual), Bethesda, MD.
- 2019-current Mentor to NIH Dept. of Bioethics fellows Mr. Alex Iyer (2019-2021), Mr. Kyle Patch (2021-2023), Ms. Kelsey Mumford (2022-2023), Ms. Caroline Morehouse (2023-2025), Dr. Shen Pan (2024-2026)
- 2018-current Lecturer for various NIH audiences (NINDS Clinical Care meeting, Trans-NIH Biomedical Technology and Engineering Collective Meeting, NIH Brain Initiative team N, NINDS NSF, NINDS Topics in Clinical Research, Neuroethics Working Group of the NIH BRAIN Initiative, NIH Bioethics Interest Group, NICHD on reproductive health, NIH Reproductive Endocrinology and Infertility) and other programs (Utrecht University, Mid-Atlantic Regional Fellows Conference/University of Pennsylvania)
- 2017-2020 Supervised Ph.D. student Ms. Ivy van Dijke (Amsterdam University Medical Center).
- 2015-2017 Supervised 2 bachelor students’ theses (Amsterdam University Medical Center).

SERVICE (SELECTED)

- 2023-current Acting vice-chair, NIH Clinical Center Ethics Committee
- 2023-current Member, the NIH BRAIN Initiative Team Data
- 2022-current Member/working group planning/lead of subgroup, NIH OSP/OER Implant Working Group
- 2022 Bioethics reviewer, peer review panel of the Traumatic Brain Injury and Psychological Health Research Program for the Department of Defense Congressionally Directed Medical Research Programs
- 2021 Invited representative, roundtable on Public Sector Uses of Biometric Technologies, White House Office of Science and Technology Policy
- 2020-current Member, NINDS Data Sharing Working Group (co-lead of data governance and neuroethics subcommittee 2020-2021)
- 2019-current Subject matter expert and organizer, The BRAIN Initiative Neuroethics Working Group. Workshops organized and moderated:
 ‘Continuing Trial Responsibilities’ (2022)
 ‘Ethics of Sharing Individual Level Human Brain Data Collected in Biomedical Research’ (2023)
- 2017 Advisor on ‘a durable biotechnology policy’ to the Dutch Ministry of Environment and Water Management, The Hague.
- 2016 Member, Committee on Corporate Social Responsibility: affordable and sensible care, Academic Medical Center, Amsterdam.
- 2015 Intern, Department of Reproductive Health and Research, World Health Organization, Geneva (August-September).
- 2015-current Reviewer for academic journals (*Cell*, *Bioethics*, *Prenatal Diagnosis*, *Human Reproduction Update*, *Reproductive Biomedicine Online*, *Perspectives in Biology and Medicine*).

MEDIA COVERAGE

Interviewed for international and national media (*MIT Technology Review, Nature Medicine, Undark, Fuentes documentary, VICE Motherboard, Folia, Focus on Reproduction, AMC magazine, Kennis van Nu*).

LANGUAGES

Dutch (native), English (fluent), French (can read with dictionary), Spanish (can read with dictionary), German (can read with dictionary).