# **Heidi Mertes**

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#### PROFILE

**Expertise** – moral philosophy (applied and theoretical), with a focus on biomedical ethics, primarily regarding assisted reproduction, embryo research, stem cell research, fertility preservation, genetics, big data, AI and intersections of the above

## **CURRENT POSITION**

Associate Professor in Medical Ethics at Department of Philosophy and Moral Sciences and at Department of Public Health and Primary Care, Ghent University, Ghent, Belgium

#### **CURRENT FUNCTIONS**

Chair of the Ethics Committee of the European Society for Human Reproduction and Embryology (ESHRE) Member of the Belgian Advisory Committee on Bioethics Member of the Belgian Federal Commission for medical and scientific research on Embryo's in vitro (FCE) Member (and former president) of the board of directors of vzw De Maakbare Mens Expert of the Superior Health Council Belgium

#### **PREVIOUS EMPLOYMENT & FUNCTIONS**

Oct 2019 – Jan 2021	Assistant Professor (tenure track) in Medical Ethics at Department of Philosophy and Moral Sciences and at Department of Public Health and Primary Care, Ghent University, Ghent, Belgium
Jan 2022 – current	Expert of the Superior Health Council Belgium
May 2021 – current	Member of steering committee SIG Reproduction in Society, International Society of <i>in vitro</i> Fertilization (ISIVF)
Oct 2015 – current	Board of directors, De Maakbare Mens
Dec 2013 – current	Member of the Federal Commission for medical and scientific research on Embryo's in vitro (FCE)

Mar 2016 – Mar 2024	President, De Maakbare Mens
Sep 2017 – Jun 2019	Senior deputy SIG Ethics and Law, European Society for Reproductive Medicine and Embryology (ESHRE)
Oct 2018 – Sep 2019	Assistant Professor in Ethics at Department of Philosophy and Moral Sciences, Ghent University, Ghent, Belgium (40%)
Oct 2017 – Sep 2019	Postdoctoral researcher at Department of Philosophy and Moral Sciences, Ghent University, Ghent, Belgium
Aug 2018 – Nov 2018	Lecturer at Department of Industrial Engineering and Innovation Sciences, Eindhoven University of Technology (40%)
Jan 2018 – May 2018	Adjunct lecturer, Dedman School of Law, Southern Methodist University (10%)
Oct 2014 – Sep 2017	Associate professor in ethics at Ghent University (30%)
Oct 2014 – Sep 2017	postdoctoral research fellow of the Research Foundation – Flanders (70%)
Jan 2012 – Jan 2016	Associate Editor for Human Reproduction
Oct 2010 – Sep 2014	postdoctoral research fellow of the Research Foundation – Flanders
Oct 2009 – Sep 2010	doctor-assistant at Department of Philosophy and Moral Sciences, Ghent University, Ghent, Belgium
Mar 2005 – Feb 2009	researcher at Department of Philosophy and Moral Sciences, Ghent University, Ghent, Belgium
May 2003 – Feb 2005	translator at Universal Computer Systems, Houston TX, USA
Jan 2002 – Jun 2002	researcher at Department of Philosophy and Moral Sciences, Ghent University, Ghent, Belgium

# **INSTITUTIONAL RESPONSIBILITIES**

Oct 2022 – current	Member of the Committee on Scientific Research (CWO) of the Faculty of Arts and Philosophy, Ghent University
Jan 2023 – current	Member of the alpha-working group for the Board of Research (Onderzoeksraad), Ghent University
Oct 2015 – Sep 2016	Secretary of examination committee Department of Philosophy & Moral sciences Ghent University

# EDUCATION/DEGREES

June 2017	PhD in Philosophy
	Department of Philosophy and Moral Sciences, Ghent University, Belgium
	Title dissertation: "Egg banking in anticipation of age-related fertility decline. Using
	medical technology for better, not for worse"

May 2009	<b>PhD in Moral Sciences (Ethics)</b> Department of Philosophy and Moral Sciences, Ghent University, Belgium Title dissertation: "The interaction between science and ethics in the debate concerning stem cell research"
July 2002	<b>Teaching degree in Moral Sciences</b> Cum laude Department of Pedagogy, Ghent University, Belgium
July 2001	<b>Master's degree in Moral Sciences – Moral Counseling</b> Magna cum laude Department of Philosophy and Moral Sciences, Ghent University, Belgium Title dissertation: "Zingeving vanuit een vrijzinnig perspectief" (in Dutch, free translation: "The meaning of life from a secular perspective")
July 1999	<b>Bachelor's degree in Moral Sciences</b> Cum laude Department of Philosophy and Moral Sciences, Ghent University, Belgium
July 1997	<b>High school degree</b> Sint-Jan-Berchmanscollege, Westmalle, Belgium

# **ADDITIONAL PROFESSIONAL TRAINING**

2017: Coachen van PhD studenten, Ghent University (coaching PhD students)

2011: Basisdocententraining, Ghent University (basic training in academic lecturing)

# GRANTS

2022 – 2026	Management of (suspected) harmful mutations in (sperm) donor conception: current practice,
	stakeholder experiences, ethical analysis and good practice recommendations - Research
	Foundation – Flanders (principal applicant)
2021 – 2026	Disruptive Innovation in healthcare requires disruptive innovation in Medical Ethics (DIME) -
	ERC Starting Grant (sole applicant)
2016 – 2020	Science and Ethics of Stem cell derived Gametes (SEGa) - IWT-SBO project, Research
	Foundation – Flanders (co-applicant)
2015 – 2019	Personalised functional genomics in Mendelian diseases: from DNA variants to clinical and
	bioethical implications - GOA project, Ghent University (co-applicant),
2014 – 2017	Ethical challenges in prenatal genomics - Post-doctoral research fellowship Research
	Foundation – Flanders (principal applicant)
2010 - 2014	Ethical implications of new techniques for fertility preservation - Post-doctoral research
	fellowship Research Foundation – Flanders (principal applicant)
2009 - 2010	Ethical implications of new techniques for fertility preservation - Post-doctoral research
	fellowship Special Research Fund of Ghent University (principal applicant)

#### **INTERNATIONAL RESEARCH VISITS**

September 2017 – July 2018 March 2017 – July 2017 Southern Methodist University, Dallas TX (Dedman School of Law) Maastricht University, Netherlands (department of Health, Ethics and Society)

### **PUBLICATIONS**

permanent link to publications: http://lib.ugent.be/bibliografie/801001621876 ORCID iD: https://orcid.org/0000-0003-3029-2158 Web of Science ResearcherID: AAV-4988-2020

#### ARTICLES IN INTERNATIONAL PEER-REVIEWED JOURNALS

- Accoe D, Pennings G, Tilleman K, Van den Meerschaut F, Janssens S, **Mertes H**. Managing risks for genetic conditions in donor sperm treatment: current practices in Belgian fertility clinics. *Reproductive Medicine Online* 2024; DOI: 10.1016/j.rbmo.2024.104352
- Ferlito B, Segers S, De Proost M, **Mertes H**. Responsibility Gap (s) Due to the Introduction of AI in Healthcare: An Ubuntu-Inspired Approach. *Science and Engineering Ethics* 2024;30(4):34.
- Gameiro S, Leone D, **Mertes H**. Fertility clinics have a duty of care towards patients who do not have children with treatment. *Human Reproduction* 2024;39(8):1591-1598.
- **Mertes H**. The Personalized Patient Preference Predictor: A Harmful and Misleading Solution Losing Sight of the Problem It Claims to Solve. *The American Journal of Bioethics* 2024;24(7):41-42.
- Capalbo A, Pla J, Janssens S, Accoe D, Pennings G, **Mertes H**. Should we use expanded carrier screening in gamete donation? *Fertility and Sterility* 2024;122(2):220-227.
- De Proost M, Segers S, **Mertes H**. Age-related hearing loss and "hearables": An agenda for moral considerations. *Bioethics* 2024; DOI: 10.1111/bioe.13327
- Capalbo A, de Wert G, **Mertes H**, Klausner L, Coonen E, Spinella F, Van de Velde H, Viville S, Sermon K, Vermeulen N, Lencz T, Carmi S. Screening embryos for polygenic disease risk: a review of epidemiological, clinical, and ethical considerations. *Human Reproduction Update* 2024;dmae012.
- Pennings G, Heindryckx B, Stoop D, **Mertes**, **H**. Attitude of Belgian women towards enucleated egg donation for treatment of mitochondrial diseases and infertility. *Reproductive BioMedicine Online* 2024;104101.
- Delbaere I, De Vos M, Somers S, Condorelli M, Pening D, Bogaerts A, Vandepitte H, Stoop D, Harper J, Mertes H. 'Do I want children later in life?' Reproductive intentions of 1700 adolescents. *The European Journal of Contraception & Reproductive Health Care* 2024; 1-8.
- Gray J, Segers S, **Mertes H**. The information, control, and value models of mobile health-driven empowerment. *Bioethics* 2024; DOI: 10.1111/bioe.13294

- ESHRE Guideline Group on the Number of Embryos to Transfer, Alteri A, Arroyo G, Baccino G, Craciunas L, De Geyter C, Ebner T, Koleva M, Kordic K, Mcheik S, **Mertes H**, Pavicic Baldani D, Rodriguez-Wallberg KA, Rugescu I, Santos-Ribeiro S, Tilleman K, Woodward B, Vermeulen N, Veleva Z. ESHRE guideline: number of embryos to transfer during IVF/ICSI. *Human Reproduction* 2024; deae010
- Mayeur C, **Mertes H**, Van Hoof W. How to Deal with Uninformed and Poorly Informed Opinions of Citizens? A Critical Approach to Online Public Engagement. *Citizen Science: Theory and Practice*, 9(1): 10, pp. 1–10; DOI: 10.5334/cstp.689
- Mertens M, **Mertes H**. Deconstructing self-fulfilling outcome measures in infertility treatment. *Bioethics* 2023; DOI: 10.1111/bioe.13226
- Mertes H, Harper J, Boivin J, Ekstrand Ragnar M, Grace B, Moura-Ramos M, Rautakallio-Hokkanen S,
   Simopoulou M, Hammarberg K, on behalf of the International Reproductive Health Education
   Collaboration. Stimulating fertility awareness: the importance of getting the language right. *Human Reproduction Open* 2023 (2); hoad009.
- Mayeur C, **Mertes H**, Van Hoof W. Do genomic passports leave us more vulnerable or less vulnerable? Perspectives from an online citizen engagement. *Humanit Soc Sci Commun* 2023;10:83; DOI: 10.1057/s41599-023-01580-7
- Segers S, **Mertes H**. The curious case of "trust" in the light of changing doctor–patient relationships. *Bioethics* 2022;36(8):849-857.
- Segers S, Pennings G, **Mertes H.** Assessing the normative significance of desire satisfaction. *Metaphilosophy* 2022;53(4):475-485.
- Mertes H, Goethals T, Segers S, Huysentruyt M, Pennings G, Provoost V. Enthusiasm, concern and ambivalence in the Belgian public's attitude towards in-vitro gametogenesis. *Reproductive BioMedicine & Society Online* 2022;14:156-168.
- Debrabander J, **Mertes H**. Watson, autonomy and value flexibility: revisiting the debate. *Journal of Medical Ethics* 2022;48(12):1043-1047.
- Saelaert M, **Mertes H**, Moerenhout T, Van Cauwenbergh C, Leroy B, Devisch I, De Baere E. A qualitative study among patients with an inherited retinal disease on the meaning of genomic unsolicited findings. *Scientific Reports* 2021; 11(1):1-9.
- Segers S, **Mertes H**, Pennings G. An ethical exploration of pregnancy related mHealth : does it deliver? *Medicine, Health Care and Philosophy* 2021;24(4):677-685.
- Shabani M, Goffin T, **Mertes H**. Reporting, Recording and Communication of COVID-19 Cases in Workplace: Data Protection as a Moving Target. *Journal of Law and the Biosciences* 2020;7(1):Isaa008.
- Jans V, Dondorp W, Mastenbroek S, Mertes H, Pennings G, Smeets H, de Wert G. Between innovation and precaution: how did offspring safety considerations play a role in strategies of introducing new reproductive techniques? *Human Reproduction Open* 2020;2:hoaa003.
- Jans V, Dondorp W, Bonduelle M, de Die C, **Mertes H**, Pennings G, de Wert G. Follow-up in the field of reproductive medicine: an ethical exploration. *Reproductive BioMedicine Online* 2020; doi:https://doi.org/10.1016/j.rbmo.2020.08.033.

- Saelaert M, **Mertes H**, Moerenhout T, De Baere E, Devisch I. Ethical values supporting the disclosure of incidental and secondary findings in clinical genomic testing: a qualitative study. *BMC Medical Ethics* 2020;21(1):9.
- Segers S, Pennings G, **Mertes H**. The ethics of ectogenesis-aided foetal treatment. *Bioethics* 2020;34(4):364-370. 10.1111/bioe.12715.
- Saelaert M, Mertes H, Moerenhout T, De Baere E, Devisch I. Criteria for reporting incidental findings in clinical exome sequencing – a focus group study on professional practices and perspectives in Belgian genetic centres. BMC Medical Genomics 2019;12(1). doi: 10.1186/s12920-019-0561-0
- Zhang T, Madeira J, Lu Y, Sun Y, **Mertes H**, Pennings G, Lindheim SR. Expanded Preconception Carrier Screening in Clinical Practice: Review of Technology, Guidelines, Implementation Challenges, and Ethical Quandaries. *Clinical Obstetrics and Gynecology* 2019;62(2):217-227.
- Segers S, Pennings G, **Mertes H**. Getting what you desire : the normative significance of genetic relatedness in parent-child relationships. *Medicine, Health Care and Philosophy* 2019;22(3):487-495
- Segers S, **Mertes H**. Does human genome editing reinforce or violate human dignity? *Bioethics* 2020;34(1):33-40.
- Segers S, Pennings G, Dondorp W, de Wert G, **Mertes H**. In vitro gametogenesis and reproductive cloning: Can we allow one while banning the other? *Bioethics* 2019;33(1):68-75.
- Mertes H, Van Assche K. UTx with deceased donors also places risks and burdens on third parties. *The American Journal of Bioethics* 2018;18(7):22-24.
- Salaert M, **Mertes H**, De Baere E, Devisch I. Incidental or secondary findings: an integrative and patientinclusive approach to the current debate. *European Journal of Human Genetics* 2018;26(10):1424-1431.
- Jans V, Dondorp W, Goossens E, **Mertes H**, Pennings G, Smeets H, de Wert G. Of mice and human embryos. Evaluating the order of preclinical animal and human embryo research on new assisted reproductive technologies. *Human Reproduction* 2018;33(9):1581-1585.
- Segers S, Pennings G, Dondorp W, de Wert G, **Mertes H**. In vitro gametogenesis and the creation of 'designer babies'. *Cambridge Quarterly of Healthcare Ethics* 2019;28(3):499-508.
- Mishra S, Kacin E, Stamatiadis P, Franck S, Van der Jeught M, **Mertes H**, Pennings G, De Sutter P, Sermon K, Heindryckx B, Geens M. The role of the reprogramming method and pluripotency state in gamete differentiation from patient-specific human pluripotent stem cells. *MHR: Basic science of reproductive medicine* 2018;24(4):173-184.
- Jans V, Dondorp W, Goossens E, **Mertes H**, Pennings G, de Wert G. Balancing animal welfare and assisted reproduction : ethics of preclinical animal research for testing new reproductive technologies. *Medicine, Health Care and Philosophy* 2018;21:537-545.
- Mertes H, Lindheim S, Pennings G. Ethical quandaries around expanded carrier screening in third party reproduction. *Fertility and Sterility* 2018;109(2):190-194.
- Rombaut C, **Mertes H**, Heindryckx B, Goossens E. Human in vitro spermatogenesis from pluripotent stem cells: in need of a stepwise differentiation protocol? *MHR: Basic science of reproductive medicine* 2018;24(2):47–54.

- Segers S, Pennings G, **Mertes H**. Ethical reflections on stem cell-derived gametes. Médecine Thérapeutique 2017;19(4):298-306.
- Harper JC, Aittomäki K, Borry P, De Wert G, Dondorp W, Geraedts J, Gianaroli L, Ketterson K, Liebaers I, Lundin K, Mertes H, Morris M, Pennings G, Sermon K, Spits C, Soini S, Cornel MC, Van Montfoort APA, Veiga A, Vermeesch JR, Viville S and Macek Jr M on behalf of the European Society of Human Genetics and the European Society of Human Reproduction and Embryology. Recent developments in genetics and medically-assisted reproduction: from research to clinical applications. *Human Reproduction Open* 2017;3:hox015, https://doi.org/10.1093/hropen/hox015.
- Harper JC, Aittomäki K, Borry P, De Wert G, Dondorp W, Geraedts J, Gianaroli L, Ketterson K, Liebaers I, Lundin K, Mertes H, Morris M, Pennings G, Sermon K, Spits C, Soini S, Cornel MC, Van Montfoort APA, Veiga A, Vermeesch JR, Viville S and Macek Jr M on behalf of the European Society of Human Genetics and the European Society of Human Reproduction and Embryology. Recent developments in genetics and medically-assisted reproduction: from research to clinical applications. *European Journal of Human Genetics* 2018;26:12–33. [NOTE: content of this publication is identical to the publication above]
- Pennings G, Segers S, Debrock S, Heindryckx B, Kontozova-Deutsch V, Punjabi U, Vande Velde H, Van Steirteghem A and **Mertes H**. Human embryo research in Belgium: an overview. *Fertility and Sterility* 2017;108(1):96-107.
- Segers S, **Mertes H**, Pennings G, de Wert G and Dondorp W. Using stem cell-derived gametes for same-sex reproduction: an alternative scenario. *Journal of Medical Ethics* 2017;43(10):688-691.
- Segers S, **Mertes H**, de Wert G, Dondorp W and Pennings G. Balancing Ethical Pros and Cons of Stem Cell Derived Gametes. *Annals of Biomedical Engineering* 2017:1-13.
- **Mertes H**. The role of anticipated decision regret and the patient's best interest in sterilisation and medically assisted reproduction. *Journal of Medical Ethics* 2017;43:314-318.
- Mertes H and Pennings G. Modification of the embryo's genome: more useful in research than in the clinic. *The American Journal of Bioethics* 2015;15(12):52-53.
- Zoll M, **Mertes H** and Gupta J. Corporate giants provide fertility benefits: have they got it wrong? *European Journal of Obstetrics & Gynecology and Reproductive Biology* 2015;195:A1-A2.
- **Mertes H**. Let's not forget that many prepubertal girls do have other options besides ovarian tissue cryopreservation. *Human Reproduction* 2015;30(9):2011-2013. (editorial commentary)
- Mertes H. Does company-sponsored egg freezing promote or confine women's reproductive autonomy? Journal of Assisted Reproduction and Genetics 2015;32(8):1205-1209.
- Mertes H and Hens K. The diversity of genetic perfection. American Journal of Bioethics 2015;15(6):34-6.
- **Mertes H**. Gamete derivation from stem cells: revisiting the concept of genetic parenthood. *Journal of Medical Ethics* 2014;40(11):744-747.
- Mertes H. A moratorium on breeding better babies. Journal of Medical Ethics 2014;40(11):734-735.
- Mertes H. The portrayal of healthy women requesting oocyte cryopreservation. *Facts, Views & Vision in ObGyn* 2013;5(2):141-146.

- Mertes H, Pennings G. Testicular tissue cryopreservation: Combining access with safeguards. *The American Journal of Bioethics* 2013;13:46-48.
- **Mertes H,** Pennings G, Dondorp W, de Wert G. Implications of oocyte cryostorage for the practice of oocyte donation. *Human Reproduction* 2012;27:2886-2893.
- Pennings G, **Mertes H**. Ethical issues in infertility treatment. *Best Practice & Research Clinical Obstetrics & Gynaecology* 2012;26:853-863.
- **Mertes H**, Pennings G. Elective oocyte cryopreservation: who should pay? *Human Reproduction* 2011;27:9-13.
- Mertes H, Pennings G. Social egg freezing: for better, not for worse. *Reproductive BioMedicine Online* 2011;23:824-829. (Reprinted in Fertility Magazine 2013;15:40-45.)
- Mertes H, Pennings G. Ethical concerns eliminated: Safer stimulation protocols and egg banking. *The American Journal of Bioethics* 2011;11:33-35.
- **Mertes H**, Pennings G. The force of dissimilar analogies in bioethics. *Theoretical Medicine and Bioethics* 2011;32(2): 117-128.
- Mertes H, Pennings G. Ethical aspects of the use of stem cell derived gametes for reproduction. *Health Care Analysis* 2010;18(3):267-278.
- Mertes H, Pennings G. Preserving and restoring fertility: current techniques and prospects for the future. Expert Review of Obstetrics & Gynecology 2010;5(2):157-159. (meeting report)
- Mertes H, Pennings G. Stem cell research policies: Who's afraid of complicity? *Reproductive BioMedicine Online* 2009;19:38-42.
- Mertes H, Pennings G. Cross-border research on human embryonic stem cells: legal and ethical considerations. *Stem Cell Reviews and Reports* 2009;5(1):10-17.
- **Mertes H**, Pennings G. Embryonic stem cell derived gametes and genetic parenthood: a problematic relationship. *Cambridge Quarterly of Healthcare Ethics* 2008;17(1):7-14.
- Mertes H, Pennings G. Oocyte donation for stem cell research. Human Reproduction 2007;22(3):629-634.
- **Mertes H**, Pennings G, Van Steirteghem A. An ethical analysis of alternative methods to obtain pluripotent stem cells without destroying embryos. *Human Reproduction* 2006;21(11):2749-55.

## ARTICLES IN NATIONAL PEER-REVIEWED JOURNALS

- Pennings G, Segers S, Debrock S, Heindryckx B, Kontozova-Deutsch V, Punjabi U, Vande Velde H, Van Steirteghem A, **Mertes H**. Onderzoek op menselijke embryo's in België: een overzicht. *Tijdschrift voor Geneeskunde* 2018;74(5):316-323.
- **Mertes H**. Understanding the ethical concerns that have shaped European regulation of human embryonic stem cell research. *Proceedings of the Belgian royal academies of medicine* 2012;1:127-139.
- Mertes H, Pennings G. Eiceldonatie voor stamcelonderzoek: schuilt er kwaad in de vergoeding? *Ethiek en Maatschappij* 2008;11(4):3-14.

Mertes H, Pennings G, Van Steirteghem A. Op zoek naar 'ethische' embryonale stamcellen. *Tijdschrift voor Geneeskunde* 2007;63(12): 567-573.

# BOOK CHAPTERS

- Mertes H. Ethical issues related to cryopreserved reproductive specimen. In: Nagy ZP, Varghese AC, Agarwal A (eds) Cryopreservation in Assisted Reproduction. Springer, Cham. https://doi.org/10.1007/978-3-031-58214-1\_41
- Frith, L., **Mertes, H**., & Williams, N. J. The long term safety of assisted reproductive technologies: Ethical aspects. In Long Term Safety of Assisted Reproduction. CRC Press, 2022. p. 195-204.
- Mertes H, Pennings G. Ethical considerations of fertility preservation. In: Grynberg M, Patrizio P, editors. Female and Male Fertility Preservation. Springer, Cham, 2022. p. 627-640.
- Mertes H, Pennings G. Bioethics in human reproduction. In: García-Velasco JA, Seli E, editors. Human reproductive genetics. Academic Press; 2020. p. 283–93.
- Mertes H. Reproduction and Ethics. *Routledge Encyclopedia of Philosophy* 2020; doi: 10.4324/9780415249126-L083-2
- Mertes H, Pennings G. Bioethics in human reproduction. In: Garcia-Velasco J, Seli E (eds) Human Reproductive Genetics. Academic Press, 2020:283-293.
- Pennings G, **Mertes H**. (2019). The Belgian experience: Cultural and political factors shaping preimplantation genetic diagnosis during in vitro fertilization. In: Sills ES, Palermo GD (eds) *Human Embryos and Preimplantation Genetic Technologies*. Cambridge (US): Academic Press, 2019:113-118.
- Pennings G, Segers S, **Mertes H.** Modern Ethical Dilemmas in ART. In: Skinner M (ed) *Encyclopedia of* Reproduction. 2018:391-394.
- Mertes H. Stem cell derived gametes and uterus transplants: hurray for the end of third party reproduction! Or not? In: van Beers B, Sterckx S, Dickenson D. (eds) *Personalised Medicine, Individual Choice and the Common Good*. Cambridge: Cambridge University Press, 2018.
- Mertes H. The donation of embryos for research maintaining trust. In: Giordano S, Harris J, Picirillo L (eds) The Freedom of Scientific Research: An Anthology. Manchester, Manchester University Press, 2018.
- Mertes H. Ethical Aspects of AGE Banking. In: Stoop D. (ed.) *Preventing Age Related Fertility Loss*. Springer, Cham, 2018 (Online first: https://doi.org/10.1007/978-3-319-14857-1\_13)
- Pennings G, Mertes H. Ethical aspects of genetic screening of gamete donors. *Medically assisted reproduction: towards a common European legislation?* M. Kaiafa-Gbandi, E. Kounougeri-Manoledaki, E. Symeonidou-Kastanidou (eds.). Athens, Thessaloniki: Sakkoulas Publications, 2015: 259-269.
- **Mertes H**, Pennings G. Gamete generation from stem cells to avoid gamete donation and customized hESC from blastomeres as the cellular insurance for the newborn: will it ever be ethically acceptable? *Stem*

*cells in reproductive medicine: basic science and therapeutic potential (3<sup>rd</sup> edition).* C. Simon, A. Pellicer and R. Reijo Pera. Cambridge, Cambridge University Press, 2013: 93-101.

- Pennings G, Mertes H. The state and the infertile patient looking for treatment abroad: a difficult relationship. *Consumer Medicine* A. Tupasela. Copenhagen, Nordic Council of Ministers, 2010: 93-110.
- Mertes H, Pennings G. Gamete generation from stem cells: an ethicist's view. *Stem cells in human reproduction: basic science and therapeutic potential.* C. Simon and A. Pellicer. London, Informa Healthcare, 2009: 14-21.

## <u>Other</u>

- **Mertes H.** Egg banking in anticipation of age-related fertility decline. Using medical technology for better, not for worse. Ghent University (dissertation)
- Mertes H, Repping S, de Wert G. Stating the obvious: discarding embryos does not increase your chance of having a baby. *BioNews* 2016; 835.
- Mertes H. Koste wat het kost een kind? De Standaard 13/12/14 (opinion paper)
- Mertes H. Company-sponsored egg freezing: perk or coercion? BioNews 2014; 777.
- Mertes H, Pennings G, Van Steirteghem A. Embryo's zijn geen miniatuurmensjes, maar balletjes cellen die niet kunnen denken of voelen. De Morgen 12/04/14 (opinion paper)
- **Mertes H.** The interaction between science and ethics in the debate concerning stem cell research. Ghent University (dissertation)
- Mertes H. Egg donation for stem cell research: reconciling scientific progress and women's welfare. Bionews 2006; 364.
- Braeckman J, Mertes H, Demeyere F & De Meester R. Ethische matrix voor de evaluatie van dierproeven, uitgave van het Centrum voor Milieufilosofie en Bio-ethiek aan de Universiteit Gent, 2003.

# **CONFERENCE CONTRIBUTIONS / LECTURES (SELECTION)**

- Ethical concerns related to AI in healthcare. Pre-congress course 40<sup>th</sup> Annual Meeting of the European Society of Human Reproduction and Embryology (ESHRE), 7-10 July 2024, Amsterdam (invited speaker).
- Responsible implementation of expanded carrier screening. 5<sup>th</sup> International Congress EBART (Evidence Based Assisted Reproduction Technology) – Shaping the future of ART, 11-12 April 2024, Barcelona (invited speaker).
- Al in healthcare: aiming for the good, avoiding the bad and the ugly. 2nd International Conference on Ethics of Artificial Intelligence (2ICEA), 28-30 November 2023, Porto (keynote speaker).
- Responsibility and honesty have a price, but trust is a good investment. ESHRE campus course on Errors in ART, 25 November 2022, Athens (invited speaker).

- Social freezing: blessing or burden? *Annual VVOG meeting A and B centres*, 10 December 2021, Leuven (invited speaker).
- The enduring appeal of anonymous donor conception. *Project Educational Trust Annual Conference*, 1 December 2021, online (invited speaker).
- Ethical perspectives on big data in healthcare Achieving the good, but not the bad and the ugly. *Science for Health Conference*, 19 November 2021, Brussels (invited speaker).
- Why we need new outcome measures in infertility treatment. *Workshop on reproductive technologies and family ties*. 26 October 2021, Copenhagen (invited speaker).
- Will a data ownership model fix ethical concerns over health data use for research ? *4TU.Ethics bio-annual conference on Ethics & Technology*, 14-15 October 2021, Wageningen.
- The non-identity argument : is the fact that children would not have been born without ART a reason to be more lenient regarding safety concerns ? Pre-congress course ESHRE *How safe is Medically Assisted Reproduction and how far should we go to produce children*? 27 June 2021, online (invited speaker).
- Divergent ESC policies in Europe : overview and practical difficulties for international collaboration. Precongress course ESHRE *Novel technologies in human reproduction*, 26 June 2021, online (invited speaker).
- Ethical exploration of IVG : between innovation and precaution. Annual conference of the International Society for Stem Cell Research, 21 June 2021, online (invited speaker).
- Préoccupations éthiques concernant le don de sperme. *PMA éthique-philosophique : les nouvelles parentalités*. 5 December 2020, Brussels (invited speaker).
- Responsibility and honesty have a price, but trust is a good investment. *Introduction to errors in ART (ESHRE campus course)*. 19 November 2020, online (invited speaker).
- De ethische uitdagingen die zeldzame aandoeningen opwerpen in de gezondheidszorg. *Studiedag zeldzame aandoeningen*. 27 October 2020, Brussels, Belgium (invited speaker).
- Disruptieve technologieën in de gezondheidszorg: impact op medische ethiek. *Startsymposium METAMEDICA*. 7 February 2020, Ghent, Belgium.
- Safety standards for reproductive interventions. *Experimenting on Future Children: Gene editing in human reproduction*. 14-16 January 2020, Geneva, Switzerland (invited speaker).
- Attitudes towards benefits, risks and risk mitigation in in vitro gametogenesis in a representative sample of the Belgian population. *The Ethics and Regulation of Reproductive Donation*. 12-13 September 2019, Lancaster, UK (invited speaker).
- Attitudes towards in vitro gametogenesis in a representative sample of the Belgian population. *35th Annual Meeting of the European Society for Human Reproduction and Embryology*. 24-27 June 2019, Vienna (poster presentation).
- Should we be using preconceptional genetic tests in our sperm donation programs? Only for prevalent mutations. 35th Annual Meeting of the European Society for Human Reproduction and Embryology.
  23 June 2019, Vienna (invited speaker pre-congress course).
- Information and consent in children: making the right choices. *Fertility preservation in children and adolescents: the next frontier*. 9-10 May 2019, Edinburgh. (invited speaker)
- Ethische bedenkingen bij invriezen van eicellen en ovariële cortex. 22<sup>e</sup> Nederlands-Vlaams Doelencongres Infertiliteit, Gynaecologie en Obstetrie. 3-5 April 2019, Rotterdam. (invited speaker)

Innovations in reproductive medicine (Professor Heymans lecture). 8<sup>th</sup> Amsterdam Kindersymposium: Innovations in pediatrics. 7 February 2019, Amsterdam (keynote lecture).

Some critical thoughts about the introduction of UTx in the clinic. 1<sup>st</sup> meeting of the International Society for Uterus Transplantation (ISUTx). 19-20 October 2018, Ghent (invited speaker).

- Embryo research in Europe: Belgium as a well-documented case study. Annual Congress of the American Society for Reproductive Medicine. 8 October 2018, Denver, USA (invited speaker).
- When reproductive decision making meets genetics and statistical illiteracy. *Meeting of the North Texas Bioethics Network*. 1 May 2018, Dallas (invited speaker).
- Ethical aspects of artificial gametes. *33rd Annual Meeting of the European Society for Human Reproduction and Embryology*. 3-5 July 2017, Geneva (invited speaker plenary session).
- Are fertility clinics and sperm/egg banks under a moral obligation to perform comprehensive genetic screening of their gamete donors? *33rd Annual Meeting of the European Society for Human Reproduction and Embryology*. 3-5 July 2017, Geneva (oral presentation).
- Ethical aspects of genome editing. *37<sup>th</sup> meeting of the Belgian Society for Reproductive Medicine (BSRM)*. 24 March 2017, Brussels (invited speaker).
- Ethical concerns related to genome editing in human embryos. *Symposium "The importance of the Federal Embryo Commission in times of genome editing"*. 25 November 2016, Brussels (invited speaker).
- Ethical aspects and moratorium on gene editing in (human) embryos. *The 24<sup>th</sup> World Congress on Controversies in Obstetrics, Gynaecology & Infertility (COGI)*. 10-13 November 2016, Amsterdam (invited speaker).
- Ethische aspecten van kunstmatige gameten. *Symposium Andrologisch Centrum.* 24 September 2016, Gent (invited speaker).
- Ethical reflections on gene editing in (human) embryos. *ESHRE Campus Course on Novel gamete manipulation technologies in ART.* 22-23 September 2016, Amsterdam (invited speaker).
- Preimplantation genetic screening (PGS): technology-driven, commercially driven or patient driven? *EACME* conference. 8-10 September 2016, Leuven (oral presentation).
- Is it unethical (not) to transfer an aneuploid embryo? 20<sup>th</sup> International Conference of Prenatal Diagnosis and Therapy (ISPD). 10-13 July, 2016, Berlin (poster presentation).
- Preimplantation genetic screening (PGS): a blessing or a curse for patient-centred fertility treatment? 32nd Annual Meeting of the European Society for Human Reproduction and Embryology. 3-6 July 2016, Helsinki (oral presentation).
- The technological imperative of reproductive medicine. *32nd Annual Meeting of the European Society for Human Reproduction and Embryology*. 3-6 July 2016, Helsinki (invited speaker precongress course).
- Is there a place for non-patient specific stem-cell derived gametes in medically assisted reproduction? 13<sup>th</sup> World Congress of the International Association of Bioethics. 16 June 2016, Edinburgh (invited speaker).
- Medische/ethische aspecten van genetische diagnostiek en screening van embryo's. *De reproductieve, urogenitale en seksuologische gezondheidszorg van morgen.* 21 November 2015, Ghent (invited speaker).
- Ethical aspects about collecting and the public exhibition of museum objects of human origin in academic collections. How do the U4 partners deal with that? 22-23 October 2015, Ghent (moderator of discussion session).
- Is there a place for non-patient specific stem cell derived gametes in medically assisted reproduction? *2nd Meeting of the Belgian Society for Stem Cell Research (BeSSCR)*. 18 September 2015, Brussels (poster presentation).
- Stem cell derived gametes and uterus transplants: Hurray for the end of third party reproduction! *Me Medicine vs. We Medicine: Personalised Medicine, Individual Choice and the Common Good* (invitational symposium). 9-10 September 2015, Amsterdam (invited speaker).

Should gamete donors be screened more thoroughly than aspiring parents? *Symposium Parenthood Research "Donor conception: An unfamiliar path to a normal family?*". 27-28 August 2015, Ghent.

- Uterus transplantation: the only option thus the good one? 29<sup>th</sup> European conference on Philosophy of Medicine and Health Care (ESPMH), "Medicalisation". 19-22 August 2015, Ghent.
- Negligence and responsibility for genetic diseases in donor offspring. 19<sup>th</sup> International Conference on Prenatal Diagnosis and Therapy.13-15 July 2015, Washington.
- The technological imperative in reproductive medicine. *31st Annual Meeting of the European Society for Human Reproduction and Embryology*. 14-17 June 2015, Lissabon (poster presentation).
- Pre-implantatie genetische diagnostiek en ethiek. 20<sup>e</sup> Nederlands-Vlaamse Doelencongres Infertiliteit, Gynaecologie en Obstetrie. 22-24 April 2015, Rotterdam (invited speaker).
- Who needs social egg freezing? 2<sup>nd</sup> International symposium on social egg freezing. 6 March 2015, Barcelona (invited speaker).
- Does company-sponsored egg freezing promote or confine personal autonomy? *Freezing of oocytes, embryos and ovarian tissue: focus on fertility management and fertility preservation*. 16-17 January 2015, Brussels.
- Cryopreservation of oocytes for reproductive purposes social and ethical aspects. *Postponed Motherhood and the Ethics of Family*. 14-15 October 2014, Göttingen (keynote lecture).
- Are parthenotes embryos and does it really matter? 1st Meeting of the Belgian Society for Stem Cell Research (BeSSCR) Stem cells: ready for the transition from bench to bedside? 12 September 2014, Ghent (poster presentation).
- Maybe we shouldn't give infertile patients what they want, but what they need. *30th Annual Meeting of the European Society for Human Reproduction and Embryology*. 29 June 2 July 2014, München.
- Parenthood, happiness and IVF treatment: are patients helped, harmed or both? Analytic Bioethics in Europe. 28-29 May 2014, Ghent (invited speaker).
- Ethische aspecten van vruchtbaarheidsbehoud bij kankerpatiënten. Oncofertiliteit. 22 May 2014, Ghent (invited speaker).
- Stem cell derived gametes: Is there more to genetic parenthood than genes? Stem cells: Origins, genetics, properties and significance for fertility preservation. 27-28 April 2014, Brussels.
- The donation of human embryos for stem cell research. Third World Congress for Freedom of Scientific Research. 4-6 April 2014, Rome (invited speaker).
- The portrayal of healthy women requesting oocyte cryopreservation. Third International Congress of the International Society for Fertility Preservation. 7-9 november 2013, Valencia.
- The irrationality of valuing genetic parenthood. Artifical gametes: Science and ethics. 12-13 September 2013, Maastricht (invited speaker).
- Innovation in MAR: lessons from the past, challenges for the present, perspectives on the future. 29<sup>th</sup> Annual Meeting of the European Society for Human Reproduction and Embryology. 7-10 July 2013, London (invited speaker pre-congress course).
- Fertility preservation for transgender people: should we go there? *The Third International Congress on Controversies in Cryopreservation of Stem Cells, Reproductive Cells, Tissue & Organs (CRYO).* 21-23 March 2013, Berlin (poster presentation).
- Financial compensations for oocyte donors: soon to be a debate of the past? 28<sup>th</sup> Annual Meeting of the European Society for Human Reproduction and Embryology. 1-4 July 2012, Istanbul.
- Will oocyte cryopreservation quell ethical concerns over donor recruitment? 11<sup>th</sup> IAB World Congress Bioethics. 26-29 June 2012, Rotterdam.

- Ethical issues in fertility preservation. *Kanker en kinderwens, Fertiliteitspreservatie.nl.* 15 December 2011, Leiden.
- Ethische voetnoten bij de derivatie en klinische toepassingen van humane embryonale stamcellen. *State of the art lecture Koninklijke Academie voor Geneeskunde*. 26 November 2011, Brussels.
- Elective oocyte freezing: who should pay? 27<sup>th</sup> Annual Meeting of the European Society for Human Reproduction and Embryology. 3-6 July 2011, Stockholm.
- Making the best of elective freezing, both clinically and ethically. *First Transatlantic Reproductive Technologies Network Conference*. 14-16 April 2011, Istanbul (poster presentation).
- Gametes derived from embryonic stem cells: ethical aspects. 24<sup>th</sup> Annual Meeting of the European Society for Human Reproduction and Embryology. 6-9 July 2008, Barcelona (invited speaker pre-congress course).
- Oocyte donation for stem cell research. 22th Annual Meeting of the European Society for Human Reproduction and Embryology. 18-21 June 2006, Prague.

## INVITED LECTURES AT UNIVERSITIES AND SCHOLARLY INSTITUTIONS

- Ethische aspecten binnen de fertiliteitszorg. Guest lecture VIVES Hogeschool (postgraduaat Preconceptieen fertiliteitszorg), 24 March 2023.
- Medisch begeleide voortplanting en draagmoederschap: ethische beschouwingen. Guest lecture University of Antwerp (postgraduaat gezondheidsrecht en gezondheidsethiek), 23 March 2019, 25 March 2023.
- Genetic testing in the context of reproduction. Guest lecture Artevelde Hogeschool Gent, 20 November 2018.
- Ethical debates underlying embryonic stem cell research policies. Guest lecture Southern Methodist University, Dallas, TX, USA, 15 February 2018.
- Dual use research. Guest lecture Universiteit Hasselt, 11 March 2015, 19 April 2017.
- Egg banking in anticipation of age-related fertility decline. Colloquium department of Health, Ethics & Society, Faculty of Health, Medicine and Life Sciences, Maastricht University, 19 April 2017.
- Embryonic stem cell research. Guest lecture Vrije Universiteit Brussel, 16 December 2015, 21 December 2017.
- Ethical concerns related to genome editing in human embryos. Lecture for the Centre for Medical Genetics, Vrije Universiteit Brussel, 2 February 2017.

## LECTURES FOR A LAY PUBLIC (SELECTION)

Ethische uitdagingen bij de digitale revolutie in de gezondheidszorg. ZNA Middelheim, 21 December 2023.

Ethische overwegingen rond 'gender disappointment' en geslachtsselectie. Netwerkevent Fara, online, 16 December 2021.

AI ethics and implications. Understanding AI webinar series European Patients Forum, online, 13 December 2021.

The ethics of informed consent. Why do we need it, and why is it problematic for health data research? Webinar i-HD

Wetenschapscafé To DNA or not to DNA. Gent, 2 February 2021. Wat brengt 2021? Medische en bioethische uitdagingen aan de horizon. De Maakbare Mens, online, 28 January 2021. (https://youtu.be/BmrnBa5fHEY)

CRISPR: knutselen met de code van het leven – ethische reflecties. Grijze Cellen, Gent, 5 March 2020. (https://www.eoswetenschap.eu/gezondheid/mogen-we-knutselen-met-de-code-van-het-leven) Wat als...? Ethische aspecten van trends in genetisch onderzoek. AZ Delta Roeselare, 10 February 2020. Baarmoedertransplantatie: ethische bedenkingen. Rotary Gent, 29 January 2020. De maakbare baby - Genetisch gewijzigde baby's, willen we dat? Gent, 6 March 2019. To DNA or not to DNA. Wetenschapscafé Kortrijk, 4 December 2018. (podcast: https://www.mixcloud.com/MedialabKortrijk/wetenschapscaf%C3%A9-dna-kortrijk-4-december-2018/) Ethische vragen bij embryonaal stamcelonderzoek. Wetenschapcafé Antwerpen, 21 November 2018. Ethische aspecten van embryonaal stamcelonderzoek. Grijze Geuzen Antwerpen, 1 October 2018. Verplichte anticonceptie voor ongeschikte moeders is onverantwoord. Engage, Gent, 5 May 2017. Genetica van morgen – ethische bedenkingen. Vorming Plus Merelbeke, 27 April 2017. Van het zinvolle naar het voltooide leven. Het goede leven, Gent, 4 February 2017. Genetische revolutie – zegen of vloek? HVV Schoten, 5 December 2016. Stamcelonderzoek: een ethische kwestie. Okra Gent, 11 October 2016. De gentechnologie van morgen: verwachtingen en uitdagingen. Huis van de Mens Brussel, 11 May 2016.

Zijn mannen weldra overbodig? Dag van de Maakbare Mens, Gent, 3 March 2016.

Klonen. Wat kunnen we ermee? Wetenschapscafé Brugge, 31 March 2015.

# **TEACHING EXPERIENCE**

2020 – current	Bachelor course "Integration seminar Moral Science", Department of Philosophy and Moral Sciences, Ghent University, Belgium
2020 – current	Master course "Research seminar Bioethics", Department of Philosophy and Moral
	Sciences, Ghent University, Belgium
2020 – current	Master course "Global Health Governance and Leadership", Faculty of Medicine
	and Health Sciences, Ghent University, Belgium (co-lecturer)
2020 – current	Master course "Management of dental practice, including ethics and deontology",
	Faculty of Medicine and Health Sciences, Ghent University, Belgium (co-lecturer)
2013 – 2020	Master course "Bioethics", Department of Bioscience Engineering, Ghent
	University, Belgium
2013 – 2020	Master course "Bioethics", Department of Biology, Ghent University, Belgium
2014 – 2020	Master course "Bioethics", Departments of Biochemistry and Biotechnology, Ghent
	University, Belgium
2018	Master course "Perspectives on Medical Technology", Department of Industrial
	Engineering and Innovation Sciences, Eindhoven University of Technology, The
	Netherlands

2018	Upper class course "Argumentation in ethical debates", Dedman School of Law,
	Southern Methodist University, USA
2011 – 2017, 2019	Master course "Ethics, technology and society", Department of Civil Engineering,
	Ghent University, Belgium
2014 – 2016, 2018	Master course "Issues in contemporary ethical theory", Department of Philosophy
	and Moral Sciences, Ghent University, Belgium

#### **PROMOTED DOCTORAL THESIS**

- 2024: Jasper Debrabander, "Rationalizing patients : clinical decision support systems, patient decision aids and patient autonomy", Ghent University.
- 2020: Verna Jans, "From lab to fertility clinic. The welfare of the child and the ethics of introducing new reproductive technologies", Maastricht University (co-supervisor)
- 2020: Marlies Saelaert, "Disclosing incidental and secondary findings in clinical genomics. Professional practice, patient experience and ethical reflection", Ghent University (co-supervisor)
- 2019: Seppe Segers, "In vitro gametogenesis: an inquiry into the main ethical concerns and why they matter", Ghent University.

#### JURY MEMBERSHIPS DOCTORAL THESES

2024: Iris Loosman, "Rethinking informed consent in mHealth", Technische Universiteit Eindhoven.

- 2022: Eva Van Steijvoort, "Reproductive genetic carrier screening for monogenic conditions facilitating informed choice and decision-making", Catholic University of Leuven.
- 2022: Michiel De Proost, "Frictions with autonomy and future fertility towards a feminist empirical bioethics of social egg freezing", Vrije Universiteit Brussel.
- 2021: Hilary FJ Bowman-Smart, "Non-invasive prenatal testing: beyond clinical utility", University of Melbourne.
- 2019: Tania Moerenhout, "Treating the real or the digital patient? Impact of e-health applications on patient autonomy and the patient-doctor relationship. An ethical assessment.", Ghent University.
- 2019: Lisa Diependaele, "The codification of intellectual property rights in international law. An ethical analysis of current developments", Ghent University.
- 2016: Sandra Janssens, "Carrier screening for heritable disorders Views on implementation", Ghent University.
- 2016: Katrien Faes, "Translation of fertility preservation techniques to the clinic", Vrije Universiteit Brussel
- 2015: Inez Raes, "Building a family after donor conception Ethical and empirical perspectives", Ghent University
- 2014: Wannes Van Hoof, "Ethical problems related to cross-border reproductive care", Ghent University

## ACADEMIC SERVICE

Ethics advisor for ERC Horizon Grand View Research project NESTOR, led by the University of Tartu. Ethics advisor for ERC Advanced Grant project ScoliStorm, led by Prof. Keita Ito (TU Eindhoven, UMC

Utrecht, The Netherlands)

Ethics advisor for Horizon 2020 project ReSToRe, led by Prof. Nathalie Cools (University of Antwerp, Belgium)

## **MEMBERSHIPS**

2021 – current	International Society for IVF (member of group "Reproduction in society")
2020 – current	ReproductiveHealth.be (previously BFEI; founding member)
2020 – current	International Reproductive Health Education Collaboration (IRHEC, previously IFEI,
	founding member)
2019 – current	Metamedica (steering and founding member)
2015 – 2017	International Society for Prenatal Diagnosis
2014 – 2015	European Society for the Philosophy of Medicine and Healthcare
2014 – current	Belgian Society for Stem Cell Research (BeSSCR, founding member)
2012 – current	Editorial Board Ethiek en Maatschappij
2012 – 2016	Editorial Board Human Reproduction (associate editor)
2012 – 2016	International Association of Bioethics
2010 – 2015	International Society for Fertility Preservation
2006 – current	Bioethics Institute Ghent (founding member)
2005 – current	European Society for Human Reproduction and Embryology

**REVIEWER FOR FOLLOWING JOURNALS AND FUNDING AGENCIES** 

Publons ID: publons.com/a/1384246/ 2017: Certificate of Excellence for reviewing, by Human Reproduction.

American Journal of Bioethics American Journal of Empirical Bioethics Annals of Transplantation **Bioethics BMC Medical Ethics Canadian Journal of Bioethics Cell Proliferation Current Protocols Digital Society** Facets Health Care Analysis Human Fertility **Human Reproduction** Humanities and Social Sciences Communications Hypatia Journal of Assisted Reproduction and Genetics Journal of Bioethical Inquiry Journal of Family Planning and Reproductive Health Care Journal of Medical Ethics Journal of Obstetrics and Gynaecology Research

Journal of Reproductive and Infant Psychology Kennedy Institute of Ethics Journal Laws Medicine, Healthcare and Philsophy Monash Bioethics Review Pediatrics Philosophical Quarterly Reproductive BioMedicine Online Reproductive BioMedicine and Society Online Theoretical Medicine and Bioethics UKRI Future Leaders Fellowships Wellcome Trust Women & Health

## LANGUAGE PROFICIENCY

Dutch: native language (C2) English: full professional proficiency (C2) French: professional proficiency (C1) Spanish: conversational level (B1) German: conversational level (B1) Thai: basic level (A2)