**The Genie is Out of the Bottle for Polygenic Screening of Embryos: Where to From Here?**

**Date and time:** Friday, March 10, 9am PT / 12pm ET

**Speakers:** Francesca Forzano, MD, FRCP & Gabriel Lázaro-Muñoz, PhD, JD

**Moderator:** Anna Lewis, DPhil

**Biographies**

**Moderator:** Anna Lewis, DPhil

**Biography**: <https://ethics.harvard.edu/people/anna-lewis>

**Panelist:** Francesca Forzano, MD, FRCP

**Biography:** <https://www.guysandstthomas.nhs.uk/our-consultants/francesca-forzano>

**Panelist:** Gabriel Lázaro-Muñoz, PhD, JD

**Biography**: <https://bioethics.hms.harvard.edu/faculty-staff/gabriel-lazaro-munoz>

**ELSIhub Collections**

ELSIhub Collections are essential reading lists on fundamental or emerging topics in ELSI, curated and explained by expert collection editors. Please use the link to access How Do We Diversify Human Genomics Research? curated by Alice B. Popejoy, PhD, Assistant Professor, Division of Epidemiology, Department of Public Health Sciences, University of California, Davis

[https://elsihub.org/collection/how-do-we-diversify-human-genomics-research](https://nam02.safelinks.protection.outlook.com/?url=https%3A%2F%2Felsihub.org%2Fcollection%2Fhow-do-we-diversify-human-genomics-research&data=05%7C01%7Cts3508%40cumc.columbia.edu%7C1a2de47469194cb80c6b08db20c93844%7Cb0002a9b0017404d97dc3d3bab09be81%7C0%7C0%7C638139820832546634%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=l1t6hTSJjy%2BUEvWO31dTWS25KtOBNzt328AV%2FISFpRg%3D&reserved=0)

**Anna Lewis, DPhil**

Link to “Assisted Reproductive Technology Surveillance — United States, 2018” (2022): <https://www.cdc.gov/mmwr/volumes/71/ss/ss7104a1.htm>

Link to “Live Birth with or without Preimplantation Genetic Testing for Aneuploidy” (2021): <https://www.nejm.org/doi/full/10.1056/NEJMoa2103613>

Link to “Genomic Prediction, Second Issue” (2021): <https://assets-global.website-files.com/5f47aef619bbf2237826070e/60f019017b549b5b05dc3aef_Genomic-2021Q2.pdf>

Link to “Better Tests, Better Outcomes”: <https://www.lifeview.com/index.html>

Link to “Polygenic Health Index, General Health, and Pleiotropy: Sibling Analysis and Disease Risk Reduction” (2022): <https://www.nature.com/articles/s41598-022-22637-8>

Link to “Polygenic Risk Scores and Genomic Prediction: Q&A with Stephen Hsu” (2019): <https://www.genengnews.com/insights/polygenic-risk-scores-and-genomic-prediction-qa-with-stephen-hsu/>

Link to “Public views on polygenic screening of embryos” (2023): <https://www.science.org/doi/abs/10.1126/science.ade1083?af=R>

**Francesca Forzano, MD, FRCP**

Link to “Polygenic Risk Scores”: <https://www.genome.gov/Health/Genomics-and-Medicine/Polygenic-risk-scores>

“Prediction Research: An Introduction” (2018): <https://www.semanticscholar.org/paper/Prediction-Research-An-introduction-Janssens-Martens/861209d4a46cbb3719247cbb79fd3f3ad4fe49d3>

Link to “Assessing agreement between different polygenic risk scores in the UK Biobank” (2022): <https://doi.org/10.1038/s41598-022-17012-6>

Link to “Polygenic Risk Scores Can Differ for Same Disease in Individuals, Hampering Clinical Implementation” (2022): <https://www.genomeweb.com/genetic-research/polygenic-risk-scores-can-differ-same-disease-individuals-hampering-clinical#.ZAdOouzMIUo>

Link to “Responsible use of polygenic risk scores in the clinic: potential benefits, risks and gaps” (2021): <https://doi.org/10.1038/s41591-021-01549-6>

Link to “The use of polygenic risk scores in pre-implantation genetic testing: an unproven, unethical practice” (2021): <https://doi.org/10.1038/s41431-021-01000-x>

Link to “ESHRE supports the position of ESHG on embryo selection based on polygenic risk scores” (2022): <https://www.eshre.eu/Guidelines-and-Legal/Position-statements/PRS>

Link to “Direct-to-consumer prenatal testing for multigenic or polygenic disorders: a position statement of the American College of Medical Genetics and Genomics (ACMG)” (2021): <https://doi.org/10.1038/s41436-021-01247-1>

Link to “Advisory on the Use of Polygenic Risk Scores to Screen Embryos for Adult Mental Conditions” (2021): <https://ispg.net/wp-content/uploads/2021/05/2021-May-ISPG-Ethics-Advisory-Embryo-Screening.pdf>

Link to “Moving innovation to practice: an Ethics Committee opinion” (2021): <https://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/ethics-committee-opinions/moving_innovation_to_practice-pdfmembers.pdf>

Link to “ACCE Model Process for Evaluating Genetic Tests”: <https://www.cdc.gov/genomics/gtesting/acce/index.htm#:~:text=ACCE%2C%20which%20takes%20its%20name,about%20DNA%20(and%20related)%20testing>

Link to “Reply to Letter by Tellier et al., ‘Scientific refutation of ESHG statement on embryo selection’” (2022): <https://doi.org/10.1038/s41431-022-01241-4>

Link to “Addressing the challenges of polygenic scores in human genetic research” (2022): [https://www.cell.com/ajhg/fulltext/S0002-9297(22)00460-8](https://www.cell.com/ajhg/fulltext/S0002-9297%2822%2900460-8)

**Gabriel Lázaro-Muñoz, PhD, JD**

Link to “Screening embryos for polygenic conditions and traits: ethical considerations for an emerging technology” (2020): <https://doi.org/10.1038/s41436-020-01019-3>

**Audience Contributions**

Link to “Realistic expectations are key to realising the benefits of polygenic scores” (2023): <https://doi.org/10.1136/bmj-2022-073149>

Link to “Utility and First Clinical Application of Screening Embryos for Polygenic Disease Risk Reduction” (2019): <https://doi.org/10.3389/fendo.2019.00845>

Link to “Polygenic Embryo ELSI Research, The "PEER" Group”: <https://www.polygenicembryo.org/>

Link to “Prevention of Bias and Discrimination in Clinical Practice Algorithms” (2023): <https://jamanetwork.com/journals/jama/article-abstract/2800369>