

Patrick Landon Ferree

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PROFILE

Patrick is a doctoral student at Medical Museion and the Novo Nordisk Foundation Center for Basic Metabolic Research. He has a broad background in the humanities and natural sciences (including a PhD in developmental biology). Now he is training as a philosopher and ethnographer of biomedicine. His project examines the epistemic practices, methodology, and sociocultural dimensions of single-cell and spatial biology. *Research areas:* Philosophy of the Biomedical Sciences; Philosophy of Science in Practice; History and Philosophy of Science (&HPS); Science and Technology Studies (STS).

EDUCATION

University of Copenhagen

PhD Student in Philosophy of Science – Graduate Program in Medicine, Culture, and Society
• Project: *Making up cells: Towards an epistemology of single-cell and spatial biology*
• Advisors: Karin Tybjerg & Sara Green

Copenhagen, DK
in Progress

Duke University School of Medicine

PhD in Developmental Biology – Graduate Program in Cell and Molecular Biology
• Dissertation: *Temporal regulation of cell divisions in the embryo of *Drosophila melanogaster**
• Committee: Stefano Di Talia, Michel Bagnat, Danny Lew, Bernard Mathey-Prevot, Nick Buchler

Durham, NC, USA
Apr 2022

University of California, San Diego

BA in Philosophy, BS in Chemistry, Minor in Political Science, *magna cum laude*

La Jolla, CA, USA
Jun 2012

EXPERIENCE

University of Copenhagen

PhD Student, Advisors: Karin Tybjerg & Sara Green
• Affiliation: Medical Museion, Department of Public Health, Faculty of Medical and Health Sciences
• Affiliation: Novo Nordisk Foundation Center for Basic Metabolic Research (CBMR)
• Affiliation: Center for Medical Science and Technology Studies (MeST)
• Research: Philosophy and social studies of single-cell and spatial biology

Copenhagen, DK
Mar 2024 - Present

The National Research Centre for the Working Environment

Postdoctoral Researcher, Advisor: Keld Alstrup Jensen
• Research: Occupational exposure to airborne particles

Copenhagen, DK
Jun 2022 - Mar 2024

Copenhagen Institute for Futures Studies

Intern, Advisor: Bogi Eliassen
• Research: Futures of healthcare and biomedicine

Copenhagen, DK
Jan - Jun 2022

Duke University School of Medicine

PhD Student, Advisor: Stefano Di Talia
• Affiliation: Department of Cell Biology
• Research: Temporal patterning of mitosis in fly embryos

Durham, NC, USA
Sep 2014 - Apr 2022

University of Texas, El Paso

Research Technician, Advisor: Laura O'Dell
• Affiliation: Department of Psychology
• Research: Neuroscience of drug addiction in rats

El Paso, TX, USA
Jan 2013 - Sep 2014

Scripps Institute of Oceanography

Research Assistant, Advisor: Lynn Russell
• Research: Chemistry and physics of atmospheric aerosols

La Jolla, CA, USA
Jan - Sep 2012

PUBLICATIONS

- P. L. Ferree**, M. Polat, J. K. Nøjgaard, K. A. Jensen, “Airborne particulate matter and diesel engine exhaust on infrastructure construction sites in the Copenhagen metropolitan area”, *Annals of Work Exposures and Health*, Aug. 2024, doi.org/10.1093/annweh/wxae062 (**Article**).
- P. L. Ferree**, M. Xing, J.Q. Zhang, S. Di Talia, “Structure-function analysis of Cdc25 Twine degradation at the *Drosophila* maternal-to-zygotic transition”, *Fly*, vol. 16, no. 1, pp. 111–117, Dec. 2022, ISSN: 1933-6934 (**Article**).
- P. L. Ferree**, S. Di Talia, “Developmental Biology: Embryos Need to Control Their Nucleotides Just Right”, *Current Biology*, vol. 29, no. 7, R252–R254, Apr. 2019, ISSN: 09609822 (**Preview**).
- P. L. Ferree**, S. Di Talia, “Chemical Waves in Embryonic Cell Cycles”, *Israel Journal of Chemistry*, vol. 58, no. 6, pp. 714–721, 2018, ISSN: 18695868 (**Review**).
- P. L. Ferree**, S. Di Talia, “For Embryos, Mother Can Only Take You So Far”, *Developmental Cell*, vol. 42, no. 3, pp. 203–205, 2017, ISSN: 18781551 (**Preview**).
- P. L. Ferree**, V. Deneke, S. Di Talia, “Measuring time during early embryonic development”, *Seminars in Cell and Developmental Biology*, 2016, ISSN: 10849521 (**Review**).
- L. M. Carcoba, J. E. Orfila, L. E. Natividad, O. V. Torres, J. A. Pipkin, **P. L. Ferree**, E. Castañeda, D. E. Moss, L. E. O’Dell, “Cholinergic transmission during nicotine withdrawal is influenced by age and pre-exposure to nicotine: Implications for teenage smoking”, *Developmental Neuroscience*, vol. 36, no. 3-4, pp. 347–355, 2014, ISSN: 14219859 (**Article**).
- O. V. Torres, J. A. Pipkin, **P. L. Ferree**, L. M. Carcoba, L. E. O’Dell, “Nicotine withdrawal increases stress-associated genes in the nucleus accumbens of female rats in a hormone-dependent manner”, *Nicotine and Tobacco Research*, vol. 17, no. 4, pp. 422–430, 2014, ISSN: 1469994X (**Article**).

MANUSCRIPTS

- P. L. Ferree**, C. Ribalta, A. CØ Jensen, A. Brostrøm, T. Berthing, K. A. Jensen, “Airborne nano/microplastics in the plastics recycling and manufacturing industry” (**Article - In Preparation**).
- P. L. Ferree**, S. Brantley, T. Starr, A. Chao, S. Di Talia, “Activator-accumulation and repressor-depletion time mitosis during *Drosophila* gastrulation” (**Article - In Preparation**).

SELECT TALKS AND POSTER PRESENTATIONS

- P. L. Ferree**, “From clocks to hourglasses: Making time an epistemic object in developmental biology”, International Society for the History, Philosophy, and Social Studies of Biology (ISHPSSB), Porto, Portugal, July 2025 (**Accepted for a Talk**).
- P. L. Ferree**, “Technical and epistemic objects in cell-type classification: A study of single-cell sequencing”, Society for Philosophy of Science in Practice (SPSP), Columbia, SC, USA, May 2024 (**Poster**).
- P. L. Ferree**, C. Ribalta, A. Jensen, J. K. Nøjgaard, S. Nielsen, N. Sahlgren, T. Berthing, K. A. Jensen, “Workplace exposure to ultrafine particles, chemicals, and dust during plastic production with recycled plastics”, British Occupational Hygiene Society: Inhaled Particles and NanOEh, Manchester, UK, May 2023 (**Talk**).
- P. L. Ferree**, A. De Simone, S. Di Talia, “An activator-repressor model for improved temporal precision of transcription”, Quantitative Biology (Q-Bio), Oahu, HI, USA, Feb 2019 (**Talk**).
- P. L. Ferree**, C. Bunce, “The Questions of Developmental Biology”, The Society for Developmental Biology (SDB), Boston, MA, USA, Jul 2019 (**Poster**).
- P. L. Ferree**, A. De Simone, S. Di Talia, “An activator-repressor model for improved temporal precision of transcription”, Tissue Self-Organization: Challenging the Systems, Heidelberg, Germany, Mar 2018 (**Poster**).

SELECT SCHOOLS AND WORKSHOPS ATTENDED AS A STUDENT

European Advanced School for the Philosophy of the Life Sciences, Konrad Lorenz Institute, Austria, Sep 2024.

Summer School on the History of Knowledge, Lund University (LUCK), Sweden, Aug 2024.

Workshop on Methods in the Philosophy of Science, University of Vienna, Austria, May 2023.

Summer School on the History of the Life Sciences, Ischia, Italy, Jun 2022.

Winter School on Quantitative Biology, International Center for Theoretical Physics, Trieste, Italy, Dec 2017.

TEACHING

Philosophy of Science for Medical Engineers, University of Copenhagen, Winter 2025 (with Karin Tybjerg). *Lectured and led discussions on:* General Philosophy of Science (including Popper and Kuhn); Philosophy of Big Data; Philosophy of AI; Philosophy of Measurement; Philosophy of Medical Technology; Ethical Theories; Epistemic Injustice; AI Ethics.

Responsible Conduct of Research (RCR), Duke University, Summer 2018 (with faculty from Duke School of Medicine). *Teaching Assistant (TA); led discussions on:* Ethics of Science; Academic Misconduct.

ACADEMIC SOCIETIES

Member, Society for Philosophy of Science in Practice (SPSP), 2023-present.

Member, International Society for the History, Philosophy, and Social Studies of Biology (ISHPSSB), 2024-present.

Member, Philosophy of Science Association (PSA), 2024-present.

Member, Society for Social Studies of Science (4S), 2024-present.

SERVICE TO THE COMMUNITY

Member of Editorial Team, Society for Philosophy of Science in Practice Newsletter, 2024-present.

REFERENCES

Karin Tybjerg, PhD

Associate Professor, Medical Museion and CBMR, University of Copenhagen

Email: karin.tybjerg@sund.ku.dk, Phone: +45 35 32 38 03

Sara Green, PhD

Associate Professor, History and Philosophy of Science, University of Copenhagen

Email: sara.green@ind.ku.dk, Phone: +45 35 33 46 32

Keld Alstrup Jensen, PhD

Professor, Chemistry and Microbiology, National Research Centre for the Working Environment

Email: kaj@nfa.dk, Phone: +45 20 76 47 31

Stefano Di Talia, PhD

Professor, Department of Cell Biology, Duke University

Email: stefano.ditalia@duke.edu, Phone: +1 919 684 8079