# Patrick Landon Ferree, Ph.D.

### Academic Profile

AOS: History and Philosophy of Science, Science Studies

AOC: History of Philosophy of Science, Epistemology, 20th-Century Philosophy

Interests: History and philosophy of biomedical knowledge; research practices; methodologies; experimental systems; disciplinarity; exchanges of ideas and practices between physical, computational, and life sciences; entanglements of pedagogy, practices, and epistemology

#### EDUCATION

# University of Copenhagen Copenhagen, DK Ph.D. (Starting 1 March 2024) in Philosophy of Science Expected 2028 Duke University School of Medicine Durham, NC, USA

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<ul> <li>Ph.D. in Cell Biology</li> <li>Dissertation: Temporal regulation of cell divisions in the embryo of <i>Drosophila melanogaster</i></li> <li>Committee: Stefano Di Talia, Michel Bagnat, Danny Lew, Bernard Mathey-Prevot, Nick Buchler</li> <li>University of California, San Diego</li> <li>B.S. in Chemistry, B.A. in Philosophy, Minor in Political Theory, magna cum laude</li> </ul>	April 2022  La Jolla, CA, USA  June 2012
<ul> <li>University of Copenhagen</li> <li>Graduate Student Researcher, Advisor: Karin Tybjerg, Ph.D.</li> <li>Affiliation: Medical Museion, Department of Public Health</li> <li>Affiliation: Novo Nordisk Foundation Centre for Basic Metabolic Research</li> <li>Research: History, philosophy, and sociology of research practices in the metabolic sciences</li> </ul>	
<ul> <li>The National Research Centre for the Working Environment</li> <li>Postdoctoral Researcher, Advisor: Keld Alstrup Jensen, Ph.D.</li> <li>Affiliation: Section for Chemistry and Microbiology</li> <li>Research: Chemistry and physics of airborne particles in workplace environments</li> </ul>	Copenhagen, DK June 2022-present
Copenhagen Institute for Futures Studies Junior Health Associate, Advisor: Bogi Eliasen  Research: Futures of healthcare and biomedicine	Copenhagen, DK January-June 2022
<ul> <li>Duke University School of Medicine</li> <li>Graduate Student Researcher, Advisor: Stefano Di Talia, Ph.D.</li> <li>Affiliation: Department of Cell Biology</li> <li>Affiliation: Program in Cell and Molecular Biology</li> <li>Research: Cell cycle regulation in the early fly embryo</li> </ul>	Durham, NC, USA 2014-2022
<ul> <li>University of Texas, El Paso</li> <li>Research Technician, Advisor: Laura O'Dell, Ph.D.</li> <li>Affiliation: Department of Psychology</li> <li>Research: Neuroscience of drug addiction in rats</li> </ul>	El Paso, TX, USA 2012-2014
<ul> <li>Scripps Institute of Oceanography</li> <li>Undergraduate Researcher, Advisor: Lynn Russell, Ph.D.</li> <li>Affiliation: Aerosol Research Group</li> <li>Research: Chemistry and physics of atmospheric aerosols</li> </ul>	La Jolla, CA, USA 2012

#### Manuscripts in progress

- P. L. Ferree, M. Polat, J. K. Nøjgaard, K. A. Jensen, "A study of airborne particulate matter and diesel engine exhaust on infrastructure construction sites"
- P. L. Ferree, C. Ribalta, A. CØ 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"
- P. L. Ferree, S. Brantley, T. Starr, A. Chao, S. Di Talia, "Activatror and repressor dynamics time mitosis during *Drosophila* gastrulation"

# **PUBLICATIONS**

- [1] **P. L. Ferree**, "Temporal regulation of cell divisions in the embryo of Drosophila melanogaster", Ph.D. dissertation, Duke University, 2022.
- [2] **P. L. Ferree**, M. Xing, J. Q. Zhang, and 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.
- [3] P. L. Ferree and 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.
- [4] P. L. Ferree and S. Di Talia, "Chemical Waves in Embryonic Cell Cycles", Israel Journal of Chemistry, vol. 58, no. 6, pp. 714–721, 2018, ISSN: 18695868.
- [5] P. L. Ferree and S. Di Talia, "For Embryos, Mother Can Only Take You So Far", Developmental Cell, vol. 42, no. 3, pp. 203–205, 2017, ISSN: 18781551.
- [6] P. L. Ferree, V. E. Deneke, and S. Di Talia, "Measuring time during early embryonic development", Seminars in Cell & Developmental Biology, 2016, ISSN: 10849521.
- [7] L. M. Carcoba, J. E. Orfila, L. A. Natividad, O. V. Torres, J. A. Pipkin, **P. L. Ferree**, E. Castañeda, D. E. Moss, and L. E. O'Dell, "Cholinergic transmission during nicotine withdrawal is influenced by age and pre-exposure to nicotine: Implications for teenage smoking", *Dev. Neurosci.*, vol. 36, no. 3-4, pp. 347–355, 2014, ISSN: 14219859.
- [8] O. V. Torres, J. A. Pipkin, **P. L. Ferree**, L. M. Carcoba, and 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.

### SELECT TALKS AND POSTER PRESENTATIONS

- 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, July 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, March 2018 (Poster).
- **P. L. Ferree**, A. Momen-Roknabadi, S. Di Talia, "Precise timing of mitosis during *Drosophila* gastrulation", Winter School on Quantitative Biology, International Center for Theoretical Physics, Trieste, Italy, Dec. 2017 (**Poster**.)

### Select Schools and Workshops Attended as a Student

Crossing the Disciplinary Boundaries of Physics, Bohr Centennial, Copenhagen, Denmark, August 2023. Three days of presentations on the history of physics and its impact on other sciences, especially biology.

Workshop on Methods in the Philosophy of Science, Vienna, Austria, May 2023. Two days of presentations and discussions on contemporary methods in philosophy of science.

Summer School on the History of the Life Sciences, Ischia, Italy, June 2022. One week of presentations and discussions on the theme of kinship and other relations in biology.

Winter School on Quantitative Biology, International Center for Theoretical Physics, Trieste, Italy, December 2017. Two weeks of pedagogical lectures, presentations, and discussions between physicists and biologists.

## Academic Societies

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

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

Member, The Richard Rorty Society, 2019-present.

# REFERENCES

#### Keld Alstrup Jensen, Ph.D.

Professor, National Research Centre for the Working Environment Relationship: Postdoc advisor, Email: kaj@nfa.dk, Phone: +45 20 76 47 31

#### Stefano Di Talia, Ph.D.

Associate Professor of Cell Biology, Duke University Relationship: Ph.D. advisor, Email: stefano.ditalia@duke.edu, Phone: +1 919 684 8079

#### Sara Green, Ph.D.

Associate Professor of History and Philosophy of Science, University of Copenhagen Relationship: Colleague, Email: sara.green@ind.ku.dk, Phone: +45 35 33 46 32

#### Joeri Witteveen, Ph.D.

Associate Professor of History and Philosophy of Science, University of Copenhagen Relationship: Colleague, Email: jw@ind.ku.dk, Phone: +45 35 33 04 67