

# Patrick Landon Ferree

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## AREAS OF SPECIALIZATION

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History, philosophy, and sociology of modern biomedical sciences

## EDUCATION

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<b>University of Copenhagen</b> Ph.D. Candidate in Science Studies   History and Philosophy of Science ( <b>in Progress</b> )	Copenhagen, DK Mar 2024 - Present
<b>Duke University School of Medicine</b> Ph.D. in Cell Biology <ul style="list-style-type: none"><li><i>Dissertation:</i> Temporal regulation of cell divisions in the embryo of <i>Drosophila melanogaster</i></li><li><i>Committee:</i> Stefano Di Talia, Michel Bagnat, Danny Lew, Bernard Mathey-Prevot, Nick Buchler</li></ul>	Durham, NC, USA Apr 2022
<b>University of California, San Diego</b> B.S. in Chemistry, B.A. in Philosophy, Minor in Political Science, <i>magna cum laude</i>	La Jolla, CA, USA Jun 2012

## EXPERIENCE

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<b>University of Copenhagen</b> Graduate Student Researcher, Advisor: Karin Tybjerg, Ph.D. <ul style="list-style-type: none"><li><i>Affiliation 1:</i> Medical Museion, Department of Public Health, Faculty of Health and Medical Sciences</li><li><i>Affiliation 2:</i> Novo Nordisk Foundation Centre for Basic Metabolic Research</li><li><i>Program:</i> Cardiometabolic Research in Society and Culture</li><li><i>Research:</i> Technology platforms in biomedical sciences</li></ul>	Copenhagen, DK Mar 2024 - Present
<b>The National Research Centre for the Working Environment</b> Postdoctoral Researcher, Advisor: Keld Alstrup Jensen, Ph.D. <ul style="list-style-type: none"><li><i>Affiliation:</i> Section for Chemistry and Microbiology</li><li><i>Research:</i> Airborne particles in workplace environments</li></ul>	Copenhagen, DK Jun 2022 - Mar 2024
<b>Copenhagen Institute for Futures Studies</b> Junior Health Associate, Advisor: Bogi Eliassen <ul style="list-style-type: none"><li><i>Research:</i> Futures of healthcare and biomedicine</li></ul>	Copenhagen, DK Jan - Jun 2022
<b>Duke University School of Medicine</b> Graduate Student Researcher, Advisor: Stefano Di Talia, Ph.D. <ul style="list-style-type: none"><li><i>Affiliation:</i> Department of Cell Biology</li><li><i>Program:</i> Cell and Molecular Biology</li><li><i>Research:</i> Cell cycle regulation in the early fly embryo</li></ul>	Durham, NC, USA Sep 2014 - Apr 2022
<b>University of Texas, El Paso</b> Research Technician, Advisor: Laura O'Dell, Ph.D. <ul style="list-style-type: none"><li><i>Affiliation:</i> Department of Psychology</li><li><i>Research:</i> Neuroscience of drug addiction in rats</li></ul>	El Paso, TX, USA Jan 2013 - Sep 2014
<b>Scripps Institute of Oceanography</b> Undergraduate Researcher, Advisor: Lynn Russell, Ph.D. <ul style="list-style-type: none"><li><i>Affiliation:</i> Aerosol Research Group</li><li><i>Research:</i> Chemistry and physics of atmospheric aerosols</li></ul>	La Jolla, CA, USA Jan - Sep 2012

**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” (**Article - Revise and Resubmit**).

**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**).

## PUBLICATIONS

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**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 and **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, and **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**).

## SELECT TALKS AND POSTER PRESENTATIONS

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**P. L. Ferree**, K. Tybjerg, “Technical and epistemic objects in cell-type classification: A study of single-cell sequencing platforms”, Society for Philosophy of Science in Practice, Columbus, SC, USA, May 2024 (**Submitted**).

**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**).

## OTHER ONGOING PROJECTS

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J. K. Nøjgaard, **P. L. Ferree**, V. Kofoed-Sørensen, S. P. Jensen, S. B. Jensen, M. Frederiksen<sup>1</sup>, M. Polat, “Exposure to elemental carbon and polycyclic aromatic hydrocarbon during asphalt paving”, European Aerosol Conference, Tampere, Finland, August 2024 (**Abstract**).

J. B. Liisberg, A. Brostrøm, **P. L. Ferree**, S. B. Jensen, V. Di Battista, W. Wohlleben, A. S. Fonseca, K. A. Jensen, “Particle release during cutting of novel aerogel- and conventional MMVF insulation mats”, European Aerosol Conference, Tampere, Finland, August 2024 (**Abstract**).

A. S. Fonseca, **P. L. Ferree**, S. B. Jensen, S. H. Møller, T. N. Jensen, J. T. Rasmussen, P. Kines, J. B. Liisberg, F. Husovská<sup>1</sup>, J. Thalmann, A. Brostrøm, K. A. Jensen, “Implementation of sensor-based workplace measurements for improved handling of particle exposures in the working environment”, European Aerosol Conference, Tampere, Finland, August 2024 (**Abstract**).

## SELECT SCHOOLS AND WORKSHOPS ATTENDED AS A STUDENT

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Crossing the Disciplinary Boundaries of Physics, Bohr Centennial, Copenhagen, Denmark, August 2023.

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

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

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

## PUBLIC OUTREACH

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**P. L. Ferree**, “Algorithms to live by: how we will one day build a digital embryo”, CIFS Health Blog, 2022 (**Essay**).

**P. L. Ferree**, “Digital twins in future healthcare”, CIFS Health Blog, 2022 (**Essay**).

**P. L. Ferree**, E. Balk-Møller, “DNA sequencing: The future is in the whole thing”, CIFS Health Blog, 2022 (**Essay**).

**P. L. Ferree**, “Encoding information in waves and patterns”, Moogfest: Music, Art, and Technology Festival, Durham, NC, USA, May 2018. *A public talk on the concept of information in developmental biology* (**Talk**).

Science Speed Dating, Durham, NC, USA, 2016-2018. *Organized science communication events* (**Outreach**).

## ACADEMIC SOCIETIES

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

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

## REFERENCES

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### **Karin Tybjerg, Ph.D.**

Associate Professor, Medical Museion, University of Copenhagen

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### **Sara Green, Ph.D.**

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

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

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

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**Stefano Di Talia, Ph.D.**

Associate Professor, Department of Cell Biology, Duke University

Relationship: Ph.D. advisor, Email: stefano.ditalia@duke.edu, Phone: +1 919 684 8079