

CURRICULUM VITAE

Last update: 9/13/2024

Philip Kohlmeier

University of Memphis / 3774 Walker Ave / Memphis, TN, 38111

pkhlmier@memphis.edu / www.kohlmeierlab.com / X: @PhilipKohlmeier

RESEARCH POSITIONS

Since 2022 **Assistant Professor** at the Department of Biological Sciences, University of Memphis, Memphis, TN, USA.

2018 - 2022 **Postdoctoral researcher** in the Billeter lab, Groningen Institute for Evolutionary Life Sciences, Groningen University, Netherlands.

Research topic: The neurogenetic mechanisms regulating plastic female mate choice in *Drosophila melanogaster*.

2014 - 2018 **PhD student** in the Foitzik lab, Institute of Organismic and Molecular Evolutionary Biology, Mainz University, Germany

Research topic: The transcriptomic and epigenetic mechanisms of behavioral specialization in ants

EDUCATION

2014 - 2018 PhD at the Institute of Organismic and Molecular Evolutionary Biology, Mainz University, Germany.

2012 - 2014 Master of Science in Biology at Mainz University, Germany.

2009 - 2012 Bachelor of Science in Biology at Bielefeld University, Germany

FUNDING AND AWARDS

Total sum awarded: 195.864€

Submitted grants with pending decisions

2024 NSF Early CAREER grant (US\$ 869.264). *Title:* Decoding the Social Interface: Chemical and Neurogenetic Mechanisms of Behavioral Dynamics

Research and travel grants

2024 Research grant of the Huyck preserve, NY, USA (1.769€). *Title:* The effect of larval chemical cues on worker response thresholds in the ant *Temnothorax longispinosus*

2023 Research grant of the Huyck preserve, NY, USA (1.824€). *Title:* The social and genetic mechanisms modulating adaptive foraging decisions in an ant

Seed grant by the Center for Biodiversity Research (1.362€). *Title:* The hormonal regulation of postmating responses in a solitary bee

2021 Travel grant (1.000 €) of the Uyttenboogaart-Eliasen foundation for organizing the symposium entitled “From signaling to sensing: how pheromones modulate social organization” at the conference of the International Union for the Study on Social Insects in San Diego, USA

2019 Research grant of the Dobberke foundation for comparative psychology, Netherlands (5.600€). *Title:* The origin of complex social life: evidence for a socio-circadian ground plan?

2016 Research grant of the Huyck Preserve, NY, USA (1.510€). *Title:* Genetic and epigenetic regulation of division of labor in social insects.

2015 Research grant of the Huyck Preserve, USA (3.022€). *Title:* The genetic basis of division of labor.

Fellowships

2019 Postdoctoral fellowship of the German Research Foundation (75.120€)

2018 Postdoctoral fellowship of the German National Academy of Sciences Leopoldina (75.120€)

Shortterm postdoctoral fellowship of the German Academic Exchange Service (18.106€)

2013 Deutschlandstipendium - fellowship for excellent students (3.600€)

2012 RISE fellowship of the German Academic Exchange Service for a research internship at the Sakaluk lab, Illinois State University, USA (2.000€)

2011 Deutschlandstipendium - fellowship for excellent students (3.600€)

Awards

2021 Netherlands Evolutionary Biology Prize for our paper “Mating increases *Drosophila melanogaster* females’ choosiness by reducing olfactory sensitivity to a male pheromone” published in *Nature Ecology and Evolution* (500€)

2019 Award of the Boehringer Ingelheim Foundation, Germany for excellent PhD theses (3.000€)

2015 Poster award at the Epigenetics workshop, Institute Curie Paris, France (500€)

TEACHING, SUPERVISION, AND OUTREACH

Teaching and supervision

Since 2023 Developed and ran a *Neuroethology* course and a lab-based *CURE* course in *Neurogenetics* (Level 4000/Junior and senior undergraduate)

Since 2014 Supervision of a total of 19 bachelor, three master, and one PhD project(s).

Supervision of three international students research internships recruited through the *Research Internships in Science and Engineering* Program of the German Academic Exchange Service

2019 Mentor of six bachelor students who performed a literature review on a scientific question and to prepare a poster presentation (First year symposium)

2016 Lecture on the genetic basis of division of labor at the Young Researcher Congress at the Institute of Molecular Biology, Mainz, Germany.

2015 Lecture on the genetic basis of division of labor at a workshop for biology teachers at the Educational Institute Rhineland Palatinate, Germany

Outreach

2024 Collaboration with the University of Memphis Middle School on a project-based learning unit addressing the question "How can genetics help us address real-world challenges?".

2016 Public lecture on ant biology at the Niles Edmund Huyck Preserve, USA

2015 Organization of a three-day fieldwork workshop on ant biology for a high school class at the Niles Edmund Huyck Preserve, USA

ACADEMIC SERVICE

Since 2022 Hosting seminar speakers for a weekly department-level seminar.

Active member of the social media committee at the University of Memphis.

Member of the graduate thesis committee of PhD student Soo-Hyung Jeung, University of Memphis.

2022 Organization of a symposium in collaboration with Dr. Arne Jungwirth entitled "The emergence of novel behaviors during social evolution" at the European Congress for Behavioral Biology in Groningen, Netherlands.

2022 Organization of a symposium in collaboration with Dr. Cintia Akemi Oi entitled "From signaling to sensing: how pheromones modulate social organization" at the conference of the International Union for the Study on Social Insects in San Diego, USA.

Since 2018 Reviewer for Open Science, Frontiers in Zoology, Nature Ecology and Evolution, Molecular Ecology, Biology Letters, Genes Brains and Behavior, Behavioral Ecology and Sociobiology, Insect Molecular Biology, Insectes Sociaux, and the Dutch Research Council.

PRESENTATIONS

2024 Invited seminar at the CNRS in Tours, France.

Poster presentation at the IUSSI meeting in Lausanne, Switzerland.

Invited oral presentation at the Memphis Neurosciences Symposium.

2023 Invited oral presentation at the Cognitive Science Seminar, University of Memphis, USA.

2022 Poster presentation at the Graduate Meeting Evolutionary Biology by the German Zoological Society in Bielefeld, Germany.

2021 Oral presentation at the Dutch Belgian *Drosophila* Meeting, Leuven, Belgium.

2019 Oral presentation at the mini symposium on sexual conflict, Groningen, The Netherlands.

2017 Poster presentation at the conference of the European Society of Evolutionary Biology, Groningen, The Netherlands.

2016 Oral presentation at the conference of the International Union for the Study on Social Insects, Helsinki, Finland.

2015 Oral presentation at the conference of the European Society of Evolutionary Biology, Lausanne, Switzerland.

2012 Oral presentation at the conference of the Ethological Society, Münster, Germany.

2011 Oral presentation at the graduate meeting of the German Zoological Society, Bielefeld, Germany.

PUBLICATIONS

Preprints and submitted manuscripts

19) Kohlmeier & **Kohlmeier**: Non-overwintering urban populations of the African fig fly (*Zaprionus indianus*) impact the reproductive output of *Drosophila melanogaster*. Under Review

18) Umarova, Cathey, **Kohlmeier**: Co-option of two *n*-alkanes as a brood pheromone modulating foraging preferences in *Temnothorax* ant workers. Under review.

17) Mitchell, Abbott, Brown, Skinner, Umarova, **Kohlmeier**: Chemical mate choice copying in *Drosophila melanogaster*. In revision.
bioRxiv: <https://www.biorxiv.org/content/10.1101/2024.06.23.600307v1>

Published peer-reviewed manuscripts

16) Billeter, Baily, **Kohlmeier**: The social life of *Drosophila melanogaster*. *Insectes Sociaux*, in press.

15) Doubovetzky, **Kohlmeier**, Bal, Billeter: Cryptic female choice in response to male pheromones in *Drosophila melanogaster*. *Current Biology*, in press.

- 14) Dunn, Hodapp, Menzel, **Kohlmeier** (2024): Larval chemical cues induce rapid adaptations of foraging preferences in ant workers (Hymenoptera: Formicidae). *Myrmecological News* 34: 71-79.
- 13) **Kohlmeier**, Feldmeyer, Foitzik (2023): Histone acetyltransferases and external demands influence task switching in *Temnothorax* ants. *Biology Letters* 19: 20230176.
- 12) Bailly, **Kohlmeier**, Etienne, Wertheim, Billeter (2023): Social modulation of oogenesis and egg-laying in *Drosophila melanogaster*. *Current Biology* 33:2865-2877.e4
- 11) **Kohlmeier** & Billeter (2023): Genetic mechanisms modulating behaviour through plastic chemosensory responses in insects. *Molecular Ecology* 32: 45-60.
- 10) Verschut, **Kohlmeier**, Billeter (2021): Bioassaying the function of pheromones in *Drosophila melanogaster*'s social behavior. In *Behavioral Neurogenetics* pp 123 – 156, Springer.
- 9) **Kohlmeier**, Zhang, Gorter, Su, Billeter (2021): Mating increases *Drosophila melanogaster* females' choosiness by reducing olfactory sensitivity to a male pheromone. *Nature Ecology and Evolution* 5: 1165-73
- 8) **Kohlmeier**, Alleman, Libbrecht, Foitzik, Feldmeyer (2019): Gene expression is more strongly associated with behavioural specialization than with age or fertility in ant workers. *Molecular Ecology* 28: 658-70
- 7) **Kohlmeier**, Feldmeyer, Foitzik (2018): *Vitellogenin-like A*-associated shifts in social cue responsiveness regulate behavioral task specialization in an ant. *PLoS Biology* 16: e2005747
- 6) Kramer, Körner, Diehl, Scheiner, Yüksel-Dadak, Christl, **Kohlmeier**, Meunier (2017): When earwig mothers do not care to share: parent-offspring competition and the evolution of family life. *Functional Ecology* 31: 2098-107
- 5) **Kohlmeier**, Negroni, Kever, Emmling, Stypa, Feldmeyer, Foitzik (2017): Intrinsic worker mortality depends on behavioural caste and the queens' presence in a social insect. *The Science of Nature* 104: 34
- 4) **Kohlmeier**, Holländer, Meunier (2016): Survival after pathogen exposure in a group-living insect: Don't forget the stress of social isolation! *Journal of Evolutionary Biology* 29: 1867-72
- 3) **Kohlmeier**, Dreyer, Meunier (2015): PO-CALC: A novel tool to correct common inconsistencies in the measurement of phenoloxidase activity. *Journal of Insect Physiology* 75: 80-4
- 2) Caspers, Hoffman, **Kohlmeier**, Krüger, Krause (2013): Olfactory imprinting and discrimination of nest odours in zebra finches. *Animal Behaviour* 86: 85-90
- 1) Krause, Krüger, **Kohlmeier**, Caspers (2012): Olfactory kin recognition in a songbird. *Biology Letters* 8: 327-9