

Curriculum Vitae

Personal Details

Name	Luisa Kumpitsch
Address	Kobberstensvägen 17 45296 Strömstad Sweden
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E-Mail	luisa.kumpitsch@gu.se
Birthday/-place	10.06.1995 in Friedrichroda
Nationality	German



Education

10/2017 - 09/2021	TU Dresden, Dresden, Germany Field of study: Biology (Master of Science)
10/2014 - 03/2018	TU Dresden, Dresden, Germany Field of study: Biology (Bachelor of Science)
10/2013 - 09/2014	University of Passau Field of study: International Cultural and Business Studies (Bachelor of Arts)
08/2005 - 06/2013	Salzmannschule Schnepfenthal, Governmental school for languages, Schnepfenthal, Germany Degree: Abitur

Work Experience

10/2017 - 03/2020	TU Dresden, Germany, Faculty of Biology, Institute of Zoology
06/2016 - 03/2017	Professorship of Applied Zoology Function: student research assistant (behavioral experiments with <i>Cimex lectularius</i> and <i>Drosophila melanogaster</i> , measurements of reactive oxygen species in sperm of <i>D. melanogaster</i> lines)
03/2018 - 09/2018	TU Dresden, Division of Sciences, International Office Function: student assistant (organization and implementation of a German-Japanese symposium in Kobe, Japan)

Present Employment

01/2022 - current PhD Student, Tjärnö Marine Laboratory, Department of Marine Sciences, University of Gothenburg, Strömstad, Sweden
Project: The role of sperm in sexual selection and speciation in marine intertidal organisms

International Experience

31.10.2022 - 30.11.2022 Toralla Marine Station, University of Vigo, Vigo, Spain
Project: Sperm competition effects on fertilization success and sperm motility in the sea urchin *Paracentrotus lividus* (Funded by Aquacosm-plus, European Commission)

09/2020 - 06/2021 Marine Biological Research Centre, University of Southern Denmark Kerteminde, Denmark and Geomar, Helmholtz Zentrum für Ozeanforschung, Kiel, Germany
Project: Master Thesis on physiological and structural effects of macroplastic on blue mussel aggregates; the thesis was part of the international project GAME led by Geomar Kiel.

03/2017 - 07/2017 Kyoto Institute of Technology, Kyoto, Japan
Project: Effects of ozone on the photosynthesis rate of two different plant species (*Rhododendron pulchrum* and *Prunus yedoensis*) in zones with different traffic amounts in Kyoto, Japan

Courses

26.08.2024 - 30.08.2024 Villefranche-Sur-Mer Marine station, Sorbonne University, Villefranche-sur-Mer, France
Course: Imaging marine invertebrate embryos
Acquired skills: fundamental concepts of embryonic/extraembryonic development of marine invertebrates (ascidians, jellyfish, salps, sea urchins), handling of organisms and their gametes/embryos, confocal and light sheet microscopy, image analysis

26.06.2024 - 27.06.2024 University of Cambridge, Cambridge Centre for Proteomics, Cambridge, United Kingdom

	Course: Analysis of expression proteomics data in R Acquired skills: characterization of the protein diversity and abundance in datasets from LFQ and TMT mass spectrometry, proteomics Bioconductor packages
04.06.2024 - 13.06.2024	Tjärnö Marine Laboratory, Universtiy of Gothenburg, Strömstad, Sweden Course: Experimental Design and Data Analysis for Marine Sciences Acquired skills: experimental and sampling design, data analysis (linear models, multiple regression, model selection and regression trees, mixed models, multivariate analyses)
12.06.2023 - 14.07.2023	Friday Harbor Laboratories, Friday Harbor, Washington State, USA Course: Larval Biology Acquired skills: handling of marine invertebrate gametes and embryos, different fertilization techniques, plankton sampling, larval development, behavior and anthropogenic change effects in the marine environment
10.06.2022 - 16.06.2022	Tjärnö Marine Laboratory, Universtiy of Gothenburg, Strömstad, Sweden Course: Variation & Extremes in Ecology and Ecological Physiology - Thinking Beyond the Average Acquired skills: the role of variation and extremes in ecology and ecological physiology, the pervasive effects of Jensen's inequality ("the fallacy of the average"), the statistics of extremes and how to calculate and interpret them, and the importance of mechanistic models in the exploration of variation and extremes
25.04.2022 - 29.04.2022	Institute of Aquatic Ecology, HUN-REN Centre for Ecological Research, Budapest, Hungary Course: Aquacosm-plus Spring School
14.03.2022 - 19.03.2022	Kristineberg Center, University of Göteborg, Fiskebäckskil, Sweden Course: Basic Training Course on ocean acidification Acquired skills: characterization of seawater carbon chemistry, key aspects of ocean acidification experimental design Acquired skills: key aspects of mesocosm experiments in aquatic environments (marine and freshwater)

Conferences

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| 14.07.2023 - 28.07.2023 | XIII International Symposium on Littorinid Biology and Evolution, Vila do Conde, Portugal

Presentation: Talk on „The role of eusperm in reproductive isolation and sperm competition in <i>Littorina</i> snails“ |
| 04.09.2023 - 08.09.2022 | Biology of Sperm meeting, Nynäshamn, Sweden

Presentation: Poster on „Sperm ultrastructure and variation in the marine gastropod genus <i>Littorina</i> “ |
| 14.08.2022 - 19.08.2022 | Congress of the European Society for Evolutionary Biology, Prag, Czech Republic

Presentation: Poster on „Comparative analysis of heteromorphic sperm in the gastropod genus <i>Littorina</i> “ |

Teaching Experience

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| 01/2022 - current | Tjärnö Marine Laboratory, Universtiy of Gothenburg, Strömstad, Sweden

Teaching: undergraduate course on DNA and protein extractions, undergraduate course on marine biodiversity, graduate course on marine experimental ecology, supervision of three bachelor students |
| 08/2020 - 01/2022 | GoStudent Austria

Teaching: English, Spanish, Biology, and Japanese for high school students |

Additional Experiences

Training in transmission electron microscopy and scanning electron microscopy, inshore yachtmaster diploma, experience in operating small motor boats, open water diver

Language Skills

German (native), English (C1 **CEFR**), Spanish (C1 **CEFR**), Japanese (B1 **CEFR**), Swedish (A2 **CEFR**), Russian (A1 **CEFR**)

Computer Skills

Microsoft Office, ImageJ, R

Publications

Dobson, A. J., Voigt, S., Kumpitsch, L., Langer, L., Voigt, E., Ibrahim, R., Dowling, D. K., & Reinhardt, K. (2023). Mitonuclear interactions shape both direct and parental effects of diet on fitness and involve a SNP in mitoribosomal 16s rRNA. *PLOS Biology*, 21(8), e3002218.

Matsumoto, M., Kiyomizu, T., Yamagishi, S., Kinoshita, T., Kumpitsch, L., Kume, A., & Hanba, Y. T. (2022). Responses of photosynthesis and long-term water use efficiency to ambient air pollution in urban roadside trees. *Urban Ecosystems*, 25(4), 1029–1042.

Matsuura, T., Okamoto, Y., Matsumoto, M., Kiyomizu, T., Kumpitsch, L., Kume, A., & Hanba, Y. T. (2025). The impact of air pollution control measures and the COVID-19 pandemic on photosynthesis in urban trees. *Scientific Reports*, 15(1), 1453. <https://doi.org/10.1038/s41598-024-85080-x>

Turnell, B. R., Kumpitsch, L., & Reinhardt, K. (2021). Production and scavenging of reactive oxygen species both affect reproductive success in male and female *Drosophila melanogaster*. *Biogerontology*, 22(4), 379–396.

Turnell, B. R., Kumpitsch, L., Ribou, A.-C., & Reinhardt, K. (2021). Somatic production of reactive oxygen species does not predict its production in sperm cells across *Drosophila melanogaster* lines. *BMC Research Notes*, 14(1), 131.