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Positions

2022-present Assistant Professor, Interdisciplinary Nanoscience Center (iNANO), Aarhus University, Denmark
2020-present Assistant Professor, Dept. Molecular Biology and Genetics, Aarhus University, Denmark
2015-2019 Postdoc Fellow, Dept. Molecular Biology and Genetics, Aarhus University, Denmark
2015-2016 Guest Researcher, Inst. Toxicology and Genetics, Karlsruhe Institute of Technology, Germany
2012-2014 Ph.D. Fellow, iNANO Interdisciplinary Nanoscience Center/Dept. Bioscience, Aarhus University, Denmark

Education and Training

2020 Foundational Course in Ph.D. Supervision
2015 International Zebrafish and Medaka Course, European Zebrafish Resource Centre, Germany
2009-2014 Ph.D. Nanoscience, Aarhus University, Denmark
2003-2007 BSc. Environmental Biology, The University of Reading, U.K.

Scientific Summary

Area of Research

Seeing is believing. The core of my research is to image life at the interface with nanotechnology. My current interest centers around bioinspired nanomedicine, for which I have just started a journey to explore novel ideas in extracellular vesicles, the new frontier in cell-to-cell communication. They can simply be therapeutic targets or potentially mimicked as drug delivery vehicles of the next generation nanomedicine. The knowledge about their basic biology is, however, still largely lacking. For example, how does nature succeed in designing extracellular vesicles as natural nanoparticles for targeted delivery of biomolecules? What is their biological significance? Together with zebrafish, I seek answers to these questions by nanoscience approaches and 4D imaging of live transgenic embryos.

Bibliometrics

h-index: 14
Total number of publications: 18
(Corresponding-authored: 6, First/Last-authored: 9)
- Peer-reviewed: 18
- Preprint: 0
Total citations: 1134
*The metrics are based on Scopus records as of 9th Feb 2022.

Active International Collaborations

Dr. Carsten Weiss, Karlsruhe Institute of Technology (KIT), Germany
Prof. Uwe Strähle, Karlsruhe Institute of Technology (KIT), Germany
Dr. Frederik J. Verweij, Utrecht University, the Netherlands
Dr. Guillaume van Niel, INSERM IPNP, France
Dr. Jean-Pierre Levraud, Institut Pasteur, France
Dr. Georges Lutfalla, The University of Montpellier, France
Dr. Péter Engelmann, The University of Pécs, Hungary
Dr. Annalisa Grimaldi, The University of Insubria, Italy

Research Funding

Novo Nordisk Foundation - Hallas-Møller Emerging Investigator: "Exosomes: Decrypting the 'Blood-Streamed' RNA Communication", 10 million DKK, Principal Investigator (2022-2027)
Lundbeck Foundation - LF Experiment: "TRAPping Long-Distance Extracellular RNA Communication in Action", 1.8 million DKK, Principal Investigator (2020-2021)

Lundbeck Foundation - Postdoctoral Fellowship in Denmark: "NanoALERT - Imaging of Nanoparticle-Activated Leukocytes and Endothelium in Real-Time", 1.4 million DKK, Principal Investigator (2017-2019)
Independent Research Fund Denmark (DRF/FTP) - Individual Postdoctoral Grant: "DANIim - *Danio rerio* (zebrafish) Innate Immunity Model for Bionanoscience", 2 million DKK, Principal Investigator (2015-2016)

Teaching and Supervision

Supervision: 1 Master's level ERASMUS student (2020-2021)
Laboratory Instructor: Nanotoxicology exercises/projects for undergraduate students (2010-2014, Aarhus University, Denmark; 2016, Karlsruhe Institute of Technology, Germany)

Research Evaluation

Peer-reviewing activities (3-5 times/year since 2013)
– For Manuscripts: *ACS Nano*, *Nature Communications*, *Advanced Science*, *Small*, *Environmental Science & Technology*, and more.
– For Research grants: *Swiss National Science Foundation*.

Scientific Dissemination

Appearance in Mass Media

EU FP7 nanOpinion teaching video: "The Environmental Impacts of Nanosilver: An Earthworm's Point of View".
<http://nanopinion.archiv.zsi.at/en/video/environmental-impacts-nanosilver-earthworms-point-view-nanopinion-video>
DR K Danskernes Akademi: "De miljømæssige konsekvenser af nanosilver" aired on 20th October 2013 by DR, Denmark.