

Yuya Hayashi, Ph.d.
Lektor

Fødselsdato: 28. mar 1984

Postadresse:
Aarhus Universitet,
Institut for Molekylærbiologi og Genetik,
Universitetsbyen 81,
8000 Aarhus C,
Danmark

E-mail: yuya.hayashi@mbg.au.dk
Group webpage: <https://mbg.au.dk/yuya-hayashi/>
Instagram: nanobias

ORCID: 0000-0002-7090-0990
Scopus Author ID: 55931719800



Positions

Education and Training

Scientific Summary

Area of Research

Seeing is believing. I use zebrafish embryos as a model organism to "visualize" unsolved mysteries in biology – the role of extracellular vesicles (EVs) in cell-to-cell communication. EVs emerge as a new frontier in molecular cell biology that has the potential to redefine today's knowledge across many research areas from basic to clinical sciences. My lab is where nanoscience meets zebrafish in search of new therapeutic inspirations by learning, manipulating and mimicking nature's smart biomolecular architecture, EVs.

Bibliometrics

h-index: 14

Total number of publications: 20

(Corresponding-authored: 6, First/Last-authored: 9)

- Peer-reviewed: 20

- Preprint: 0

Total citations: 1584

*The metrics are based on Scopus records as of 7th Oct 2024.

Active International Collaborations

Dr. Pia Siljander, The University of Helsinki, Finland

Dr. Frederik J. Verweij, Utrecht University, the Netherlands

Dr. Guillaume van Niel, CRCI2NA INSERM, France

Dr. Jean-Pierre Levraud, Institut Pasteur, France

Dr. Carsten Weiss, Karlsruhe Institute of Technology (KIT), Germany

Dr. Péter Engelman, The University of Pécs, Hungary

Research Funding

EU-Interreg ÖKS - HALRIC Pilot Project: "Investigating Amyloid Fibril-Protein Interactions and Their Impact on Neuroinflammation", 19k EUR, Co-recipient (2024)

Villum Foundation - Villum Experiment: "What the Cell 'Sees' in Extracellular Vesicle Biology", 2 million DKK, Principal Investigator (2024-2026)

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

Research-Based Supervision, Completed & in Progress

Postdoc: 1, PhD student: 1 (+1 co-supervision), Research Assistant: 1 MSc student: Thesis 0, Experimental project 5, Intern 2

BSc student: Thesis 5 (+1 co-supervision), Intern 4

Contributions to Lectures, Classroom Instructions and Laboratory Exercises

Advanced in Vivo Optical Imaging Techniques (PhD), Extracellular Vesicles in Health and Disease (MSc), Nanomedicine (MSc), Experimental Nano Exercises (BSc), From Cells to Organisms (BSc)

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.