

ANTON STRUNOV

SENIOR SCIENTIST

CONTACT

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WORKPLACE

University of Vienna, Center
for Microbiology and
Environmental Systems
Science, Division of Microbial
Ecology

SKILLS

Fluorescent in-situ
hybridization

Immunofluorescence

Light microscopy
(epifluorescent, confocal,
super-resolution)

Transmission electron
microscopy

Correlative microscopy

Image processing and data
analysis (Photoshop, Corel
Draw, GIMP, Reconstruct,
Blender, Fiji, R)

Molecular biology work
including PCR/qPCR/RT-qPCR

Population genetics

Prompt engineering

PROFILE

Experienced scientist with extensive background (10+ years) in fluorescent and electron microscopy. I successfully completed multiple individual and collaborative projects, developed several microscopy methods, which are currently in use by other research groups.

My goal is to develop new user-friendly methods in biology to visualize biological structures. I am motivated to learn new techniques and apply cutting-edge equipment to drive scientific projects further and expand the possibilities of bio-imaging.

EXPERIENCE

Senior Scientist at University of Vienna
2025-present

Postdoc at University of Vienna
2023-2025

Successfully replicated an existing seqFISH imaging technique and applied to a new non-model organism. Obtained experience in super-resolution microscopy technique (Stimulated emission depletion, STED).

Postdoc at Medical University of Vienna
2019-2023

Co-led an FWF project on influence of Wolbachia bacteria infection on thermal preference in Drosophila flies. Performed multiple population genetic experiments combined with PCR/qPCR tests.

EDUCATION

2007-2010

Specialist diploma in Biology
Novosibirsk State University

2010-2015

PhD in Cell Biology
Institute of Cytology and
Genetics, Novosibirsk

RESEARCH INTERESTS

Cell biology, microbiology,
developmental biology,
structural biology, confocal
and transmission electron
microscopy, endosymbiotic
bacteria, host-symbiont
interactions, *Drosophila*, cell
division

REVIEWING ACTIVITY

Nature Communications,
ISME Journal, PloS Pathogens,
Journal of Insect Physiology,
Ecological Entomology,
Insects, Frontiers in Cell and
Developmental Biology

Postdoc at Medical University of Vienna

2018-2019

Performed multiple FISH and Immunofluorescence imaging
experiments on different *Drosophila* organs and
demonstrated a novel mechanism of endosymbiont density
regulation by the host.

Head of electron microscopy group, Institute of Cytology
and Genetics, Novosibirsk, Russia

2017-2018

Led and supervised several collaborative projects in the
group related to transmission electron microscopy.

Research Fellow, Institute of Cytology and Genetics,
Novosibirsk, Russia

2016-2017

Completed several individual and collaborative projects in
the group related to transmission electron microscopy.
Successfully completed a part of a Mega-grant project
(14.Z50.31.0005) on ultrastructure of *Drosophila* S2 cell
mitosis. Obtained extensive experience in confocal and
epifluorescent microscopy.

Junior Researcher, Institute of Cytology and Genetics,
Novosibirsk, Russia

2013-2016

Assisted on several group projects related to transmission
electron microscopy. Completed my PhD. Started a
collaboration with the Medical University of Vienna on
visualizing bacteria in *Drosophila* brains.

Senior Lab Assistant, Institute of Cytology and Genetics,
Novosibirsk, Russia

2010-2013

Started my PhD. Assisted on several group projects related
to transmission electron microscopy. Learned FISH and
immunofluorescent techniques.

Lab Assistant, Institute of Cytology and Genetics,
Novosibirsk, Russia

2009-2010

Obtained my Specialist Diploma. Mastered transmission
electron microscopy technique. Assisted on several group
projects related to transmission electron microscopy.

MOST RELEVANT PUBLICATIONS

1. Strunov A., Schmidt K, Kapun M, Miller WJ. (2022). Restriction of Wolbachia Bacteria in Early Embryogenesis of Neotropical *Drosophila* Species via Endoplasmic Reticulum-Mediated Autophagy. **mBio**, e0386321. doi: 10.1128/mbio.03863-21.
2. Strunov A., Kiseleva E., Gottlieb Y. (2013). Spatial and temporal distribution of pathogenic *Wolbachia* strain wMelPop in *Drosophila melanogaster* central nervous system under different temperature conditions. **J Invertebr Pathol**, 114, 22-30. doi: 10.1016/j.jip.2013.05.001.
3. Strunov A., Kiseleva E. (2016). *Drosophila melanogaster* brain invasion: pathogenic *Wolbachia* in central nervous system of the fly. **Insect Sci**, 23, 253-264. doi: 10.1111/1744-7917.12187.
4. Strunov A., Boldyreva L.V., Andreyeva E.N., Pavlova G.A., Popova J.V., Razuvaeva A.V., Anders A.F., Renda F., Pindyurin A.V., Gatti M., Kiseleva E. (2018). Ultrastructural analysis of mitotic *Drosophila* S2 cells identifies distinctive microtubule and intracellular membrane behaviors. **BMC Biol**, 16(1):68. doi: 10.1186/s12915-018-0528-1.
5. Fishman V., Battulin N., Nuriddinov M., Maslova A., Zlotina A., Strunov A., Chervyakova D., Korablev A., Serov O., Krasikova A. (2019). 3D organization of chicken genome demonstrates evolutionary conservation of topologically associated domains and highlights unique architecture of erythrocytes' chromatin. **Nucleic Acids Res**, 47(2), 648-665. doi: 10.1093/nar/gky1103.

LIST OF TALKS

2023

11th International Wolbachia conference (Kolymbari, Crete)

"The taming of a mighty bug: how neotropical *Drosophila* flies restrict *Wolbachia* infection".

2022

10th Congress of the International Symbiosis Society (Lyon, France)

"How can we explain a recent replacement of wMelCS *Wolbachia* by wMel".

2020

Symbiosis seminar series (online, by Greg Hurst)

"The taming of the mighty bug: a story of *Wolbachia* and neotropical *Drosophila* flies".

2019

Let's talk about symbiosis (University of Vienna, Vienna, Austria)

"The impact of *Wolbachia* bacteria on thermal preference in *Drosophila melanogaster*".

2018

Let's talk about symbiosis (University of Vienna, Vienna, Austria)

"Stem cell passengers: *Wolbachia* bacteria journey through *Drosophila* development".

Invited talk (Sapienza University of Rome, Rome, Italy)

"Stem cell passengers: *Wolbachia* bacteria tropism to reproductive and somatic tissues of *Drosophila* flies".

2017

International mini conference: Chromosomes and Mitosis (Institute of Molecular and Cellular Biology, Novosibirsk, Russia)

"Endoplasmic reticulum and mitochondria behaviour during *Drosophila* S2 cell mitosis".

2015

International mini conference: Chromosomes and Mitosis (Institute of Molecular and Cellular Biology, Novosibirsk, Russia)

"Peering into *Drosophila* S2 cell mitosis: new details of nuclear envelope and microtubule ultrastructural dynamics".

2013

European Symposium for Insect Taste and Olfaction (Sardegna, Italy)

"*Wolbachia* bacteria invade central regions of the *Drosophila* brain: illness or delicate mechanism of influence on insect behavior?".

2012

EU COST Action FA0701 Summit Meeting (Oleron, France)

"Effect of high temperature on distribution of pathogenic *Wolbachia* strain wMelPop in *Drosophila melanogaster* brain cells".

7th International Wolbachia conference (Oleron, France)

"Pathogenic *Wolbachia* strain wMelPop in *Drosophila melanogaster* brain".

ACHIEVMENTS, AWARDS AND FELLOWSHIPS

2020

Cover image

mBio journal (Volume 14)

2018

Cover image

BMC Biology journal (Volume 16)

2017

Image of the year (top 10) Olympus Europe

Cover image

Cellular Microbiology journal (Volume 19, Issue 1)

2016

Ernst Mach Grant (Research project at Medical University of Vienna)

Austrian Federal Ministry of Education and Science (BMWF)

2015

Eurasia-Pacific Uninet Scholarship (Research project at Medical University of Vienna)

OeAD-GmbH/ICM on behalf of and financed by the Federal Ministry of Science, Research and Economy (BMWFW)

2013

Travel Grant

European Symposium for Insect Taste and Olfaction (ESITO), Sardinia, Italy

Ernst Mach Grant (Research project at Medical University of Vienna)

Austrian Federal Ministry of Education and Science (BMWF)

2012

Best Poster Award

7th International Wolbachia Conference, Oleron, France

2012

Grant for young scientists

ZEISS-OPTEC, Russia

Travel grant

EU COST Action FA0701 Summit meeting

2011

Short term scientific grant (Research project at Hebrew University of Jerusalem)

EU-COST Program Action FA0701 "Arthropod Symbioses: from studies to pest and disease management".

LIST OF COURSES (TEACHING)

Epigenetics- From basic mechanisms to medical applications (University of Vienna; **2020-2021**; Tutor)

Preparation of samples for electron microscopy (Novosibirsk State University; **2015-2017**; Tutor)

Actual problems in Genetics (Novosibirsk State University; **2015-2016**; Lecturer)