

Anat Florentin, PhD



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Research Positions

Senior Lecturer (Assistant Professor)

2020 - present

Department of Microbiology and Molecular genetics, Faculty of Medicine, The Hebrew University in Jerusalem.

Postdoctoral Research Associate

2014 – 2020

Department of Cellular Biology, Center for Tropical & Emerging Global Diseases, University of Georgia

Postdoctoral Research Assistant

2013

Department of Molecular Genetics, Weizmann Institute of Science, Israel

Scientific Education

Weizmann Institute of Science, Israel – PhD 2012

Department of Molecular Genetics, PhD Advisor Eli Arama
Programmed Cell Death Using the Fruit Fly as a Model Organism

Weizmann Institute of Science, Israel – MSc 2005

Department of Cell Biology, MSc Advisor Benny Geiger
Research on Regulatory Kinases in Cell Adhesions

Tel Aviv University, Israel – BSc 2003

Faculty of Life Science, *Summa Cum Laude*

Funding

2023 USAID, Middle East Regional Cooperation (MERC) Program

Combating Malaria in Sudan: Genetic and Ecological Traits of the Human Host, the Mosquito Vector and the Plasmodium Parasite (2023-2026)

2022 Personal Research Grant, Israel Science Foundation

Regulation of plastid proteostasis and biogenesis by the Clp complex in the malaria parasite *Plasmodium falciparum* (2022-2027)

2022 New-Faculty Equipment Grants, Israel Science Foundation

Equipment for molecular and microscopy work with malaria parasites

2022 Joint Canada-Israel Health Research Program Phase II, Israel Science Foundation & Canadian Institute of Health Research

Investigating the interplay between Sickle Cell Anemia and Malaria at the epidemiological and molecular levels (2022-2026)

2022 Erasmus+ Mobility Grant for Faculty members, European Union

Research and teaching exchange with the University of Heidelberg, Germany

- 2021 **Abisch-Frenkel Faculty Development Lectureship**
Exploring Cell Biology of Malaria Parasites (2021-2026)
- 2018 **AHA Postdoctoral Fellowship, American Heart Association**
The Function of the Bacterial Clp Complex in the Apicoplast of Malaria Parasites (2018-2020)

Awards

- 2022 **Danny Engelhard award for significant contribution to the study of children's diseases**
- 2021 **Golda Meir Fellowship Award**
- 2018 **Postdoctoral Research Award, University of Georgia**
- 2018 **Foreign Travel Award, University of Georgia**
- 2016 **Best Presentation Award, GSPS Research Day, University of Georgia**
- 2015 **Best Postdoctoral Presentation Award, Drug Discovery Conference, University of Georgia**
- 2012 **Best Presentation Award, EMBO workshop on Programmed Cell Death in Model Organisms**
- 2003 **BSc *Summa Cum Laude*, Tel Aviv University**
- 2002 **Dean's Recognition of Outstanding Academic Achievements, Tel Aviv University**
- 2001 **Dean's Recognition of Outstanding Academic Achievements, Tel Aviv University**
- 2000 **Tel Aviv University Excellent Students Research Program (2000-2003)**

Publications

1. Elaagip A., Absalon S., **Florentin A.** (2022) Apicoplast Dynamics during *Plasmodium* Cell Cycle. *Frontiers in Cellular and Infection Microbiology*. 12:864819. doi: 10.3389/fcimb.2022.864819
2. **Florentin A.** (2021) mSphere of Influence: courage and resilience in life and science. *mSphere* 6:e00200-21
3. **Florentin A.**, Stephens DR, Brooks CF, Muralidharan V. (2020) Plastid biogenesis in malaria parasites requires the interactions and catalytic activity of the Clp proteolytic system. *Proc Natl Acad Sci USA*. 117; (24) 13719-13729
4. **Florentin A.**, Cobb DW, Kudyba HM, Muralidharan V. (2020) Directing traffic: Chaperone-mediated protein transport in malaria parasites. *Cellular Microbiology*. 22; (7) e13215
5. Zimbres FM, Valenciano AL, Merino EF, Holderman NR, **Florentin A.**, He G, Wang X, Muralidharan V, Cassera MB. (2020) Metabolomics profiling reveals new aspects of dolichol biosynthesis in *Plasmodium falciparum*. *Scientific Reports*. 10; (1) 13264
6. Kudyba HM, Cobb DW, Fierro MA, **Florentin A.**, Ljolie D, Singh B, Lucchi NW, and Muralidharan, V. (2019) The ER Chaperone PfGRP170 Is Essential for Asexual

Development and is Linked to Stress Response in Malaria Parasites. *Cellular Microbiology*. e13042

7. Kudyba HM, Cobb DW, **Florentin A**, Krakowiak M, Muralidharan V. (2018) CRISPR/Cas9 Gene Editing to Make Conditional Mutants of Human Malaria Parasite *P. falciparum*. *Journal of Visualized Experiments*. (139), e57747
8. Gorelick-Ashkenazi A, Weiss R*, Sapozhnikov L*, **Florentin A***, Tarayrah-Ibraheim L, Dweik D, Yacobi-Sharon K, Arama E. (2018) Caspases Maintain Tissue Integrity by an Apoptosis Independent Inhibition of Cell Migration and Invasion. (* – equal contributions). *Nature communications*. 18;9(1):2806
9. **Florentin A**, Cobb DW, Fishburn JD, Cipriano MJ, Kim PS, Fierro MA, Striepen B, and Muralidharan V. (2017) PfClpC is an Essential Clp Chaperone Required for Plastid Integrity and Clp Protease Stability in *Plasmodium falciparum*. *Cell Reports*. 21(7):1746-1756
10. Cobb DW*, **Florentin A***, Fierro MA, Krakowiak M, Moore JM, and Muralidharan V. (2017) The Exported Chaperone Pfhsp70x is Dispensable for *Plasmodium falciparum* Intraerythrocytic Lifecycle (* – equal contributions). *mSphere* 2: e00363-17
11. **Florentin A**. and Arama E. (2012). Caspase Levels and Execution Efficiencies Determine the Apoptotic Potential of the Cell. *Journal of Cell Biology*. 196:513-27
12. Anbar M, Bracha R, Nuchamowitz Y, Li Y, **Florentin A**, and Mirelman D. (2005) Involvement of a SINE Element in the Epigenetic Transcriptional Silencing of the Amoebapore Gene in *Entamoeba histolytica*. *Eukaryotic Cell*, 4 (11):1775-84
13. Peer D, **Florentin A**, Margalit R. (2003) Hyaluronan is a Key Component in Cryoprotection and Formulation of Targeted Unilamellar Liposomes. *Biochimica et Biophysica Acta*. 2;1612(1):76-82

Invited Speaker

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| 2023 | 10th ILANIT/FISEB Conference, Federation of the Israeli Societies for Experimental Biology, Israel |
| 2022 | Guest speaker, Straus Campus, Hadassah Academic College, Israel |
| 2022 | GIF-Leibniz Young Scientist meeting, Germany-Israel, Israel |
| 2022 | Guest speaker, Neglected Tropical Diseases course, University of California Santa Cruz, Santa Cruz, USA |
| 2022 | Departmental seminar, Department of Developmental Biology and Cancer Research, Faculty of Medicine, the Hebrew University, Israel |
| 2021 | Guest speaker, Berlin-Canberra Malaria Seminar series, Humboldt University, Berlin, Germany |
| 2021 | Departmental seminar, Department of Microbiology and Molecular Genetics, Faculty of Medicine, the Hebrew University, Israel |
| 2021 | Guest speaker, Center for Tropical and Emerging Global Diseases, University of Georgia, USA |

- 2021 Guest seminar, Department of Pharmacology and Toxicology, School of Medicine, Indiana University, USA
- 2021 Guest seminar, Wellcome Centre for Integrative Parasitology, University of Glasgow, Scotland
- 2021 Joint Guest Seminar, Departments of Molecular Genetics and Biomolecular Sciences, Weizmann Institute of Science, Israel
- 2020 The Annual Meeting of the Israel Society for Parasitology, Protozoology and Tropical Diseases, Israel
- 2020 Guest seminar, Department of Genetics, The Life Science Institute, at the Hebrew University, Israel
- 2020 Young seminar, The Institute of medical Research Israel-Canada, the Hebrew University, Israel

Selected Conferences Talks

- 2022 EMBL conference BioMalPar XVIII: Biology and Pathology of the malaria Parasite, Heidelberg, Germany
- 2021 1st Women in Malaria Conference, international online meeting
- 2020 Annual Meeting of The Israel Society for Parasitology, Protozoology and Tropical Diseases, Israel
- 2020 Annual Cell Biology of Eukaryotic Pathogens Symposium, Clemson, SC, USA
- 2020 Annual Molecular Parasitology Meeting, Woods Hole, MBL, USA
- 2019 Annual Molecular Parasitology & Vector Biology Symposium, Center for Tropical and Emerging Global Diseases, University of Georgia, GA, USA
- 2018 Annual Molecular Parasitology Meeting, Woods Hole, MBL, USA
- 2018 Frontiers in Parasitology, Weizmann Institute of Science, Israel
- 2016 Annual Molecular Parasitology Meeting, Woods Hole, MBL, USA
- 2016 Annual Molecular Parasitology/Vector Biology Symposium, Center for Tropical and Emerging Global Diseases, University of Georgia, GA, USA
- 2015 Annual Cell Biology of Eukaryotic Pathogens Symposium, Clemson, SC, USA
- 2014 Annual Cell Biology of Eukaryotic Pathogens Symposium, Clemson, SC, USA
- 2011 Annual Drosophila Research Conference, San Diego, USA

Peer Review

Journal Editor

Genes, Frontiers in Cellular and Infection Microbiology, Microbiology Spectrum

Journal Peer Review

Frontiers in Cellular and Infection Microbiology, Microbiology Spectrum, Pathogens, International Journal for Parasitology, Emerging Topics in Life Sciences, International Parasitology

Grant Review

American Heart Association: pre- and post-doctoral fellowship awards