

RESUME

March-2023

1. PERSONAL DETAILS

Full Name: **ANKRI SERGE**

Identity No: 314100546

Date of birth: 15/10/1967

Place of birth: Paris-France

Marital status: married

Phone numbers: +972548162387

E-mail: sankri@technion.ac.il

Orcid Account: <https://orcid.org/0000-0002-8775-1557>



2. ACADEMIC DEGREES

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| 1996 | PhD , Faculty of Biotechnology and Food Engineering, University Paris XI, France (advisor: Isabelle Bouvier) |
| 1993 | MSc (Summa Cum laude), Faculty of Genetics, University Paris XI, France (Advisor:Gerard Leblon) |

3. ACADEMIC APPOINTMENTS

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| 2011 - Present | Associate Professor, Faculty of Medicine, Technion-Israel Institute of Technology, Haifa, Israel |
| 2007 - 2011 | Assistant Professor, Faculty of Medicine, Technion-Israel Institute of Technology, Haifa, Israel |
| 2000 - 2007 | Senior Lecturer, Faculty of Medicine, Technion-Israel Institute of Technology, Haifa, Israel |
| 1996 - 2000 | Postdoctoral fellow, Biological Chemistry, Weizmann Institute of Science, Rehovot, Israel |

4. PROFESSIONAL EXPERIENCE (OUTSIDE ACADEMIA)

5. RESEARCH INTERESTS (BRIEFLY)

- My laboratory has a wealth of expertise in the regulation of *E. histolytica* virulence and its adaptation to environmental stresses.
- We focus on understanding the role of epigenetic mechanisms and the gut microbiota in infection, with the aim of discovering new therapeutic approaches.

6. TEACHING EXPERIENCE

2003 - 2014	Parasitology, Director, Medical school pre-clinical, Technion-Israel Institute of Technology, Haifa
2003 - 2016	Microbiology- Parasitology (TEAMS), Lecturer, Medical school pre-clinical, Technion-Israel Institute of Technology, Haifa
2003 - present	Bacteriology, Lecturer, Medical school pre-clinical, Technion-Israel Institute of Technology, Haifa
2004 - 2011	Molecular Parasitology, Director, MSc and PhD students, Technion-Israel Institute of Technology, Haifa
2015 - present	Eukaryotic Pathogens, Director, Medical school pre-clinical, Technion-Israel Institute of Technology, Haifa
2017 - 2019	Middle East Biology of Parasitism, Lecturer, MSc and PhD students, University of Bern, Switzerland
2021 - present	Microbiology (TEAMS), Director, Medical school pre-clinical, Technion-Israel Institute of Technology, Haifa

7. ACTIVITIES

2004 - 2019	Member of the animal ethic committee
2011 - 2015	Head of the animal ethic committee
2015 - 2016	Reviewer for the academic promotion board of the University of California, San Diego, USA
2017 - present	Representative of the Technion on the Israel council for the regulation of research in Infectious diseases
2017 - present	Member of the Technion safety committee
2022 - present	Head of the external safety committee of the Israel council for the regulation of research in Infectious diseases

8. DEPARTMENTAL ACTIVITIES

2003 - 2014	Member of the pre-clinical studies committee, Technion-Israel Institute of Technology, Haifa
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2005 - 2010	Member of the counseling and monitoring committee , Technion-Israel Institute of Technology, Haifa
2015 - present	Member of the safety committee at the Faculty of Medicine , Technion-Israel Institute of Technology, Haifa

9. PUBLIC PROFESSIONAL ACTIVITIES

2002 - present	Reviewer for many scientific journals including Nature communication, PLoS Pathogens, PNAS and Antioxidants , Technion-Israel Institute of Technology, Haifa
2005 - present	Member of study section:ISF (2005,2008,2012,2017), Israel Ministry of Health (2007), BSF (2011, 2018 as head of the study section board), ANR(2014), GIF (2017), ERA-NET (2016), Technion-Israel Institute of Technology, Haifa
2015	External expert in the Advisory board meeting of INFECT-ERA , Technion-Israel Institute of Technology, Haifa
2016	Editor for Frontiers in Cellular and Infection Microbiology , Technion-Israel Institute of Technology, Haifa
2018	Editor for Frontiers in Cellular and Infection Microbiology - special issue on “Recent Progresses in Amebiasis” , Technion-Israel Institute of Technology, Haifa
2021	Editor for Antioxidants - special issue on "Oxidative stress in Parasites" , Technion-Israel Institute of Technology, Haifa
2022 - present	Editorial board member in Antioxidants , Technion-Israel Institute of Technology, Haifa
2022 - present	Review editor in Frontiers in Molecular Biosciences - RNA Networks and Biology , Technion-Israel Institute of Technology, Haifa

10. MEMBERSHIP IN PROFESSIONAL SOCIETIES

- Israel society for Microbiology
- Israel Society for Parasitology, Protozoology and Tropical Diseases.

11. FELLOWSHIPS, AWARDS AND HONORS

1997	Lavoisier Fellowship, Biological Chemistry , Weizmann Institute of Science, Rehovot
1998	The Sir Charles Clore Postdoctoral Fellowship , Biological Chemistry , Weizmann Institute of Science, Rehovot

- 1999 American Society of Tropical Medicine and Hygiene Young Investigator Award , Biological Chemistry , Weizmann Institute of Science, Rehovot
- 2007 Moshe Shilo Prize - Israel Society for Microbiology , Medicine , Technion-Israel Institute of Technology, Haifa
- 2007-2012 Excellent Lecturer , Medicine , Technion-Israel Institute of Technology, Haifa
- 2009 Alfred & Yehuda Weissman Award for excellence in teaching , Medicine , Technion-Israel Institute of Technology, Haifa
- 2010 Listed in the book of the 100 best Israeli immigrant scientists published by the Israel Ministry of Immigrant Absorption , Medicine , Technion-Israel Institute of Technology, Haifa
- 2024 Alfried Krupp fellows. Senior fellowship for the summer term 2024 at Greifswald University, Greifswald, Germany.

12. GRADUATE STUDENTS

Completed PhD theses

- 2006 Fisher Ohad ,The Role of DNA Methylation in the Parasite *Entamoeba histolytica* ,(Ankri Serge)
- 2008 Harony Hala (currently an Associate Professor at Icahn School of Medicine at Mount Sinai, USA (research on autism)). ,DNA Methylation and Targeting of LINE Retrotransposons in *Entamoeba histolytica* and *Entamoeba invadens* ,(Ankri Serge)
- 2009 Lavi Tal ,Characterization of a Novel Methylated DNA Binding Protein in the Protozoan Parasite *Entamoeba histolytica* ,(Ankri Serge)
- 2011 Tovy Ayala (currently a PI at Novartis Research Institute (NIBR), Cambridge, Massachusetts, USA (research on epigenetics and gene therapy)) ,The Function of Ehmeth an *E.histolytica* Dnmt2 homolog, and the Meaning of its Interaction with Enolase ,(Ankri Serge)
- 2012 Katz Sophia ,The *E.histolytica* Methylated LINE Binding Protein(EhMLBP) Serves as a Bridge between Environmental Stress Response and Epigenetic Regulation ,(Ankri Serge)
- 2014 Alterzon Sharon (currently a PI at Icahn School of Medicine at Mount Sinai, USA (research on diabetes)) ,Identification of Dihydropyrimidine Dehydrogenase as a Virulence Factor Essential for the Survival of *Entamoeba Histolytica* in Glucose-Poor Environment ,(Ankri Serge)
- 2014 Hertz Rivka ,Proteins S-Nitrosylation and Dnmt2 Mediated Resistance to Nitrosative Stress in the Parasite *Entamoeba histolytica* ,(Ankri Serge)
- 2016 Shahi Preeti ,Adaptive Response of the Parasite *Entamoeba Histolytica* to Nitrosative and Oxidative Stresses ,(Ankri Serge)

- 2020 Nagராஜா Shruti ,Queuine-Driven Regulation of Entamoeba Histolytica Virulence and Resistance to Oxidative Stress ,(Ankri Serge)
- 2021 Shaulov Dvir Yana ,Study of the Interplay Between the Parasite Entamoeba histolytica and Enteric Bacteria During Oxidative Stress and a Multi-Omics Characterization of the Effect of Auranofin on the Parasite ,(Ankri Serge)

Completed MSc Theses

- 2002 Riahi Yael Ester , Characterization of New Targets for the Interruption of Differentiation and Pathogenesis of Entamoeba Parasites ,(Ankri Serge)
- 2003 Elnekave Keren , Catabolism of L-arginine in Entamoeba histolytica: Involvement in the Growth and in the Virulence of the Parasite ,(Ankri Serge)
- 2005 Abed Mona , Applications of RNAi in the Protozoan Parasite Entamoeba histolytica ,(Ankri Serge)
- 2006 Barnes Sabina , Epigenetic Regulation of Entamoeba Histolytica Heat Shock Protein 100 (EHsp100) Expression ,(Ankri Serge)
- 2008 Isakov Elada , Trichostatin A Regulates Peroxiredoxin Expression and Virulence of the Parasite Entamoeba histolytica ,(Ankri Serge)
- 2011 Kushnir Oded , The Effect of Environmental Changes on the Epigenetic Machinery of Entamoeba histolytica ,(Ankri Serge)
- 2017 Manor Shiran , Adaptation of Entamoeba histolytica to nitrosative stress: insights into the role of arginase in the adaptation process ,(Ankri Serge)
- 2018 Shaulov Dvir Yana , Study of the Protective Effect Against Oxidative Stress that Enteropathogenic Bacteria Escherichia Coli 055 Confers to the Parasite Entamoeba histolytica ,(Ankri Serge)
- 2020 Sarid Lotem , Insights into the Role of Queuine Produced by the Gut Microbiome on E. histolytica's Transcriptome ,(Ankri Serge)

PhD Theses in Progress

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| start 2020 - expected 2023 | Lotem Sarid , Insights into the queuosine salvage machinery in Entamoeba histolytica ,(Ankri Serge) |
| start 2020 - expected 2024 | Jun Ye , Insights into the regulation of Entamoeba histolytica transcriptome by queuine ,(Ankri Serge) |
| start 2021- expected 2025 | Eva Zantidenas , Interaction between Entamoeba histolytica and bacterial biofilms ,(Ankri Serge) |

MSc Theses in Progress

13. SPONSORED LONG-TERM VISITORS AND POST-DOCTORAL

ASSOCIATES

MD thesis students

2016, Michael Kirschenbaum, Alternative strategies for the therapeutic treatment and prophylaxis of Amebiasis.

2017. Ari Gordon, Elucidation of the role of N-acetylornithine deacetylase (NAOD) in the formation of stress granules in the parasite *Entamoeba histolytica*

2018. Shai Vanunu, Development of a model of pig intestinal tissue for the study of amoebic dysentery.

Post-Doc students

2011 Ayala Tovy

2012 Sophie Katz

2015 Ajay Rana

2020 Shruti Nagaraja.

Visiting students

2015. Jessica Borbolla Vázquez, PhD student from the Infectómica y Patogénesis Molecular CINVESTAV, Mexico, Mexico.

14. RESEARCH GRANTS

Competitive

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| 2000 - 2003 | Israeli Science Foundation, Encystation in <i>Entamoeba</i> : Induction, gene expression and regulation, 135000 USD, ANKRI SERGE (PI) |
| 2001 - 2002 | Israel Ministry of Health, Involvement of Ehserp, an <i>E.histolytica</i> serine proteinase inhibitor (serpin), in the evasion of the host defenses, 10000 USD, ANKRI SERGE (PI) |
| 2004 - 2005 | Israel Ministry of Health, Insights into the role of 5-cytosine DNA methyltransferase 2 (DNMT2) by using the human parasite <i>Entamoeba histolytica</i> as a model organism, 20000 USD, ANKRI SERGE (PI) |
| 2004 - 2006 | Center for the Study of Emerging Diseases, Epigenetic regulation of virulence in the protozoan parasite <i>Entamoeba histolytica</i> , 48000 USD, ANKRI SERGE (PI) |
| 2004 - 2007 | Israel Science Foundation, DNA methylation in <i>Entamoeba</i> parasites: characterization of Ehmeth and its role in the control of gene expression, virulence and differentiation, 88000 USD, ANKRI SERGE (PI) |

- 2005 - 2007 Indian-Israeli Research Cooperation in Biotechnology, Nanotechnology, Advanced Materials. Israel Ministry of Science and Technology, A genomic and proteomic analysis of nuclear matrix components to identify their role in regulation of gene expression in the human pathogen *Entamoeba histolytica*, 50000 USD, **ANKRI SERGE** (PI), Anuradha Lohia (CO) (PI)
- 2006 Israel Ministry of Health, Proteomic analysis of *Entamoeba histolytica* parasite following treatment with Trichostatin A, 5000 USD, **ANKRI SERGE** (PI)
- 2007 - 2010 Israel Science Foundation, Decoding the epigenetic language of the protozoan parasite *Entamoeba histolytica*: How DNA methylation is sensed by this organism?, 108500 USD, **ANKRI SERGE** (PI)
- 2008 - 2010 Niedersachsen Program, Characterization of a new methylated DNA binding protein in the parasite *Entamoeba histolytica*, 134100 USD, **ANKRI SERGE** (PI), Ralf Ficner (CO) (PI)
- 2009 - 2011 Israel Ministry of health, Characterization of a novel methylated DNA binding protein in the protozoan parasite *Entamoeba histolytica*, 50000 USD, **ANKRI SERGE** (PI), Frank Lyko (CO), Albert Jeltsch (CO), Gunder Reuter (CO), Mark Helm (CO), Ann Ehrenhofer-Murray (CO), Wolfgang Nellen (grant coordinator). (PI)
- 2009 - 2015 The German Research Foundation Consortium, Biochemistry and Biological function of Dnmt2 methyltransferase, 120000 USD, **ANKRI SERGE** (PI)
- 2010 - 2014 Israel Science Foundation, From DNA methylation to its recognition: Response to some environmental stresses and crosstalk of the *Entamoeba histolytica* unique epigenetic components, 280000 USD, **ANKRI SERGE** (PI)
- 2015 - 2018 INFECT-ERA (ERA-NET), *Entamoeba histolytica*-bacterium interaction and the role of this interaction in intestinal pathogenesis, 80200 USD, **ANKRI SERGE** (PI and grant coordinator), Nancy Guillen (CO), Alok Bhattacharya (CO), Michael Lalk (CO), Jean-Yves Coppee (CO). (PI and grant coordinator)
- 2016 - 2020 Israel Science Foundation, A new perspective on the relationship between *Entamoeba histolytica* and enteropathogenic bacteria: the role of queuine as a nutritional regulator of *Entamoeba histolytica* virulence, 285800 USD, **ANKRI SERGE** (PI)
- 2016 - 2020 U.S.-Israel Binational Science Foundation, tRNA modifications in *Entamoeba histolytica*, 96200 USD, **ANKRI SERGE** (PI), Peter Dedon (CO) (PI)
- 2017 MIT-Israel Seed Fund Award, tRNA modifications in *Entamoeba histolytica*., 24750 USD, **ANKRI SERGE** (PI), Peter Dedon (CO) (PI)
- 2019 - 2022 Israel Science Foundation- National Research Foundation Singapore., Fighting Amebiasis with bacteria: a combined approach with natural probiotics and engineered bacteria, 293600 USD, **ANKRI SERGE** (PI), In Young Whang (CO) (PI)

2019 - 2022	Niedersachsen program, Molecular and Structural Characterization of <i>Entamoeba histolytica</i> tRNA-guanine transglycosylase. An integrated study using structural biology and physiology, 166000 USD, ANKRI SERGE (PI), Teresa Carlomagno (PI)
2021 - 2024	Ministry of Science and Technology, Mechanisms of <i>Entamoeba histolytica</i> adaptation to Auranofin, 191567 USD, ANKRI SERGE (PI)

Industrial and other sources

15. PUBLICATIONS

15.1 Theses

Ankri Serge, (1996), "Genetic and Biochemical study of proline biosynthesis in response to hyperosmotic stress in *Corynebacterium glutamicum*", advisor: Gerard Leblon, University of Orsay, Paris 13, France.

15.2 Refereed papers in professional journals

1-**Ankri , S.**, Reyes, O., and Leblon, G. Electrotransformation of highly DNA-restrictive *Corynebacteria* with synthetic DNA. *Plasmid*, 35(1):62-6. 1996.

2-**Ankri , S.**, Reyes, O., and Leblon, G. Improved electro-transformation of highly DNA-restrictive *corynebacteria* with DNA extracted from starved *Escherichia coli*. *FEMS Microbiology Letters*, 140(2-3):247-51. 1996.

3-**Ankri , S.**, Bouvier, I., Reyes, O., Predali, F., and Leblon, G. A *Brevibacterium linens* pRBL1 replicon functional in *Corynebacterium glutamicum*. *Plasmid*, 36(1):36-41. 1996.

4-**Ankri , S.**, Serebrijski, I., Reyes, O., and Leblon, G. Mutations in the *Corynebacterium glutamicum* proline biosynthetic pathway: a natural bypass of the *proA* step. *Journal of Bacteriology*, 178(15):4412-9. 1996.

5-**Ankri , S.**, Padilla-Vaca, F., Stolarsky, T., Koole, L., Katz, U., and Mirelman, D. Antisense inhibition of expression of the light subunit (35 kDa) of the Gal/GalNac lectin complex inhibits *Entamoeba histolytica* virulence. *Molecular Microbiology*, 33(2):327-37. 1999.

6-Padilla-Vaca, F., **Ankri , S.**, Bracha, R., Koole, L.A., and Mirelman, D. Down regulation of *Entamoeba histolytica* virulence by monoxenic cultivation with *Escherichia coli* O55 is related to a decrease in expression of the light (35-kilodalton) subunit of the Gal/GalNac lectin. *Infection and Immunity*, 67(5):2096-102. 1999.

7-**Ankri , S.**, Stolarsky, T., Bracha, R., Padilla-Vaca, F., and Mirelman, D. Antisense inhibition of expression of cysteine proteinases affects *Entamoeba histolytica*-induced formation of liver abscess in hamsters. *Infection and Immunity*, 67(1):421-2. 1999.

8-**Ankri , S.**, Stolarsky, T., and Mirelman D. Antisense inhibition of expression of cysteine proteinases does not affect *Entamoeba histolytica* cytopathic or haemolytic activity but inhibits phagocytosis. *Molecular Microbiology*, 28(4):777-85. 1998.

- 9-**Ankri , S.**, Miron, T., Rabinkov, A., Wilchek, M., and Mirelman, D. Allicin from garlic strongly inhibits cysteine proteinases and cytopathic effects of *Entamoeba histolytica*. *Antimicrobial Agents and Chemotherapy*, 41(10):2286-8. 1997.
- 10-Zhang, Z., Wang, L., Seydel, K.B., Li, E., **Ankri , S.**, Mirelman, D., and Stanley, S.L. *Entamoeba histolytica* cysteine proteinases with interleukin-1 beta converting enzyme (ICE) activity cause intestinal inflammation and tissue damage in amoebiasis. *Molecular Microbiology*, 37(3): 542-8. 2000.
- 11-Katz, U., **Ankri , S.**, Stolarsky, T., Nuchamowitz, Y., and Mirelman, D. *Entamoeba histolytica* expressing a dominant negative N-terminal truncated light subunit of its Gal/GalNac lectin are less virulent. *Molecular Biology of the Cell*, 13(12): 4256-65. 2002.
- 12-Lauwaet, T., Oliveira, M.J., Callewaert, B., De Bruyne, G., Saelens, X., **Ankri , S.**, Vandenabeele, P., Mirelman, D., Mareel, M., Leroy, A. Proteolysis of enteric cell villin by *Entamoeba histolytica* cysteine proteinases. *Journal of Biological Chemistry*, 278(25):22650-6. 2003.
- 13-Siman-Tov, R., and **Ankri , S.** Nitric oxide inhibits cysteine proteinases and alcohol dehydrogenase 2 of *Entamoeba histolytica*. *Parasitology Research*, 89(2): 146-149. 2003.
- 14-Riahi, Y., Siman Tov, R., and **Ankri , S.** Molecular Cloning, expression and Characterization of a serine proteinase inhibitor gene from *Entamoeba histolytica*. *Molecular and Biochemical Parasitology*, 133(2):153-162. 2004.
- 15-Fisher, O., Siman Tov, R., and **Ankri , S.** Characterization of cytosine methylated regions and 5-cytosine DNA methyltransferase (EhMeth) in the protozoan parasite *Entamoeba histolytica*. *Nucleic Acids Research*, 1(32): 287-297. 2004.
- 16-Elnekave, K., Siman Tov, R., and **Ankri , S.** Consumption of L-arginine mediated by *Entamoeba histolytica* L-arginase (EhArg) inhibits amebicidal activity and nitric oxide production by activated macrophages. *Parasite Immunology*, 25(11):597-608. 2004.
- 17-Salzberg A., Fisher, O., Siman Tov, R., and **Ankri , S.** Identification of methylated sequences in genomic DNA of adult *Drosophila melanogaster*. *Biochemical and Biophysical Research Communications*, 322(2):465-469. 2004.
- 18-Banerjee, S., Fisher, O., Lohia, A. and **Ankri , S.** *Entamoeba histolytica* DNA methyltransferase (EhMeth) is a nuclear matrix protein that binds EhMRS2, a DNA that includes a scaffold /matrix attachment region (S/MAR). *Molecular and Biochemical Parasitology*, 139:91-97. 2005.
- 19-Abed, M. and **Ankri , S.** Molecular characterization of *Entamoeba histolytica* RNase III and AGO2, two RNA interference hallmark proteins. *Experimental Parasitology*, 3(110):265-269. 2005.
- 20-Bernes S., Siman Tov, R., **Ankri , S.** Epigenetic and classical activation of *Entamoeba histolytica* Heat Shock Protein 100 (EHsp100) expression. *FEBS Letters*, 579:6395-6402. 2005.
- 21-Moncada, D.M., Keller, K., **Ankri , S.**, Mirelman, D., Chadee, K. Antisense Inhibition of *Entamoeba histolytica* Cysteine Proteases Inhibits Colonic Mucus Degradation. *Gastroenterology*, 130(3):721-730. 2006.
- 22-Harony, H., Bernes, S., Siman-Tov, R., **Ankri , S.** DNA methylation and targeting of LINE retrotransposons in *Entamoeba histolytica* and *Entamoeba invadens*. *Molecular and Biochemical Parasitology*, 147(1):55-63. 2006.

- 23-Fisher, O., Siman-Tov, R., **Ankri, S.** Pleiotropic phenotype in *Entamoeba histolytica* overexpressing DNA methyltransferase (EhMeth). *Molecular and Biochemical Parasitology*, 147(1):48-54. 2006.
- 24-Lavi, T., Isakov, E., Harony, H., Fisher, O., Siman-Tov, R., **Ankri, S.** Sensing DNA methylation in the protozoan parasite *Entamoeba histolytica*. *Molecular Microbiology*, 62(5):1373-1386. 2006. (cover page)
- 25-Isakov, E., Siman-Tov, R., Weber, C., Guillen, N., **Ankri, S.** Trichostatin A regulates peroxiredoxin expression and virulence of the parasite *Entamoeba histolytica*. *Journal of Molecular and Biochemical Parasitology*, 158(1):82-94. 2008.
- 26-Lavi, T., Siman-Tov, R., **Ankri, S.** EhMLBP is an essential constituent of the *Entamoeba histolytica* epigenetic machinery and a potential drug target. *Molecular Microbiology*, 69(1):55-66. 2008.
- 27-Lavi, T., Siman-Tov, R., **Ankri, S.** Insights into the mechanism of DNA recognition by the methylated LINE binding protein EhMLBP of *Entamoeba histolytica* *Molecular and Biochemical Parasitology*, 166(2):117-25. 2009.
- 28-Tovy, A., Siman Tov, R., Gaentzsch, R., Helm, M., **Ankri, S.** A new nuclear function of the *Entamoeba histolytica* glycolytic enzyme enolase: The metabolic regulation of cytosine-5 methyltransferase 2 (Dnmt2) activity. *PLoS PATHOGENS*, 6(2):e1000775. 2010. (This article has been recommended by F1000 and classified as Good).
- 29-Tovy, A., Hofmann, B., Helm, M., **Ankri, S.**, In vitro tRNA methylation assay with *Entamoeba histolytica* DNA and tRNA methyltransferase Dnmt2 (EhMeth) enzyme. *Journal of Visualized Experiments, J Vis Exp.* 19,(44). pii: 2390. doi: 10.3791/2390. 2010.
- 30-Schulz, E.C., Tietzel, M., Tovy, A., **Ankri, S.**, Ficner, R. Structure analysis of *Entamoeba histolytica* enolase. *Acta Crystallogr D Biol Crystallogr.* 67, 619-27. 2011.
- 31-Tovy, A., Hertz, R., Siman-Tov, R., Syan, S., Faust, D., Guillen, N., **Ankri, S.** Glucose starvation boosts *Entamoeba histolytica* virulence. *PLoS Negl Trop Dis.*, 5(8):e1247. 2011.
- 32-Schulz, E.C., Roth, H.M., **Ankri, S.**, Ficner, R. Structure analysis of *Entamoeba histolytica* DNMT2 (EhMeth). *PLoS One.*,7(6):e38728. 2012.
- 33-Katz, S., Kushnir, O., Tovy, A., Siman Tov, R., **Ankri, S.** The *Entamoeba histolytica* methylated LINE-binding protein EhMLBP provides protection against heat shock. *Cell Microbiol.* 14(1), 58-70. 2012
- 34-Baumel-Alterzon, S., Weber, C., Guillén, N., **Ankri, S.** Identification of dihydropyrimidine dehydrogenase as a virulence factor essential for the survival of *Entamoeba histolytica* in glucose-poor environments. *Cell Microbiol.* 15(1), 130–144. 2013.
- 35-Katz, S., Trebicz-Geffen, M., **Ankri, S.** Stress granule formation in *Entamoeba histolytica*: cross-talk between EhMLBP, EhRLE3 reverse transcriptase and polyubiquitinated proteins. *Cell Microbiol.*16(8):1211-23. 2014.
- 36-Hertz, R., Tovy, A., Kirschenbaum, M., Geffen, M., Nozaki, T., Adir, N., **Ankri, S.** The *Entamoeba histolytica* Dnmt2 homolog (EhMeth) confers resistance to nitrosative stress. *Eukaryot Cell.* 13(4):494-503. 2014.
- 37-Shanmugam, R., Aklujkar, M., Schäfer, M., Reinhardt, R., Nickel, O., Reuter, G., Lovley, D.R.,

- Ehrenhofer-Murray, A., Nellen, W., **Ankri , S.**, Helm, M., Jurkowski, T.P., Jeltsch, A. The Dnmt2 RNA methyltransferase homolog of *Geobacter sulfurreducens* specifically methylates tRNA-Glu. *Nucleic Acids Res.* 42(10):6487-96. 2014.
- 38-Hertz, R., Ben Lulu, S., Shahi, P., Trebicz-Geffen, M., Benhar, M., **Ankri , S.** Proteomic Identification of S-Nitrosylated Proteins in the Parasite *Entamoeba histolytica* by Resin-Assisted Capture: Insights into the Regulation of the Gal/GalNAc Lectin by Nitric Oxide. *PLoS One.*13,9(3):e91518. 2014.
- 39-Shahi, P., Trebicz-Geffen, M., Nagaraja, S., Alterzon-Baumel, S., Hertz, R., Methling, K., Lalk, M., **Ankri , S.** Proteomic Identification of Oxidized Proteins in *Entamoeba histolytica* by Resin-Assisted Capture: Insights into the Role of Arginase in Resistance to Oxidative Stress. *PLoS Negl Trop Dis.* 10(1):e0004340. 2016.
- 40-Jeltsch, A., Ehrenhofer-Murray, A., Jurkowski, T.P., Lyko, F., Reuter, G., **Ankri , S.**, Nellen, W., Schaefer, M., Helm, M. Mechanism and biological role of Dnmt2 in Nucleic Acid Methylation. *RNA Biol.* 27:1-16. 2016.
- 41-Shahi, P., Trebicz-Geffen, M., Nagaraja, S., Hertz, R., Alterzon-Baumel, S., Methling, K., Lalk, M., Mazumder, M., Samudrala, G., **Ankri , S.** N-acetyl ornithine deacetylase is a moonlighting protein and is involved in the adaptation of *Entamoeba histolytica* to nitrosative stress. *Sci Rep.* 6:36323. 2016.
- 42-Trebicz-Geffen, M., Shahi, P., Nagaraja, S., Vanunu, S., Manor, S., Avrahami, M., **Ankri , S.** Identification of S-Nitrosylated (SNO) Proteins in *Entamoeba histolytica* Adapted to Nitrosative Stress: Insights into the Role of SNO Actin and in vitro Virulence. *Front. Cell. Infect. Microbiol.* 7: 192 2017.
- 43- Varet, H. #, Shaulov, Y. #, Sismeiro, O., Trebicz-Geffen, M., Legendre, R., Coppée, J.Y., **Ankri , S.**# and Guillen, N.#. Enteric bacteria boost defences against oxidative stress in *Entamoeba histolytica*. *Sci Rep.*13,8(1):9042. 2018.
#Co-first author. #Co-corresponding author. (This article has been recommended by F1000 and classified as Very Good).
- 44- Shaulov, Y., Shimokawa, C., Trebicz-Geffen, M., Nagaraja, S., Methling, K., Lalk, M., Weiss-Cerem, L., Lamm, A.T., Hisaeda, H., **Ankri , S.** *Escherichia coli* mediated resistance of *Entamoeba histolytica* to oxidative stress is triggered by oxaloacetate. *PLoS Pathog.*,14(10):e1007295. 2018. (This article has been recommended by F1000 and classified as Very Good).
- 45- Malik, A., Dalal, V., **Ankri , S.**, Tomar, S. Structural insights into *Entamoeba histolytica* arginase and structure-based identification of novel non-amino acid based inhibitors as potential antiamebic molecules. *FEBS J.* 286(20):4135-4155. 2019.
- 46-Shaulov, Y., Nagaraja, S., Sarid, L., Trebicz-Geffen, M., **Ankri , S.** Formation of oxidized (OX) proteins in *Entamoeba histolytica* exposed to auranofin and consequences on the parasite virulence. *Cell Microbiol.* doi: 10.1111/cmi.13174. 2020.
- 47- Nagaraja, S., W. Cai, M., Sarid, L., Shaulov, Y., Trebicz-Geffen, M., Mazumdar, M., Varet, H., Legendre, R., Coppée, J.Y., Dedon, P.C., Gourinath, S., Guillen, S., Saito-Nakano, Y., Shimokawa, C., Hisaeda, H., **Ankri., S.** Queuine is a nutritional regulator of *Entamoeba histolytica* response to oxidative stress and a virulence attenuator. *mBio.* doi: 10.1128/mBio.03549-20. 2021.

48- Shaulov, Y., Sarid, L., Trebicz-Geffen, M., **Ankri, S.** Entamoeba histolytica Adaption to Auranofin: A Phenotypic and Multi-Omics Characterization. *Antioxidants* 10, 1240. doi.org/10.3390/antiox10081240. 2021.

49- Sarid, L., Zanditenas, E., Ye, J., Trebicz-Geffen, M. & **Ankri, S.** Insights into the Mechanisms of *Lactobacillus acidophilus* Activity against *Entamoeba histolytica* by Using Thiol Redox Proteomics. *Antioxidants* 11, doi:10.3390/antiox11050814. 2022.

50- Sarid, L., Sun, J., Chittrakanwong, J., Trebicz-Geffen, M., Ye, J., Dedon, P.C., **Ankri, S.** Queuine Salvaging in the Human Parasite *Entamoeba histolytica*. *Cells*, 11, 2509. doi.org/10.3390/cells11162509. 2022.

Accepted (or in press) papers

Submitted papers

Zanditenas, E., Trebicz-Geffen, M., Domínguez-García, L., Romero, D., Kolodkin-Gal, I., **Ankri, S.** Digestive exophagy of Bacterial Biofilms by an Amoeba Predator is Mediated by Specific Biofilm Recognition. bioRxiv 2022.09.24.509356, doi: <https://doi.org/10.1101/2022.09.24.509356>

Review papers

1-**Ankri, S.**, Bracha, R., Padilla-Vaca, F., and Mirelman, D. Applying antisense technology to the study of *Entamoeba histolytica* pathogenesis. *Trends in Microbiology*, 7(12):473-4. 1999.

2-**Ankri S**, Mirelman D. Antimicrobial properties of allicin from garlic. *Microbes and Infection*, 1(2):125-9. 1999.

3-**Ankri S**. Immune evasion strategies from the protozoan parasite *Entamoeba histolytica*. *Journal of Biosciences*, 27(6): 609-614. 2002.

4-Abed M, **Ankri S**. Progress and prospects of gene inactivation in *Entamoeba histolytica*. *Experimental Parasitology*, 118(2):151-5. 2008.

5-Harony H., **Ankri S**. What do unicellular organisms teach us about DNA methylation? *Trends in Parasitology*, 24(5):205-9. 2008.

6-Tovy A., **Ankri S**. Epigenetics in the unicellular parasite *Entamoeba histolytica*: more than meets the eye, *Future Medicine*, 5:1875-84. 2010.

7-Baumel-Alterzon S, **Ankri S**. *Entamoeba histolytica* adaptation to glucose starvation: a matter of life and death. *Curr Opin Microbiol*. 20:139-45. 2014.

8-Rana AK, **Ankri S**. Reviving the RNA World: An Insight into the Appearance of RNA Methyltransferases. *Front Genet*.7:99. 2016.

9-Nagaraja S, **Ankri S**. Utilization of Different Omic Approaches to Unravel Stress Response Mechanisms in the Parasite *Entamoeba histolytica*. *Front Cell Infect Microbiol*. 8:19, 2018.

10-Nagaraja, S., **Ankri, S.** Target identification and intervention strategies against amebiasis. *Drug Resist Updat*. 44:1-14. 2019.

11-**Ankri S**. *Entamoeba histolytica*-Gut Microbiota Interaction: More Than Meets the Eye.

Microorganisms. doi: 10.3390/microorganisms9030581. 2021.

12-Lotem S., **Ankri S.** Are metabolites from the gut microbiota capable of regulating epigenetic mechanisms in the human parasite *Entamoeba histolytica*? *Frontiers in Cell and Developmental Biology*. DOI: 10.3389/fcell.2022.841586. 2022.

15.3 Books

Monographs and textbooks

Edited Books

15.4 Book chapters

Kirschenbaum M., **Ankri S.**, *Entamoeba histolytica*: Bridging the gap between environmental stress and epigenetic regulation, *Amebiasis: Biology and Pathogenesis of Entamoeba* by Springer, Japan, (2015), chapter 11, pages 171-185.

15.5 Refereed papers in conference proceedings

15.6 Patents (granted)

15.7 Research reports and other publications

16. CONFERENCES

16.1 Plenary, keynote or invited talks

International

1. Ankri Serge, Involvement of Serine proteinases during encystation of *Entamoeba invadens*, XIV Seminar on Amebiasis, Mexico, 2000. (Invited Talk)
2. Ankri Serge, Characterization of Ehserp, an *Entamoeba histolytica* serine protease, Conference on Amoebiasis and the Biology of *Entamoeba histolytica*, India, 2002. (Invited Talk)
3. Ankri Serge, Epigenetic regulation of gene expression in the protozoan parasite *Entamoeba histolytica*, International Conference on Anaerobic Protists, Italy, 2005. (Invited Talk)
4. Ankri Serge, Epigenetic regulation of gene expression in the protozoan parasite *Entamoeba histolytica*, Seminar on amoebiasis, Mexico, 2006. (Invited Talk)
5. Ankri Serge, Characterization of an unusual epigenetic machinery in the protozoan parasite *Entamoeba histolytica*, *Entamoeba International meeting*, Netherlands, 2007. (Invited Talk)
6. Ankri Serge, From DNA methylation to DNA methylation recognition in the parasite *Entamoeba histolytica*, EMBO workshop: Amebiasis: Molecular approaches in an important but neglected disease, Mexico, 2009. (Invited Talk)

7. Ankri Serge, Regulation of *Entamoeba histolytica* Dnmt2 (Ehmeth) by environmental conditions , The German Research Foundation consortium, Workshop on the “Biochemistry and biological function of Dnmt2 methyltransferases, Germany, 2011. (Invited Talk)
8. Ankri Serge, The *E. histolytica* methyl LINE- binding protein EhMLBP serves as a bridge between environmental stress response and epigenetic regulation, EMBO symposium on Amebiasis , India, 2012. (Invited Talk)
9. Ankri Serge, Regulation of *Entamoeba histolytica* Dnmt2 (Ehmeth) by environmental conditions , Workshop on the “Biochemistry and biological function of Dnmt2 methyltransferases, Germany, 2013. (Invited Talk)
10. Ankri Serge, Regulation of *Entamoeba histolytica* Dnmt2 by nitric oxide, XVII Seminar on Amebiasis, Mexico, 2013. (Invited Talk)
11. Ankri Serge, Nitrosative stress in the parasite *Entamoeba histolytica*: resist or die, PARAFRAP meeting (From basic research to intervention strategies against parasites), France, 2014. (Invited Talk)
12. Ankri Serge (Member of the scientific committee and chairperson), N-acetyl-L ornithine deacetylase is an essential factor for adaptation of the parasite *Entamoeba histolytica* to nitrosative stress, XVIII International Seminar on Amebiasis, Mexico, 2015. (Invited Talk)
13. Ankri Serge, Mechanisms of *Entamoeba histolytica* adaptation to environmental constraints, Conference on Amoebiasis, India, 2016. (Invited Talk)
14. Ankri Serge, ICOPA, *Escherichia coli* mediated resistance of *Entamoeba histolytica* to oxidative stress is triggered by oxaloacetate, South Korea, 2018. (Invited Talk)
15. Ankri Serge (Member of the scientific committee and chairperson), Redox-proteomics give insights into the role of *Escherichia coli* in the resistance of *Entamoeba histolytica* to oxidative stress, XIX International Seminar on Amebiasis Puebla, Mexico, 2018. (Invited Talk)
16. Ankri Serge, Parasite-bacteria responses to host immune stresses, EUKARYOME- Eukaryome impact on Intestine homeostasis and mucosal immunology., France, 2019. (Invited Talk)
17. Ankri Serge, Epitranscriptomics regulation of stress survival in the parasite *Entamoeba histolytica* by queuine from the gut microbiota, EMOP2021-changing climate-changing parasites, Serbia, 2021. (Invited Talk)
18. Ankri Serge, Queuine in the human parasite *Entamoeba histolytica*: from salvage to translational control, 28th tRNA conference, USA, 2022. (Invited Talk)
19. Ankri Serge, The molecular mechanisms of predator-prey interactions between the amoeba *Entamoeba histolytica* and bacterial biofilms, 15th International Congress of Parasitology, Denmark , 2022. (Invited Talk)

National

1. Ankri Serge, Amebiasis: DNA methylation and virulence, Workshop of the Israel society for Microbiology on Microbial Pathogenesis, Israel, 2002. (Invited Talk)
2. Ankri Serge, Role(s) of DNA methylation in the parasite *Entamoeba histolytica*, Pathogenesis of amoebiasis: from genomics to disease, EMBO workshop, Israel, 2004. (Invited Talk)
3. Ankri Serge (Shilo prize recipient talk), Characterization of an unusual epigenetic machinery in the protozoan parasite *Entamoeba histolytica*, Israel Society for Microbiology, Israel, 2007. (Other)
4. Ankri Serge, From methylated DNA binding complex to virulence in the protozoan parasite *Entamoeba histolytica*, Israel Society for Parasitology Protozoology and Tropical diseases, Israel, 2008. (Other)
5. Ankri Serge, A new nuclear function of the *Entamoeba histolytica* glycolytic enzyme enolase: the metabolic regulation of cytosine-5 methyltransferase 2 (dnmt2) activity, Israel Society for Microbiology, Israel, 2010. (Invited Talk)
6. Ankri Serge, Essential adaptations of the parasite *Entamoeba histolytica* to glucose availability in its human host, The Israel society for microbiology fall workshop on host-microorganisms interaction, Israel, 2013. (Invited Talk)
7. Ankri Serge, N-acetyl ornithine deacetylase is a moonlighting protein and is involved in the adaptation of *Entamoeba histolytica* to nitrosative stress, The Israel Society for Oxygen and Free Radical Research meeting, Israel, 2016. (Invited Talk)
8. Ankri Serge, Mechanisms of *Entamoeba histolytica* adaptation to environmental constraints, 8th ILANIT/FISEB Conference, Israel, 2017. (Invited Talk)
9. Ankri Serge, *Escherichia coli* mediated resistance of *Entamoeba histolytica* to oxidative stress is triggered by oxaloacetate, Advances in Redox Biology and Medicine, the 33rd annual meeting of the Israeli society for oxygen and free radical research, Israel, 2019. (Invited Talk)
10. Ankri Serge, Queuine is a nutritional regulator of *Entamoeba histolytica* response to oxidative stress and a virulence attenuator, Annual Conference of the Israeli Society for Parasitology, Protozoology and Tropical Diseases, Israel, 2020. (Invited Talk)

16.2 Contributed Talks and Posters

International Oral

1. Ankri Serge, Epigenetic regulation of gene expression in the protozoan parasite *Entamoeba histolytica*, 12th International Congress of Protozoology, China. 07-2005 .
2. Ankri Serge, The unique epigenetic machinery of *Entamoeba histolytica* as a target for anti-amebic drugs, Xth European Multicolloquium of Parasitology, France. 08-2008 .
3. Ankri Serge, N-acetyl-L-ornithine deacetylase is an essential factor for adaptation of the parasite *Entamoeba histolytica* to nitrosative stress , VII ECOP-ISOP Joint Meeting, Spain. 09-2015 .

4. Ankri Serge, N-acetyl-L-ornithine deacetylase is an essential factor for adaptation of the parasite *Entamoeba histolytica* to nitrosative stress , PROTIST-2016, Russian Federation. 06-2016 .
5. Ankri Serge, N-acetyl-L-ornithine deacetylase is an essential factor for adaptation of the parasite *Entamoeba histolytica* to nitrosative stress , International Society of Antioxidants meeting, France. 06-2016 .
6. Ankri Serge, Mechanisms of *Entamoeba histolytica* adaptation to Nitrosative stress, BIT's 7th Annual World Congress of Molecular & Cell Biology, China. 04-2017 .
7. Ankri Serge, Redox proteomics for study of the human parasite *Entamoeba histolytica* response and adaptation to nitrosative stress, 5th International Congress of Analytical Proteomics, Portugal. 07-2017 .

International Poster

1. Ankri Serge, DNA methylation controls virulence in *Entamoeba histolytica*, Pathogenesis of amoebiasis: from genomics to disease, EMBO workshop, France. 05-2003 .
2. Ankri Serge, DNA methylation controls virulence in *Entamoeba histolytica*, Molecular Parasitology Meeting, USA. 09-2003 .
3. Ankri Serge, EhMLBP, a novel methylated LINE retrotransposon binding protein, Gordon research conference on chromatin structure and function, Italy. 05-2006 .
4. Ankri Serge, DNA methylated binding complex in *Entamoeba histolytica*, Gordon research conference on Epigenetics, USA. 08-2007 .
5. Ankri Serge, DNA methylated binding complex in *Entamoeba histolytica*, Molecular Parasitology Meeting, USA. 09-2007 .
6. Ankri Serge, The Glycolytic Enzyme Enolase interacts with *Entamoeba histolytica* Dnmt2 , FASEB summer research conferences: Epigenetics, Chromatin & transcription, USA. 07-2009 .
7. Ankri Serge, Dnmt2 mediated resistance to nitrosative stress in the parasite *Entamoeba histolytica* , 40th FEBS congress, The biochemical basis of life, Germany. 07-2015 .
8. Ankri Serge, Queuine as a modulator of *Entamoeba histolytica* oxidative stress response , First symposium on Nucleic Acid Modifications, IMB, Mainz, Germany. 09-2017 .

National Oral

1. Ankri Serge, Epigenetic regulation of virulence in *Entamoeba histolytica*, Israel Society for Microbiology, Israel. 02-2005 .
2. Ankri Serge, Decoding the epigenetic language of the parasite *Entamoeba histolytica*, Israel Society for Microbiology, workshop on Microbial resistance to drugs, Israel. 11-2006 .
3. Ankri Serge, Characterization of an unusual epigenetic machinery in the protozoan parasite *Entamoeba histolytica*, ILANIT, Israel. 02-2008 .

4. Ankri Serge, The unique epigenetic machinery in *E. histolytica* - Searching for an anti-amebic drug, Israel Society for Microbiology, Israel. 04-2008 .

National Poster

1. Ankri Serge, LESSON FROM THE PROTOZOAN PARASITE ENTAMOEBA HISTOLYTICA ABOUT THE ROLE(S) OF DNA METHYLTRANSFERASE 2 (DNMT2), ILANIT, Israel. 02-2005 .

16.3 Participation in organizing conferences

1. The Israel society for microbiology fall workshop on host-microorganisms interaction, Israel, 11-2013, Co-organizer of the meeting .
2. EUKARYOME- Eukaryome impact on Intestine homeostasis and mucosal immunology., France , 10-2019, Co-organizer of the meeting .
3. Epigenetics in the Biology of Parasites, Israel, 06-2021, Organizer of an international web-meeting. .

17. NOTES