

## Curriculum Vitae

**Name:** Tahereh Taheri

### Education:

- B.Sc. on Biology, Azad University, Tahrán, Iran, 1997.
- M.Sc. on Genetics, Azad University, Tehran, Iran, 1999.
- Ph.D. on Molecular Genetics, NIGEB, Tehran, Iran, 2010.  
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### Positions:

- Researcher in Molecular Immunology and Vaccine Research Lab., Pasteur Institute of Iran, 2000-2010.
- Assistant Professor in Department of Immunotherapy and *Leishmania* Vaccine Research, Pasteur Institute of Iran; 2010-2017.
- Associated professor & Faculty Member, 2017-present.

### List of publication

- 1) Mahya Sadat Lajevardi, **Tahereh Taheri**, Elham Gholami, Negar Seyed and Sima Rafati. Structural analysis of PpSP15 and PsSP9 sand fly salivary proteins designed with a self-cleavable linker as a live vaccine candidate against cutaneous leishmaniasis. *Parasites & Vectors*. (2022) 15:377. doi.org/10.1186/s13071-022-05437-x
- 2) Mahya Sadat Lajevardi, Elham Gholami, **Tahereh Taheri**, Hamzeh Sarvnaz, Sima Habibzadeh, Negar Seyed, Yousef Mortazavi and Sima Rafati. *Leishmania tarentolae* as Potential Live Vaccine Co-Expressing Distinct Salivary Gland Proteins Against Experimental Cutaneous Leishmaniasis in BALB/c Mice Model. *Frontiers in Immunology*. June 2022, Volum 13, 1-15, doi: 10.3389/fimmu.2022.895234.
- 3) Sima Habibzadeh, Delaram Doroud, **Tahereh Taheri**, Negar Seyed, Sima Rafati\*. *Leishmania* Parasite: the Impact of New Serum-Free Medium as an Alternative for Fetal Bovine Serum. 2021, IBJ, Volume 25, Issue 5.

- 4) Atefeh Sadeghi Shermeh, Farnaz Zahedifard, Sima Habibzadeh, **Tahereh Taheri**, Sima Rafati, Negar Seyed. Evaluation of protection induced by in vitro matured BMDCs presenting CD8+ T cell stimulating peptides after a heterologous vaccination regimen in BALB/c model against *Leishmania major*. *Experimental Parasitology*. Volume 223, April 2021, 108082.
- 5) Yasaman Taslimi, Farnaz Zahedifard, **Tahereh Taheri**, Delaram Doroud, Sakineh Latif Dizaji, Noushin Saljoughian, Sima Rafati. Comparison of Protective Potency of DNA and Live Vaccines Expressing A2-CPA-CPB-CTE Antigens against Visceral Leishmaniasis in Syrian Hamster as Preliminary Study. *Iranian Journal of Parasitology*, 2020, 15(3): 383-392.
- 6) Mahdieh Eskandar, Elham Gholami, Negar Seyed, Yasaman Taslimi, Sima Habibzadeh, Sima Rafati and **Tahereh Taheri**. Visualization of *Leishmania tropica* Infection in BALB/c Mice by Bioluminescence Imaging. *IBJ*, 2020, 24(3): 164-172.
- 7) Elaheh Davarpanah, Negar Seyed, Fariborz Bahrami, Sima Rafati, Reza Safaralizadeh, **Tahereh Taheri**. *Lactococcus lactis* expressing sand fly PpSP15 salivary protein confers long-term protection against *Leishmania major* in BALB/c mice. 2020, *PLoS Negl Trop Dis* 14(1):e0007939. <https://doi.org/10.1371/journal.pntd.0007939>.
- 8) Shima Nahidi, Elham Gholami Elham, Gholami Yasaman, Taslimi Yasaman, Taslimi, **Tahereh Taheri**. The outcome of arginase activity inhibition in BALB/c mice hosting *Leishmania tropica*. 2019, *Parasite Immunology* 42(3):e12691.
- 9) Fatemeh Khadir, Ahmad Oryan, **Tahereh Taheri**, Sima Habibzadeh, Maryam Heidari-Kharaji, Sima Rafati. Antileishmanial effect of Rapamycin as an alternative approach to control *Leishmania tropica* infection. *Veterinary Parasitology*, 2019 Dec;276:108976. doi: 10.1016/j.vetpar.2019.108976. Epub 2019 Nov 10.
- 10) Nastaran Ansari, Sima Rafati, **Tahereh Taheri**, Farzin Roohvand, Mohammad Farahmand, Zamaneh Hajikhezri, Abolfazl Keshavarz, Katayoun Samimi-Rad. A non-pathogenic *Leishmania tarentolae* vector based- HCV polytope DNA vaccine elicits potent and long lasting Th1 and CTL responses in BALB/c mice model. (*Molecular Immunology*, 111(2019), 152-161.
- 11) Elham Gholami, **Tahereh Taheri**, Negar seyed, Safoora Gharibzadeh, Nasim Gholami, Amir Mizbani, Fatemeh Zali, Sima Habibzadeh, Daniel Omid Bakhadj, Claudio Meneses, Kambiz Kamyab-Hesari, Kambiz Kamyab-Hesari, Alireza Sadeghipour, Yasaman Taslimi, Shaden Kamhawi, Fatemeh khadir, Jesus G Valenzuela, Fabiano Oliveira, Mohammad Ali Mazlomi, Sima Rafati. DNA plasmid coding for *Phlebotomus sergenti* salivary protein PsSP9, a member of the SP15 family of proteins, protects against *Leishmania tropica*. *PLoS NTD*. January 11, 2019, <https://doi.org/10.1371/journal.pntd.0007067>

- 12) Fatemeh Khadir, Christopher R. Shaler, Ahmad Oryan, Patrick T. Rudak, Delfina M. Mazzuca, **Tahereh Taheri**, Jimmy D. Dikeakos, S. M. Mansour Haeryfar, Sima Rafati. Therapeutic control of leishmaniasis by inhibitors of the mammalian target of rapamycin. *PLoS NTD*, Published: August 22, 2018, <https://doi.org/10.1371/journal.pntd.0006701>
- 13) Abdossamadi Z, **Taheri T**, Seyed N, Montakhab-Yeganeh H, Zahedifard F, Taslimi Y, Habibzadeh S, Gholami E, Gharibzadeh S, Rafati S. Live *Leishmania tarentolae* secreting HNP1 as an immunotherapeutic tool against *Leishmania* infection in BALB/c mice. *Immunotherapy*. 2017 Oct;9(13):1089-1102. doi: 10.2217/imt-2017-0076. PMID: 29032739
- 14) **T Taheri**, M Eskandar, S Rafati. Generation of recombinant *L. tropica* expressing two reporter proteins EGFP and LUC, *JBUMS* 2017, 19(8): 58-64.
- 15) Zahra Abdossamadi; Negar Seyed; Farnaz Zahedifard; **Tahereh Taheri**; Yasaman Taslimi; Hossein Montakhab Yeganeh; Alireza Badirzadeh; Mohammad Vasei; Safoora Gharibzadeh; Sima Rafati. Human Neutrophil Peptide 1 as immunotherapeutic agent against *Leishmania* infected BALB/c mice. *PLoS Negl Trop Dis*. 2017 Dec 18;11(12):e0006123. doi: 10.1371/journal.pntd.0006123. eCollection 2017 Dec. PMID: 29253854.
- 16) Montakhab-Yeganeh H, Abdossamadi Z, Zahedifard F, Taslimi Y, Badirzadeh A, Saljoughian N, **Taheri T**, Taghikhani M, Rafati S. *Leishmania tarentolae* expressing CXCL-10 as an efficient immunotherapy approach against *L. major*-infected BALB/c mice. *Parasite Immunol*. 2017 Aug 18. doi: 10.1111/pim.12461.
- 17) Alireza Badirzadeh, **Tahereh Taheri**, Fatemeh Abedi-Astaneh, Yasaman Taslimi, Zahra Abdossamadi, Hossein Montakhab-Yeganeh, Maryam Aghashahi, Maryam Niyyati, Sima Rafati. Arginase activity of *Leishmania* isolated from patients with cutaneous leishmaniasis. *Parasite Immunology, Parasite Immunol*. 2017 Sep;39(9). doi: 10.1111/pim.12454. PMID: 28731592.
- 18) A Badirzadeh, **T Taheri**, Y Taslimi, Z Abdossamadi, M Heidari-Kharaji, E Gholami, B Sedaghat, M Niyyati, S Rafati. Arginase activity in pathogenic and non-pathogenic species of *Leishmania* parasites. *PLoS neglected tropical diseases*, 2017 Jul 14;11(7):e0005774.
- 19) Seyed Jalal Kiani, **Tahereh Taheri**, Ahmad Nejati, Monireh Maleki, Sima Rafati, Kayhan Azadmanesh, Seyed Moayed Alavian, Talat Mokhtari Azad, Katayoun Samimi-Rad. Repression of the Internal Ribosome Entry Site-dependent Translation of Hepatitis C Virus by an Engineered PUF Protein. *Hepatitis Monthly*. 2017, e45022.

- 20) Somayeh Sadeghi, Negar Seyed, Sima Rafati, **Tahereh Taheri**. Optimization of the timing of induction for the assessment of nitric oxide production in *L. major*-infected macrophage cells. (Iranian J. Parasitology, 2016, 11 (3), 325-331).
- 21) Seyed Jalal Kiani, **Tahereh Taheri**, Sima Rafati and Katayoun Samimi-Rad. PUF Proteins: Cellular Functions and Potential Applications. Current Protein & Peptide Science, 2016, 18(3): 250-261.
- 22) Maryam Heidari-Kharaji, **Tahereh Taheri**, Delaram Doroud, Sima Habibzadeh, Alireza Badirzadeh, Sima Rafati. Enhanced paromomycin efficacy by Solid Lipid Nanoparticle formulation against *Leishmania* in BALB/c mice model. (Parasite Immunology, 2016, 0, 1-10).
- 23) **Tahereh Taheri**, Negar Seyed, Amir Mizbani, Sima Rafati. *Leishmania*-based expression systems. Review, Applied Microbiology and Biotechnology. 2016, 100:7377–7385.
- 24) Negar Seyed, **Tahereh Taheri**, Sima Rafati. Post-Genomics and Vaccine Improvement for *Leishmania*. Frontiers in Microbiology, April 2016.
- 25) Yasaman Taslimi, Farnaz Zahedifard, Sima Habibzaheh, **Tahereh Taheri**, Hossain Abbaspour, Alireza Sadeghipour, Elham Mohit, Sima Rafati. Antitumor effect of IP-10 using two different approaches: Live and gene therapy. Journal of Breast Cancer. 2016 March, 19 (1): 34-44.
- 26) Maryam Heidari-Kharaji, **Tahereh Taheri**, Delaram Doroud, Sima Habibzadeh, Sima Rafati. Solid Lipid Nanoparticle loaded with Paromomycin: in vivo efficacy against *Leishmania tropica* infection in BALB/c mice model. Applied Microbiology and Biotechnology. 2016 March 10.
- 27) Mojgan Zandieh, Tahereh Kashi, **Tahereh Taheri**, Farnaz Zahedifard, Yasaman Taslimi, Mahnaz Doustdary, Sima Habibzadeh, Ali Eslamifar, Fazel Shokri, Sima Rafati and Negar Seyed. Assessment of Protection Induced by DNA and Live Vaccine Encoding *Leishmania* MHC Class I Restricted Epitopes against *L. major* Challenge in Balb/c Mice Model. Microbial & Biochemical Technology, 2015, 7:6.
- 28) Maryam Heidari Kharaji, Delaram Doroud, **Tahereh Taheri** and Sima Rafati. Drug Targeting to Macrophages with Solid Lipid Nanoparticles Harboring Paromomycin: an *In Vitro* Evaluation against *L. major* and *L. tropica*. AAPS PharmSciTech, 2015.
- 29) Samira Seif, Fereshteh Kazemi, Negar Seyed, Elham Gholami, Yasaman Taslimi, Sima Habibzadeh, Bahareh Azarian, Shahram Jamshidi, Mehrdad Hashemi, Sima Rafati and **Tahereh Taheri**. EGFP reporter protein: Its immunogenicity in *Leishmania* infected BALB/c mice. (Applied Microbiology and Biotechnology, 2016, 100: 3923-3934).

- 30) Somayeh Sadeghi, Negar Seyed, Mohammad-Hossein Etemadzadeh, Saeid Abediankenari and Sima Rafati and **Tahereh Taheri**. *In vitro* infectivity assessment by drug susceptibility comparison of recombinant *Leishmania major* expressing EGFP or EGFP-LUC fused genes with wild-type Parasite. (Korean Journal of Parasitology, 2015, 53(4), 385-394).
- 31) Katebi A, Gholami E, **Taheri T**, Zahedifard F, Habibzadeh S, Taslimi Y, Shokri F, Papadopoulou B, Kamhawi S, Valenzuela J.G. and Rafati S. *Leishmania tarentolae* secreting the sand fly salivary antigen PpSP15 confers protection against *Leishmania major* infection in a susceptible BALB/c mice model. (Molecular Immunology, 2015, 67, 501-511).
- 32) Mahdi Shabazi, Farnaz Zahedifard, **Tahereh Taheri**, Yasaman Taslimi, Shahram Jamshidi, Sadegh Shirian, Niousha Mahdavi, Mehdi Hassankhani, Yahya Daneshbod, Sayyed Hamid Zarkesh-Esfahani, Barbara Papadopoulou, Sima Rafati. Evaluation of Live Recombinant Nonpathogenic *Leishmania tarentolae* Expressing Cysteine Proteinase and A2 Genes as a Candidate Vaccine against Experimental Canine Visceral Leishmaniasis. (PLOS One, 2015, 10(7): e0132794).
- 33) **Tahereh Taheri**, Hana Saberi, Negar Seyed, Fatemeh Doustdari, Mohammad-Hossein Etemadzadeh, Fatemeh Torkashvand and Sima Rafati. Generation of stable *L. major*<sup>EGFP-LUC</sup> and simultaneous comparison between EGFP and luciferase activity. (Experimental parasitology, 2015, 150, 44-55).
- 34) Leila Pishraft Sabet, **Tahereh Taheri**, Arash Memarnejadian, Talat Mokhtari Azad, Fatemeh Asgari, Ramin Rahimnia, Seyed Moayed Alavian, Sima Rafati and Katayoun Samimi Rad. Immunogenicity of multi-epitope DNA and peptide vaccine candidates based on core, E2, NS3 and NS5B HCV epitopes in BALB/c mice. (Hepatitis Monthly, 2014, 14(10): e22215).
- 35) Leila Pishraft Sabet, Anna.D Kosinska, Sima Rafati, Azam Bolhassani, **Tahereh Taheri**, Arash Memarnejadian, Seyed-Moayed Alavian, Michael Roggendorf, Katayoun samimi-Rad. Enhancement of HCV polytope DNA vaccine efficacy by fusion to an N-terminal fragment of heat shock protein gp96. (Archives of Virology, 2014,1-12)
- 36) Negar Seyed, **Tahereh Taheri**, Charline Vauchy, Magalie Dosset, Yann Godet, Ali Eslamifar, Iraj Sharifi, Olivier Adotevi, Christophe Borg, Pierre Simon Rohrlich, Sima Rafati. Immunogenicity Evaluation of a Rationally Designed Polytope Construct Encoding HLA-A\*0201 Restricted Epitopes Derived From *Leishmania major* Related Proteins in HLA-A2/DR1 Transgenic Mice: Steps Toward Polytope Vaccine. (PLOS One, 2014, 9(10), e108848).
- 37) **Tahereh Taheri**, Elham Gholami, Faeze Saatchi, Negar Seyed, Yasaman Taslimi, Sima Rafati. Expressional comparison between episomal and stable transfection of selected trifused protein in *Leishmania tarentolae*. (Vaccine Research, 2014, 1 (1):9).

- 38) Noushin Saljoughian, **Tahereh Taheri**, Sima Rafati. Live vaccination tactics: possible approaches for controlling visceral leishmaniasis. (Frontiers in Immunology, March 2014, 5(134), 1-11).
- 39) Farnaz Zahedifard, Elham Gholami, **Tahereh Taheri**, Yasaman Taslimi, Fatemeh Doustdari, Negar Seyed, Fatemeh Torkashvand, Claudio Meneses Barbara Papadopoulou, Shaden Kamhawi, Jesus G. Valenzuela and Sima Rafati. Enhanced protective efficacy of nonpathogenic recombinant *Leishmania tarentolae* expressing cysteine proteinases combined with a sand fly salivary antigen. (PLOS Neglected Tropical Diseases, March 2014, Volume 8, Issue 3, e2751).
- 40) **Tahereh Taheri**, Sima Rafati. Leishmaniasis: Recombinant DNA vaccination and different approaches for vaccine development. (Clinical Investigation, November 2013, Vol. 3, No. 11, Pages 1023-1044).
- 41) Sahar Hosseinzadeh, Azam Bolhassani, Sima Rafati, **Tahereh Taheri**, Farnaz Zahedifard, Amin Daemi, Yasaman Taslimi, Mehrdad Hashemi, and Arash Memarnejadian. A non-pathogenic live vector as an efficient delivery system in vaccine design for the prevention of HPV16 E7-overexpressing cancers. (Drug Delivery, April-May 2013, Vol. 20, No. 3-4, Pages 190-198).
- 42) Saljoughian N, **Taheri T**, Zahedifard F, Bolhassani A, Taslimi Y, Doustdari F, Doroud D, Azizi H, Heidari K, Vasei M, Namvar N, Papadopoulou B, Rafati S. Live nonpathogenic *Leishmania* expressing selected immunodominant parasite antigens elicit protective immunity against visceral leishmaniasis in mice. (PLOS Neglected Tropical Diseases. 2013, April 2013, 7, 4, e2174)
- 43) Salehi M, **Taheri T**, Mohit E, Zahedifard F, Seyed N, Taslimi Y, Sattari M, Bolhassani A, Rafati S. Recombinant *Leishmania tarentolae* encoding the HPV type 16 E7 gene in tumor mice model. (Immunotherapy. 2012 Nov; 4(11):1107-20).
- 44) Mizbani A, Taslimi Y, Zahedifard F, **Taheri T**, Rafati S. Effect of A2 gene on infectivity of the nonpathogenic parasite *Leishmania tarentolae*. (Parasitol Res. 2011, 109(3):793-9).
- 45) Azam Bolhassani, **Tahereh Taheri**, Yasaman Taslimi, Soheila Zamanlui, Farnaz Zahedifard, Negar Seyed, Fatemeh Torkashvand, Behrouz Vaziri and Sima Rafati. Fluorescent *Leishmania* species: Development of stable GFP expression and its application for *in vitro* and *in vivo* studies. (Experimental Parasitology, 2011 Mar; 127(3):637-45).
- 46) **T. Taheri**, A.H Salmanian, E. Gholami, F. Doustdari, F. Zahedifard and S. Rafati. *Leishmania major*: Disruption of signal peptidase type I and its consequences on survival, growth and infectivity. (Experimental parasitology 2010, 125, 135-145).

- 47) A. Mizbani, **T. Taheri**, F. Zahedifard, Y. Taslimi, H. Azizi, K. Azadmanesh, B. Papadopoulos and S. Rafati. Recombinant *Leishmania tarentolae* expressing the A2 virulence gene as a novel candidate vaccine against visceral leishmaniasis. (Vaccine 2009; 28(1):53-62).
- 48) S. Rafati, F. Zahedifard, M.K. Azari, Y. Taslimi, **T. Taheri**. *Leishmania infantum*: Prime boost vaccination with C-terminal extension of cysteine proteinase type I displays both type 1 and 2 immune signatures in BALB/c mice. (Exp Parasitol. 2008 Mar; 118(3):393-401).
- 49) S. Rafati, E. Gholami, N. Hasani, F. Ghaemimanesh, Y. Taslimi, **T. Taheri**, L. Soong. *Leishmania major* heat shock protein 70 (HSP70) is not protective in murine models of cutaneous leishmaniasis and stimulates strong humoral responses in cutaneous and visceral leishmaniasis patients. (Vaccine. 2007 May 22;25(21):4159-69. Epub 2007 Mar 19).
- 50) A. Nakhaee, S. Rafati, A.H. salmanian, M. Taghikhani, M. Mohebbi, **T. Taheri**. Immunological responses of naturally infected dogs to Type I and II recombinant cysteine proteinases of *Leishmania infantum*. (Modares Journal of medical Sciences, 2005, 8 (1), 55-56).
- 51) S. Rafati, A. Nakhaee, **T. Taheri**, Y. Taslimi, H. Darabi, D. Eravani, S. Sanos, P. Kaye, M. Taghikhani, S. Jamshidi, M. A. Rad. Protective vaccination against experiment canine visceral Leishmaniasis using a combination of DNA and protein immunization with cysteine proteinases type I and II of *L. infantum*. (Vaccine 23 (2005), 3716-3725).
- 52) M. Golkar, S. Rafati, Y. Taslimi, **T. Taheri**, F. Doustdari, M. Assmar. High-level expression and evaluation the antigenicity of a recombinant Toxoplasma gondii GRA2 protein. (Iranian J. Biotechnology, Vol 2, No 3, July 2004).
- 53) A. Zadeh-Vakili, **T. Taheri**, Y. Taslimi, F. Doustdari, A.H. salmanian, S. Rafati. Bivalent DNA vaccination with genes encoding *Leishmania major* cysteine proteinases type I and II protects mice against infectious challenge. Iranian (Journal of Biotechnology, January 2004, Vol. 2, No.1, 35-43).
- 54) S. Rafati, A-H. salmanian, **T. Taheri**, S. Masina, C. Schaff, Y. Taslimi, N. Fasel. Type I signal peptidase from *Leishmania major* is a target of the immune response in human cutaneous and visceral leishmaniasis. (Molecular and Biochemical Parasitology, 135 (2004), 13-20).
- 55) A. Zadeh-Vakili, **T. Taheri**, Y. Taslimi, F. Doustdari, A-H. Salmanian, S. Rafati. Immunization with a hybrid protein vaccine consisting of *Leishmania major* cysteine proteinases type I (cpb) and type II (cpa) partially protects against leishmaniasis. (Vaccine 22 (2004), 1930-1940).

- 56) A. Nakhaee, **T. Taheri**, M. Taghikhani, M. Mohebbali, A-H. salmanian, N. Fasel, S. Rafati. Humoral and cellular immune responses against Type I cysteine proteinase of *Leishmania infantum* are higher in asymptomatic than symptomatic dogs selected from a naturally infected population. (Veterinary Parasitology 119 (2004) 107-123).
- 57) S. Rafati, A. Nakhaee, **T. Taheri**, A. Ghashghaii, A-H. salmanian, M. Jimenez, M. Mohebbali, S. Masina, N. Fasel. Expression of Cysteine Proteinase Type I and II of *Leishmania infantum* and their recognition by Sera during Canine and Human Visceral Leishmaniasis. (Experimental Parasitology 103 (2003) 143-151).
- 58) S. Rafati, A. Kariminia, Sh. Seyde-Eslami, M. Narimani, **T. Taheri**, M. Lebbatard. Recombinant Cysteine Proteinases-based vaccines against *Leishmania major* in BALB/c mice: The partial protection relies on IFN- $\gamma$  producing CD8<sup>+</sup> T lymphocyte activation. (Vaccine 20 (2002) 2439-2447).
- 59) S. Rafati, A-H. Salmanian, **T. Taheri**, M. Vafa, N. Fasel. A protective cocktail vaccine against murine cutaneous Leishmaniasis with DNA encoding cysteine proteinases of *Leishmania major*. (Vaccine 19 (2001) 3369-3375).

#### Persian papers

۱- تولید انگل‌های نو ترکیب لیشمانیا تروپیکا بیان کننده دو پروتئین گزارشگر EGFP و لوسیفراز. **ظاهره ظاهری**، مهدیه اسکندر، سیما رافتی. مجله علمی دانشگاه پزشکی بابل. ۱۳۹۶، جلد ۱۹، شماره ۸، صفحات ۶۴-۵۸.

#### Book chapter

- a) DNA integration in *Leishmania* genome: an application for vaccine study and drug screening. **Tahereh Taheri**, Negar Seyed and Sima Rafati. Vaccine Design: Methods and Protocols: Volume 1: Vaccines for Human Diseases, Methods in Molecular Biology, vol. 1403. 2016, 603-622. (Sunil Thomas (ed.)) Springer Science+Business Media New York 2016.