

# Iftach Shaked, PhD

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San Diego, CA | 1 (858) 232-4986 | [ishaked@physics.ucsd.edu](mailto:ishaked@physics.ucsd.edu)

## **Summary:**

A highly motivated and accomplished biomedical scientist with expertise in myeloid immunology, neuroinflammation, autoimmune diseases and brain imaging.

## **Professional experience:**

2020-current UCSD in collaboration with Plasfer Srl, Italy; inventor

- Developing a platelet-based Covid-19 cell therapy (patent application # US63/197,057)

2015-current UCSD, Physics Department; project scientist in neuroinflammation

- Established a mouse model for cerebral venous thrombosis
- Adapted the lab's two-photon imaging system for monitoring brain inflammation in real time
- Authored three high-impact papers
- Received an R01 grant as a co-PI and leading the grant consortium
- Organized a scientific conference

2009-2015 La Jolla Institute of immunology; instructor in inflammatory biology

- Led a successful collaboration with a McGill University medical center to integrate patient data with animal studies in multiple sclerosis (Shaked et al., 2015 *Nature Immunol*)
- Authored several papers in collaboration, including a co-first (Wang, Shaked et al., 2013 *Immunity*)
- Led a study on association of macrophage markers and atherosclerosis in patients with HIV or HCV (Shaked et al., 2014 *ATVB*)

2005-2009 Hebrew University in Jerusalem; postdoctoral fellow in neuroimmunology

- Authored several papers, including a first-author paper (Shaked et al., 2009 *Immunity*)
- Guided undergrad, M.Sc. and PhD students
- Instructed in a lab course "From gene to protein and back" (2005-2009)

2000-2005 Weizmann Institute of Science; PhD student in neuroimmunology

- Authored several papers, including two first-author papers
- Guided M.Sc. and rotation students
- Co-lectured a course "Introduction to Neuroimmunology" (2003-2004)

## **Awards and grants:**

2019-2023 R01 grant NS108472/NS/NINDS (Co-IP)

2013-2017 American Heart Association Scientist Development Grant (\$300,000)

2010-2013 American Heart Association Postdoctoral Fellowship

Oct. 2013 Young Investigator Award, 39<sup>th</sup> Annual La Jolla Immunology Conference

2007-2008 Lady Davis Trust Fellowship

2005-2006 National Institute of Psychobiology Postdoctoral Fellowship in Memory of Leah Smith

## **Education:**

2005 PhD in neuroimmunology; Weizmann Institute of Science  
Mentor: Dr. Michal Schwartz  
Thesis: "From the immune to the chemical synapse"

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1999 M.Sc. in neurochemistry; Tel-Aviv University  
Mentor: Dr. Lily Vardimon  
1996 B.Sc. in Biochemistry; Tel-Aviv University

## IDF military service:

1991-2009 Active reserve officer (fire support commander, rank: Major)  
1986-1991 Artillery officer (battery commander)

## List of publications:

1. **Shaked I.**, Foo C., Liu R., Cui Y., Ji X., Broggin T., Sundd P., Devor A., Friedman B., and Kleinfeld D. (2023). A lone spike in blood glucose can enhance the thrombo-inflammatory response in cortical vessels (*Under revision in JCBFM*) (impact factor 6.2).
2. Li W., Tran V., **Shaked I.**, Xue B., Moore T., Lightle R., Kleinfeld D., Awad I.A., and Ginsberg M.H. (2021). Abortive intussusceptive angiogenesis causes multi-cavernous vascular malformations. *Elife*, 10:e62155. (1 citations, impact factor 8.14).
3. Weijts B., **Shaked I.**, Li W., Ginsberg D., Kleinfeld D., Robin C., and Traver D. (2021). Endothelial struts enable the generation of large lumenized blood vessel de novo. *Nat Cell Biol*, 23, 322. (2 citations, impact factor 28.824).
4. **Shaked I.**, Hanna R.N., Shaked H., Chodarczek G., Nowyhed H.N., Tweet G., Tacke R., Basat A.B., Mikulski Z., Togher S., Miller J., Blatchley A., Salek-Ardakani S., Darvas M., Kaikkonen M., Thomas G., Lai-Wing-Sun S., Rezk A., Bar-Or A., Glass C.K., Bandukwala H., Hedrick C.C. (2015). The orphan nuclear receptor Nr4a1 couples sympathetic and inflammatory cues in CNS-recruited macrophages to limit neuroinflammation. *Nat Immunol.*, 16, 1228 (74 citations, impact factor 25.606).
5. Hanna R.N., Cekic C., Chittezhath M., Sag D., Tacke R., Thomas G., Nowyhed H., Herrley E., Rasquinha N., McArdle S., Wu A., **Shaked I.**, Chodaczek G., Biswas S.K., and Hedrick C.C. (2015). Patrolling Monocytes Control Tumor Metastasis to the Lung. *Science*, 350, 985. (248 citations, impact factor 47.728).
6. Mikulski Z., Johnson R., **Shaked I.**, Kim G., Nowyhed H., Goodman W., Chodaczek G., Pizarro T.T., Cominelli F., Ley K. (2015). SAMP1/YitFc mice develop ileitis via loss of CCL21 and defects in dendritic cell migration. *Gastroenterology*, 148, 783. (13 citations, impact factor 22.682).
7. **Shaked, I.**, Hanna, D., Kaplan, R., Landay, A.L., Tracey, D., Ley, K. (2014). Macrophage inflammatory markers are associated with subclinical carotid artery disease in women with HIV or HCV infection. *ATVB*, 34, 1085. (57 citations, impact factor 8.311).
8. Wang Y., **Shaked, I.**, Stanford S.M., Zhou W., Curtsinger, J.M., Mikulski, Z., Shaheen, Z.R., Cheng, G., Sawatzke, K. Campbell, A.M., Auger, J.L., Bilgic, H., Shoyama, F.M., Schmeling, D.O., Balfour Jr, H.H., Hasegawa, K., Chan, A.C., Corbett, J.A., Binstadt, B.A., Mescher, M.F., Ley, K., Bottini, N., and Peterson, E.J. (2013). Ptpn22 potentiates Toll-like receptor-driven, type 1 interferon-dependent immunity. *Immunity* 39, 111. (133 citations, impact factor 43.474).
9. Spann, N.J., Garmire, L.X., McDonald, J.G., Myers, D.S., Milne, S.B., Shibata, N., Reichart, D., Fox, J.N., **Shaked, I.**, Heudobler, D., Raetz, C.R., Wang, E.W., Kelly, S.L., Sullards, M.C., Murphy, R.C., Merrill, A.H., Jr., Brown, H.A., Dennis, E.A., Li, A.C., Ley, K., Tsimikas, S., Fahy, E., Subramaniam, S., Quehenberger, O., Russell, D.W., and Glass, C.K. (2012). Regulated accumulation of desmosterol integrates macrophage lipid metabolism and inflammatory responses. *Cell* 151, 138. (363 citations, impact factor 41.582).

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10. Hanna, R.N., **Shaked, I.**, Hubbeling, H.G., Punt, J.A., Wu, R., Herrley, E., Zaugg, C., Pei, H., Geissmann, F., Ley, K., and Hedrick, C.C. (2012). NR4A1 (Nur77) deletion polarizes macrophages toward an inflammatory phenotype and increases atherosclerosis. *Circ Res* 110, 416. (277 citations, impact factor 17.367).
11. Gleissner, C.A., **Shaked, I.**, Little, K.M., and Ley, K. (2010) CXC chemokine ligand 4 induces a unique transcriptome in monocyte-derived macrophages. *J Immunol* 184, 4810. (186 citations, , impact factor 5.422).
12. Gleissner, C.A., **Shaked, I.**, Erbel, C., Bockler, D., Katus, H.A., and Ley, K. (2010) CXCL4 downregulates the atheroprotective hemoglobin receptor CD163 in human macrophages. *Circ Res* 106, 203. (103 citations, , impact factor 17.367).
13. **Shaked, I.**, Meerson, A., Wolf, Y., Avni, R., Greenberg, D., Gilboa-Geffen, A., and Soreq, H. (2009) MicroRNA-132 potentiates cholinergic anti-inflammatory signaling by targeting acetylcholinesterase. *Immunity* 31, 965. (319 citations, , impact factor 43.474).
14. Gilboa-Geffen, A., Lacoste, P.P., Soreq, L., Cizeron-Clairac, G., Le Panse, R., Truffault, F., **Shaked, I.**, Soreq, H., and Berrih-Aknin, S. (2007) The thymic theme of acetylcholinesterase splice variants in myasthenia gravis. *Blood* 109, 4383. (30 citations, impact factor 22.113).
15. Guimaraes-Sternberg, C., Meerson, A., **Shaked, I.**, and Soreq, H. (2006) MicroRNA modulation of megakaryoblast fate involves cholinergic signaling. *Leuk Res* 30, 583. (30 citations, impact factor 3.156).
16. Bakalash, S., Ben-Shlomo, G., Aloni, E., **Shaked, I.**, Wheeler, L., Ofri, R., and Schwartz, M. (2005) T-cell-based vaccination for morphological and functional neuroprotection in a rat model of chronically elevated intraocular pressure. *J Mol Med* 83, 904. (58 citations, impact factor 6.427).
17. **Shaked, I.**, Tchoresh, D., Gersner, R., Meiri, G., Mordechai, S., Xiao, X., Hart, R. P., and Schwartz, M. (2005) Protective autoimmunity: interferon-gamma enables microglia to remove glutamate without evoking inflammatory mediators. *J Neurochem* 92, 997. (161 citations, impact factor 5.372).
18. **Shaked, I.**, Porat, Z., Gersner, R., Kipnis, J., and Schwartz, M. (2004) Early activation of microglia as antigen-presenting cells correlates with T cell-mediated protection and repair of the injured central nervous system. *J Neuroimmunol* 146, 84 (110 citations impact factor 3.478).
19. Kipnis, J., Mizrahi, T., Hauben, E., **Shaked, I.**, Shevach, E., and Schwartz, M. (2002) Neuroprotective autoimmunity: naturally occurring CD4+CD25+ regulatory T cells suppress the ability to withstand injury to the central nervous system. *Proc Natl Acad Sci U S A* 99, 15620. (204 citations, impact factor 11.205).
20. **Shaked, I.**, Ben-Dror, I., and Vardimon, L. (2002) Glutamine synthetase enhances the clearance of extracellular glutamate by the neural retina. *J Neurochem* 83, 574-580. (56 citations, impact factor 5.372).
21. Kipnis, J., Yoles, E., Schori, H., Hauben, E., **Shaked, I.**, and Schwartz, M. (2001) Neuronal survival after CNS insult is determined by a genetically encoded autoimmune response. *J Neurosci* 21, 4564. (184 citations impact factor 6.344).
22. Gorovits, R., Avidan, N., Avisar, N., **Shaked, I.**, and Vardimon, L. (1997) Glutamine synthetase protects against neuronal degeneration in injured retinal tissue. *Proc Natl Acad Sci U S A* 94, 7024. (119 citations, impact factor 11.205).

### Reviews:

1. **Shaked, I.**, and Ley, K. (2012) Protective role for myeloid specific KLF2 in atherosclerosis. *Circ Res* 110, 1266 (editorial). (6 citations, impact factor 17.367).
- Shaked, I.**, Zimmerman, G., and Soreq, H. (2008) Stress-induced alternative splicing modulations in brain and periphery: acetylcholinesterase as a case study. *Ann N Y Acad Sci* 1148, 269 (review). (19 citations, impact factor 5.691).

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2. Schwartz, M., **Shaked, I.**, Fisher, J., Mizrahi, T., and Schori, H. (2003) Protective autoimmunity against the enemy within: fighting glutamate toxicity. *Trends Neurosci* 26, 297 (review). (87 citations, impact factor 13.837).
3. Nevo, U., Kipnis, J., Golding, I., **Shaked, I.**, Neumann, A., Akselrod, S., and Schwartz, M. (2003) Autoimmunity as a special case of immunity: removing threats from within. *Trends Mol Med* 9, 88 (review). (30 citations, impact factor 11.951).