# CURRICULUM VITAE – RAZ PALTY

## CONTACT INFORMATION

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## CURRENT POSITION

2016 Assistant Professor, Faculty of Medicine, Department of Biochemistry, Technion – Israel Institute of Technology, Haifa, Israel

## PREVIOUS POSITIONS

2012 – 2016 Postdoc, Department of Molecular and Cell Biology, University of California, Berkeley, USA

2010 – 2012 Postdoc, Department Biological Chemistry, Weizmann Institute of Sciences, Rehovot, Israel

## EDUCATION

2010 – PhD (*Summa Cum-Laude*) Ben-Gurion University, Department of Physiology, Beer-Sheva, Israel

2004 – MSc, Physiology, Ben-Gurion University, Israel

2002 – BSc, Biology, Ben-Gurion University, Israel

## TEACHING RESPONSIBILITIES

1.2017-current Lecturer, Histology. Technion – Israel Institute of Technology, Faculty of Medicine, Israel

2.2017-current Lecturer, Technological applications in biomedical research. Technion – Israel Institute of Technology, Faculty of Medicine, Israel

2005-2008 Lecturer, Cellular Physiology. Ben Gurion University, Department of Medical Health Sciences, Israel

2005-2008 Instructor, Histology. Ben Gurion University, Department of Medical Health Sciences, Israel

2003. Instructor, Introduction to human physiology. Ben Gurion University, Department of Medical Health Sciences, Israel

## MEMBERSHIPS IN SCIENTIFIC SOCIETIES

2008 – Current Biophysical Society

2018 – Current Israeli society for Pharmacology and Physiology

2018 – Current European society for calcium signaling

## HONORS, AWARDS AND FELLOWSHIPS

2016 – 2018 Career Advancement Chair (Women's Division), Technion – Israel Institute of Technology

2013 – 2014 Postdoctoral Fellowship, American Heart Association

2010 – 2011 Postdoctoral Fellowship, Clore foundation

2011. Weizmann Department of Biological Chemistry Annual Retreat Prize.

2005. Ben Gurion University- Faculty of Health Sciences, Dean Award for excellence in PhD studies.

2004. The Israel Academy of Sciences and Humanities – 'Adams' Pre-Doctoral Fellowship.

2004. Kreitman Foundation Pre-Doctoral Fellowship.

2004. Ben-Gurion University – Rector's Award for excellence in M.Sc. studies.

2004. Zinc Signals Conference, Aarhus, Denmark. Young Scientist Award.

2004. Israeli Academic Association Award for excellence in M.Sc. studies.

## PRINCIPAL GRANT SUPPORT

2018. 1. Israel Science Foundation Grant (01/10/2018-30/09/2021). Molecular regulation of CRAC channels. Amount: NIS 1,320,000.

2018. 2. Rappaport Research Institute Grant (18/4/2018-17/4/2020). Physiological aspects of cellular heterogeneity: from in vitro to in vivo and back. Amount: NIS 640,000.

## LIST OF PUBLICATIONS

1. Palty R, Fu Z, Isacoff EY. "Sequential steps of CRAC channel activation" ***Cell Reports*** *19 (9), 1929-1939*. 2017

2. Palty R**,** Isacoff EY. "Cooperative STIM1 binding to the N' and C' termini of Orai1 gates and modulates CRAC channels." ***JBC*** 291(1):334-41. 2016

3. Palty R, Stanley C, Isacoff EY. "Critical role for Orai1 C-terminal and TM4 in gating of CRAC channels." ***Cell Research*** 25 (8):963-80. 2015

4. Palty R, Shoshan-Barmatz V. "Mitochondrial Na+/Ca2+ exchange assays." ***Cold Spring Harbor Protocols*** 2014(2):202-6. 2014

5. Ben-Hail D, Palty R, Shoshan-Barmatz V. "Measurement of mitochondrial Ca2+ transport as mediated by VDAC1, by the Na+/Ca2+ exchanger and by the Ca2+ uniporter." ***Cold Spring Harbor Protocols*** 2014(2):161-6. 2014

6. Bharill S, Fu Z, Palty R, Isacoff EY. "Stoichiometry and specific assembly of Best ion channels." ***PNAS*** 111(17):6491-6. 2014

7. Palty R**,** Raveh A, Kaminsky I, Meller R, Reuveny E. "SARAF Inactivates the Store Operated Calcium Entry Machinery to Prevent Excess Calcium Refilling." ***Cell*** 149(2):425-38. 2012

   *Research Highlight: Stop refilling Ca2+ stores. ***Nat Rev Mol Cell Biol.***

8. Palty R, Sekler I. "The mitochondrial Na(+)/Ca(2+) exchanger." ***Cell Calcium***. 52(1):9-15. 2012

9. Palty R, Hershfinkel M, Sekler I. "Molecular identity and functional properties of the mitochondrial Na+/Ca2+ exchanger." ***JBC***. 287(38):31650-7. 2012

10. Palty R, Silverman WF, Hershfinkel M, Caporale T, Sensi SL, Parnis J, Nolte C, Fishman D, Shoshan-Barmatz V, Herrmann S, Khananshvili D, Sekler I. "NCLX is an essential component of mitochondrial Na+/Ca2+ exchange." ***PNAS*** 107(1):436-41. 2010

11. Palty R, Hershfinkel M, Yagev O, Saar D, Barkalifa R, Khananshvili D, Peretz A, Grossman Y and I Sekler. "Single alpha-domain constructs of the Na+/Ca2+ exchanger, NCLX, oligomerize to form a functional exchanger." ***Biochemistry*** 45:11856-66, 2006.

12. Palty R, Ohana E, Hershfinkel M, Volokita M, Elgazar V, BaharirO, Silverman WF, Argaman M and I. Sekler. "Lithium-calcium exchange is mediated by a distinct potassium-independent sodium-calcium exchanger." ***JBC*** 279:25234-40, 2004

13. Ohana E, Segal D, Palty R, Ton-That D, Moran A, Sensi SL, Weiss JH, Hershfinkel M and I Sekler. "A sodium zinc exchange mechanism is mediating extrusion of zinc in mammalian cells." ***JBC*** 279:4278-84, 2004.

## PROVISIONAL PATENT

Ion Exchangers And Methods Of Use Thereof. Sekler, I., Hershfinkel, M., Yagil, Y., and Palty, R. (2011) WO2011048589A3

## INVITED TALKS

2004. Single alpha-domain constructs of the Na+/Ca2+ exchanger, NCLX, oligomerize to form a functional exchanger. Zlotowski Center for Neuroscience Annual Meeting, Mizpe-Rammon, Israel.

2007. Sodium dependent Ca2+ or Zn2+ transport is mediated by Single a-domain constructs of the Na+/Ca2+ exchanger, NCLX. Zinc Signals, Abbazia di MonteOliveto Maggiore, Italy.

2008. NCLX is an essential component of mitochondrial Na+/Ca2+ exchange. Max Delbrück center for molecular medicine, Berlin, Germany

2012. SARAF, A Novel Regulator of Store Operated Calcium Entry. Biophysical Society Annual Meeting, San Diego, USA

2015. Critical Role for Orai1 C-Terminal and TM4 in Gating of CRAC Channels. Gordon Research Conference - Organellar Channels & Transporters. Bentley University, Waltham, MA USA

2016. Closing CRACs: Regulation of Intracellular Calcium Signals Around Organelles. Department of Biological Regulation, Weizmann Institute of Science, Rehovot, Israel

2017. A molecular mechanism for Orai1 channel activation by STIM1. Department of Physiology and Cell Biology, Ben-Gurion University of the Negev, Israel

2017. A molecular mechanism for Orai1 channel activation by STIM1. Cell Physics 2017, Saarbrücken, Germany

2017. A molecular mechanism for Orai1 channel activation by STIM1. The Future of Health - From Molecules to Machines, Haifa, Israel

2018. Membrane Transoprt Mechanisms and Physiology. Session Chair. Israeli Society of Physiology & Pharmacology annual meeting. Tel-Aviv, Israel

2018. Molecular regulation of CRAC channel activity. The 16th Chinese Biophysics Congress, Chengdu, China

2019. CRACing Intracellular Ca2+ signaling. Department of Physiology and Pharmacology, Tel-Aviv University, Tel-Aviv, Israel