

MICKEY KOSLOFF

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Education:

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| | The Hebrew University, Department of Biological Chemistry | Jerusalem, Israel |
| 2003 | PhD Structural and Molecular Biochemistry (<i>summa cum laude</i>).
Thesis title: "Modulation of G-protein function as molecular switches". | |
| 1996-2002 | PhD studies with the late Prof. Zvi Selinger. | |
| 1996 | MSc Biochemistry. | |
| | The Hebrew University | Jerusalem, Israel |
| 1994 | BSc Chemistry in the Amirim interdisciplinary honor program (<i>summa cum laude</i>). Graduated first in class, with a 98.0 point average (out of 100). | |

Professional:

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| 2011-present | Senior lecturer (Asst. Prof., University of Haifa, Departments of Biology and Human Biology). |
| 2006-2011 | Research associate (computational and experimental biology) with Dr. Vadim Arshavsky (Duke University). |
| 2003-2006 | Postdoctoral fellow (computational biology) with Dr. Barry Honig (Columbia University). |
| 2003 | Research scientist with Prof. Shy Arkin (Hebrew University). |
| 2001-2003 | Co-founder of Promethium Drug Development (with Prof. Zvi Selinger), a biotechnology startup company developing novel anti-cancer drugs. |
| 2000 | Visiting researcher with Prof. Arie Warshel (USC, Los Angeles). |
| 1994-2002 | Researcher with Prof. Zvi Selinger (Hebrew University). |
| 1993-1994 | Research assistant - Amirim honor program research project (Hebrew University). |
| 1986-1991 | System analyst – IDF intelligence corps (last rank - captain). |

Teaching (partial):

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| 2011-2003 | Lecturer in the courses: "Biochemistry", "Computational Biology and Modeling" (University of Haifa).
Developed and taught an advanced EMBO workshop for high school science teachers from Israel and Europe (Belmonte Science Center): "Structural Bioinformatics". |
| 2003 | Developed and taught a new course for graduate students (Hebrew University): "Using Protein Structure Analysis in experimental research". |
| 2002 | Invited lecturer in a seminar series for high school science teachers (Belmonte Science Center). |
| 2002 | Invited lecturer in a popular science lecture series (part of the Jerusalem Science Festival): "Biological Switches, Cancer and Future Anti-Cancer Drugs". |
| 2001, 2002 | Instructor in TA teaching skills workshops (Hebrew University). |
| 1999-2003 | Invited lecturer in five undergraduate/graduate courses and workshops (Hebrew University, Tel-Aviv University, Weizmann Institute). |
| 1994-2002 | Teaching assistant (Hebrew University, frontal lectures) in the courses: "Advanced Biochemistry lab", "Advanced Biochemistry", "Advanced Biochemistry lab for the Etgar Biology honor program", "General and Organic Chemistry for Biology Students", "Structural Biology and Modeling". |

Awards and Honors

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| 2009 | The Duke University postdoctoral award for professional development. |
| 2003 | The Teva prize for a young scientist - awarded by the Israeli Society of Biochemistry and Molecular Biology. |

- 2003 The Kaye prize for innovative research by a young scientist.
 2003 PhD thesis (Hebrew University) – *summa cum laude*.
 1996 The Dean-Intel award for MSc students.
 1994-1996 Hebrew University Rector's MSc scholarship.
 1993, 1994 Hebrew University Dean's end-of-year list of excellence.
 1993, 1994 Hebrew University Rector's prize for excellence.
 1992-1994 The Amirim merit-based undergraduate scholarship.

Publications

1. Cohen S.P., Buckley B.K., **Kosloff M.**, Bosch D.E., Cheng G., Radhakrishna H., Brown M.D., Willard F.S., Arshavsky V.Y., Tarran R., Siderovski D.P., Kimple A.J. "Regulator of G-protein signaling-21 (RGS21) is an inhibitor of bitter gustatory signaling found in lingual and airway epithelia". *Journal of Biological Chemistry*, 2012, 287 (50):41706-41719.
2. Weiss S., Kohn E., Dadon D., Katz B., Peters M., Lebediker M., **Kosloff M.**, Colley N., Minke B. "Compartmentalization and Ca²⁺ buffering are essential for prevention of light induced retinal degeneration". *Journal of Neuroscience*, 2012, 32 (42): 14696-14708.
3. Ivarsson Y., Wawrzyniak A., Wuytens G., **Kosloff M.**, Vermeiren E., Raport M., Zimmermann P. "Cooperative Phosphoinositide and Peptide Binding by PSD-95/Discs Large/ZO-1 (PDZ) Domain of Polychaetoid, *Drosophila* Zonulin". *Journal of Biological Chemistry*, 2011, 286 (52): 44669-44678.
4. **Kosloff M.**, Travis A.M., Bosch D.E., Siderovski D.P., Arshavsky V.Y. "Integrating energy calculations with functional assays to decipher the specificity of G-protein-RGS protein interactions". *Nature Structural & Molecular Biology*, 2011, 18(7): 846-853.
5. **Kosloff M.**, Alexov E., Arshavsky V.Y., Honig B. "Electrostatic and lipid-anchor contributions to the interactions of transducin with membranes: mechanistic implications for activation and translocation". *Journal of Biological Chemistry*, 2008, 283 (45): 31197-31207.
6. **Kosloff M.**, Kolodny R. "Sequence-Similar, Structure-Dissimilar Protein Pairs in the PDB". *Proteins: Structure, Function and Bioinformatics*, 2008, 71 (2): 891-902.
7. **Kosloff M.** et al. (co-authors are all 52 JCSG consortium personnel) "Comparative structural analysis of a novel glutathione S-transferase (Atu5508) from *Agrobacterium tumefaciens* at 2.0 angstrom resolution". *Proteins: Structure, Function and Bioinformatics*, 2006, 65 (3): 527-537.
8. **Kosloff M.**, Selinger Z. "GTPase catalysis by Ras and other G-proteins: insights from Substrate Directed SuperImposition". *Journal of Molecular Biology*, 2003, 331 (5):1157-1170.
9. **Kosloff M.**, Elia N., Joel-Almagor T., Timberg R., Zars T.D., Hyde D.R., Minke B., Selinger Z. "Regulation of light-dependent Gq-alpha translocation and morphological changes in fly photoreceptors". *EMBO Journal*, 2003, 22 (3): 459-468.
10. **Kosloff M.**, Elia N., Selinger Z. "Structural homology discloses a bi-functional motif at the N-termini of G-alpha proteins". *Biochemistry*, 2002, 41 (49): 14518-14523.
11. **Kosloff M.**, Selinger Z. "Substrate assisted catalysis - application to G proteins". *Trends in Biochemical Sciences*, 2001, 26 (3): 161-166.
12. **Kosloff M.**, Zor T., Selinger Z. "Substrate-assisted catalysis: Implications for biotechnology and drug design". *Drug Development Research*, 2000, 50 (3-4): 250-257.

Invited Presentations (partial):

- 2012 Highlight track, ISMB meeting, Long Beach.
 2012 Bioinformatics: Past, Present and Future Symposium, Haifa.
 2012 Department of Biotechnology Engineering, Ben Gurion University.
 2012 EuroMembrane ESF Workshop, Turku.
 2012 Department of Marine Biology, University of Haifa.
 2011 Modeling electrostatics in molecular biology conference, Clemson.
 2010 Molecular Perspectives on Protein-Protein Interactions ESF symposium, Sant Feliu.
 2010 3DSIG structural bioinformatics and biophysics meeting, Boston.
 2009 Department of Pharmacology, Hebrew University Medical School.
 2009 Faculty of Life Sciences, Bar Ilan University.
 2008 National Institute for Biotechnology, Ben Gurion University.

2008	Faculty of Biology, Technion.
2008	Department of Biology, Haifa University.
2008	Department of Structural Biology, Weizmann Institute.
2008	Department of Biochemistry, UCSD.
2008	Duke Eye Center, Duke University Medical School.
2007	Department of Biology, Ben-Gurion University.
2007	HSFP annual meeting, Brisbane.
2006	Department of Biological Chemistry, Hebrew University.
2006	Department of Pharmacology, Mount Sinai School of Medicine.
2006	Duke Eye Center, Duke University Medical School.
2005	Faculty of Chemistry, Technion.
2005	BigRoc seminar series, Weizmann Institute.
2005	Department of Physiology, Hebrew University.
2005	Department of Biochemistry, Tel Aviv University.
2004	Department of Biological Chemistry, Hebrew University.
2003	Advanced science lecture series for science teachers, Belmonte Science Center.
2003	Department of Structural Biology, Weizmann Institute.
2003	Israeli Society of Biochemistry and Molecular Biology Teva Prize lecture.
2003	Bioinformatics workshop, Weizmann Institute.
2002	Popular science lecture series, the Jerusalem Science Festival.
2002	Bloomsbury Biocomputing club, University College London.
2002	Department of Biochemistry, University of Cambridge.
2002	Department of Molecular Biophysics and Biochemistry, Yale University.
2002	Department of Biological Chemistry, Hebrew University.

Selected Conference Presentations and Awards

- “Structure-based redesign of selective G-protein inactivation by RGS proteins”:
 - ISMB 2010 (*winner of the RCSB PDB best poster award*).
- “Characterizing the interactions of peripheral membrane proteins with membranes – a computational approach”:
 - FASEB conference on Protein Lipidation, Signaling and Membrane Domains 2009.
- “Deciphering RGS - G protein specificity and selectivity by combining computational and experimental methods”:
 - 3rd RGS Protein Colloquium / Experimental Biology 2008 (*travel award, winner of SciVee’s best poster presentation at the Experimental Biology 2008 conference*).
- “Characterizing transducin’s interactions with membranes: mechanistic implications for activation and translocation”:
 - FASEB conference on the Biology and Chemistry of Vision 2007.
- “Sequence-Similar, Structure-Dissimilar Protein Pairs in the PDB”:
 - ECCB 2006 (*travel award*).
- “Computational investigations of the reversible interactions of G-proteins with membrane surfaces”:
 - ECCB 2006 (*travel award*).
- “Computational investigation of the role of electrostatics in the interaction of transducin with membrane surfaces”:
 - FASEB conference on the Biology and Chemistry of Vision 2005 (*awarded best poster prize*).
- “Elucidating the mechanism of Ras GTPase using Substrate Directed Super-Imposition”:
 - Annual Israeli Bioinformatics symposium 2003.
- “A novel amphitropic motif in the N-terminal helix of heterotrimeric G-proteins”:
 - Annual Israeli Bioinformatics symposium 2002.
 - FASEB conference on Protein Lipidation, Signaling and Membrane Domains 2002.
- “Activity dependent translocation of the DGq protein in vivo”:
 - Sequence, Structure and Function in Membrane Protein Systems conference 2001.
 - The 3rd Federation of Israel Societies for Experimental Biology Congress 2002.
 - FASEB conference on Protein Lipidation, Signaling and Membrane Domains 2002.

- Open day of the Hebrew U. Faculty of Sciences 2002 (*awarded best poster prize*).
- 11. “Mechanism and benefits of catalytic inefficiency in G-proteins”:
 - Annual Israeli Bioinformatics symposium 2001 (*awarded best poster prize*).
 - Sequence, Structure and Function in Membrane Protein Systems conference 2001 (*travel award*).
 - Protein Society annual symposium 2001 (*travel award*).
- 12. “How did evolution maximize catalytic inefficiency to regulate the GTPase super-family?”:
 - ISMB 2000 (*travel award*).
 - Open day of the Hebrew U. Faculty of Sciences 2001 (*awarded best poster prize*).

Service

- 2004-present Reviewer for Journal of Molecular Biology, Bioinformatics, Proteins: Structure, function and Bioinformatics, PLOS Computational Biology, PLOS One, Nucleic Acids Research.
- 2008-2011 BioAbroad (Israeli scientists networking organization) - NC regional manager.
- 2008-2011 Duke University Postdoctoral Association – executive board member.
- 2001-2002 Advisor for new teaching assistants, Hebrew University.

Professional Societies

The Israel Society for Biochemistry and Molecular Biology.
 Israel Society of Physiology and Pharmacology.
 The American Society for Pharmacology and Experimental Therapeutics.
 International Society for Computational Biology.
 Biophysical Society.
 Protein Society.