Curriculum Vitae - Meytal Landau

Date & place of birth:	September 26, 1976; Safed, Israel.
Work address:	Faculty of Biology, room 250 Technion - Israel institute of technology, Haifa, Israel
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Google Scholar:	link

Academic Positions

Present

2019-present **Associate Professor**
The Faculty of Biology at the Technion – Israel Institute of Technology

2020-Present **Visiting Group Leader**
The European Molecular Biology Laboratory (EMBL), Hamburg, Germany

2022-Present **Associate Member**
Centre for Structural Systems Biology (CSSB), Hamburg, Germany

Past

2012-2018 **Assistant Professor**
The Faculty of Biology at the Technion – Israel Institute of Technology

2013-2015 **David and Inez Mayers Career Advancement Chair in Life Sciences Fellow**
The Faculty of Biology at the Technion – Israel Institute of Technology

Professional Positions

2019-2020 **Visiting Scientist on one-year Sabbatical**
Centre for Structural System Biology (CSSB) at the DESY campus, Hamburg, Germany
Affiliation*:* The European Molecular Biology Laboratory (EMBL)
Hosts: Profs. Matthias Wilmanns and Kay Grünewald

2007-2012 **Post-doctoral scholar**
University of California, Los Angeles, USA.
Adviser*:* Prof. David Eisenberg
Subject: Structural investigations of amyloid proteins

2002-2007 **Research assistant** (support research with computational aspects)
The laboratory of Prof. Uri Seligsohn at the Amalia Biron Research Institute of Thrombosis and Hemostasis, Chaim Sheba Medical Center, Tel-Hashomer and Sackler Faculty of Medicine, Tel-Aviv University, Tel Aviv, Israel

Education

2002-2007 **Ph.D. Biochemistry**, Tel-Aviv University, Tel Aviv, Israel.
Adviser*:* Prof. Nir Ben-Tal.
Title of Dissertation*:* 'Computational Investigation of Selected Protein Families'.

2000-2002 **M.Sc. Neurobiology** *Summa cum laude*, Tel-Aviv University, Tel Aviv, Israel.
Adviser*:* Prof. Nava Zisapel
Title of M.Sc. Thesis*:* 'Theoretical modeling of Ca^{+2}-calmodulin complexes with peptides and antagonists. The case of the Melatonin-mediated facilitation of the cyclic-nucleotide gated cation channel activity'.

1995-2000 **B.Sc. Pharm**. (Bachelor of Pharmacy) *Magna cum laude*,
The Hebrew University, Jerusalem, Israel.

Recent research achievements

My lab pioneered the atomic-level analysis of structure-function relationships in bacterial amyloids and published the first structures of bacterial amyloid fibrils involved in cytotoxicity, antibacterial activity and biofilm structuring. Our findings thus far exposed an extreme diversity in the structures of functional fibrils, extending beyond canonical amyloid cross-β structures, and encoding different activities. In particular, the discovery of a novel class of cross-α amyloid fibrils of toxic peptides presented a unique protein architecture, offered drug targets and leads, and opened a fresh perspective to study amyloid-related toxicity. Moreover, we revealed that amyloids secreted by enterobacteria show similarities in molecular structures to human amyloids involved in neurodegenerative diseases and followingly repurposed anti-Alzheimer's drugs to be used as anti-biofilm compounds. This structural similarity raises concerns about the involvement of microbes in facilitating neurodegenerative and systemic diseases, similar to prion proteins transmitted by contaminated meat, opening directions to explore disease predisposition. Recently, our discovery of unique types of antibacterial human-derived and amphibian protein fibrils can facilitate the design of functional and stable nanostructures with tunable self-assembly for anti-cancer and antibacterial therapeutics with enhanced selectivity, bioavailability, and shelf-life. Our work is already extensively cited, thereby showing an impact on the fields of amyloids, protein self-assembly and microbial virulence. We believe that we have only begun to lift the veil from the structures and roles of functional fibrils and strive to expose new concepts in structure-function relationships, mechanisms of actions, interactions, modulation and design.

Academic Honors and Awards

2020 Daniel Shiran Memorial Prize
2020 Hestrin Prize of the Israel Society for Biochemistry and Molecular Biology
2019 Juludan Research Prize
2019 The Henry Taub Prize for Academic Excellence from the Technion
2019 Margaret Oakley Dayhoff Award from the Biophysical Society
2018 The Krill Prize for Excellence in Scientific Research from the Wolf Foundation
2018 Excellence in Research Award from the Henri Gutwirth Fund for the Promotion of Research
2018 Selected as a speaker in the Burroughs Wellcome Fund Future of Biophysics Symposium at the Biophysical Society 62nd Annual Meeting
2016 Best Speaker Award; X Jakub K. Parnas Conference Young Scientist Forum "Molecules in the Living Cell and Innovative Medicine"; Wrocław, Poland
2013 Alon Fellowship from the Israeli Council for Higher Education
2011 MBI Postdoctoral Recognition Award of Excellence, UCLA.
2010 American Crystallographic Association Travel Award.
2007 Finalist for The Life Science Research Foundation (LSRF) Postdoctoral Fellowship (the foundations were not able to find a sponsor for me).
2006 A delegate in the 56th Lindau Meeting of Nobel Laureates and Students in Lindau, Germany.
2006 Aharon Katzir Travel Fellowship.
2006 The Anat Krauskopf Travel Fund.
2006 Award of Excellence in Teaching and Research. Faculty of Life Science, Tel Aviv University.
2005 The Iafa Keydar Prize in Cancer Research.
2005 Trotzki Fellowship for Graduate Students.
2004 Matching Rector Doctoral Fellowship, Tel-Aviv University.
2004 Travel award from the Constantiner Institute of Molecular Biology.
2004 Award of Excellence in Teaching and Research, Faculty of Life Science, Tel Aviv University.
1998 Awards of excellence, School of Pharmacy, The Hebrew University.

Teaching Experience

2020-present	**Academic coordinator** in Fundamentals of Drug Development - a course given to graduate students by Teva Pharmaceutical Industries Ltd. in collaboration with the Blavatnik Center for Drug Discovery at Tel Aviv University for graduate students; Technion
2014-present	**Lecturer and Supervisor** in 'Protein Biochemistry'; Technion.
2013-present	**Lecturer and course developer** in 'Science of Drugs'; Technion.
2005-2006	**Lecturer and course developer** in 'Introduction to Bioinformatics for Graduate Students'; Tel-Aviv University.
2004-2005	**Lecturer and course developer** in 'Introduction to Bioinformatics for Biotechnologists' ; Tel-Aviv University.
2004	**Teaching assistant** in 'Bioinformatics & Perl Programming'; Tel-Aviv University.
2003-2004	**Teaching assistant** in 'Bioinformatics'; Tel-Aviv University.
2002-2003	**Teaching assistant** in 'Protein Structure and Function'; Tel-Aviv University.
2000-2001	**Teaching assistant** in 'Laboratory in Organic Chemistry'; Tel-Aviv University.

Institutional and Departmental Activities (Technion and EMBL)

2020-present	Academic Head of the Technion Center for Structural Biology (TCSB)
2020-2021	Member of the Technion Standing Committee on Academic Studies
2020	Member of the EMBL Interdisciplinary Postdocs (EIPOD) selection committee
2020- present	Faculty Representative at the Faculty of Chemical Engineering, Technion
2018-present	Member of the Technion Internal Review Committee for Research Using Biohazard Agents
2018-2019	Faculty Consultant, Biochemical Engineering undergraduate studies, Technion
2017-2018	Faculty Consultant, Molecular Biochemistry and Biochemical Engineering undergraduate studies, Technion
2017-2018	Coordinator of Faculty Seminars, Biology, Technion
2013-2019	Member of the Graduate Studies Committee, Biology, Technion
2015-2016	Biology Representative at the Faculty of Chemistry Council Meetings, Technion
2013-2014	Faculty of Biology, Secretary of the Board, Technion

National and International Professional Activities

2020–present	Member of the ESRF Beamtime Allocation Panel C10
2020–present	Member of the Israeli national committee for synchrotron radiation
2020–present	Member of an Israeli academy committee assessing the establishment of a National Center for Cryogenic Electron Microscopy
2020–present	The Israeli delegate at the European synchrotron and FEL user organisation (ESUO)
2019–2020	Member of the SAB of the Centre for Structural Systems Biology (CSSB), Deutsches Elektronen-Synchrotron DESY, Hamburg, Germany
2017–present	Member at HZB (Helmholtz-Zentrum Berlin) Scientific Selection Panel C2

Research Grants

Active Grants:

2020-2025	Israel Science Foundation, Individual Research Grant; Grant No. 2111/20. Project title: Structure-Function-Fibrillation Relationships in Fibril-forming Antimicrobial Peptides. Principal investigator: Meytal Landau
2020-2022	Israel-Hamburg Cooperation, Hamburg Behörde für Wissenschaft, Forschung und Gleichstellung (BWFG). Project title: Amyloids - friends or enemies in the fight against pathogens. Principal Investigators: Meytal Landau, Kay Grünewald

2018-2021	Israel Ministry of Science, Technology & Space; Grant No. 3-15517 Project title: Amyloids in the Microbiome
2018-2022	U.S.-Israel Binational Science Foundation (BSF); Grant No 2017280 Project title: Diverse Functions of Amyloids from Pathogenic Microbes Encoded in Novel Fibril Structures Principal Investigators: Meytal Landau, Matthew R. Chapman.

Previous Grants:

2016-2020	Israel Science Foundation, Individual Research Grant; Grant No 560/16 Project title: An Extension of the Amylome revealed by the Virulent Staphylococcus aureus Phenol Soluble Modulins (PSMs).
2015-2020	DIP - Deutsch-Israelische Projektkooperation Project title: Structural and Functional Dynamics of Na+/H+ Antiporters Principal Investigators: Meytal Landau, Hartmut Michel, Klaus Fendler, Elena Olkhova, Heinz-Jurgen Steinhoff, Etana Padan, Nir Ben-Tal, Assaf Friedler
2018	The Henri Gutwirth Fund for the Promotion of Research Project title: Amyloids as Antimicrobial Drugs and Drug Targets with a Novel Mechanism of Action
2017-2018	University of Michigan – Israel Partnership for Research; Collaborative Research Grant. Project title: New Structure-activity Paradigms for Microbial Functional Amyloids Principal Investigators: Meytal Landau, Matthew R. Chapman.
2013-2018	I-CORE Program of the Planning and Budgeting Committee and The Israel Science Foundation Center of Excellence in Integrated Structural Cell Biology; Grant No 1775/12 Project title: Characterizing Regulatory Principles in Platelet Surface Receptors via X-ray Crystallography and Small-molecule Design.
2013-2017	Support for training and career development of researchers (Marie Curie) CIG. Seventh framework program, Single Beneficiary Project title: Platelet Receptors
2014-2016	U.S.-Israel Binational Science Foundation (BSF) Start-Up Research Grant Project title: Functional Microbial Amyloids: Do They Share the Amyloid β-spines of Human Aggregation Diseases? Principal investigators: Meytal Landau and David Eisenberg
2014-2015	J. and A. Taub Biological Research Project title: Functional Microbial Amyloids: Do They Share the Amyloid β-spines of Human Aggregation Diseases?
2014-2015	Mallat Family Research Fund Project title: Platelets and cancer: The role of the platelet-activating receptor CLEC-2.
2013-2015	Eliyahu Pen Fund for Scientific and Medical Research Project title: Platelet-Surface Receptors.
2010-2015	P50 NIH center grants awarded to UCLA Alzheimer's Disease Research Center. Project title: Design and Structure of Drugs against Alzheimer's disease. Principal Investigator: David Eisenberg; Investigator: Meytal Landau

<u>Invited talks</u>

11/2022	International Workshop on "Interdisciplinary life of microbes: from single cells to multicellular aggregates", Dresden, Germany.
09/2022	Protein aggregation conference, Leuven, Belgium.
09/2022	Workshop on coiled-coil, fibrous & repeat proteins, Alpbach, Austria.

05/2022 FEBS Advanced course on "Protein folding, aggregation and compartmentalization", Greece.
09/2021 CECAM Workshop: Innovative strategies for neurodegenerative diseases: perspective from molecular simulation, machine learning and experiment, Pisa, Ital (hybrid).
04/2021 Workshop "Strategy for future EMBL research infrastructures in the Life Sciences in Hamburg" (virtual).
03/2021 DESY Photon Science Users Meeting 2021 (virtual).
11/2020 The 3rd World Laureates Forum, Science and Technology, for the Common Destiny of Mankind (worldwide, based in Shanghai, China; virtual).
10/2020 PETRA IV workshop - Soft Matter, Health, and Life Science (European, virtual).
10/2020 NICE-2020 International Conference on Nature Inspires Creativity Engineers, Nice, France (keynote) COULD NOT ATTEND
09/2020 EMBL Retreat (virtual).
09/2020 The 14th North German Biophysics Meeting (virtual).
06/2020 Gordon Research Conference (GRC) on Intrinsically Disordered Proteins (IDPs): 'Functional Roles of Disorder in Biological Systems', Les Diablerets, Switzerland. POSTPONED
02/2020 Bilateral Workshop of The Israel Academy of Sciences and Humanities and The Royal Society on: "The Molecular Fabric of Life", Jerusalem, Israel.
01/2020 EMBL Structural Biology Retreat, Hamburg, Germany
01/2020 The 13th North German Biophysics Meeting, Research Center Borstel, Germany (keynote)
11/2019 Third Duesseldorf-Juelich Symposium on Neurodegenerative Diseases: "Aggregation, Fibrils, Autophagy, Prions, and Biomarkers" Duesseldorf, Germany.
10/2019 Nanomedicine Italy-Israel binational meeting, Tel Aviv University, Israel.
06/2019 FASEB SRC: "The Protein Aggregation Conference: From Structure to In Vivo Sequelae conference on Protein Aggregation", Snowmass, Colorado, USA.
03/2019 The Biophysical Society Meeting, Baltimore, USA (Margaret Oakley Dayhoff Awardee lecture).
02/2019 Third Ulm Meeting on "Biophysics of Amyloid Formation". Ulm University, Germany
11/2018 The nanoBioMed2018 International Conference, Barcelona, Spain.
11/2018 The 25th Rothschild School in Life Sciences on "SIGNAL TRANSDUCTION". The Institute for Advanced Studies at the Hebrew University (International meeting).
09/2018 The 4th NGP-NET symposium on non-globular proteins and the 7th Amyloid Disease Annual Meeting (ADAM). Druskininkai, Lithuania.
09/2018 Current Challenges in Amyloid Diseases: From Molecular Mechanisms to the Cell and Clinics. Dead Sea, Israel (International conference)
03/2018 UK-Israel Synergy program on the theme: "Protein misfolding in ageing and neurodegeneration: from basic biology to drug development". London, England.
03/2018 High-Resolution Protein Structures: Understanding Human Diseases. Ben-Gurion University of the Negev, Israel (International conference).
02/2018 Burroughs Wellcome Fund Future of Biophysics Symposium at the Biophysical Society 62nd Annual Meeting. San Francisco, USA.
02/2018 The 83rd Annual Meeting of the Israel Chemical Society, Tel Aviv, Israel.
02/2018 UK-Israel SYNERGY Program Meeting, Edinburgh, Scotland.
12/2017 Molecular Perspectives on Protein-Protein Interactions, Eilat, Israel (International conference).
09/2017 Improving Biomaterials Through Better Understanding of their Assembly Mechanisms. Weizmann Institute of Science, Israel.
09/2017 42nd Congress of The Federation of the European Biochemical Societies (FEBS). Jerusalem, Israel.
09/2017 The 6th Michigan-Israel Partnership for Research and Education Annual Scientific Symposium: The Future of Health: from Molecules to Machines. Technion's Rappaport Faculty of Medicine, Israel.
06/2017 FASEB SRC "Protein Aggregation in Health and Disease", Steamboat Springs, Colorado, USA.
06/2017 14th Annual Meeting of The Medicinal Chemistry Section - Israel Chemical Society, Weizmann Institute of Science, Israel

05/2017 19th Israeli Bioinformatics Symposium, Weizmann Institute of Science, Israel.
04/2017 Israel Society for Microbiology Annual Meeting – NGMS next generation microbiology scientists; Agricultural Research Organization, Volcani Center, Israel.
02/2017 8th ILANIT / FISEB (Federation of all the Israel Societies for Experimental Biology) conference; Eilat, Israel.
07/2016 X Jakub K. Parnas Conference Young Scientist Forum "Molecules in the Living Cell and Innovative Medicine"; Wrocław, Poland.
06/2016 Israel Crystallographic Association 2016 Annual Meeting, Tel-Aviv University, Israel.
02/2014 8th ILANIT / FISEB (Federation of all the Israel Societies for Experimental Biology) conference; Eilat, Israel.
05/2011 Israel Crystallographic Association 2011 Annual Meeting, Bar-Ilan University, Israel.
03/2011 Pittcon 2011, Atlanta, Georgia, USA.

Patents

1. Anti-biofilm composition.; PCT Patent Application No. PCT/IL2019/051190. US Provisional Application No. 62/754,024; Filed on 1 November 2018. Inventors: Meytal Landau, Sergei Perov, Ofir Lidor, Nir Salinas, Nimrod Golan and Dieter Willbold.
2. Antimicrobial Peptides and Uses Thereof. PCT Patent Application No. PCT/IL2017/050936. International App. No. WO 2018/037408 filed on August 2016 and published on March 1, 2018. Inventors: Meytal Landau, Nir Salinas and Asher Moshe.
3. Pharmacophores for Amyloid Fibers Involved in Alzheimer's Disease. US Patent App. No. 61/507, 810; International App. No. PCT/US2012/046945, Filing on Jul. 2011; Pub. No. WO/2013/010176, Jan 2013. Inventors: David S. Eisenberg, Lin Jiang, Meytal Landau and Cong Liu.

Publications in chronological order

Names of Landau lab members are underlined

1. N. Rosenberg, M. Landau, J. Luboshitz, G. Rechavi and U. Seligsohn. A novel PHE171CYS mutation in integrin αIIB causes Glanzmann Thrombasthenia by abrogating αIIbβ3 complex formation. *J Thromb Haemost* 2: 1167-1175, 2004.

2. O. Ashur-Fabian, A. Avivi, L. Trakhtenbrot, K. Adamsky, M. Cohen§, G. Kajakaro, A. Joel, N. Amariglio, E. Nevo and G. Rechavi. Evolution of p53 in hypoxia-stressed Spalax mimics human tumor mutation. *PNAS* 101: 12236-12241, 2004. §Maiden name.

3. A. Vysokovsky, R. Saxema, M. Landau, A. Zivelin, R. Eskaraev, N. Rosenberg, U. Seligsohn and A. Inbal. Seven novel mutations in Factor XIII A-subunit gene causing hereditary Factor XIII deficiency in 10 unrelated families. *J Thromb Haemost 2:* 1790-1797, 2004.

4. A. Zivelin, T. Ogawa, S. Bulvik, M. Landau, J.R. Toomey, J. Lane, U. Seligsohn and D. Gailani. Severe factor XI deficiency caused by a Gly555 to Glu mutation (factor XI-Glu555): a cross-reactive material positive variant defective in factor IX activation. *J Thromb Haemost 2:* 1782-1789, 2004.

5. Y. Fromovich-Amit, A. Zivelin, N. Rosenberg, H. Tamary, M. Landau and U. Seligsohn. Characterization of mutations causing factor VII deficiency in 61 unrelated Israeli patients. *J Thromb Haemost* 2:1774-1781, 2004.

6. M. Landau, S.J. Fleishman and N. Ben-Tal. A Putative mechanism for down-regulation of the catalytic activity of the EGF receptor via direct contact between its kinase and C-terminal domains. *Structure* 12: 2265-75, 2004.

7. M. Mark-Danieli, N. Laham, M. Kenan-Eichler, A. Castiel, D. Melamed, M. Landau, N.M. Bouvier, M.J. Evans and E. Bacharach. Single point mutations in the zinc finger motifs of the human immunodeficiency

virus type 1 nucleocapsid alter RNA binding specificities of the gag protein and enhance packaging and infectivity. *J Virol 79*: 7756-67, 2005.

8. Y. Fromovich-Amit, A. Zivelin, N. Rosenberg, M. Landau, R. Jean-Philippe and U. Seligsohn. Of four mutations in the factor VII gene in Tunisian patients, one novel mutation (Ser339Phe) in three unrelated families abrogates factor X activation. *Blood Coagul Fibrinolysis* 16: 369-374, 2005.

9. M. Landau, I. Mayrose, Y. Rosenberg, F. Glaser, E. Martz, T. Pupko and N. Ben-Tal. ConSurf 2005: the projection of evolutionary conservation scores of residues on protein structures. *Nucleic Acids Res* 33: W299-W302, 2005.

10. N. Rosenberg, H. Hauschner, H. Peretz, R. Mor-Cohen, M. Landau, B. Shenkman, G. Kenet, B.S. Coller, A. A. Awidi and U. Seligsohn. A 13bp Deletion in αIIb Gene is a Founder Mutation that Predominates in Palestinian Arab Patients with Glanzmann Thrombasthenia. *J Thromb Haemost 3*: 2764-72, 2005.

11. H. Peretz, N. Rosenberg, M. Landau, S. Usher, E.J.R. Nelson, R. Mor-Cohen, D.L. French, B.W. Mitchell, S.C. Nair, M. Chandy, B.S. Coller, A. Srivastava and U. Seligsohn. Molecular diversity of Glanzmann thrombasthenia in southern India: new insights into mRNA splicing and structure-function correlations of alphaIIbbeta3 integrin (ITGA2B, ITGB3). *Human Mutation* 27:359-369, 2006.

12. N. Rosenberg, S. Lalezari, M. Landau, B. Shenkman, U. Seligsohn and S. Izraeli. Trp207Gly in platelet glycoprotein Ibalpha is a novel mutation which disrupts the connection between the leucine-rich repeat domain and the disulfide loop structure and causes Bernard-Soulier syndrome. *J Thromb Haemost* 5(2):378-86; 2006.

13. M. Landau and N. Zisapel. The low affinity binding of melatonin to calmodulin: use of computational methods to explain its physiological relevance. Melatonin: from molecules to therapy, S.R. Pandi-Perumal and D.P. Cardinali. Hauppauge, NY: Nova Science Publishers, Inc. 2006.

14. M. Zucker, A. Zivelin, M. Landau, O. Salomon, G. Kenet, F. Bauduer, M. Samama, J. Conard, H. Denninger, A.B. Hani, M. Berruyer, D. Feinstein, U. Seligsohn. Characterization of seven novel mutations causing FXI deficiency. *Haematologica* 92(10):1375-80; 2007.

15. C. Bozzao, V. Rimoldi, R. Asselta, M. Landau, R. Ghiotto, M.L. Tenchini, R. De Cristofaro, G. Castaman and S. Duga. A novel factor XI missense mutation (Val371Ile) in the activation loop is responsible for a case of mild type II factor XI deficiency. *FEBS J.* 274: 6128–6138; 2007.

16. R. Mor-Cohen, N. Rosenberg, H. Peretz, M. Landau, B.S. Coller, A. Awidi, U. Seligsohn. Disulfide bond disruption by a beta3-Cys549Arg mutation in six Jordanian families with Glanzmann thrombasthenia causes diminished production of constitutively active alphaIIbbeta3. J *Thromb Haemost.* 98(6):1257-65; 2007

17. M. Landau, K. Hertz, E. Padan and N. Ben-Tal. Model structure of the Na^+/H^+ exchanger 1 (NHE1) of the human heart: functional and clinical implications. *J Biol Chem.* 282(52):37854-63; 2007.

- The paper was ranked "must read" in *Faculty of 1000 Biology*.

18. M. Landau and N. Ben-Tal. Dynamic Equilibrium between Multiple Active and Inactive Conformations Explains Regulation and Oncogenic Mutations in ErbB Receptors. *Biochim Biophys Acta. Reviews on cancer* 1785(1):12-31; 2008.

19. R. Mor-Cohen, N. Rosenberg, M. Landau, J. Lahav and U. Seligsohn. Specific cysteines in beta3 are involved in disulfide bond exchange-dependent and -independent activation of alphaIIbbeta3. *J Biol Chem*. 283(28):19235-44; 2008.

20. M. Zucker, A. Zivelin, M. Landau, N. Rosenberg and U. Seligsohn. Three residues at the interface of factor XI monomers augment covalent dimerization of factor XI. *J Thromb Haemost.* 7(6):970-5; 2009.

21. J.W. Wiltzius*, M. Landau*, R. Nelson*, M.R. Sawaya*, M.I. Apostol, L. Goldschmidt, A.B. Soriaga, D.Cascio, K. Rajashankar and D. Eisenberg. Molecular mechanisms for protein-encoded inheritance. *Nat. Struct. Mol. Biol.* 16(9) 973-8; 2009. *Authors contributed equally

22. H. Hauschner, M. Landau, U. Seligsohn, and N. Rosenberg. A unique interaction between αIIb and β3 in the head region is essential for outside-in signaling related functions of αIIbβ3 integrin. *Blood* 115(22):4542-50; 2010.

23. A. Laganowsky, J.L.P. Benesch M. Landau, L. Ding, M.R. Sawaya, D. Cascio, Q. Huang, C.V. Robinson, J. Horwitz, and D. Eisenberg. Crystal structures of truncated alpha and alphaB crystallins reveal structural mechanisms of polydispersity important for eye lens function. *Prot. Sci.* 19(5):1031-43; 2010.

24. M. Landau and N. Rosenberg. Molecular Insight into Human Platelet Antigens: Structural and Evolutionary Conservation Analyses offer New Perspective to Immunogenic Disorders. *Transfusion* 51(3):558-69; 2010.

25. M. Landau, M.R. Sawaya, K.F. Faull, A. Laganowsky, L. Jiang, S.A. Sievers, J. Liu, J.R. Barrio and D. Eisenberg. Towards a Pharmacophore for Amyloid. *PLoS Biology* 9(6): e1001080; 2011.

26. M. Schushan, M. Landau, E. Padan and N. Ben-Tal. Two conflicting NHE1 model-structures: Compatibility with experimental data and implications for the transport mechanism. *J. Biol. Chem.* 286, le9; 2011. *Letter.*

27. JP. Colletier*, A. Laganowsky*, M. Landau*, M. Zhao*, A.B. Soriaga*, L. Goldschmidt, D. Cascio, M.R. Sawaya, and D. Eisenberg. Molecular Basis for Amyloid-beta Polymorphism. *PNAS* 108(41):16938-43; 2011. *Authors contributed equally

28. A. Laganowsky, C. Lui, M.R. Sawaya, J.P. Whitelegge, J. Park, M. Zhao, A. Pensalfini, A.B. Soriaga, M. Landau, P.K. Teng, D. Cascio, C. Glabe, D. Eisenberg. Atomic View of a Toxic Amyloid Small Oligomer. *Science* 335(6073):1228-31; 2012.

29. R. Mor-Cohen, N. Rosenberg, Y. Einav, E. Zelzion, M. Landau, W. Mansour, Y. Averbukh and U. Seligsohn. Unique disulfide bonds in the epidermal growth factor (EGF) domains of β3 affect the structure and function of αIIbβ3 and αvβ3 integrins in a different manner. *J Biol Chem* 16;287(12):8879-91; 2012.

30. R. Loewenthal, N. Rosenberg, R. Kalt, R. Dardik, M. Landau, V. Yahalom, O. Avishai, O. Frenkel, E. Gazit, D.M. Steinberg, S. Lipitz, O. Salomon. Compound heterozygosity of HLA-DRB3*01:01 and HLA-DRB4*01:01 as a potential predictor of fetal neonatal alloimmune thrombocytopenia. *Transfusion* 53(2):344-52; 2013.

31. L. Jiang, C. Liu, D. Leibly, M. Landau, M. Zhao, M. Hughes, and D.Eisenberg. Structure-based discovery of fiber-binding compounds that reduce the cytotoxicity of amyloid beta. *eLife* 2:e00857; 2013.

32. N. Gal, A. Morag, S. Kolusheva, R. Winter, M. Landau, R. Jelinek. Lipid Bilayers Significantly Modulate Cross-Fibrillation of Two Distinct Amyloidogenic Peptides. *J. Am. Chem. Soc* 135(36):13582–13589; 2013.

33. K. Kondapalli , A. Hack , M. Schushan , M. Landau , N. Ben-Tal, and R. Rao. Functional evaluation of autism-associated mutations in NHE9. *Nat Commun* 4: p. 2510; 2013

34. B. Brumshtein, SR. Esswein, M. Landau, CM. Ryan, JP. Whitelegge, ML. Phillips, D. Cascio, MR. Sawaya, and DS. Eisenberg. Formation of amyloid fibers by monomeric light chain variable domains. *J Biol Chem* 289(40):27513-25; 2014

35. E. Reinstein, K. Orvin, E. Tayeb-Fligelman, H. Stiebel-Kalish, A. L. Pimienta, S. Tzur, L. Bazak, T. Bengal, L. Cohen, D. D. Gaton, C. Bormans, M. Landau, R. Kornowski, M. Shohat, D. M. Behar. Mutations in TAX1BP3 cause Dilated Cardiomyopathy with Septo-Optic Dysplsia. *Human Mutation* 36(4):439-42; 2015.

36. E. Padan and M. Landau. Sodium-Proton (Na+/H+) Antiporters: Properties and Roles in Health and Disease. Alkali Metal Ions: Their Role for Life. Book Series: Metal Ions in Life Sciences. Volume 16 Pages

391-458. Eds Astrid Sigel, Helmut Sigel, and Roland K. O. Sigel. Springer International Publishing AG, Cham, Switzerland 2016; ISSN: 1559-0836.

37. A. Moshe, M. Landau and D. Eisenberg. Preparation of Crystalline Samples of Amyloid Fibrils and Oligomers. *Methods in Molecular Biology* 1345: 201-210; 2016.

38. Bhonker Y, Abu-Rayyan A, Ushakov K, Amir-Zilberstein L, Shivatzki S, Yizhar-Barnea O, Elkan-Miller T, Tayeb-Fligelman E, Kim SM, Landau M, Kanaan M, Chen P, Matsuzaki F, Sprinzak D, Avraham KB. The GPSM2/LGN GoLoco motifs are essential for hearing. *Mamm Genome.* 27(1-2):29-46: 2016

39. E. Reinstein, A. Gutierrez-Fernandez, S. Tzur, C. Bormans, S. Marcu, E. Tayeb-Fligelman, C. Vinkler, A. Raas-Rothschild, D. Irge, M. Landau, M. Shohat, X.S. Puente, D.M. Behar, C. Lopez-Otın. Congenital dilated cardiomyopathy caused by biallelic mutations in Filamin C. *Eur J Hum Genet.* 24(12):1792-1796; 2016

40. E. Tayeb-Fligelman and M. Landau. X-ray structural study of amyloid-like fibrils of Tau peptides bound to small-molecule ligands. *Methods in Molecular Biology;* 1523: 89-100; 2016.

41. E. Ratzon, I. Bloch, M. Nicola, E. Cohen, N. Ruimi, N. Dotan, M. Landau, and M. Gal. A Small Molecule Inhibitor of Bruton's Tyrosine Kinase Involved in B-Cell Signaling. *ACS Omega* 2 (8), 4398-4410; 2017

42. E. Tayeb-Fligelman*, O. Tabachnikov*, A. Moshe*, O. Goldshmidt-Tran, M.R. Sawaya, N. Coquelle, J-P. Colletier, and M. Landau. The Cytotoxic Staphylococcus aureus PSMα3 Reveals a Cross-α Amyloid-like Fibril. *Science* 355(6327): 831-833; 2017

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