

List of Publications (D)

- D71.** A.J. Wolfe, J.F. Gugel, M. Chen, and **L. Movileanu**, 2018, Detergent Desorption of Membrane Proteins Exhibits Two Kinetic Phases, *J. Phys. Chem. Lett.* **9**, 1913-1919.
- D70.** A.J. Wolfe, W. Si, F. Zhang, A.R. Blanden, Y.C. Hsueh, J.F. Gugel, B. Pham, M. Chen, S.N. Loh, S. Rozovsky, A. Aksimentiev, and **L. Movileanu**, 2017, Quantification of Membrane Protein-Detergent Complex Interactions, *J. Phys. Chem. B* **121(44)**, 10228-10241. PMCID: PMC5680101
- D69.** A.K. Thakur, M.G. Larimi, K. Gooden, and **L. Movileanu**, 2017, Aberrantly large single-channel conductance of polyhistidine arm-containing protein nanopores, *Biochemistry* **56(36)**, 4895-4905. PMCID: PMC5595664
- D68.** A.J. Wolfe, Y.C. Hsueh, A.R. Blanden, M.M. Mohammad, B. Pham, A.K. Thakur, S.N. Loh, M. Chen, and **L. Movileanu**, 2017, Interrogating Detergent Desolvation of Nanopore-forming Proteins by Fluorescence Polarization Spectroscopy, *Anal. Chem.* **89(15)**, 8013-8020. PMCID: PMC5558884
- D67.** M.M. Mohammad, N. Tomita, M. Ohta, and **L. Movileanu**, 2016, The Transmembrane Domain of a Bicomponent ABC Transporter Exhibits Channel-forming Activity, *ACS Chem. Biol.* **11(9)**, 2506-2518. PMCID: PMC5026576
- D66.** S. Couoh-Cardel, Y.C. Hsueh, S. Wilkens, and **L. Movileanu**, 2016, Yeast V-ATPase Proteolipid Ring Acts as a Large-conductance Transmembrane Protein Pore, *Sci. Rep.* **6**, 24774. PMCID: PMC4838861
- D65.** A.J. Wolfe, M.M. Mohammad, A.K. Thakur, and **L. Movileanu**, 2016, Global Redesign of a Native β -barrel Scaffold, *Biochim. Biophys. Acta Biomembranes* **1858(1)**, 19-29. PMCID: PMC4663120
- D64.** J.F. Gugel and **L. Movileanu**, 2015, Staphylococcal β -barrel Pore-forming Toxins: Mushrooms That Breach the Greasy Barrier, *Springer Series in Biophysics*, Martinac, B. (Series Ed.), Vol. 18, *Electrophysiology of Unconventional Channels and Pores*, Chapter, 10, Delcour, A.H. (Ed.), Springer, New York, pp. 241-266.
- D63.** A.R. Blanden, X. Yu, A.J. Wolfe, J.A. Gilleran, D.J. Augeri, R.S. O'Dell, E.C. Olson, S.D. Kimball, T.J. Emge, **L. Movileanu**, D.R. Carpizo and S.N. Loh, 2015, Synthetic metallochaperone ZMC1 rescues mutant p53 conformation by transporting zinc into cells as an ionophore, *Mol. Pharmacol.* **87(5)**, 825-831. PMCID: PMC4407733
- D62.** B.R. Cheneke, B. van den Berg, and **L. Movileanu**, 2015, Quasithermodynamic Contributions to the Fluctuations of a Protein Nanopore, *ACS Chem. Biol.* **10(3)**, 784-794. PMCID: PMC4372101
- D61.** **L. Movileanu**, 2014, Watching Single Proteins Using Engineered Nanopores, *Protein Pept. Lett.* **21(3)**, 235-246. PMCID: PMC3924890
- D60.** E. Eren, J. Parkin, A. Adelanwa, B.R. Cheneke, **L. Movileanu**, S. Khalid and B. van den Berg, 2013, Towards understanding the outer membrane uptake of small molecules by *Pseudomonas aeruginosa*, *J. Biol. Chem.* **288(17)**, 12042-12053. PMCID: PMC3636890

- D59.** N. Tomita, M.M. Mohammad, D.J. Niedzwiecki, M. Ohta and **L. Movileanu**, 2013, Does the lipid environment impact the open-state conductance of an engineered β -barrel protein nanopore?, *Biochim. Biophys. Acta Biomembranes* **1828(3)**, 1057-1065. PMID: PMC3560310
- D58.** **L. Movileanu** and E.A. Schiff, 2013, Enthalpy-entropy Compensation of Biomolecular Systems in Aqueous Phase: a Dry Perspective, *Monatsh Chem. – Chem. Monthly* **144(1)**, 59-65. PMID: PMC3747987
- D57.** D.J. Niedzwiecki, R. Iyer, P.N. Borer and **L. Movileanu**, 2013, Sampling a Biomarker of the Human Immunodeficiency Virus across a Synthetic Nanopore, *ACS Nano* **7(4)**, 3341-3350. PMID: PMC3634884
- D56.** D.R. Singh, M.M. Mohammad, S. Patowary, J.A. Oliver, **L. Movileanu** and V. Raicu, 2013, Determination of the Quaternary Structure of a Bacterial ATP-Binding Cassette (ABC) Transporter in Living Cells, *Integr. Biol. (Cambridge)* **5(2)**, 312-323. PMID: PMC3558595
- D55.** J. Liu, A.J. Wolfe, E. Eren, J. Vijayaraghavan, M. Indic, B. van den Berg and **L. Movileanu**, 2012, Cation Selectivity is a Conserved Feature in the OccD Subfamily of *Pseudomonas aeruginosa*, *Biochim. Biophys. Acta Biomembranes* **1818(11)**, 2908-2916. PMID: PMC3424372
- D54.** D.J. Niedzwiecki, M.M. Mohammad and **L. Movileanu**, 2012, Inspection of the Engineered FhuA $\Delta C/\Delta L$ Protein Nanopore by Polymer Exclusion, *Biophys. J.* **103(10)**, 2115-2124. PMID: PMC3512039
- D53.** B.R. Cheneke, M. Indic, B. van den Berg and **L. Movileanu**, 2012, An Outer Membrane Protein undergoes Enthalpy- and Entropy-driven Transitions, *Biochemistry* **51(26)**, 5348-5358. PMID: PMC3448022
- D52.** J. Liu, E. Eren, J. Vijayaraghavan, B.R. Cheneke, M. Indic, B. van den Berg and **L. Movileanu**, 2012, OccK Channels from *Pseudomonas aeruginosa* Exhibit Diverse Single-channel Electrical Signatures, but Conserved Anion Selectivity, *Biochemistry* **51(11)**, 2319-2330. PMID: PMC3311111
- D51.** M.M. Mohammad, R. Iyer, K.R. Howard, M.P. McPike, P.N. Borer and **L. Movileanu**, 2012, Engineering a Rigid Protein Tunnel for Biomolecular Detection, *J. Am. Chem. Soc.* **134(22)**, 9521-9531. PMID: PMC3415594
- D50.** E. Eren, J. Vijayaraghavan, J. Liu, B.R. Cheneke, D.S. Touw, B.W. Lepore, M. Indic, **L. Movileanu** and B. van den Berg, 2012, Substrate specificity within a family of outer membrane carboxylate channels, *PLoS Biol.* **10(1)**, e1001242. PMID: PMC3260308
- D49.** M.M. Mohammad and **L. Movileanu**, 2012, Protein Sensing with Engineered Protein Nanopores, in "Nanopore-Based Technology, *Methods Mol. Biol.*, M.E. Graceva (Ed.), vol. 870, Springer, New York, pp. 21-37. PMID: PMC3708658
- D48.** **L. Movileanu**, 2012, Single-molecule detection of proteins using nanopores, Chapter 25, In: *Frontiers in Sensing – From Biology to Engineering*, F.G. Barth, J.A.C. Humphrey and M.V. Srinivasan (Eds.), First Edition, Springer, Wien, New York, pp. 363-381.
- D47.** B.R. Cheneke, B. van den Berg and **L. Movileanu**, 2011, Analysis of gating transitions among the three major open states of the OpdK channel, *Biochemistry* **50(22)**, 4987-4997. PMID: PMC3107985
- D46.** D.J. Niedzwiecki and **L. Movileanu**, 2011, Monitoring protein adsorption with solid-state nanopores, *J. Vis. Exp.* **58**, e3560, DOI: 10.3791/3560.
- D45.** M.M. Mohammad, K.R. Howard and **L. Movileanu**, 2011, Redesign of a plugged beta-barrel membrane protein, *J. Biol. Chem.* **286(10)**, 8000-8013. PMID: PMC3048687

- D44.** R. Bikwemu, A.J. Wolfe, X. Xing and **L. Movileanu**, 2010, Facilitated translocation of polypeptides through a single nanopore, *J. Phys.: Condens. Matter* **22(45)**, 454117. PMID: PMC3108026
- D43.** D.J. Niedzwiecki, J. Grazul and **L. Movileanu**, 2010, Single-molecule observation of protein adsorption onto an inorganic surface, *J. Am. Chem. Soc.* **132(31)**, 10816-10822. PMID: PMC2917251
- D42.** M.M. Mohammad and **L. Movileanu**, 2010, Impact of distant charge reversals within a robust β -barrel protein pore, *J. Phys. Chem. B* **114(26)**, 8750-8759. PMID: PMC2907733
- D41.** **L. Movileanu**, 2009, Interrogating single proteins through nanopores: challenges and opportunities, *Trends Biotechnol.* **27(6)**, 333-341.
- D40.** S. Biswas, M.M. Mohammad, **L. Movileanu** and B. van den Berg, 2008, Crystal structure of outer membrane protein OmpK from *Pseudomonas aeruginosa*, *Structure* **16(7)**, 1027-1035.
- D39.** C. Chimere, **L. Movileanu**, S. Pezeshki, M. Winterhalter and U. Kleinekathöfer, 2008, Transport at the nanoscale: Temperature dependence of ion conductance, *Eur. Biophys. J.* **38(1)**, 121-125.
- D38.** D. Popescu, **L. Movileanu** and A.G. Popescu, 2008, The behavior of the lipid vesicle under osmotic stress, Chapter 11, *Invited review article*, In: *Mathematical Biology Research Trends*, L.B. Wilson (Ed.), Nova Science Publishers, New York, pp. 275-294.
- D37.** **L. Movileanu**, 2008, Squeezing a single polypeptide through a nanopore, *Soft Matter* (Highlight Article) **4(5)**, 925-931.
- D36.** M.M. Mohammad and **L. Movileanu**, 2008, Excursion of a single polypeptide into a protein pore: simple physics, but complicated biology, *Eur. Biophys. J.* **37(6)**, 913-925.
- D35.** M.M. Mohammad, S. Prakash, A. Matouschek and **L. Movileanu**, 2008, Controlling a single protein in a nanopore through electrostatic traps, *J. Am. Chem. Soc.* **130(12)**, 4081-4088.
- D34.** A.J. Wolfe, M.M. Mohammad, S. Cheley, H. Bayley and **L. Movileanu**, 2007, Catalyzing the translocation of polypeptides through attractive interactions, *J. Am. Chem. Soc.* **129(45)**, 14034-14041.
- D33.** S. Biswas, M.M. Mohammad, D.R. Patel, **L. Movileanu** and B. van den Berg, 2007, Structural insight into OprD substrate specificity, *Nature Struct. Mol. Biol.* **14(11)**, 1108-1109.
- D32.** C.P. Goodrich, S. Kirmizialtin, B.M. Huyghues-Despointes, A. Zhu, J.M. Scholtz, D.E. Makarov and **L. Movileanu**, 2007, Single-molecule electrophoresis of β -hairpin peptides by electrical recordings and Langevin dynamics simulations, *J. Phys. Chem. B* **111(13)**, 3332-3335.
- D31.** Y.H. Jung, H. Bayley and **L. Movileanu**, 2006, Temperature-responsive protein pores, *J. Am. Chem. Soc.* **128(47)**, 15332-15340.
- D30.** **L. Movileanu**, D. Popescu, S. Ion and A.I. Popescu, 2006, Transbilayer pores induced by thickness fluctuations, *Bull. Math. Biol.* **68(6)**, 1231-1255.
- D29.** D. Dinu, M.T. Nechifor and **L. Movileanu**, 2005, Ethanol-induced alterations of the antioxidant defense system in rat kidney, *J. Biochem. Mol. Toxicol.* **19(6)**, 386-395.

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- D27. L. Movileanu** and D. Popescu, 2004, The birth, life and death of statistical pores into a bilayer membrane, *Invited review article*, In: *Recent Research Developments in Biophysics*, vol. 3, Part I, Transworld Research Network, Kerala, pp. 61-86.
- D26. L. Movileanu**, S. Cheley and H. Bayley, 2003, Partitioning of individual flexible polymers into a nanoscopic protein pore, *Biophys. J.* **85(2)**, 897-910.
- D25. D. Popescu**, S. Ion, A. I. Popescu and **L. Movileanu**, 2003, Elastic properties of bilayer lipid membranes and pore formation, *Invited review article*, In: *Membrane Science and Technology Series (vol. 7), Planar Lipid Bilayers (BLMs) and Their Applications*, H. Ti Tien and A. Ottova (Eds.), Elsevier Science Publishers, Amsterdam, pp. 173-204.
- D24. S. Avram**, **L. Movileanu**, D. Mihailescu and M.-L. Flonta, 2002, Comparative study of some energetic and steric parameters of the wild type and mutants HIV-1 protease: a way to explain the viral resistance, *J. Cell Mol. Med.* **6(2)**, 251-260.
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- D21. G. Miles, Jr.**, **L. Movileanu** and H. Bayley, 2002, Subunit composition of a bicomponent toxin: staphylococcal leukocidin forms an octameric transmembrane pore, *Protein Sci.* **11(4)**, 894-902. PMID: PMC2373538
- D20. L. Movileanu**, and H. Bayley, 2001, Partitioning of a polymer into a nanoscopic protein pore obeys a simple scaling law. *Proc. Natl. Acad. Sci. USA* **98(18)**, 10137-10141. PMID: PMC56928
- D19. S. Howorka**, **L. Movileanu**, O. Braha and H. Bayley, 2001, Kinetics of duplex formation for individual DNA strands within a single protein nanopore. *Proc. Natl. Acad. Sci. USA* **98(23)**, 12996 - 13001. PMID: PMC60813
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- D12. J.M. Benevides, L. Movileanu** and G.J. Thomas, Jr., 1999, Structure and thermostability of DNA containing A·T pairs in alternating and non-alternating sequences: investigation of premelting, melting and postmelting phenomena by Raman spectroscopy. *J. Biomol. Struct. Dyn.* **16(6)**, 1331-1332.
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- D4. L. Movileanu**, 1996, On the electrolyte transport mechanisms through fish intestinal cells. A computer study. *Bioelectrochem. Bioenerg.* **40(2)**, 261-265.
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- D2. L. Movileanu** and D. Popescu, 1995b, Differential length effects into a binary mixture of single-chain amphiphiles in planar monolayers. A three-dimensional approach. *BioSystems* **36(1)**, 43-53.
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