
BIOGRAPHICAL SKETCH

DO NOT EXCEED FOUR PAGES.

NAME Liviu Movileanu	POSITION TITLE Assistant Professor		
eRA COMMONS USER NAME Imovilea			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
University of Bucharest	B.S.	1989	Physics
University of Bucharest	M.S.	1990	Polymer Physics
University of Bucharest	Ph.D.	1997	Biophysics
University of Missouri-Kansas City	Postdoc	1997-1998	Biochemistry & Biophysics
Texas A&M University	Postdoc	1999-2004	Biochemistry & Biophysics

A. Positions and Honors.

Positions and Employment

1990-1991 *Junior Researcher*, Institute of Physics and Nuclear Engineering, Bucharest, Romania
1991-1995 *Teaching Assistant and Graduate Student*, University of Bucharest, Bucharest, Romania
1996-1997 *Assistant Professor of Biological Physics*, University of Bucharest, Bucharest, Romania
1997-1998 *Visiting Research Associate*, University of Missouri-Kansas City, Kansas City, Missouri
1999-2004 *Postdoctoral Research Associate*, Texas A&M University, College Station, Texas
2004- *Assistant Professor of Biophysics*, Syracuse University, Syracuse, New York

Other Experience and Professional Memberships

1993-1994 *Graduate Research Fellowship*, University of Amsterdam, Amsterdam, The Netherlands
1995-1997 *Member*, Federation of European Biochemical Societies
1997 *Research Fellow*, Tempus Program, CEN Saclay, Paris, France.
1998- *Member*, American Biophysical Society
1998-2003 *Associate Member*, Abdus Salam ICTP, Trieste, Italy
2002-2003 *Visiting Professor*, Delft University of Technology, Delft, The Netherlands
2004- *Member*, Structural Biology, Biochemistry, and Biophysics Program of Syracuse University
2005- *Member*, American Physical Society, International Association of Nanotechnology
2005- *Member*, American Association for the Advancement of Science
2007- *Member*, Syracuse Biomaterials Institute (SBI), Syracuse, New York
2008- *Associate Fellow*, Institute for Complex Adaptive Matter (ICAM)

Honors and Awards

1997 Associate Member Fellowship of the Abdus Salam ICTP, Trieste, Italy
1997 Research Fellowship of TEMPUS Program of the European Community, Higher Education Commission
1998 The Wellcome Trust Award for International Postdoctoral Fellows, United Kingdom

B. Selected peer-reviewed publications (abstracts excluded from a total of 42 articles)

1. D. Popescu, **L. Movileanu**, S. Ion and M.-L. Flonta, 2000, Hydrodynamic effects on the solute transport across endothelial pores and hepatocyte membranes, *Phys. Med. Biol.* **45(11)**, N157-N165.
2. S. Howorka, **L. Movileanu**, X. Lu, M. Magnon, S. Cheley, O. Braha and H. Bayley, 2000, A protein pore with a single polymer chain tethered within the lumen. *J. Am. Chem. Soc.* **122(11)**, 2411-2416.

3. **L. Movileanu**, S. Howorka, O. Braha and H. Bayley, 2000, Detecting protein analytes that modulate transmembrane movement of a polymer chain within a single protein pore. *Nature Biotechnol.* **18(10)**, 1091-1095.
4. **L. Movileanu**, S. Cheley, S. Howorka, O. Braha and H. Bayley, 2001, Location of a constriction in the lumen of a transmembrane pore by targeted covalent attachment of polymer molecules. *J. Gen. Physiol.* **117(3)**, 239-251.
5. 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.
6. **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.
7. 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.
8. **L. Movileanu**, J.M. Benevides and G.J. Thomas, Jr., 2002, Determination of Base and Backbone Contributions to the Thermodynamics of Premelting and Melting Transitions in B DNA, *Nucleic Acids Res.* **30(17)**, 3767-3777.
9. **L. Movileanu**, J.M. Benevides and G.J. Thomas, Jr., 2002, Temperature dependence of the Raman spectrum of DNA. II. Raman signatures of premelting and melting transitions of poly(dA)•poly(dT) and comparison with poly(dA-dT)•poly(dA-dT), *Biopolymers* **63(3)**, 181-194.
10. **L. Movileanu**, S. Cheley and H. Bayley, 2003, Partitioning of individual flexible polymers into a nanoscopic protein pore, *Biophys. J.* **85(2)**, 897-910.
11. **L. Movileanu** and D. Popescu, 2004, The birth, life and death of statistical pores into a bilayer membrane, *Invited review paper, Recent Research Developments in Biophysics* (chapter 4), vol. 3, Part I, Transworld Research Network, Kerala, pp. 61-86.
12. **L. Movileanu**, J.P. Schmittschmitt, J.M. Scholtz and H. Bayley, 2005, Interactions of peptides with a protein pore, *Biophys. J.* **89(2)**, 1030-1045.
13. 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.
14. **L. Movileanu**, D. Popescu, S. Ion, and A.I. Popescu, 2006, Transbilayer pores induced by thickness fluctuations, *Bull. Math. Biol.* **68(6)**, 1231-1255.
15. Y.H. Jung, H. Bayley and **L. Movileanu**, 2006, Temperature-responsive protein pores, *J. Amer. Chem. Soc.* **128(47)**, 15332-15340.
16. 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
17. 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)**, 14034-11041.
18. 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.
19. 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.
20. 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.
21. **L. Movileanu**, 2008, Squeezing a single polypeptide through a nanopore, *Soft Matter* (Highlight Article) **4(5)**, 925-931.
22. S. Biswas, M.M. Mohammad, **L. Movileanu** and B. van den Berg, 2008, Crystal structure of outer membrane protein OpdK from *Pseudomonas aeruginosa*, *Structure* **16(7)**, 1027-1035.
23. C. Chimerele, **L. Movileanu**, S. Pezeshki, M. Winterhalter, U. Kleinekathöfer, 2008, Transport at the nanoscale: Temperature dependence of ion conductance, *Eur. Biophys. J.* **38(1)**, 121-125.
24. **L. Movileanu**, 2009, Interrogating single proteins through nanopores: challenges and opportunities, *Trends Biotechnol.* **27(6)**, 333-341.