

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors in the order listed on Form Page 2.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Liviu Movileanu	POSITION TITLE Associate Professor		
eRA COMMONS USER NAME LMOVILEA			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
University of Bucharest	B.S.	06/89	Physics
University of Bucharest	M.S.	06/90	Polymer Physics
University of Bucharest	Ph.D.	04/97	Biophysics
University of Missouri-Kansas City	Postdoc	10/98	Biochemistry & Biophysics
Texas A&M University	Postdoc	08/04	Biochemistry & Biophysics

B. Positions and Honors.

B1. 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
2004-2010 *Assistant Professor of Biophysics*, Syracuse University, Syracuse, New York
2010- *Associate Professor of Biophysics*, Syracuse University, Syracuse, New York

B2. Other Experience and Professional Memberships

1993-1994 *Graduate Research Fellowship*, The 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 Assistant Professor*, Delft University of Technology, Delft, The Netherlands
2004- *Member*, Structural Biology, Biochemistry, and Biophysics Program (SB3) 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)
2008 The National Science Foundation, Panel Reviewer
2009 The National Science Foundation, Panel Reviewer
2009- Editorial Board, *Applied Medical Informatics*, Member
2010- Editorial Board, *Journal of Nanomedicine and Nanotechnology*, Member
2010- *Member*, The Upstate Cancer Research Institute (CRI), Syracuse, New York
2011 The National Science Foundation, Panel Reviewer

B3. Honors and Awards

- 1997-2002 Associate Research Fellow 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
2011 Beckman Faculty Mentor

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

C1. Most relevant to the current application

1. **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. PMID: PMC1366589
2. 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.
3. 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.
4. 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.
5. **L. Movileanu**, 2009, Interrogating single proteins through nanopores: challenges and opportunities, *Trends Biotechnol.* **27(6)**, 333-341.

C2. Additional recent publications of importance to the field (in chronological order)

1. **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
2. Y.H. Jung, H. Bayley and **L. Movileanu**, 2006, Temperature-responsive protein pores, *J. Amer. Chem. Soc.* **128(47)**, 15332-15340.
3. 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.
4. 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.
5. **L. Movileanu**, 2008, Squeezing a single polypeptide through a nanopore, *Soft Matter* (Highlight Article) **4(5)**, 925-931.
6. 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
7. 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
8. 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
9. 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
10. 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