

Suggested reading for *Biophysics: From Basic Concepts to Current Research*
(Original papers that were the background of lecture content)

- Difference between Physics and Biology approaches to complexity: [Y. Lazebnik, *Biochemistry \(Moscow\)* **69** \(2004\), 1403-1406](#)
- “Biology by the Numbers”: [R. Phillips, R. Milo, *Proc. Natl. Acad. Sci. USA* **106** \(2009\), 21465-21471](#)
- Biophysical insight from “Deep Sequencing”: [J. B. Kinney et al., *Proc. Natl. Acad. Sci. USA* **107** \(2010\), 9158-9163](#)
- Diffusivity of membrane components: [L.D. Frye, M. Edidin, *J. Cell. Sci.* **7** \(1970\), 319-335](#)
- “Fluid-mosaic bilayer model”: [S.J. Singer, G.L. Nicolson, *Science* **175** \(1972\) 720-731](#)
- Hydrophobic effect: [J.A. Reynolds, D.B. Gilbert, C. Tanford, *Proc. Natl. Acad. Sci. USA* **71** \(1974\), 2925-2927](#); [C. Tanford, *Proc. Natl. Acad. Sci. USA* **76** \(1979\), 4175-4176](#)
- Proteome dynamics in cells: [E. Eden et al., *Science* **331** \(2011\), 764-768](#)
- Theory of bilayer elasticity: [W. Helfrich, *Z. Naturf.* **28c** \(1973\), 693-703](#)
- Size of sonicated vesicles: [W. Helfrich, *Phys. Lett.* **50a** \(1974\), 115-116](#)
- Red blood cell shape from elasticity: [H.J. Deuling, W. Helfrich, *Biophys. J.* **16** \(1976\), 861-868](#)
- RBC mechanical properties from pipette aspiration: [E.A. Evans, P.L. La Celle, *Blood* **45** \(1975\), 29-43](#)
- Analysis of membrane tethers: [R.M. Hochmuth, E.A. Evans, *Biophys. J.* **39** \(1982\) 71-81](#) and [R.E. Waugh, R.M. Hochmuth, *Biophys. J.* **52** \(1987\), 391-400](#); [L. Bo, R.E. Waugh, *Biophys. J.* **55** \(1989\), 509-517](#); [M.P. Sheetz, L. Dai, *Trends Cell Biol.* **6** \(1996\), 85-89](#)
- Bilayer adhesion: [E.A. Evans, M. Metcalfe, *Biophys. J.* **45** \(1986\), 715-720](#)
- Inter-bilayer forces and “hydration force”: [V.A. Parsegian, N. Fuller, R.P. Rand, *Proc. Natl. Acad. Sci. USA* **76** \(1979\), 2750-2754](#)
- Undulation repulsion: [V.A. Parsegian, E.A. Evans, *Proc. Natl. Acad. Sci. USA* **83** \(1986\), 7132-7136](#)
- Experimental quantification of interbilayer forces: [H.I. Petrache et al., *Phys. Rev. E* **57** \(1998\), 7014-7024](#); [Y. Liu, J.F. Nagle, *Phys. Rev. E* **69** \(2004\) 040901](#)
- Membrane “flickering”: [A. Zilker, M. Ziegler, E. Sackmann, *Phys. Rev. A* **46** \(1992\) 7998-8001](#)
- Bilayer membrane profile from neutron and x-ray diffraction: [M.C. Wiener, S.H. White, *Biophys. J.* **61** \(1992\), 434-447](#)
- Membrane signaling and PIPs: [M.A. Lemmon, *Nat. Rev. Molec. Cell Biol.* **9** \(2008\), 99-111](#); [M.P. Wymann, R. Schneider, *Nat. Rev. Molec. Cell Biol.* **9** \(2008\), 162-176](#)

Gramicidin as a force transducer: [J.A. Lundbaek et al., *J. Gen. Physiol.* **123** \(2004\), 599-621](#);
[O.S. Andersen, R.E. Koeppe, *Annu. Rev. Biophys. Biomol. Struct.* **36** \(2007\), 107-130](#)

Phage Physics: [A. Evilevitch et al., *Proc. Natl. Acad. Sci. USA* **100** \(2003\), 9292-9295](#); [D. E. Smith et al., *Nature* **413** \(2001\), 748-752](#)

Manning condensation: [G.S. Manning, *J. Chem. Phys.* **51** \(1969\), 924-933](#)

Donnan potential and osmotic pressure within viral capsid: [A. Cordova et al., *Biophys. J.* **85** \(2003\), 70-74](#)

Ribosome structure: [Ban et al., *Science* **289** \(2000\), 905-920](#)

Hydrophobic effect & protein structure: [C. Tanford, *J. Am. Chem. Soc.* **84** \(1962\), 4240-4247](#)

DNA duplex stability: [K.J. Breslauer et al., *Proc. Natl. Acad. Sci. USA* **83** \(1986\), 3746-3750](#)

DNA breathing: [M.P. Printz, P.H. von Hippel, *Proc. Natl. Acad. Sci. USA* **53** \(1965\), 363-370](#)

Sequence reading of DNA: [N.C. Seeman, J.M. Rosenberg, A. Rich, *Proc. Natl. Acad. Sci. USA* **73** \(1976\), 804-808](#)

lac repressor: [C.G. Kalodimos et al., *Science* **305** \(2004\), 386-389](#)