

# NS3108: Sensing and Signalling in Biology and Physics

View Online



---

Alberts, Bruce. 2015. *Molecular Biology of the Cell (Sixth Edition)*. Sixth edition. New York, NY: Garland Science, Taylor and Francis Group.

Anon. n.d.-a. 'Extracellular Signalling'. Retrieved (<http://www.sumanasinc.com/webcontent/animations/content/extracellularsignaling.html>).

Anon. n.d.-b. 'Pathway Central: ERK Signaling'. Retrieved ([http://www.sabiosciences.com/pathway.php?sn=ERK\\_Signaling](http://www.sabiosciences.com/pathway.php?sn=ERK_Signaling)).

Anon. n.d.-c. 'Phase Velocity - Wikipedia, the Free Encyclopedia'. Retrieved ([http://en.wikipedia.org/wiki/Phase\\_velocity](http://en.wikipedia.org/wiki/Phase_velocity)).

Anon. n.d.-d. 'Signaling Pathways: MAPK/Erk in Growth and Differentiation'. Retrieved ([http://www.cellsignal.com/reference/pathway/MAPK\\_ERK\\_Growth.html](http://www.cellsignal.com/reference/pathway/MAPK_ERK_Growth.html)).

Berg, Jeremy M., Tymoczko, John L., and Stryer, Lubert. 2011. *Biochemistry*. 7th ed. New York: W. H. Freeman.

Brooker, Robert J. 2010. *Biology*. 2nd ed. New York: McGraw-Hill Higher Education.

Calvo, Fernando, Lorena Agudo-Ibáñez, and Piero Crespo. 2010. 'The Ras-ERK Pathway: Understanding Site-Specific Signaling Provides Hope of New Anti-Tumor Therapies'. *BioEssays* 32(5):412–21. doi: 10.1002/bies.200900155.

Cooper, Geoffrey M. and Hausman, Robert E. 2013. *The Cell: A Molecular Approach*. 6th ed. Sunderland, Mass: Sinauer Associates.

Endres, Robert G. 2013. *Physical Principles in Sensing and Signaling: With an Introduction to Modeling in Biology*. Oxford: Oxford University Press.

Grant, I.S., & Phillips, W.R. 1990a. 'Extract from Chapter 9 - Transmissions Lines'. in *Electromagnetism*. Vol. The Manchester physics series. Chichester: Wiley.

Grant, I.S., & Phillips, W.R. 1990b. 'Extracts from Chapter 8 - 8.3 "Impedance and Admittance" to 8.4.1 "Ladder Networks"'. in *Electromagnetism*. Vol. The Manchester physics series. Chichester: Wiley.

Lemmon, Mark A., and Joseph Schlessinger. 2010. 'Cell Signaling by Receptor Tyrosine Kinases'. *Cell* 141(7):1117–34. doi: 10.1016/j.cell.2010.06.011.

Lim, Wendell A. 2010. 'Designing Customized Cell Signalling Circuits'. *Nature Reviews Molecular Cell Biology* 11(6):393–403. doi: 10.1038/nrm2904.

Lim, Wendell, Bruce Mayer, and T. Pawson. 2015. *Cell Signaling: Principles and Mechanisms*. New York: Garland Science.

Liu, Bernard A., Brett W. Engelmann, and Piers D. Nash. 2012. 'The Language of SH2 Domain Interactions Defines Phosphotyrosine-Mediated Signal Transduction'. *FEBS Letters* 586(17):2597–2605. doi: 10.1016/j.febslet.2012.04.054.

Lodish, Harvey F. 2013. *Molecular Cell Biology*. 7th ed. New York: W.H. Freeman.

Marks, Friedrich, Karin Müller-Decker, and Ursula Klingmüller. 2009. *Cellular Signal Processing: An Introduction to Molecular Mechanisms of Signal Transduction*. New York: Garland Science.

Murray, Robert K. and Harper, Harold A. 2009. *Harper's Illustrated Biochemistry*. 28th ed. New York, N.Y.: McGraw-Hill Medical.

Nelson, David L., Cox, Michael M., and Lehninger, Albert L. 2013. *Lehninger Principles of Biochemistry*. 6th ed. New York, N.Y.: W.H. Freeman.

Nelson, Philip Charles. 2008. *Biological Physics: Energy, Information, Life*. Updated ed. New York: W.H. Freeman.

Raven, Peter H., Johnson, George B., Mason, Kenneth A., Losos, Jonathan B., and Singer, Susan R. 2014. *Biology*. 10th ed. New York, NY: McGraw-Hill.

Reece, Jane B. and Campbell, Neil A. 2011. *Biology*. 9th ed. Boston: Pearson Education.

Scott, J. D., and T. Pawson. 2009. 'Cell Signaling in Space and Time: Where Proteins Come Together and When They're Apart'. *Science* 326(5957):1220–24. doi: 10.1126/science.1175668.

Tipler, Paul A. and Mosca, Gene P. 2008. *Physics for Scientists and Engineers: With Modern Physics*. 6th ed. New York, NY: W.H. Freeman.