**Cinar, E., Zhou, S., Decourcey, J., Wang, Y., Waugh, R. E., & Wan, J. (2015). Piezo1 regulates mechanotransductive release of ATP from human RBCs. *Proceedings of the National Academy of Sciences,* *112*(38), 11783-11788. doi:10.1073/pnas.1507309112**

The Authors seek to provide functional information on the recently identified Piezo1, which is expressed in human red blood cells. Mutations of Piezo1 have been correlated to Xerocytosis, but the physiological role Piezo1 plays remains poorly understood. Through microfluidic measurements of shear-induced calcium influx and ATP, it was determined that inhibition of Piezo1 results in a significant decrease of ATP release and calcium influx, dependent on the extracellular concentration of calcium.

**Bae, C., Sachs, F., & Gottlieb, P. A. (2011). The Mechanosensitive Ion Channel Piezo1 Is Inhibited by the Peptide GsMTx4. *Biochemistry,* *50*(29), 6295-6300. doi:10.1021/bi200770q**

This is a short paper seeking to essentially confirm Piezo1 responds pharmacologically like known mechanosensitive ion channels (MSC) through testing if the peptide GsMTx4 (a known cationic MSC blocker) can inhibit Piezo1 current. This knowledge is important for the use of Piezo1 as a positive control for different pharmacological studies, and exploring its physiological role further.

**Guo, Y. R., & Mackinnon, R. (2017). Structure-based membrane dome mechanism for Piezo mechanosensitivity. *ELife,* *6*. doi:10.7554/elife.33660**

These authors areone of the first to present a cryo-EM structure of Piezo1 to investigate the gating mechanism and organization of the ion channel**.** The paper provides high-resolution images revealing the size of the protein, and important structural detail giving clues to its gating mechanism.

**Gottlieb, P. A., & Sachs, F. (2012). Piezo1. *Channels,* *6*(4), 214-219. doi:10.4161/chan.21050**

This is a comprehensive review by authors who’ve been involved in much of the research on mechanosensitive ion channels and piezo1 specifically. Being a newly identified MSC, Piezo1 still lacks a large literature base. The authors provide a detailed description of what is known, and what remains to be demonstrated experimentally.

**Haswell, E., Phillips, R., & Rees, D. (2011). Mechanosensitive Channels: What Can They Do and How Do They Do It? *Structure,* *19*(10), 1356-1369. doi:10.1016/j.str.2011.09.005**

Despite being from 2012, this review paper still provides an easily digestible breakdown of MSCs: their known structure and biophysical properties. The channels originally cloned from bacteria have received the most scientific attention, and are the primary focus of this review. For the purposes of the presentation, this paper provided much needed background on how these channels are experimentally defined, and their importance in many organisms.

**Zhao, Q., Zhou, H., Chi, S., Wang, Y., Wang, J., Geng, J., & Xiao, B. (2018). Structure and mechanogating mechanism of the Piezo1 channel. *Nature,554*(7693), 487-492. doi:10.1038/nature25743**

Taking advantage of the high quality imaging of Piezo1 in previous work, the authors demonstrate a convincing mechanism by which the channel is gated. The referenced beam from the presentation and a previous citation appears to play a role in the channels mechanosensitivity, as deletions in distal regions or mutations of residues at the beam itself impair its activation.

**Chesler, A. T., Szczot, M., Bharucha-Goebel, D., Čeko, M., Donkervoort, S., Laubacher, C., & Bönnemann, C. G. (2016). The Role of PIEZO2 in Human Mechanosensation. *New England Journal of Medicine,* *375*(14), 1355-1364. doi:10.1056/nejmoa1602812**

Though Piezo1 was focused on in the presentation, Piezo2 is an interesting member of this channel family that has some biophysical differences from Piezo1. The authors here demonstrate this experimentally through whole–exome sequencing, adding to the growing knowledge of Piezo2 in some aspects of tactile sensation and proprioception.

**Ridone, P., Grage, S. L., Patkunarajah, A., Battle, A. R., Ulrich, A. S., & Martinac, B. (2018). “Force-from-lipids” gating of mechanosensitive channels modulated by PUFAs. *Journal of the Mechanical Behavior of Biomedical Materials,* *79*, 158-167. doi:10.1016/j.jmbbm.2017.12.026**

A trademark of mechanosenstive channels is how much of their activity is derived from the “Force-From Lipids” (FFL) concept, where the organization of the lipid membrane and differences in orientation can induce a force resulting in a response of the channel. The authors explain in great detail what exactly FFL is, and its physiological basis through looking at the modulating influence of PUFAS.

**Kung, C., Martinac, B., & Sukharev, S. (2010). Mechanosensitive Channels in Microbes. *Annual Review of Microbiology,* *64*(1), 313-329. doi:10.1146/annurev.micro.112408.134106**

This is a more focused paper, but one of the landmark works almost a decade ago summing up years of research on mechanosensitive channels in microbes. A lot of these major channels were being isolated in different bacteria such as MScL, and the authors go through the large body of research born from this.

**Moroni, M., Servin-Vences, M. R., Fleischer, R., Sánchez-Carranza, O., & Lewin, G. R. (2018). Voltage gating of mechanosensitive PIEZO channels. *Nature Communications,* *9*(1). doi:10.1038/s41467-018-03502-7**

This is a recent paper discussing some odd findings of Piezo channels possibly having voltage-gated properties. Up until now most of the gating of Piezo has been thought to occur the extracellular domain above the pore, and more importantly the beam structure located at the more proximal end. The authors demonstrate that Piezo1 may be able to shift to a voltage sensing “mode” to compensate for the given cellular environment. Though this may only apply to the model systems studied in this paper, the fact that Piezo is highly conserved warrants a closer look.

**Ncbi.nlm.nih.gov. (2018). *Home - PubMed - NCBI*. [online] Available at: https://www.ncbi.nlm.nih.gov/pubmed/ [Accessed 2 Nov. 2018].**

Pubmed is perhaps the best database for locating credible research articles for any purpose. While not that useful for some of the social sciences, PubMed is an irreplaceable resource for the medical and biological literature.

**Scimagojr.com. (2018). *Scimago Journal & Country Rank*. [online] Available at: https://www.scimagojr.com/ [Accessed 2 Nov. 2018].**

This websites primary purpose is for presenting the H-index of journals and a nice statistical breakdown of their citations. A quartile ranking is provided that generally represents well the quality of the journal, assisting in the evaluation of results if a paper seems dubious at first glance.

**Portal.brain-map.org. (2018). *Brain Map - brain-map.org*. [online] Available at: http://portal.brain-map.org/ [Accessed 2 Nov. 2018].**

Here you can access the Allen Brain Atlas, which is the most robust and easiest to use atlas found online. The site is great for refreshing your cerebral anatomy, and is of great importance to those doing histology as specific nuclei are clearly delineated by borders and colors.

**Centre for Neural Circuits and Behavior, U. (2018). *ICGenealogy - the ion channel model database*. [online] Icg.neurotheory.ox.ac.uk. Available at: https://icg.neurotheory.ox.ac.uk/ [Accessed 2 Nov. 2018].**

This web database provides an easy to access compilation of thousands of ion channel models, and many of which are quantitatively evaluated providing the key details of whatever ion channel you may be studying.

**Biophysics.org. (2018). *Biophysical Society*. [online] Available at: https://www.biophysics.org/ [Accessed 2 Nov. 2018].**

The website of the Biophysical Society has some interesting resources posted and provides up to date information on what’s going on in the filed .

**Team, P. (2018). *PhysiologyWeb - Physiology on the Web*. [online] Physiologyweb.com. Available at: http://www.physiologyweb.com/ [Accessed 2 Nov. 2018].**

Physiology web is an educational resource that’s great at breaking down complex physiological topics and works through complex problems with several examples.

**IUPAC | International Union of Pure and Applied Chemistry. (2018). *International Union of Pure and Applied Chemistry*. [online] Available at: https://iupac.org/ [Accessed 2 Nov. 2018].**

A website similar to the Biophysical Society, but more focused on providing access to different resources hosted by the site itself, such as chemical nomenclature.

**Nature.com. (2018). *Scitable | Learn Science at Nature*. [online] Available at: https://www.nature.com/scitable [Accessed 2 Nov. 2018].**

Scitable is another great educational resource primarily for biology, as it provides a succinct look at a molecular technique or concept that’s easy to digest.

**Physicsclassroom.com. (2018). *The Physics Classroom*. [online] Available at: https://www.physicsclassroom.com/ [Accessed 2 Nov. 2018].**

Another educational resource but for physics, where myriad concepts undergraduates and graduates in the field will come across In their coursework are explained in detail. The site is also useful as a quick refresher course of basic physical concepts.

**Neuinfo.org. (2018). *NIF | Welcome...*. [online] Available at: https://neuinfo.org/ [Accessed 2 Nov. 2018].**

A useful website that allows to search for anything neuroscience, and returns potential resources to browse either on the site itself or directing you to other sources.