



In vitro C2C12 cells, an immortal myoblast cell line. 2016. Image provided by Amrita Sahu of the Ambrosio Lab at the University of Pittsburgh.

In this image, myoblasts have been stained for cytoskeletal f-actin (phalloidin, in red) and the nuclei (DAPI, in blue). The cytoskeleton is at the heart of mechanotransductive responses, and mechanotransduction—the conversion of a biophysical force into a cellular and molecular response—forms the foundation of mechanotherapies, some of the most commonly used types of physical therapist interventions.

In this month's installment of PTJ's special series on Regenerative Rehabilitation and Genomics, Thompson et al feature the critical role that physical therapists play in facilitating tissue function not only *after* regeneration but *during* the regenerative process. In May, Dunn and Olmedo highlight how cells sense and respond to mechanical stimulation and the new scientific methods and technologies that, applied to physical therapist practice, "may hold answers to some of our age-old questions while creating new avenues for our profession to optimize movement for societal health."

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