



# Muskuloskeletal Disorders

Our skeleton provides our body with the strength, structure, and support. Without our bones we could not sit, stand, dance, play, or lie down and read a book. It is therefore vitally important that we protect our bones throughout our lives. Getting enough calcium as well as resistance strength training are crucial to the development and maintenance of healthy bones.

Holding our skeleton together are hundreds of individual muscles whose health depends on our nutritional intake as well as physical activity. To maintain muscle mass and strength, one should engage in a variety of physical outdoor and indoor activities.

### Musculoskeletal Disorders

Musculoskeletal disorders denote any abnormalities or illnesses that affect either the muscular or skeletal system. Examples of muscular disorders include foot drop (when the ankles and toes turn upward) and shin splints (inflammation of the connective tissue on the calf). Skeletal disorders are varied and many, and two examples are bone spurs (bony projections on joints) and arthritis (inflammation and pain in the joints). These disorders are often painful and debilitating if left untreated but many successful treatments and therapies exist to make the conditions more manageable.

	COMPANY	PRODUCT	PHASE
Musculoskeletal Disorders	Impax Laboratories, Inc.	Orphenadrine Citrate Extended Release Tablets	M

## INTERMUNE®

*InterMune is a Bay Area-based biotechnology company focused on the research, development and commercialization of innovative therapies in pulmonology and hepatology. InterMune has an exciting late-stage pipeline, as well as preclinical and discovery research programs, that seek to help patients with two serious unmet medical needs: idiopathic pulmonary fibrosis (IPF) and hepatitis C virus (HCV) infection. In pulmonology, we have two Phase III programs evaluating possible new therapies for treatment of patients with IPF: the INSPIRE trial, evaluating Actimmune®, and the CAPACITY program, evaluating pirfenidone. Our hepatology portfolio includes ITMN-191, the lead HCV protease inhibitor compound, a second-generation HCV protease inhibitor program, and a research program evaluating a new target in hepatology. We recently entered into a strategic collaboration with Roche for the development and commercialization of our HCV protease inhibitors. For additional information about InterMune and its R&D pipeline, please visit [www.intermune.com](http://www.intermune.com).*

### Osteopetrosis

Osteopetrosis is an extremely rare inherited disorder (1 in 20,000-500,000 for the dominant form and 1 in 200,000 for the recessive form) in which the bones become dense and harden. In normal bone formation, there is a balance between osteoblasts which create bone tissue and osteoclasts which destroy bone tissues. Patients with osteopetrosis have too few osteoclasts, so too much bone is created. Though seemingly contradictory, those with this disease have bones that are more brittle than normal. Mild cases usually do not show signs of the disease, whereas more serious forms can result in stunted growth, deformity, increased likelihood for fractures and anemia. The extra bone can also put pressure on surrounding tissues, leading to blindness, facial paralysis and deafness. There is no known cure but bone marrow transplants are being tested as a possible treatment.

	COMPANY	PRODUCT	PHASE
Osteopetrosis	InterMune, Inc.	Actimmune (interferon gamma-1b)	M

**Spasm**

Spasms are sudden involuntary muscle contractions. They can also occur in a group of muscles, a hollow organ, or an orifice. Spasms are frequently accompanied by a quick burst of pain, though it is usually harmless and ends after a few minutes. Nobody really knows what causes spasms, but they may be due to a large number of medical conditions.

COMPANY	PRODUCT	PHASE	
<b>Impax Laboratories, Inc.</b>	Dantrolene Sodium Capsules	M	<b>Spasm</b>
<b>ALZA Corporation</b>	Flexeril	M	

