The Kyba laboratory studies the role of skeletal muscle stem cells in muscle regeneration and disease. One main project in the lab is to discover and understand new genes that are important for the function of skeletal muscle stem cells. These new genes present potential new therapeutic targets for enhancing regeneration in diseases of muscle. The laboratory has a special interest in facioscapulohumeral muscular dystrophy (FSHD).

Dr. Dawn Lowe, PhD | Department of Physical Therapy

The goal of Dr. Lowe’s current project is to show that the loss of excitability during and immediately following muscle contractions by boys with DMD is repairable, and to show that therapies that impact muscle membrane integrity and excitability can lessen fatigue. Dr. Lowe’s lab hopes to start testing the impact of therapeutics on circuit breaker mechanisms that are predicted to underlie muscle fatigue in boys with DMD. This would improve the quality of life for these young men while strategies to cure the disease are being developed.

Dr. James Ervasti, PhD | Wellstone MD Center Research Director

Dr. James Ervasti's laboratory is currently investigating how the loss of the protein dystrophin in Duchenne muscular dystrophy triggers oxidative stress to ultimately cause muscle weakness. Additionally, Dr. Ervasti’s group is identifying metabolic biomarkers that can be used to non-invasively monitor the progression of Duchenne and Becker muscular dystrophy patients and also report on the effectiveness of therapies currently in development.

Dr. Joe Metzger, PhD | Lillehei Heart Institute

Duchenne muscular dystrophy causes muscle degeneration in the heart and progressive cardiomyopathy. That’s why Joseph Metzger, Ph.D., chair of the Medical School’s Department of Integrative Biology and Physiology, is developing a new therapy that he calls the “molecular Band-Aid.” When injected into the bloodstream, this chemical Band-Aid seeks out tiny cuts in the heart muscle and protects them from harm so that the heart can function normally. Dr. Metzger hopes to begin clinical trials of this therapy in humans soon.
The MD Center faculty has doubled in size from 21 to 47 members since its inception in 2003.

The largest NIH-funded training program in the country for muscle research, supporting:
- Pre-doctoral
- Post-doctoral
- Clinical and basic trainees

The first in the nation to launch an annual Family Camp dedicated to families afflicted with neuromuscular diseases, now in its 6th year.

Received more than $2 million of MDA funding; The Wellstone MD Center is the highest funded MDA institution in the nation.

Over 15 active clinical studies.

www.mdcenter.umn.edu

Upcoming Events

Greg Marzolf, Jr. Symposium
3-6pm, November 19th, 2015
University of Minnesota,
Cancer & Cardiovascular Research Building

Greg Marzolf Jr. Foundation’s
Cause to Cook for a Cure Gala
5:30pm, January 30th, 2016
University of St. Thomas,
Anderson Student Center

Paul & Sheila Wellstone MD Center
Annual Lab Day
10am-1pm, February 13th, 2016
University of Minnesota,
Cancer & Cardiovascular Research Building

Get in Touch

www.mdcenter.umn.edu
mdcenter@umn.edu
(612) 626-0822