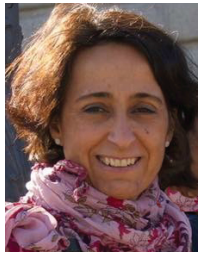
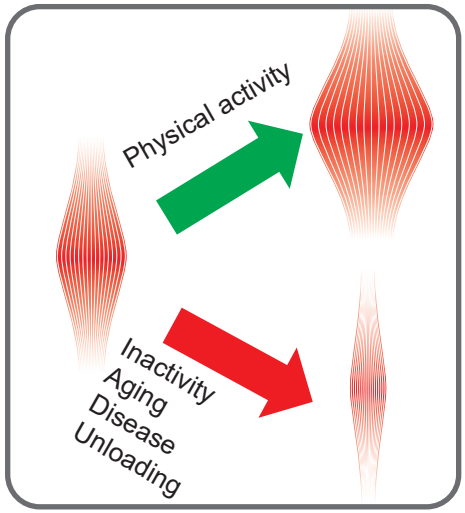


Marta Murgia, PhD



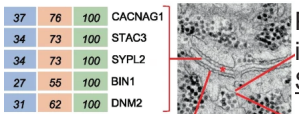
Exploring muscle plasticity by single fibers proteomics

Skeletal muscle plasticity involves the transition of muscle fibers through different structural and metabolic phenotypes, to an endpoint matching environmental conditions.

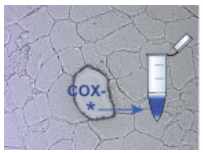
The result could be an increase of muscles in mass and performance, as in the case of exercise, or a functional decline, as in the case of age-dependent sarcopenia

Using mass spectrometry-based proteomics, we are exploring fiber type-specific changes that occur in skeletal muscle as a consequence of aging, disease, exercise, mechanical unloading and inactivity. We are open to inputs and suggestions.

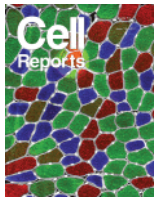
Some of our publications on muscle fiber proteomics



Protein profile of fiber types in human skeletal muscle: a single-fiber proteomics study. **Murgia M**, Nogara L, Baraldo M, Reggiani C, Mann M, Schiaffino S. Skelet Muscle. 2021 Nov 2;11(1):24.



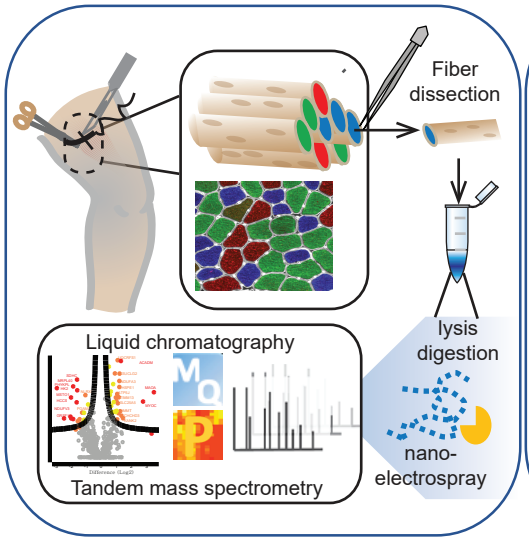
Proteomics of Cytochrome c Oxidase-Negative versus -Positive Muscle Fiber Sections in Mitochondrial Myopathy. **Murgia M,** Tan J, Geyer PE, Doll S, Mann M, Klopstock T. Cell Rep. 2019 Dec 17;29(12):3825-3834.

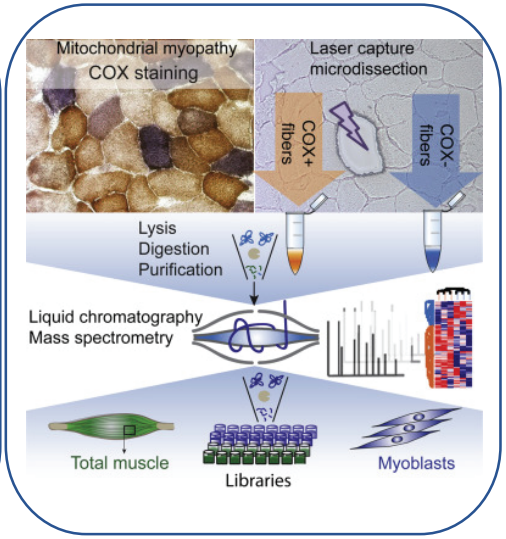


Single Muscle Fiber Proteomics Reveals Fiber-Type-Specific Features of Human Muscle Aging. **Murgia M**, Toniolo L, Nagaraj N, Ciciliot S, Vindigni V, Schiaffino S, Reggiani C, Mann M. Cell Rep. 2017 Jun 13;19(11):2396-2409

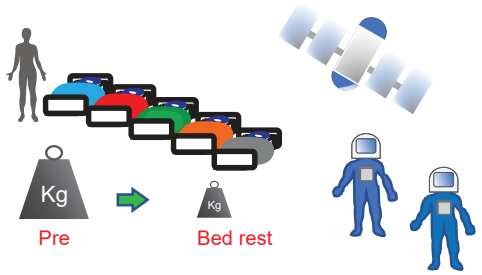
Single muscle fiber proteomics reveals unexpected mitochondrial specialization **Murgia M**, Nagaraj N, Deshmukh AS, Zeiler M, Cancellara P, Moretti I, Reggiani C, Schiaffino S, Mann M. EMBO Rep. 2015 Mar;16(3):387-95.

Workflows





In progress



Various collaborations