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The German Diabetes Center (DDZ) in Düsseldorf has one research focus, which addresses metabolic pathways in various human and animal tissues emphasizing the role of mitochondria in insulin resistance, obesity and diabetes mellitus. The research objectives are to characterize how mitochondrial function, energy, glucose and lipid metabolism change under different physiological and pathophysiological conditions in order to derive potential diagnostic tools and therapeutic targets for the prevention and treatment of diabetes and its complications.

As such, the center has a longstanding reputation in basic, clinical and epidemiological studies in the field of diabetes mellitus and its comorbidities. One key effort of the DDZ is the organization of the German Diabetes Study (GDS), a nationwide long-term prospective multicenter cohort study in patients with new-onset diabetes. This study comprises repetitive detailed phenotyping including anthropometry, insulin secretion and sensitivity testing, biobanks including blood, muscle, skin and adipose tissue specimen, spiroergometry, as well as cognitive and neurological tests. Another long-term study with similar extensive phenotyping including also liver samples addresses the effects of bariatric surgery in obese humans. In addition, research groups at DDZ also examine various transgenic mouse models with altered muscle, liver, and fat metabolism.

Thus, we can provide relevant input into *WG 2: MITOEAGLE data repository in muscle and other tissues* and *WG3: MITOEAGLE data repository on fat tissues and other tissues*. With 6 oxygraphs continuously running in our lab, we can further contribute to *WG5 MITOEAGLE dissemination and training* by organizing scientific meetings and workshops in order to foster collaborative interactions among the member of the COST Action Mitochondrial fitness mapping MITOEAGLE: Evolution - Age - Gender - Lifestyle - Environment.

For the reasons stated above, we would offer to be part of Management Committee of the Action and would be honored to contribute!