



## A multidisciplinary approach to the identification of BIOmarkers of MIGraine: a proof of concept study based on the stratification of responders CGRP monoclonal Antibodies (BIOMIGA)

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Migraine is a common neurological disorder and a major source of disability. Though curable in principle, migraine generally improves poorly with available treatments, due to their limited efficacy and scarce tolerability. In 2018, monoclonal antibodies (mABs) against calcitonin gene-related peptide (CGRP) receptor have been approved. These mABs are the first specific preventive treatment for migraine ever developed. They are highly effective in a subgroup of patients, well tolerated, but costly. The main objective of this project is the identification of predictive biomarkers of response to CGRP-targeted mABs in patients with migraine. To this end, we will use a hypothesis-driven, multidisciplinary approach that combines fundamental research in a validated animal model of migraine with a variegated and integrated 'omics' approach on a carefully characterized population of migraine sufferers. Three partners with an established long-standing and complementary expertise in animal modeling and epigenetics, neuroimaging and biochemical profiling in humans will collaborate to achieve the Project's objective. We expect important spin-offs to the improved management of migraine, but also to the understanding of CGRP-based mechanisms underlying migraine pathophysiology. Healthcare providers and the pharmaceutical industry will be engaged once the biomarker(s) have been identified to optimize access to care, reduce disability and socio-economic impact of migraine.