



## Biomarkers of ANTidepressant RESPONSE: early indicators and novel targets (ANTaRES)

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ANTaRES aims to identify early biomarkers of antidepressant action, to distinguish future responders / non-responders. We have recently identified the transcription factor Elk-1, an ERK downstream partner as a specific module within the stress-response, a novel outcome biomarker of response to treatment, but also an ideal mediator of individual responses to antidepressant treatment at early stages. We capitalize on this novel framework to investigate early biomarkers of response to antidepressant treatments, a promising avenue for the development of predictive biomarkers of the drug response. We use hypothesis-based (Elk-1 and its regulators) but also large-scale analyses to identify yet unknown mRNA and miRNA early biomarker candidates. We propose a translational (in patients and mice) and multi-level (blood, CNS, individual CNS cell populations) approach with a longitudinal design. For this we build a strong collaboration between clinicians, translational investigators, molecular and cellular biologists to

- Identify peripheral “early post-treatment biomarkers” of antidepressant response in a novel prospective patient cohort
- Validate “early post-treatment biomarkers” in blood and link blood alterations with CNS alterations in cell specific populations in mouse models
- Select the best “hits” and validate plausibility and causality by targeted manipulations in the animal.