

## DEVELOPMENT OF A PERSONALIZED AND AT-HOME FOLLOW-UP SYSTEM FOR AFFECTED PATIENTS OF CYSTIC FIBROSIS.

### PROJECT OBJECTIVES

MucoPiezoRheo Project, led by Rheonova in partnership with Cedrat Technologies (CTEC), TIMA and LRP laboratories of Grenoble-Alpes University, was selected as part of the PSPC program (Structuring Projects for Competitiveness).

Labellised by LyonBioPole this project is financed by the State via a Public Investment Bank under the Future Investment Program, Auvergne-Rhône-Alpes Region and Grenoble-Alpes City, and has started in 2020 for a duration of 36 months.

MucoPiezoRheo aims to establish a personalized monitoring tool for patients with cystic fibrosis and to anticipate exacerbations phases. These crises are characterized by a significant deterioration of patients' conditions, leading to an irreversible loss of respiratory capacities and emergencies hospitalizations. Predicting exacerbations will enhance possibility to adapt treatments upstream and therefore to limit clinical consequences and emergencies hospitalizations, however it does require a regular and personalized follow-up of patients. Analysis of mechanical properties of mucus samples helps to detect pre-exacerbated conditions.

MucoPiezoRheo project must bring this rheological analysis right up to patients' bedsides to allow regular follow-up through development of miniaturized, ergonomic, and accessible medical device.

### CEDRAT TECHNOLOGIES CONTRIBUTION

CTEC will help the consortium thanks to its knowledge in Piezo Technology and Magnetic Sensor design. By developing a new innovating magnetics sensor inside the current Rheometer, the size of the machine will dramatically decrease. And the use of the Piezo Technology will allow to develop a High Frequency Rheometer.

### PARTNERS

- [RHEONOVA](#)
- [LRP \(Laboratories of Grenoble-Alpes University\)](#)
- [CEDRAT TECHNOLOGIES](#)
- [TIMA](#)



### FUNDERS

