H2020 European Innovation Council Pathfinder Pilot awards 3M€ to ROSE project to help people with loss of smell

Seven international partners join forces to advance technology in assisting people with anosmia

8 December 2021, Lyon (France) - Partial and total loss of smell (hyposmia / anosmia) impacts 20% of the global population with adverse effects on quality of life. The Covid pandemic has shown that nearly one in two Covid-positive people worldwide suffers from olfactory loss which persists in some cases. Unlike other sensory systems, there is currently no advanced technology that can partially or totally restore the sense of smell.

The ROSE project, coordinated by the Centre National de la Recherche Scientifique (CNRS, France), will combine the efforts of seven international partners to provide a proof of concept of a new technology that would help people suffering from anosmia to perceive their olfactory environment.

The ROSE project has been awarded over 3 million euros in European funding under the H2020 European Innovation Council Pathfinder Pilot programme (formerly known as Horizon 2020 FET-Open programme). The project includes collaboration from CNRS (www.cnrs.fr), Politecnico di Milano (Italy, www.polimi.it), École Polytechnique Fédérale de Lausanne (Switzerland, www.epfl.ch), University of Thessaloniki (Greece, www.auth.gr), University of Dresden (Germany, www.uniklinikum-dresden.de), Aryballe (France, www.aryballe.com), and Commissariat à l'Energie Atomique et aux énergies alternatives (France, www.cea.fr).

This interdisciplinary research project will combine nanotechnology, microtechnology, biotechnology, mechanical design, neurosurgery, clinical olfaction, neuroscience and cognitive psychology. The ultimate goal of the ROSE project is to develop a proof of concept combining miniaturized odor sensors and stimulation arrays that will be evaluated in patients with smell disorders.

“We are excited for the new generation of innovation this will spark from the project to overcome scientific and social challenges in the area of neuroscience and olfaction in particular” [Dr. Moustafa Bensafi from CNRS, coordinator of the Rose project].

In addition to its central objective, the ROSE project will also open up new scientific and technological possibilities for miniaturization of affinity sensors for other applications. These include integration into household appliances, R&D and quality control for food, flavors and fragrances, and new neural stimulating approaches for neuroscience research.

More information is available on the ROSE EU-funded project website (www.rose-h2020.eu).

This project has received funding from the European Union's H2020 European Innovation Council Pathfinder Pilot under grant agreement No 964529.