The first Percutaneous Paddle Lead for Spinal Cord Stimulation (SCS)

Fact Sheet

Project Information

PercPad
Grant agreement ID: 867190
DOI
10.3030/867190

Funded under
INDUSTRIAL LEADERSHIP - Innovation In SMEs
Total cost
€ 71 429
EU contribution
€ 50 000

Coordinated by
WISE SRL
Italy

Start date
1 May 2019
End date
31 August 2019

Project description

The first percutaneously implantable paddle lead for spinal cord stimulation

Chronic pain affects billions of people worldwide, preventing them from leading a productive working and social life and incurring significant socioeconomic costs. As a pain relief technique, spinal cord stimulation (SCS) is used to block pain signals before they reach the brain through the delivery of electrical stimuli to the spinal cord by means of implantable leads. Currently, two types of leads are available: multi-column paddle and cylindrical. Paddle leads offer better treatment results but can only be inserted surgically. The team of the EU-funded PercPad project is developing a minimally invasive percutaneous SCS paddle lead (which can be implanted also by
anaesthesiologists and pain specialists) and will undertake the necessary activities to introduce the device into the market.

Objective

Chronic Pain is one of the most common conditions for which people seek medical attention: around 20% of adult Europeans and 27% of the US are affected with moderate to severe intensity by such syndrome. Chronic pain has serious impacts on their quality of life, including impaired physical and social functioning and reduced vitality, while being also very costly, estimated to be as much as €300 billion/year in EU only!

Spinal Cord Stimulation (SCS) is a chronic pain relief technique that delivers low-voltage electrical current pulses to the spinal cord to block the sensation of pain. It is the most commonly used implantable neuromodulation technology for the management of pain syndromes. However, this method is hindered by the available leads, which are bulky, stiff, with poor stretching and bending properties, affecting performance, precise positioning and allowing the migration of the electrode over time – thus requiring additional surgery intervention for repositioning.

The Percutaneous SCS Paddle Lead (PercPad) proposed by WISE is a “Breakthrough Product” with the potential to revolutionize the neuromodulation scenario. PercPad is a foldable paddle requiring the same implanting technique of percutaneous leads but with the properties of surgical paddles. It addresses a key market need within the segment of the growing neuromodulation market (to reach €1.95 Billion by 2021) and may be potentially applied in the future to other sectors where implantable medical devices with electrodes are employed, e.g. the cardiostimulation sector.

The goal of the current Phase 1 is to conclude the feasibility assessment of the PercPad in order to validate from a technical, regulatory and commercial perspective its ability to reach the market. This activity will supplement €2.1M worth of work already invested in the project. Within a 5-year period after the launch, WISE expects to generate a cumulative revenue over €37M respectively.

Fields of science

medical and health sciences › clinical medicine › surgery
social sciences › economics and business › business and management › business models

Programme(s)

H2020-EU.2.3. - INDUSTRIAL LEADERSHIP - Innovation In SMEs
H2020-EU.3. - PRIORITY ‘Societal challenges
H2020-EU.2.1. - INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies

Topic(s)

EIC-SMEInst-2018-2020 - SME instrument

Call for proposal

H2020-EIC-SMEInst-2018-2020

See other projects for this call

Sub call

H2020-SMEInst-2018-2020-1

Funding Scheme

SME-1 - SME instrument phase 1

Coordinator

WISE SRL

Net EU contribution

€ 50 000,00

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Region

Nord-Ovest > Lombardia > Milano

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network

Non-EU contribution