

Austrian research institute looking for partners in the field of neurorehabilitation using artificial environments like virtual reality, augmented reality and robots

Summary

Profile type	Company's country	POD reference
Technology request	Austria	TRAT20220728005
Profile status	Type of partnership	Targeted countries
PUBLISHED	Research and development cooperation agreement	• World
Contact Person	Term of validity	Last update
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General Information

Short summary

An Austrian research centre with expertise in stroke and vascular ageing neurorehabilitation - using virtual/augmented reality, robots and neuroimaging techniques - was recently created. The centre uses innovative approaches for an adapted and efficient improvement of patients' quality of life via neurocomputational modelling. The centre has connections to clinics and is now looking for private and public partners to collaborate on new technologies under a research and/or technical agreement.

Full description

The Austrian research centre on stroke and vascular ageing is funded by a national program to transfer scientific results into industrial applications. With scientific shareholders, the centre is a national competence centre in the field of stroke diagnosis, prevention and neurorehabilitation.

The research centre's neurorehabilitation division and research group was recently set up and aims to improve the quality of life of patients with neurological conditions (stroke, traumatic brain injury, cognitive impaired patients, etc) via latest technological innovative tools like virtual/augmented reality and/or robots in combination with brain electrical and metabolic activity (electroencephalography and functional near-infrared spectroscopy). The research centre's neurorehabilitation division has expertise in neuroscience, robotics, virtual/augmented reality, signal recording, processing and analysis, machine-learning, and speech therapy.

Interested in fundamental and translational research, the division is looking to collaborate with scientific partners to apply for national, international and industrial projects for advanced R&D in this field. As a long-term goal, the consortium intends to produce and sell jointly-developed products as a medical device.

Advantages and innovations

Research outcomes validate the combination of virtual/augmented reality with neurodynamic techniques (electroencephalography and/or functional near-infrared spectroscopy). Compared to the conventional methods used in neurorehabilitation, the research centre's approach ensures the best recovery of neurological functions after disease by maximizing everyday life reorganization of patients. Advantages, from a patient's point of view, are therefore increased accessibility of rehabilitation at home or even remote areas, as well as a higher degree of comfort and autonomy.

As such, the overall objective is to improve the quality of life of neurological patients, which in turn will improve the quality of life of their families and the quality of life of the society at large.

Stage of development

Under development

Sustainable Development goals

- **Goal 9: Industry, Innovation and Infrastructure**
- **Goal 3: Good Health and Well-being**
- **Goal 17: Partnerships to achieve the Goal**

IPR Status

Secret know-how

Partner Sought

Expected role of the partner

The research centre is now looking for partners from the public or private sector to collaborate on new technologies under a research and/or technical agreement:

- Research and development partners are required to support fundamental scientific research related to innovative technologies for neurorehabilitation of stroke patients. Partners could be R&D industrial institutions, companies, research centres and/or universities with expertise in technological innovation associated with virtual environments, robots and/or neuroimaging techniques (electroencephalography, functional near-infrared spectroscopy, brain-computer-interface, etc). The partner's activity should be translational research.

- As a long-term goal, the consortium intends to produce and sell jointly-developed products as a medical device. For a joint development, companies or industry partners with expertise in artificial/virtual environments or robotics are sought.

The aim is to develop new technologies adapted to personal needs of patients.

Type of partnership

Type and size of the partner

Research and development cooperation agreement

- R&D Institution
- SME <=10
- Big company
- Other
- SME 50 - 249
- SME 11-49
- University

Dissemination

Technology keywords

- **006001002 - Care and Health Services**
- **006001012 - Electromedical and Medical Equipment**
- **06001014 - Neurology, Brain Research**
- **06001013 - Medical Technology / Biomedical Engineering**
- **06001012 - Medical Research**

Targeted countries

- **World**

Market keywords

- **05003001 - Therapeutic services**
- **05007006 - Computer-aided diagnosis and therapy**
- **05007007 - Other medical/health related (not elsewhere classified)**
- **05003006 - Other therapeutic (including defibrillators)**

Sector groups involved