An italian medtech startup looks for collaboration on lung nodule diagnostics for the EUROSTARS application deadline 14 March 2024

Summary

Profile type	Company's country	POD reference
Research & Development Request	**Italy**	**RDRIT20240205007**
Profile status	Type of partnership	Targeted countries
PUBLISHED	**Research and development cooperation agreement**	**• World**
Contact Person	Term of validity	Last update
Sabrina WODRICH	**6 Feb 2024** **5 Feb 2025**	**6 Feb 2024**

General Information

Short summary

The EUROSTARS proposal is about tracking and classifying lung nodules with a novel approach that involves several technology levels, IT infrastructure and AI components. Some parts of the software are already available for data acquisition, analysis and testing while basic research is still needed to augment the diagnostic accuracy by developing some AI modules and infrastructural components.

Full description

Tracking nodules is key for phase 1 lung cancer detection, reduce biopsies and increase efficacy of treatment. The EUROSTARS proposal is about optimizing lung cancer management, by developing specific algorithmics for tracking and classifying phase 1 lung nodules. Such approach is novel and involves several algorithmic elements that need to be developed, refined and orchestrated, each with its own technological requirement. The project aims at reaching real-time diagnosis via the highest level of automation which poses severe constraints on AI-based research for augmented accuracy while securing speed of execution. In addition real-time diagnostics is challenging in terms of engineering the IT infrastructure and orchestrating the various AI components.

The proposer has a consolidated experience in the field of medical imaging specifically from CT scans, 3D image analysis and model reconstruction, and finally functional analysis of lung ventilation and perfusion. The startup has already developed a lung digital twin platform usable for data acquisition, analysis and testing but the present

proposal will push the envelope by one order of magnitude in terms of efficiency. The partner will be focusing on developing, training and testing specific AI modules to be deployed in public or private clouds as containerized solutions, with a focus on high performance delivery for each AI component.

Advantages and innovations

Lung nodule detection, classification and management are key to treat lung cancer at early stage, thus significantly increasing survival rates. Such project proposal falls within the large international effort to provide AI-based automated tools for lung cancer diagnosis and monitoring that requires a quantum leap in innovation to screen large volumes of patients, at the same time, by minimizing diagnostic errors and unnecessary CT scans.

Technical specification or expertise sought

Expertise in data science and AI-research, preferably with experience on medical imaging analysis. Expertise on software development with focus on orchestrating AI components, high-performance computing and building the IT infrastructure on public or private clouds.

Stage of development

Available for demonstration

Sustainable Development goals

• **Goal 3: Good Health and Well-being**

IPR Status

IPR granted

Partner Sought

Expected role of the partner

The proposer and the partner will perform joint research on some predefined AI architectures that are well-known candidates for nodule detection and classification. Joint-research within the project will involve the partner on developing nodule tracking algorithmics for shape and growth classification during follow-ups. The partner will further perform research on the optimal engineering of the technology with the goal that the final product will be hosted on the startup platform as a plugin.

Type of partnership

Research and development cooperation agreement

Type and size of the partner

• **SME 50 - 249**

• **SME <=10**

• **SME 11-49**

Call Details

Framework program

Eureka

Call title and identifier

Eurostars call for projects MAR 2024

Submission and evaluation scheme

Anticipated project budget

Coordinator required

Yes

Deadline for EoI

29 Feb 2024

Deadline of the call

14 Mar 2024

Project duration in weeks

Web link to the call

https://www.eurekanetwork.org/open-calls/eurostars-funding-programme-2023-call-6

Project title and acronym

Dissemination

Technology keywords

- **01001002 - Digital Systems, Digital Representation**
- **01003003 - Artificial Intelligence (AI)**
- **01003024 - Cloud Technologies**
- **01003008 - Data Processing / Data Interchange, Middleware**
- **01003012 - Imaging, Image Processing, Pattern Recognition**

Market keywords

- **05002002 - CAT scanning**
- **05001001 - Diagnostic services**
- **05005007 - Pulmonary medicine**
- **02007016 - Artificial intelligence related software**
- **02007012 - Medical/health software**

Targeted countries

- **World**

Sector groups involved

Media

Images

doctors-using-transparent-tablet-with-hologram-medical-technology-650x650.png