

Greek SME offers an innovative, smart, patented personal radiation dosimeter with a platform allowing for instant measurement for persons working in radiation environment conditions such as in healthcare, space, nuclear industry.

Summary

Profile type	Company's country	POD reference
Technology offer	Greece	TOGR20240526001
Profile status	Type of partnership	Targeted countries
PUBLISHED	Commercial agreement with technical assistance	• World
Contact Person	Term of validity	Last update
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General Information

Short summary

A Greek SME has developed and offering a patented, innovative, smart, personal radiation dosimeter capable of measuring all key types of harmful radiation (X-rays, Gamma, Heavy ions, Beta and Neutrons), with higher sensitivity and accuracy, in real time. The company is looking for distribution agreements with medical or safety equipment providers. Or commercial agreements with technical assistance with end-users such as hospitals, aerospace agencies, nuclear industry facilities etc.

Full description

The danger of radiation is a serious threat for the persons working in healthcare (approximately 30 million people globally, with 7 million health workers incur high radiation doses annually), space, aviation, nuclear industry and other similar sectors. Passive dosimeters are used commonly for more than 20 years to protect them. These dosimeters are badges that need to be collected regularly and transferred to specialized laboratories, in order to record the dosage of each person. The problems with them are multiple. First, they just inform about the radiation exposure and they don't prevent the exposure. They can detect and measure only certain types of radiation. The record of data is allowing only one, cumulative value when the badge returns for measurement. The process is also costly and timely.

A Greek SME company has developed a patented, innovation, smart radiation dosimeter, to overcome the limitations of the passive dosimeters. They are small electronic devices, capable of measuring all key types of radiation such as X-rays, Gamma, Neutrons, Beta and Heavy Ions. The sensitivity and the accuracy of the smart dosimeters are much higher than the passive (from 1 μ Sv). The dosimeter is able to alert instantly the person when certain thresholds (programmed) of radiation are exceeded. The recording of radiation is continuous and the data is sent automatically to the dedicated platform of the company. The user is then able to collect automatically statistics of the radiation received and produce reports. The platform could also connect with the relevant governmental regulatory authorities.

The company is seeking for opportunities to establish agreements with distributors of medical or security equipment. Also, commercial agreements with technical assistance with end-users of the dosimeter such as hospitals, atomic or space federations.

Advantages and innovations

The offer dosimeter can help people to protect their health, at least, effectively from radiation. Compared to passive dosimeters, it has much higher sensitivity, it can detect the lower limit radiation that the passives simply cannot. It has also increased accuracy to pulsed radiation, the main source of radiation in healthcare. It can detect all types of harmful radiation. It can continuously record and transfer automatically the data. The dedicated platform used allows the process of data and to prepare reports. Healthcare organizations and Radiation Protection Authorities are able to comply with legislative requirements and make administration easy, fast, less costly and secure.

As a piece of evidence, the product is used by 3 well-known aerospace agencies, a large aerospace company, an atomic federation and many hospitals globally. The company has also received the Seal of Excellence for the innovative design and significant impact of the dosimeter.

Technical specification or expertise sought

Stage of development

Already on the market

IPR Status

IPR granted

IPR Notes

Sustainable Development goals

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

Partner Sought

Expected role of the partner

The Greek company is seeking for distributors of medical or security equipment. These partners should be able to connect to sectors such as healthcare, space, aviation, nuclear industry and other similar sectors, in which radiation poses a risk for health.

The company is also open to conclude commercial agreements with technical assistance with end-users (such as hospitals, atomic or space federations) that wish to provide directly the dosimeters.

Excluded countries: Belgium, Netherlands, Luxemburg, Greece, Italy, Portugal and Brazil in which the company has distributing partners.

Type of partnership

Commercial agreement with technical assistance

Type and size of the partner

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

Dissemination

Technology keywords

- **06005001 - Safety & systems**
- **06001005 - Diagnostics, Diagnosis**
- **01004001 - Applications for Health**
- **10001005 - Radiation Protection**

Targeted countries

- **World**

Market keywords

- **05004004 - Medical instruments**
- **02007012 - Medical/health software**
- **05007004 - Monitoring equipment**

Sector groups involved

- **Health**
- **Digital**
- **Aerospace and Defence**