

A smart, innovative body temperature measurement system used in the early detection of infections to aid in diagnosis and patient follow-up care

Summary

Profile type	Company's country	POD reference
Technology offer	Austria	TOAT20220707021
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

An Austrian SME offers a cost-effective system to continuously measure body temperature. It consists of a single-use skin patch with an integrated temperature sensor and a supporting app. It displays temperature trends, peaks and averages that can help with diagnosis, thus benefitting the medical facility, its staff and patients. Its accuracy has been demonstrated. Both the B2B and B2C markets are addressed. Partners are sought for licensing or a commercial agreement with technical support.

Full description

An Austrian bio-medical engineering company, founded in 2016, has developed and produced an innovative temperature measurement system. The SME recognises the enormous potential of sensor technology and continuous temperature measurement in both the medical & healthcare industry. The company is already established in the global femtech fertility industry and has adapted this product to create diagnostic tools for healthcare and private use.

The Austrian SME's innovation is the only solution based on continuous temperature measurement over several days without impacting daily life. The system can identify a potential infection through continuous live measurements of an individual's body temperature over a longer period of time, so faster and better medical treatment is possible. The system is able to record fever curves that can be used in the early detection of viral and bacterial infections, in

postoperative care, after chemotherapy and in cases of unclear injuries.

In the future, fever curves may become important as a diagnostic tool, as it is known from research that every disease has its own fever pattern. Fever curves also provide much more information about an individual's health status than a single and instantaneous temperature reading. As current methods of body temperature measurement are outdated and based on a 200-year old thesis, the vision of the company is to become the new standard in temperature measurement.

The system consists of a very precise temperature sensor (calibrated to a tolerance level of 0.1°C which measures body temperature every 5 minutes for up to 7 days) embedded in an adhesive skin patch which is placed under the arm, along with a supporting app. Temperature measurements are saved, data is transferred to a handheld or mobile phone using NFC (Near Field Communication) and the temperature readings are displayed in the app in the form of curves and graphs. In the case of atypical curves, this can indicate the need for further action.

The patch can communicate with all handheld devices or smartphones, which are NFC compatible. The RFID chip in the patch is read passively via an NFC-enabled smartphone and, unlike Bluetooth, does not emit any permanent radiation. The recorded temperature data can be accessed and processed for further evaluation. All personal data is stored in encrypted form and is displayed exclusively for the user in the app.

The current focus is on implementing the system in medical environment and B2C market. The patch shows potential not only in the healthcare sector, but also as an effective instrument for health-monitoring in the private sector. The SME has a strong core team, which has been together since the start-up phase bringing the initial idea to product launch. All development is carried out in-house while the production is outsourced to strategic partners. The solution functions cross platform, covers iOS and Android, is certified according to ISO13485 and complies with the MDD (Medical Device Directive). The accuracy of the system was demonstrated in a clinical study comparing it to a bladder catheter (gold standard).

The company seeks system integrators with component sub-systems for collaboration on the basis of commercial agreement with technical assistance. Organisations (e.g. health institutions, care homes) interested in buying a licence will also be considered. Customised solutions can be discussed.

Advantages and innovations

- intelligent, cost-effective, time-saving, reliable and precise system
- optimises workflow in the clinical setting
- reduces errors and eases staff workload
- skin-friendly patches (biocompatible materials)
- no radiation: temperature values can be read and transferred with a smartphone using NFC (similar to contactless payment in the supermarket)
- data transfer in seconds
- 100% safe from third party interference (because data transmission is only possible within centimetres, access by third parties is not possible)
- GDPR (General Data Protection Regulation) compliant - all personal data is stored on European servers

Stage of development

Already on the market

IPR Status

Secret know-how

Sustainable Development goals

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

Partner Sought

Expected role of the partner

The product is already being used in the medical environment and in care homes and is also available for private use.

Specific areas of application in the clinical environment:

- Postoperative care
- Hematology & Oncology
- Internal medicine
- Tropical medicine
- FUO (fever of unknown origin)

Specific patient target group:

- Patients at risk of fever and general infections
- Patients with chronic diseases
- Immunodeficient patients
- Patients who have received an organ transplantation
- Patients who are recommended to take temperature regularly due to certain medication
- Chemotherapy patients
- General health monitoring for families

The Austrian SME is looking for strategic partners and customers.

Strategic Partners: partners with projects or customers who can integrate the product into their daily life and business, tele-medicine platforms, health-apps & med-apps, sales organisations and personalities with a focus on health & medical hardware devices. Here a commercial agreement with technical assistance is envisaged.

Customers: Re-sellers of medical equipment and devices such as online platforms, pharmacies & retailers. Here licence agreements can be arranged.

The Austrian SME is interested in selling licences to potential customers in health institutions and care homes. Customised solutions can be discussed.

It is also interested in entering into commercial agreements with technical assistance with strategic partners who wish to integrate the patch system into larger projects involving higher numbers of people in preventative, risk mitigation and crisis management scenarios.

Due to existing partnerships, partners are not sought in UK, Ireland, Greece, Baltics, Australia or India.

Type of partnership

Commercial agreement with technical assistance

Type and size of the partner

- **SME 11-49**
- **Big company**
- **SME 50 - 249**

Dissemination

Technology keywords

- **05005 - Micro- and Nanotechnology**
- **01003022 - Smart Appliances**
- **09001009 - Sensor Technology related to measurements**
- **06005002 - Sensors & Wireless products**
- **06001021 - Single Use Products and Consumer Goods**

Targeted countries

- **World**

Market keywords

- **07004002 - Health and beauty aids**
- **05010001 - Safety for the elderly**
- **03007002 - Other measuring devices**
- **05007001 - Disposable products**
- **01002002 - Telephone interconnect and other equipment**

Sector groups involved

Media

Images



[interface and skin patch.png](#)

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[skin patch \(actual size\).png](#)

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[skin patch.png](#)

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