

AMETHYST

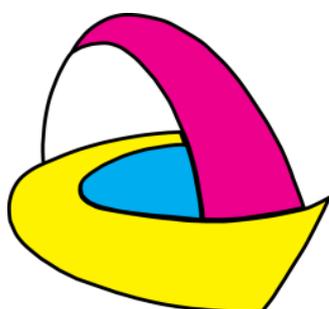
FP7 EC Supported Project
The Future of Wound Care



Ambulatory Magneto Enhancement of Transdermal High Yield Silver Therapy - AMETHYST

Project Lead: [Dr David Beynon](#)

<https://wcp Swansea.com/research/projects/amethyst>



Welsh Centre for Printing and Coating

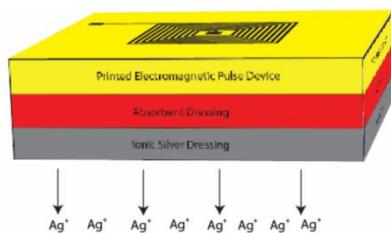
WCPC

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Project Overview

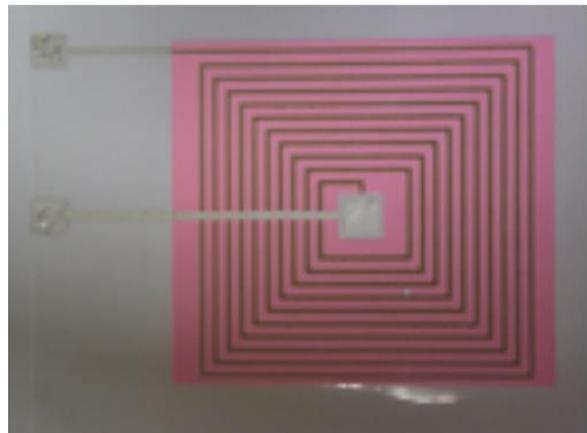
Chronic wounds such as venous leg ulcers affect about 2 million people in Europe. They typically take between 12 to 24 weeks to heal but 30% take over two years to heal so as well as the suffering experienced by patients there is an associated European healthcare cost of €8billion a year.

The AMETHYST Ambulatory Magneto Enhancement of Transdermal High Yield Silver Therapy) project aims to reduce healing times using Pulsed Electromagnetic Field (PEMF) and enhanced silver ion therapy. The PEMF increases the concentration of silver ions available in the wound bed margin through a multilayer device designed to be worn by the patient in their everyday lives.



As an EC FP7 funded project the team is made up of a consortium of European SMEs and research organisations. With the project lead by [pulse medical technologies](#) and Swansea University through its strategic collaboration between the colleges of engineering and medicine, the institute for life science is conducting biological, electronic and volume manufacture research.

The WCPCs role in the project is research and development of the electromagnetic coil element forming the top layer of the wound dressing. There are several design constraints: The dressing must be flexible, significantly 2 dimensional and capable of treating a 5x5cm area within a 10x10cm dressing. Using the screen printing process a stacked electromagnetic coil has been produced which when connected to bespoke electronics and thin film battery technology produces an effective electromagnetic pulse to the wound bed. More information can be found at the [Amethyst project website](#).



The AMETHYST project is the result of an FP7 grant from the European Commission consisting of a consortium of companies and organisations, across Europe with specific skill sets and capabilities. The consortium consists of 7 partners, including 1 university and 6 companies:

- CNH, Swansea University, Wales, UK
- Pulse Medical Technologies, UK
- BSN Medical GmbH, DE
- Barric Ltd., UK
- CK Produktion A/S, DK)
- Esfil Tehno AS, EE
- Kepar, ES

Project Partners



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