

Biophotonics Cluster Meeting – Brussels – 5 Nov 2010

*LED-based optical
haemostatic device*



*Speaker: Dr. Riccardo Cicchi
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Florence, Italy*

LENS (European Laboratory for Non-linear Spectroscopy)

- National Research Infrastructure
- Large Laser Facility
- Biophotonics group (Head: Prof. Pavone)



SEVENTH FRAMEWORK PROGRAMME THEME FP7-SME-2008-1
Research for the benefit of SMEs

Development of a compact, low cost and easy to use device based on LED technology for non-invasive haemostasis to benefit the people suffering from coagulation problems.

Project Acronym: Light+Ter

Grant agreement n°: 232397

Start date: 01/01/2010

End date: 31/12/2011

Total costs: € 1.429.844,94

EU contribution: € 1.057.580,00

State of Art

Light4Tech prototype
(local cooperation of SME and Research centres)



Italian National Research Council
Institute for Applied Physics
"Nello Carrara" - Florence (Italy)



Partners

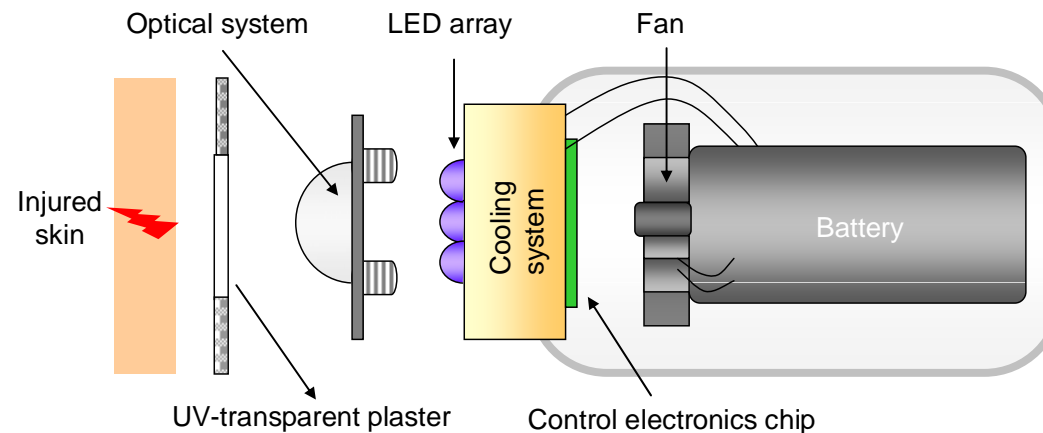
Beneficiary number	Participant Name	Participant short name	Country	Role
1 Coordinator	Light4Tech Firenze srl	L4T	IT	SME
2	Bi.Esse Adesivi S.p.A.	BS	IT	SME
3	MS MacroSystem	MACROS	NL	SME
4	Lepolam Wichrowscy	LEPO	PL	SME
5	Iris-SW Sagl	IRIS	CH	RTD
6	LENS	LENS	IT	RTD
7	Ska Polska Sp.	SKA	PL	RTD
8	CNR IFAC	CNR	IT	RTD

4 Small and Medium Enterprises and 4 Research Centres

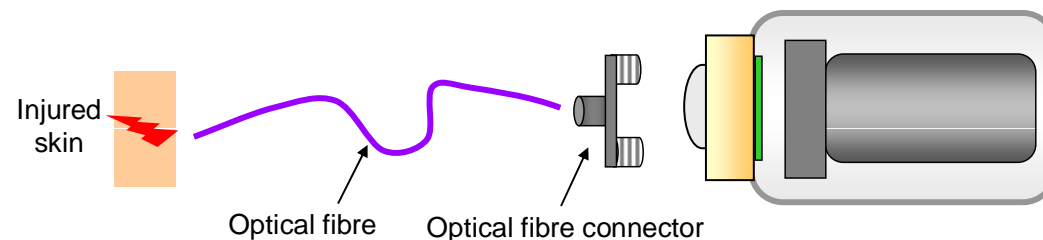
Project Objective

Project objective is develop a compact and easy-to-use device based on Light Emitting Diode (LED) technology, able to induce haemostasis of skin blood vessels through a photo-thermo-coagulation process, without damaging the surrounding tissues.

1. PLASTER LAYOUT



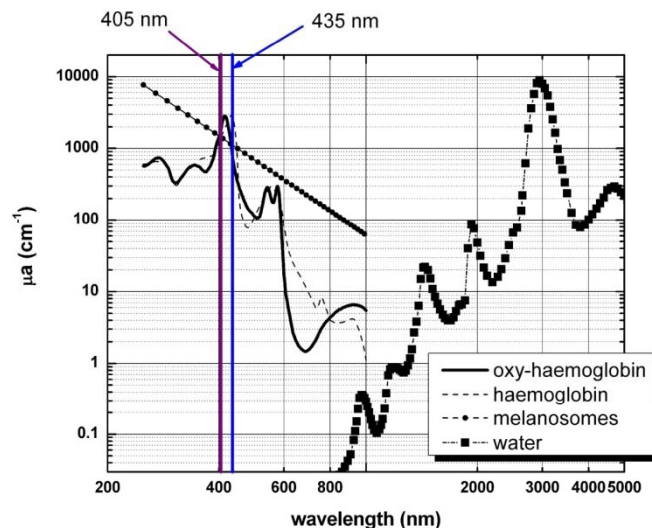
2. OPTICAL FIBRE LAYOUT



Project Innovation & Challenges

Innovation

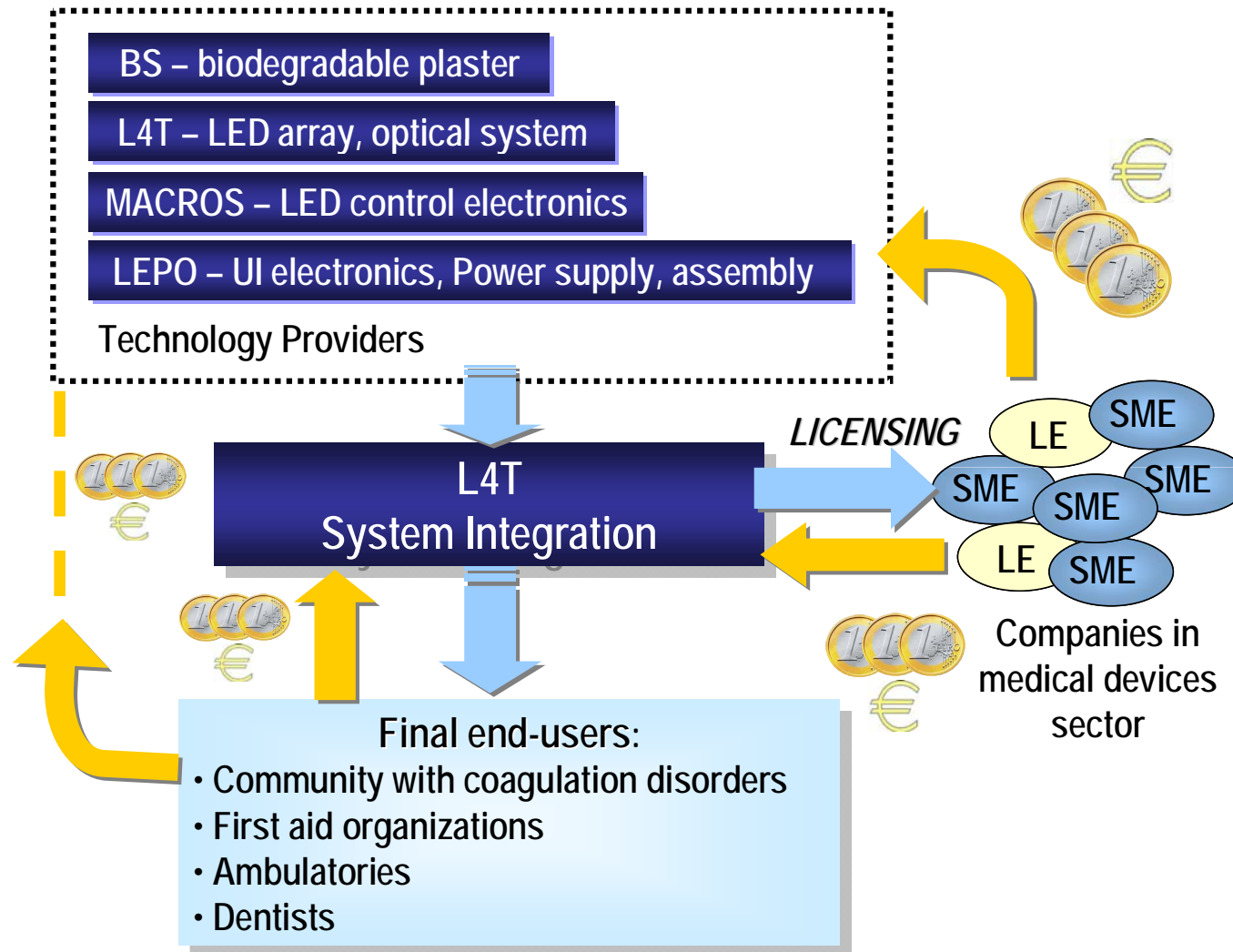
- Portability of the device (battery-based)
- Absorption peak of haemoglobin



Challenges

- UV-transparent biodegradable plaster
- fibered LED light and get enough power density for photohaemostasis

Exploitation





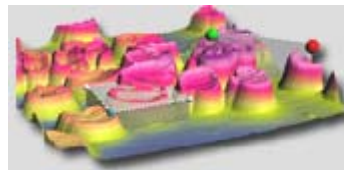
Lepolam



*Thank you
for your attention*



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MS MacroSystem