

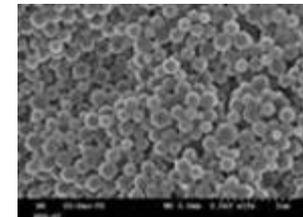


Novel approaches for the development of customized skin treatments and services

(Test case: Dead Sea Minerals and Conventional Drugs)



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SINTEF
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Project overview

- **Project title:**
Novel approaches for the development of customized skin treatments and services (Test case: Dead Sea Minerals and Conventional drugs)
- **Project duration:**
48 months
- **Call:**
NMP-2007-3.1-2: New added-value user-centered products and product services
- **Project type:**
Collaborative project targeted to SMEs
- **Coordinator:**
Dr. Ze'evi Ma'or, Dead Sea Laboratories Ltd., Israel
- **Number of partners:** 15

How did we get there?

■ Be visible in Europe:

- Participation at the steering committee meetings of the ETP Nanomedicine, as well as in additional workshops
- Participation in an expert workshop in "Emerging nanotechnology-based oncology"
- Participation in COST Action management committee meetings

■ Describe know-how:

- 1-2 slides of know-how and possible contributions to nanomedicine proposals

A valuable network was built!
Ze'evi took contact!

The project concept

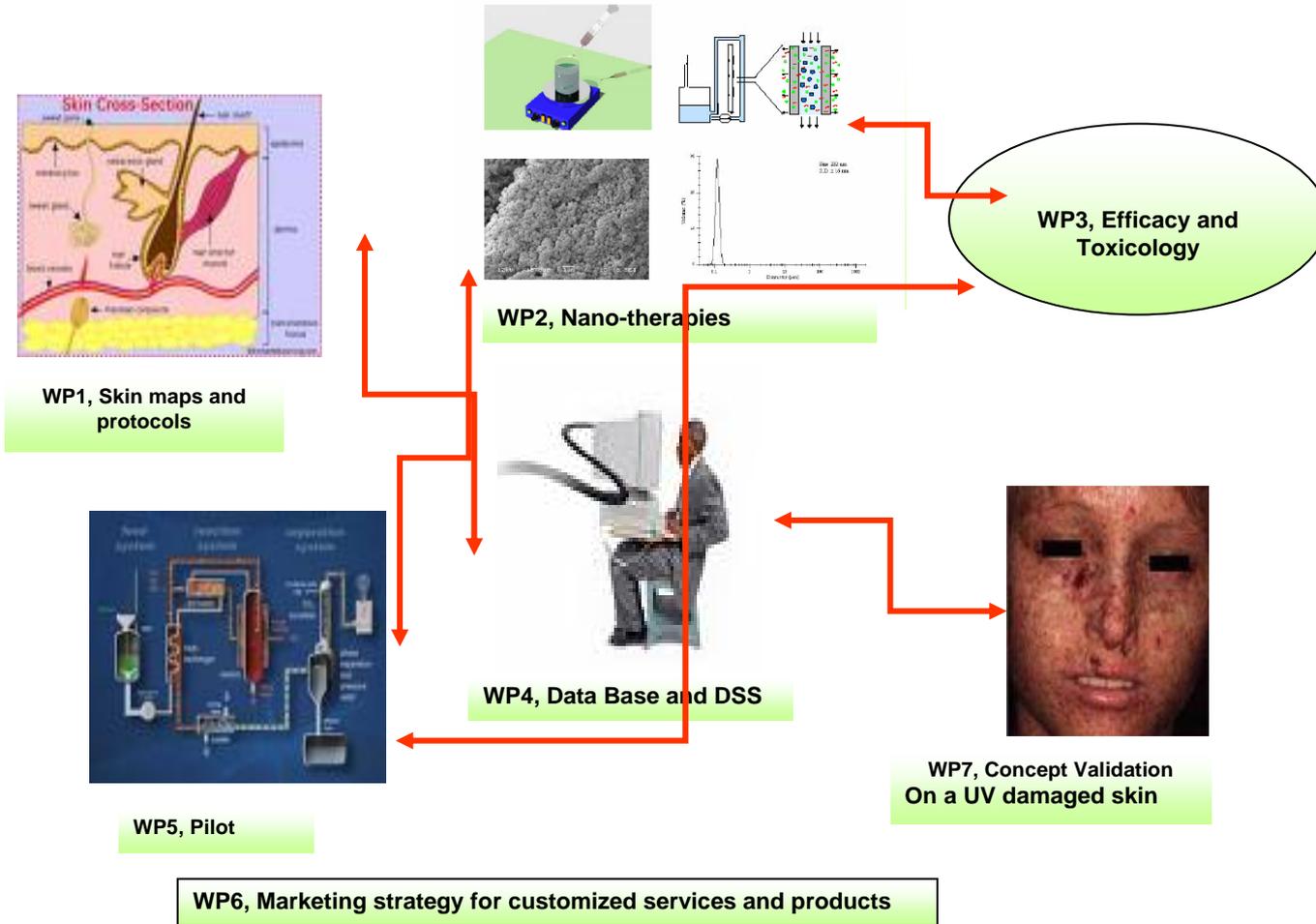
Main objective:

Improve the treatment efficacy for skin diseases by developing novel user-centered customized topical nano therapeutic strategies and novel drug delivery systems for skin diseases, based on personalized skin protocols.

The project concept

- Scientific and technological objectives:
 - Protocols for personalized biomarker maps of individual patients' skin
 - Self-assembled novel nano drug delivery systems for personalized topical therapeutic of skin diseases
 - *In vitro /ex vivo* efficacy and toxicity and skin barrier penetration studies of the new developed therapeutics
 - ICT system to serve as a patient/skin protocol data base, a primary diagnostic tool and a first prediction of therapeutics
 - Pilot development
 - Marketing strategy
 - Validation of the new personalized concept

The project concept



Test case: Dead sea minerals

- Dead sea water contains 21 minerals:
(sodium, magnesium, potassium, bromide, bitumen, chlorine, iodine, calcium, zinc)
- Dead sea minerals have beneficiary effects:
(Akne, aging, dry skin, wrinkling dry skin, skin allergies, psoriasis, arthritic disorders, hair loss, dandruff, general stress, insomnia, ...)
- In the project:
 - Combine dead sea minerals with conventional drugs



Zinc holes at mineral beach



Selected skin disorders



Contact dermatitis

Expected market for anti-inflammatory drugs for dermatological diseases:
USD 47,8 billion in 2010

Huge drug market
Huge healthcare costs
Huge impact on quality of life



Psoriasis

Expected global drug market:
USD 3,9 billion in 2011



UV skin photo-aging damages

About 1 million new skin cancers diagnosed each year in the US

The consortium

10 av 15 partnere er SME



SINTEF



INI-Novation UK LTD. (SME)



StratiCELL Screening Technologies SA (SME)
PhenoSystems SA (SME)



Groupe Mapi (SME)



Gaiker Technological Centre
Sistemas Genomicos Ltd. (SME)



Pisa University



Dermatest GmbH (SME)
Becomix - Mischtechnik (SME)



Troyka Ltd. (SME)



Dead Sea Laboratories Ltd. (SME) - coordinator
Hebrew University of Jerusalem
AFCON Software and Electronics Ltd.
OSM-Dan Ltd. (SME)



The consortium (2)

Partner	Main activity
Dead Sea Laboratories Ltd.	Management, pilot line for the production of new personalized treatment protocols
StratiCELL Screening Technologies SA	Skin models (cell and tissue-based), skin map production
Sistemas Genomicos Ltd.	Selection of biomarkers
Pisa University	Drug delivery nano-systems
Hebrew University of Jerusalem	<i>In vitro</i> models for biocompatibility, toxicity, stability and - particles
SINTEF	Nanoparticle synthesis, surface modifications
Dermatest GmbH	
Gaiker Technological Centre	Stability and efficacy of the nanoparticles
Troyka Ltd.	Nano-systems
Groupe Mapi	Marketing potentials of new concepts, future marketing plans
OSM-Dan Ltd.	Administration, workshops, etc.
INI-	ICT system design and specification
PhenoS	Software interfaces
AFCON Software and Electronics Ltd.	ICT system design and specification
Becomix-Mischtechnik	Development and production of process equipment for production

Covers the whole value-chain from nano- and biotechnological research to the final production and marketing