

NEWGEN



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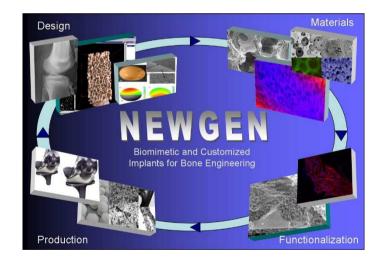
### NEW GENERATION BIOMIMETIC AND CUSTOMIZED IMPLANTS FOR BONE ENGINEERING

Dr. Francis Cambier









PATRAS (Greece), May 10<sup>th</sup>, 2017





COST Action – MP1301 NFWGFN

## Acknowledgement

## University of Patras (Greece)

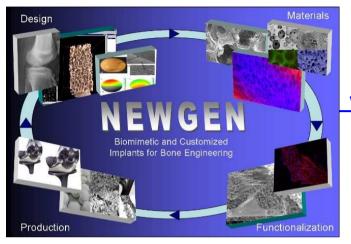
## **Local organizer:** Prof. Y. Missirlis

Training School – PATRAS (Greece) – May 10<sup>th</sup>, 2017

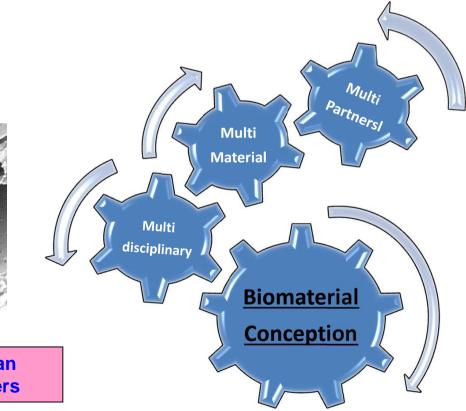


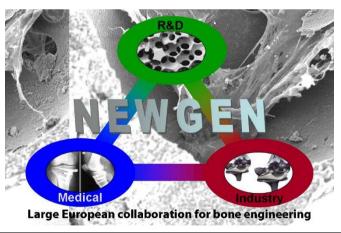






<u>Chair</u>: Dr. F. Cambier (BCRC, BE) <u>Vice-Chair</u>: Dr. P. Palmero (Politecnico di Torino, IT) <u>www.cost-newgen.org</u>





→ Unique opportunity to link European researchers to industries and end-users



COST Action – MP1301 NEWGEN



WG1 DG WG2 M MC WG3 F Core Group WG4

Design and Synthesis of New Materials

Manufacturing and Characterization of 3D-porous Scaffolds

Functionalization of implants for improved functional and therapeutic effects

In Vitro Evaluation of the Performance

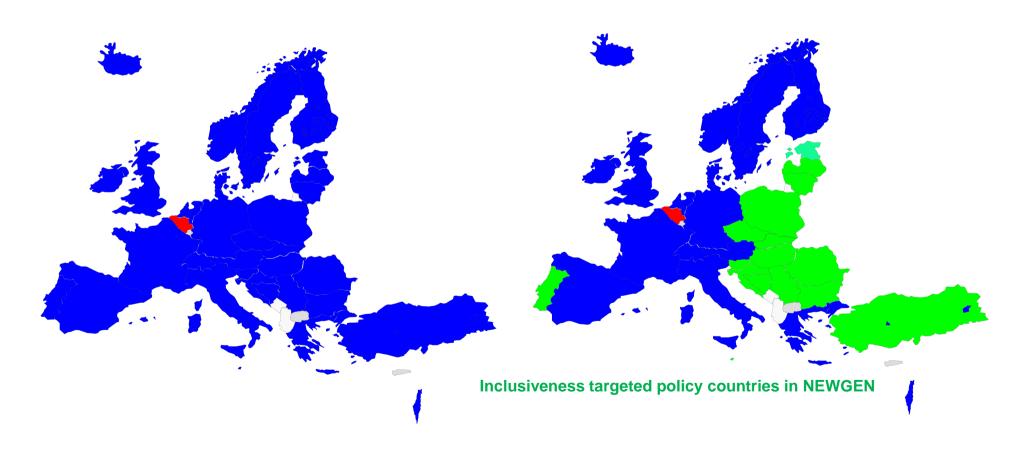
- 8 workshops
- 7 calls for STSM (40 grantees up to now)
- 2 training schools
- More than 30 scientific publications

### 7<sup>th</sup> (and last) call for STSM : open since May 1<sup>st</sup>!!!



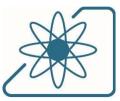


## **Our consortium!**



Training School – PATRAS (Greece) – May 10<sup>th</sup>, 2017



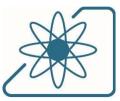


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# **Overview of the consortium** - status of the Action

- Start of NEWGEN : October 2<sup>nd</sup>, 2013 / End : October 1<sup>st</sup>, 2017
- O 33 countries + 3 IPC : USA + Canada + Australia
- O Whole consortium
  - 167 institutions
    - Universities: 89;
    - R&D Centers: 24;
    - Industry: 22;
    - Medicine: 22
  - 327 contacts in the mailing list
    - Gender balance = 39% / Inclusiveness = 33%





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#### NEWGEN

## NEWGEN Final Event Vienna (AT) – August 28<sup>th</sup>-29<sup>th</sup>, 2017

### Workshop title:

Patient-specific tissue engineering – An ambitious goal requiring a "holistic" approach

### Venue:

Vienna University of Technology, Austria

### **Topics:**

All subdisciplines of tissue engineering will be welcome, including

- material production and processing,
- in vitro studies,
- clinical trials, and
- computational modeling







Training School – PATRAS (Greece) – May 10th, 2017





**NEWGEN** 

## 1<sup>st</sup> Training School in Madrid

• June 17<sup>th</sup> to 19<sup>th</sup>, 2015



With a predicted ageing population and increasing expectations regarding the quality of life, there is an ever increasing demand for procedures such as total hip replacements, bone reconstructions, or spinal fusions, resulting from conditions such as articular cartilage degeneration, osteoporosis, accidents, etc.

This is the aim of this summer school to focus on state of the art and new processing methods for the industrial production of ceramic products for healthcare and on clinical applications, with insights into interactions between biomaterials and tissues (especially bone) and on structural integrity at long term.

Hot topics, such as additive manufacturing of complex shapes, surface modifications, tissue engineering, will be discussed. The school will represent a unique opportunity for PhD student and young searchers to meet and learn from internationally recognized experts.

From Wednesday 17 to Friday 19 June 2015 In Madrid – Spain The school is organized the week before the 14th Conference of the European Ceramic Society (21-25/06/2015 – Toledo, Spain)



Public: undergraduated, last year of Master studies, starting PhD, post docs, professionals □ Limited to 100 participants!! - Price: 250 € including accomodation and meals □ Deadline for registration: <u>15/04/2015</u> □ For more information : www.ecers2015.org - □ Contact: school2015@bcrc.be □ With the support of



- 15 lectures
- 60 students

Training School – PATRAS (Greece) – May 10<sup>th</sup>, 2017



**NEWGEN** 



# 2<sup>nd</sup> Training School in Patras



### TRAINING SCHOOL

NON LIVING MATERIALS MEET

LIVING BIOLOGY

Patras, Greece - 9-12 May 2017



cost mp1301 NEWGEN

- Bone structure and properties
- Cell biology, Bone physiology;
- Biocompatibility; Biointerphase;
- 12 lectures
- 35 students
- Poster contest
- Processing of materials and final surface characteristics;
- Scaffold design, processing, biodegradation/resorption;
- Mechanobiology;
- Bone Tissue Engineering;
- In vivo experimental procedures and Surgical aspects



#### The Young Ceramists Network (YCN)

#### connects young students and professionals in the ceramics domain

A simple idea: Bring young ceramists together to offer networking and opportunities during and after studies

- Currently +200 members
- Funded by JECS trust
- Activities run in Social Media

#### Coming soon:

- New website (+ New look!)
- Newsletters for people outside social media
- Job/Research opportunities from all over Europe

#### YCN leads the way:

Join the YCN committee, see the world and make a difference!

#### Upcoming events organized by YCN:

- Student meeting: Novi Sad, Serbia, 10/2017
- Student evening: ECerS conference, Hungary, 7/2017
- Ceramic Future Summit: October 2018

