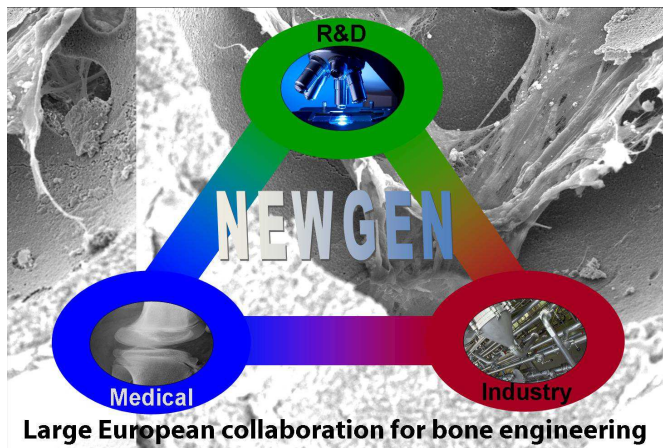


NEWGEN – New Generation Biomimetic and Customized Implants for Bone Engineering

COST-funded Action – MP1301

Start on 2nd October 2014 – Running for 4 years



Large European collaboration for bone engineering

Introduction

With a predicted ageing population and increasing expectations regarding quality of life in old age, there is an ever increasing demand for procedures such as total hip replacements, bone reconstructions, and spinal fusions.

New advances in biomaterials, with improved processing, bioactivity and/or tailored shapes, providing enough structural integrity and bone integration/regeneration are currently in development at the laboratory scale.

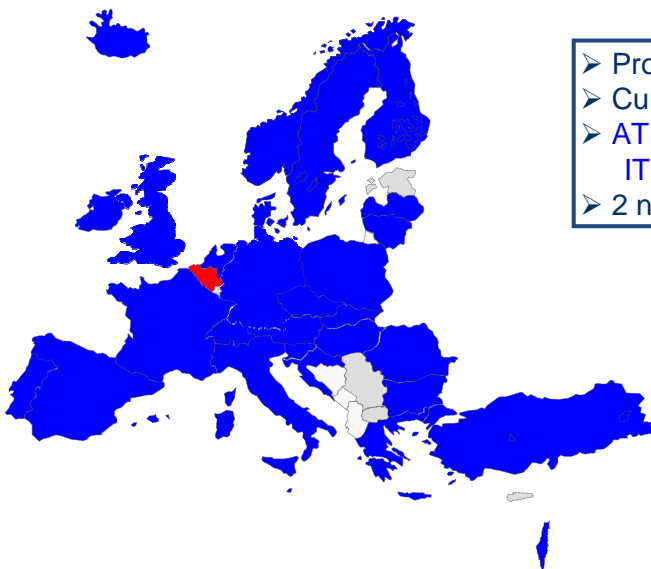
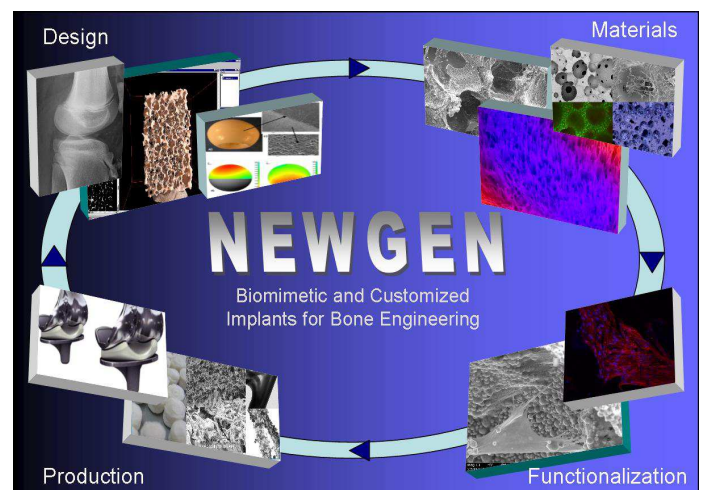
However, due to the gap between academic R&D and commercial production, and between materials scientists and clinicians, medical application of these new materials will never be possible unless companies and medics are involved in the development.

Objectives

This COST Action, NEWGEN, aims at **creating the seed** for the European research and industry **collaboration**, combining basic knowledge from academic laboratories, R&D centres, medical units from hospitals, and a significant number of companies, in the field of biomaterials to realize **new functionalized, bioresorbable and customized bone substitutes and more reliable implants**

Four Working Groups promote scientific exchange of ideas, and new information about research and opportunities through meetings, publications, training, short-term missions, etc. and **generate concrete research project proposal** for the development of new bone implants

- **WG1** : Design and synthesis of new materials
- **WG2** : Manufacturing and characterization of 3D-porous scaffolds
- **WG3** : Functionalization of implants for improved functional and therapeutic effects
- **WG4** : In vitro evaluation of the performance



- Proposer : **BE**
- Current network : 120 partners from 29 countries
- AT, BG, CH, CZ, DE, DK, HR, ES, FI, FR, GR, IE, IL, IS, IT, LT, LV, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, UK
- 2 non-COST countries : Canada and USA

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