



ISIDE

Innovative Strategies for bioactive/antibacterial advanced prostheses

ISIDE project aims to get “smart” solutions to the major challenges of the biomedical prostheses and biomaterials based on the possibility to:

- reduce the implant failure due to bacterial infection
- improve the implant surface features for a quicker and better osteogenesis

ISIDE aims at reducing the implant failure risk due to bacterial infection and/or poor osteointegration and/or fit, while avoiding any second surgery. The new implants' generation will be highly customised and made of a resorbable metal: Magnesium (Mg). The implants will be produced using **innovative processes**, no more based on the subtractive approach: sheet metal forming processes like Superplastic Forming and Incremental Forming will be used. Mg custom implants will be improved by means of **bioactive biofunctionalization** aimed to (i) boost the bone formation; (ii) reduce the bacterial infections during healing; (iii) manage the corrosion/degradation time according to the region where the prosthesis is implanted. Potential benefits are mainly related to the improvement of patients' life quality, due to the reduction of the hospitalization time (only 1 surgery and fast production process) and to the improvement of the implants performances (aesthetical and mechanical requirements).

Call: M-EraNET 2019
 Type of Action: Research and Innovation Action
 Acronym: ISIDE
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Partners



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