TargetCaRe

Project ID: 642414
Funded under: H2020-EU.1.3.1. - Fostering new skills by means of excellent initial training of researchers

Targeting Cartilage Regeneration in joint and intervertebral disc diseases

From 2015-03-01 to 2019-02-28, ongoing project | TargetCaRe Website

Project details

| Total cost: | Topic(s): |
| EUR 3 971 459,88 | MSCA-ITN-2014-ETN - Marie Skłodowska-Curie Innovative Training Networks (ITN-ETN) |

| EU contribution: | Call for proposal: |
| EUR 3 971 459,88 | H2020-MSCA-ITN-2014 | See other projects for this call |

| Coordinated in: | Funding scheme: |
| Netherlands | MSCA-ITN-ETN - European Training Networks |

Objective

Mobility, important for well-being, is seriously impaired by chronic low back pain and osteoarthritis in many people due to degeneration of cartilaginous tissue of the intervertebral disc and joint. To develop a treatment for these diseases this ETN aims to combine expertise in novel highly advanced drug delivery carriers with dedicated targeting tools, state of the art imaging techniques and expertise in stem cell and joint biology by training 15 young scientists in 12 partner institutes located in 5 different countries.

We aim to achieve regeneration of damaged and degenerated tissues by employing targeting strategies tailored both to the pathology and the tissues involved. Regeneration of diseased tissues will be achieved by loading biologically active agents in state-of-the-art nanocarriers. The biologically active agents will stimulate the body’s own capacity to regenerate by attracting local stem cells or inhibit degeneration. Targeting will be achieved by A] injection with synthetic or natural hydrogels loaded with the nanocarriers or B] coupling diseased tissue-specific antibodies and specific hyaluronic acid moieties to the nanocarriers. Delivery and retention will be monitored by advanced in vivo and molecular imaging techniques to monitor distribution of the delivered compounds at the tissue level, as well as detect biological markers of regeneration.

Major objectives:
1] To establish a network of scientists skilled in the use of smart nanocarriers, unique approach of targeting by disease-specific molecules and application of innovative imaging tools. Supported by generic scientific and training in economical and clinical valorisation, these researchers can further implement these technologies in the musculoskeletal or other areas, both in academia and industry.
2] To develop strategies exclusively targeting diseased tissues with controlled doses of bio-actives, circumventing the disadvantages of the current shotgun approaches in regenerative medicine.

Related information

Report Summaries

Periodic Reporting for period 1 - TargetCaRe (Targeting Cartilage Regeneration in joint and intervertebral disc diseases)
Coordinator

ERASMUS UNIVERSITAIR MEDISCH CENTRUM ROTTERDAM
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EU contribution: EUR 510,748,56

Activity type: Higher or Secondary Education Establishments
Contact the organisation

Participants

IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE
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EU contribution: EUR 546,575,76

Activity type: Higher or Secondary Education Establishments
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EU contribution: EUR 255,374,28

Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)
Contact the organisation

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EU contribution: EUR 273,287,88

Activity type: Higher or Secondary Education Establishments
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EU contribution: EUR 520,601,04

Activity type: Higher or Secondary Education Establishments
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Activity type: Higher or Secondary Education Establishments
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EU contribution: EUR 273,287.88

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EU contribution: EUR 255,374.28

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Activity type: Research Organisations
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EU contribution: EUR 530,453.52

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Activity type: Higher or Secondary Education Establishments
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EU contribution: EUR 290,081.88

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Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)
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EU contribution: EUR 260,300.52
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Activity type: Higher or Secondary Education Establishments
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