

Project Partners



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Join us at:



OActiveProject



Advanced personalised,
multi-scale computer
models preventing
OsteoArthritis

SC1-PM-17-2017

Personalised computer models
and in-silico systems for well-being

Project Details

Start date: 01/11/2017

Duration: 3 Years

EU Contribution: EUR 4,984,033.75



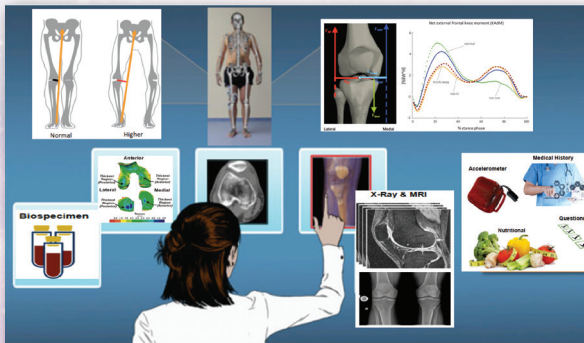
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Visit OActive website
www.oactive.eu

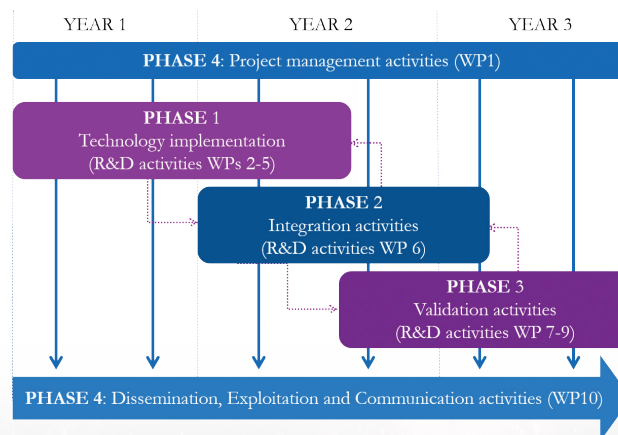
Project Description

Through OActive project a multi-scale holistic analysis will be adopted, where patient-specific information from various levels, including molecular (e.g. biochemical/ inflammatory biomarkers), cell, tissue and whole body, will be integrated and combined with information from other sources such as, environmental, behavioural and social risk factors to generate robust predictors for new personalised interventions for delaying onset and/ or slowing down progression of Osteoarthritis (OA). OActive targets patient-specific OA prediction and interventions by using a combination of mechanistic computational models, simulations and big data analytics. Augmented Reality (AR) empowered interventions will be developed in a personalised framework allowing patients to experience the treatment as more enjoyable, resulting in greater motivation, engagement, and training adherence.

0Active's mission is to improve healthcare
by transforming and accelerating
the OA diagnosis and prediction



0Active Work Plan



Objectives

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- Mechanistic modelling framework
of the musculoskeletal system
- Systemic health and inflammation
modelling framework
- Hypermodelling framework
empowered by big data
- Behavioural, social, environmental
modelling framework
- Ontology-based framework for
data/models reusability and sharing
- Personalised interventions using
Augmented Reality (AR)
- In vivo and in vitro studies and
validation in large data registries

Impacts

Benefit for health and well-being:
Prediction, Treatment & personalized interventions

Predictive and preventive methods focusing on the integrated diagnosis, treatment and prevention of disease

Uncover how
medical, biological
and environmental
factors interact

Employing knowledge discovery techniques capable of extracting interpretable rule-based knowledge from clinical time series

Direct savings for the Health system

Societal benefits
related to research
and job creation