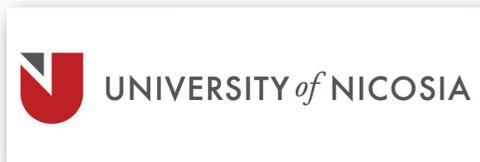


Project Partners



Contact

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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



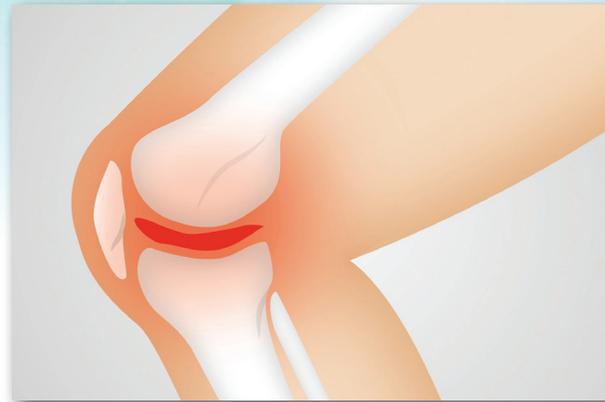
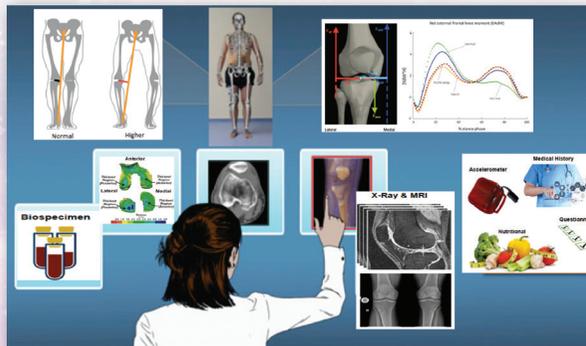
This project receives funding from the European Union's Horizon 2020 Framework Programme for research, technological development and demonstration under grant agreement no 777159

Visit OActive website
www.oactive.eu

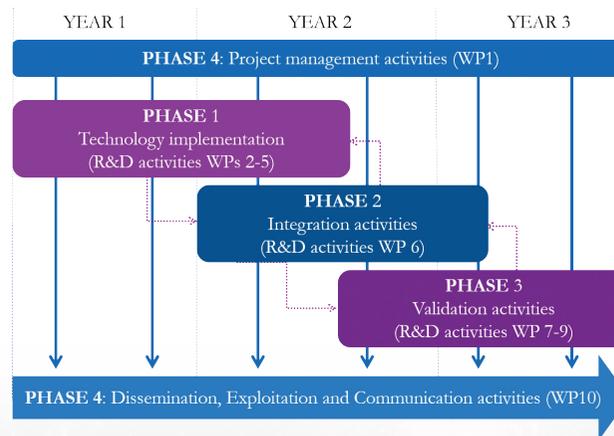
Project Description

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.

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



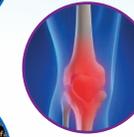
OActive Work Plan



Objectives



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

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

Direct savings for the Health system

Uncover how medical, biological and environmental factors interact

Societal benefits related to research and job creation