

Challenge

Drug substances can be chemical complex molecules with challenging properties such as poor stability, low water solubility and difficult to crystallize. There is currently increased need for developing pharmaceutical products with:



Improved controlled/immediate release, solubility and stability



Novel medicines for pharmaceutical and medical applications



Patients quality of life and adherence to treatment

Consortium

IMODE is a collaboration of academic research groups and SMEs through a transdisciplinary applied research programme in materials science, pharmacy, biology and medicine.

IMODE gathers a cross-border partnership which involves major stakeholders in the field including Universities, small and large enterprises and patients as well as an economic development agency.

The IMODE project strengthens innovation in the 2 Seas Area in order to obtain a strategic advantage for novel pharmaceutical and medical applications bridging the current gap between academia and the private sector.

The IMODE project addresses a key Health societal challenge: to improve healthcare, novel medicine while maintaining low medical costs.

Objectives

The main objective of the European project IMODE is to carry out research for the development of multicomponent systems to:

Accelerate discovery of co-drugs by developing robust prediction tools, reliable screening methods and rapid synthetic technologies providing solutions for formulation of drugs with low water solubility

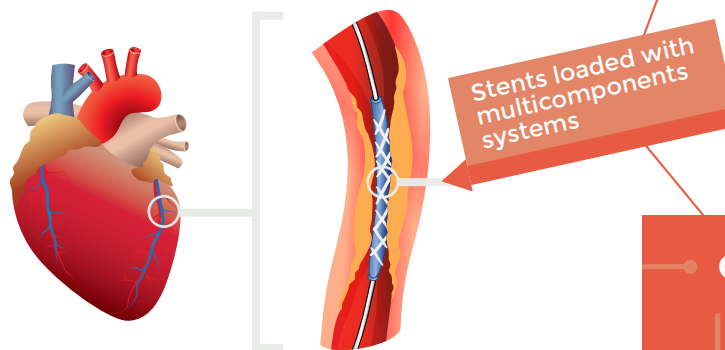
Develop a range of materials, processes and personalized medicine including:

- new bio-based excipients
- continuous manufacturing processes
- identification of genes
- pharmacogenetics
- in vivo/in vitro validation

Produce implantable medical devices to deliver bioactive molecules that respond better to the patient's needs

Accelerate preclinical validation with Mass Spectrometry Imaging

Design of resorbable stents and nanofibers coated stents (with bioactive compounds)



IMODE AIMS TO ACCELERATE PRODUCT DEVELOPMENT AND MANUFACTURING PROCESSES FOR THE PRODUCTION OF LOW COST, SUSTAINABLE HIGH QUALITY MEDICINES.

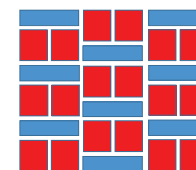
Strategy

The IMODE project strategy is a collaborative transdisciplinary research and development program on multicomponent pharmaceutical products (co-amorphous and co-crystals) and medical devices loaded with bioactive molecules aiming to provide novel and effective solutions for various gastrointestinal and cardiovascular diseases that will improve patients quality of life. These challenging objectives require a cross-border partnership of academic institutions that work closely with industry with focus for areas of basic research, continuous manufacturing and personalised medicines.

IMODE Multicomponent systems

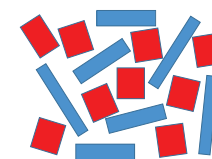
- : molecule #1
- : molecule #2

Co-crystal



+ Improved SOLUBILITY

Co-amorphous



+ Improved STABILITY

OBSERVERS

University of Cambridge (UK)
Fédération des biomatériaux (FR)
NOVITOM (FR)
Linkam Scient. Inst. (UK)
Cyversa (UK)

Patient Organizations: Different strokes (UK)
DigestScience (FR)

Operator Partners

LEAD PARTNER



University Lille 1 (France)
www.univ-lille1.fr

PARTNERS



University College London (UK)
www.ucl.ac.uk



University Lille 2 (France)
Law and Health
www.univ-lille2.fr



Ghent University (Belgium)
www.ugent.be



University of East Anglia (UK)
www.uea.ac.uk



Imabiotech (France)
www.imabiotech.com



University of Greenwich (UK)
www2.gre.ac.uk



Eurasanté (France)
www.eurasante.com



Ashford and St. Peter's Hospitals
NHS Foundation Trust

Ashford and St. Peter's Hospitals
NHS Foundation Trust (UK)
www.ashfordstpeters.nhs.uk



Institute of Cardiovascular
Research University of London
www.rhul.ac.uk/icr2ul



Cubic Pharmaceuticals Limited (UK)
www.cubicpharmaceuticals.co.uk



Roquette Group
www.roquette.com

Project details

PROJECT START	1 st July 2016
DURATION	48 month
TOTAL COST	€ 5,960,000
ERDF CO-FINANCING RATE	60%
ERDF FUNDING	€ 3,576,036

Further information



www.project-imode.eu

Contact

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Imode

INNOVATIVE MULTICOMPONENT DRUG DESIGN

INNOVATIVE MULTICOMPONENT
DRUG DESIGN FOR ENHANCING
REGIONAL STRATEGIC ADVANTAGES
IN PHARMACEUTICAL AND
BIOMEDICAL APPLICATIONS



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PROGRAMME 2014-2020
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