# Partners

The OMA network is presently comprised of 14 beneficiary partners, 11 associated partners and a growing number of adjunct partners.

Each beneficiary will host one or two early stage researchers, each dedicated to a specific research project. Associated and adjunct partners will play an important role in the network-wide training and provide secondment places for the trainees in relevant scientific areas. Partners come from academia, research centres, clinical facilities and industry, thus providing an ideal cross-sector research and training environment.

## Beneficiary Partners

## Associated and Adjunct Partners

# Project Management

The Steering Committee is responsible for the overall network strategy and takes all the decisions concerning the network. It presently consists of the following elected members:

**Prof. Dr. Joaquín Gómez Camacho** (University of Seville / Centro Nacional de Aceleradores, Spain),
**Dr. Christian Graeff** (GSI, Germany),
**Dr. Monica Necchi** (CNAO, Italy),
**Dr. Julien Smeets** (IBA, Belgium),
**Prof. Dr. Carsten P. Welsch**
(University of Liverpool / Cockcroft Institute, UK).

It is supported by a dedicated EU Project T.E.A.M. at the Cockcroft Institute/University of Liverpool. A trainee representative will join the Steering Committee in due time.

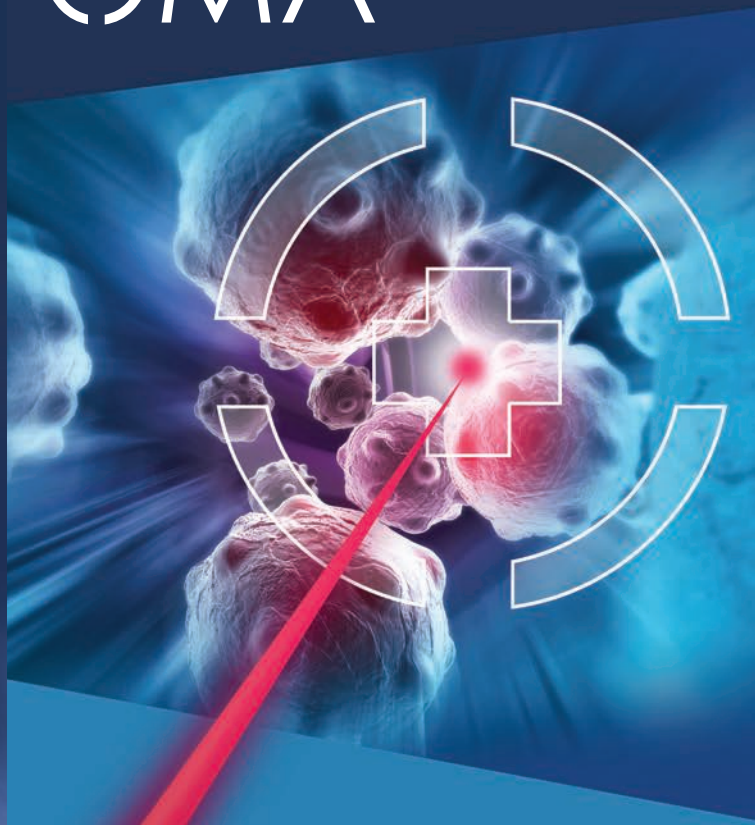
# Contact us


Prof. Dr. Carsten P. Welsch
*OMA Coordinator*

The Cockcroft Institute
University of Liverpool
WA4 4AD Warrington, UK
carsten.welsch@cockcroft.ac.uk


**www.oma-project.eu**


This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 675265. The information herein reflects only the views of its authors and the Research Executive Agency is not responsible for any use that may be made of the information contained.

# OPTIMIZATION OF MEDICAL ACCELERATORS

**A Marie Skłodowska-Curie European Training Network**

# Project Overview

Cancer is a major social problem and it is the main cause of death between the ages 45-65 years. In the treatment of cancer, radiotherapy plays an essential role. The Optimization of Medical Accelerators (OMA) is the aim of this European training network. The project joins universities, research centres and ion beam treatment facilities together with leading industry partners, to address the challenges in cancer treatment facility design and optimization, numerical simulations for the development of advanced treatment schemes, beam imaging and treatment monitoring.

Image property of CNAO

**Although significant progress has been made in the use of particle beams for cancer treatment, an extensive research and development program is still needed to maximize the healthcare benefits from these therapies.**

**The OMA network consists of an international consortium of more than 30 partner organisations who will jointly train 15 early stage researchers in the optimization of medical accelerators.**

**OMA started on 1.02.2016 and has a project duration of 48 months. It has been awarded almost €4 million of funding in one of the most competitive EU funding schemes and is to date the only initial training network that has ever received a 100% evaluation mark.**

Image © Thomas Kästenbauer

## Research Projects

The OMA Fellows will work on the following research projects:

### University of Liverpool / Cockcroft Institute
Halo-dose correlation in medical accelerators

### ASI - Amsterdam Scientific Instruments
A versatile high-speed radiation detection platform

### CERN
Improvements on FLUKA for medical applications

### CNAO
Tumour tracking in particle therapy
Light ion therapy software for data exchange

### CSIC / IFIC
Application of high gradient RF technology for hadron therapy accelerators

### GSI
A next generation 4D-therapy control system

### IBA - Ion Beam Applications
Imaging solutions for a novel prompt gamma camera

### LMU Munich - Ludwig-Maximilians-Universität München
Advanced Monte Carlo and imaging methods

### MedAustron
Treatment facility optimization studies

### PSI – Paul Scherrer Institute
RF-based measurement of ultra low charges

### University College London
Calorimeter for proton therapy and radiography

### University of Manchester / Cockcroft Institute
Gantry design for linac-boosted protons

### University of Seville / Centro Nacional de Aceleradores
Radiobiological effectiveness of protons

### ViALUX
New encoding methodologies for ultra-fast 3D surface scanning

## Training Events

All Fellows will be embedded into a structured course program at their host university or, in case their work contract is with an industry partner, a research centre or clinical facility, with a collaborating university.

The project provides a wide ranging training program comprising several schools, a number of topical workshops and an international conference. These events will also be open to delegates from outside of the network.