

## « MEDICIS-Produced radioisotope beams for medicine »

An ETN Marie-curie network for which CERN acts as a coordinator in H2020



**MEDICIS**  
*Promed*

# Understand the goal

- Published on European Commission Portal (everyone can access)
- Within the H2020 (Horizon 2020) Framework Program of the European Commission
- Marie Curie Networks programs are now part of the "Excellent Science" Pillar of H2020 framework program of the EC.
- ...(ITN) aim to train a new generation of creative, entrepreneurial and innovative early-stage researchers, able to face current and future challenges and to convert knowledge and ideas into products and services for economic and social benefit.
- ITN will raise excellence and structure research and doctoral training, extending the traditional academic research training setting,...

# Received some training

-----Original Message-----

From: Nathalie Dumeaux

Sent: jeudi 30 janvier 2014 16:38

To: Markus Aicheler; Alessandro Bertarelli; Markus Brugger; Mario Di Castro; Manjit Dosanjh; Eric Grancher; John Harvey; Christian Joram; Keith Kershaw; Magdalena Kowalska; Vetle Nilsen; Andrzej Nowak; Antonio Pellegrino; David Plane; Stefano Redaelli; Marco Silari; Thierry Stora; Jukka Ilmari Vainola

Cc: Nathalie Dumeaux; Catherine Brandt

Subject: Invitation to course : Proposal writing for Innovative Training Networks (ITNs) under H2020

Hello,

We are pleased to invite you to the course:

"Proposal writing for Innovative Training Networks (ITNs) under H2020"

that will take place as follows :

DATE and TIME:

**5 February 2014 from 09:00 to 17:00**

**6 February 2014 from 09:00 to 12:30**

VENUE:

CERN, Training Center, bldg 593, room 17

LANGUAGE:

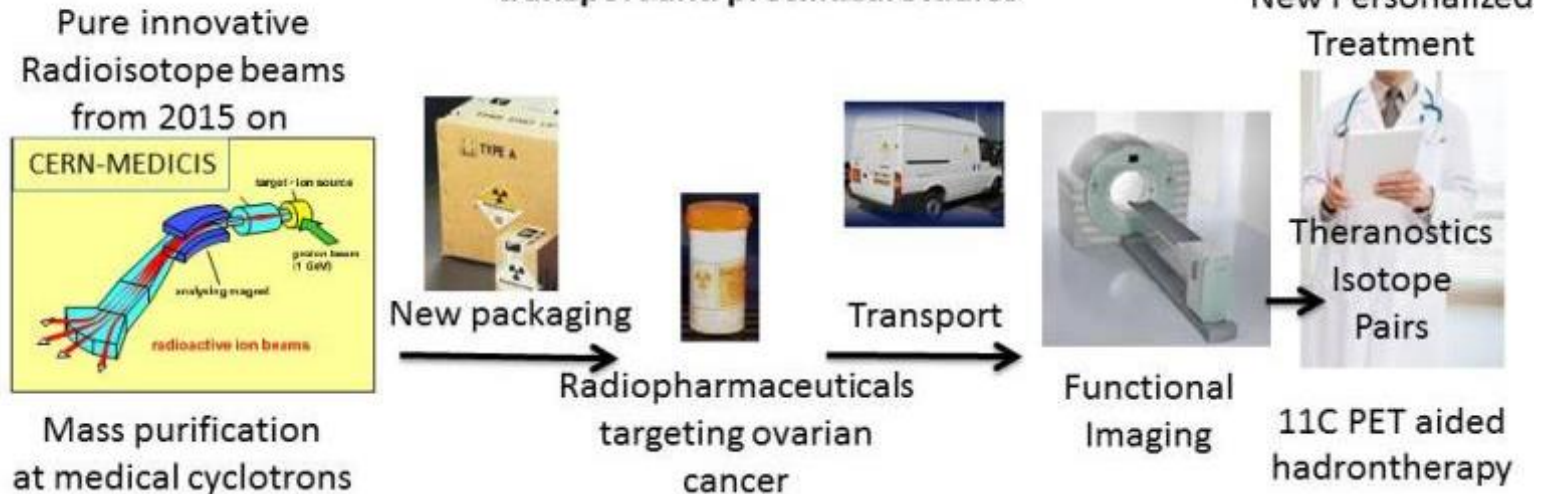
in English

# The overall R&D objectives

Prepare the project description and build the network (institutes, projects, coherence, impact, etc)

Proposed innovative treatments based on radioactive ion beam production, transport and preclinical studies

## MEDICIS-PROMED: Innovative treatments based on radioactive ion beam production, transport and preclinical studies



# Use the guide for applicants, training, institutional support



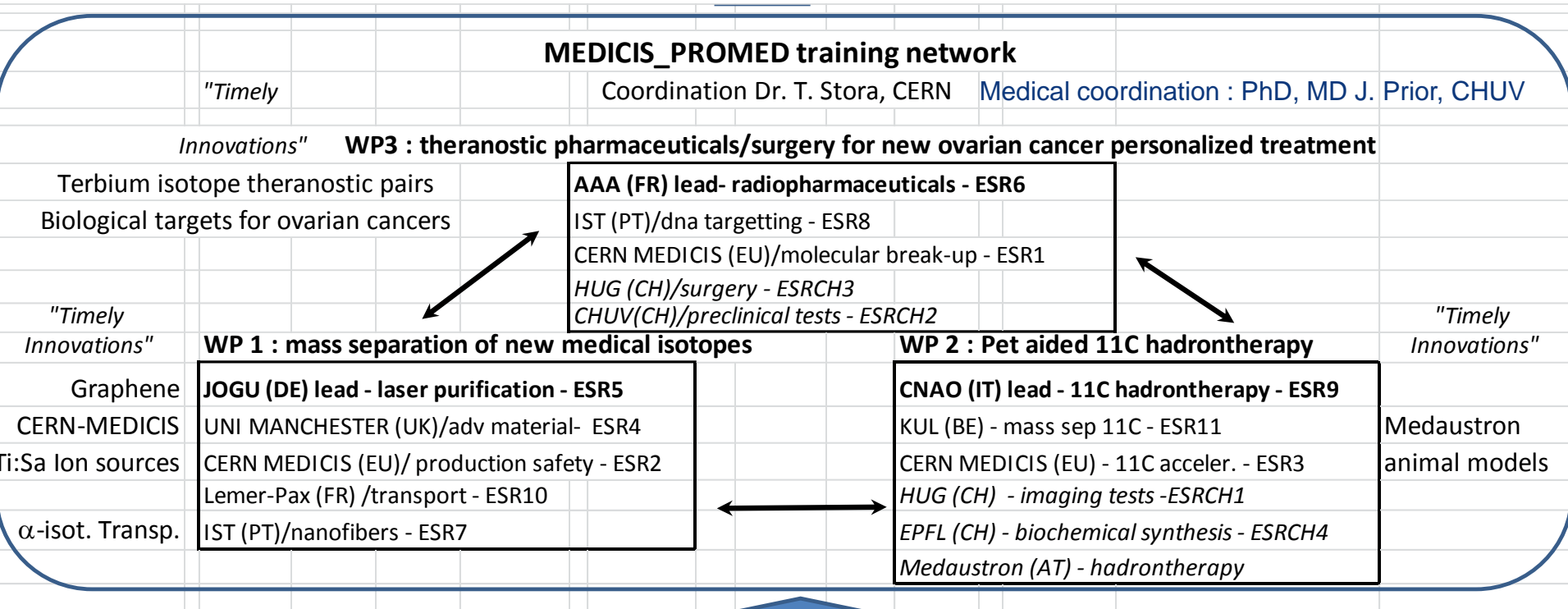
H2020 Programme

**Guide for Applicants**

Marie Skłodowska-Curie Actions - Innovative Training Networks (ITN)

Version 3.1 - 2018  
27 October 2017

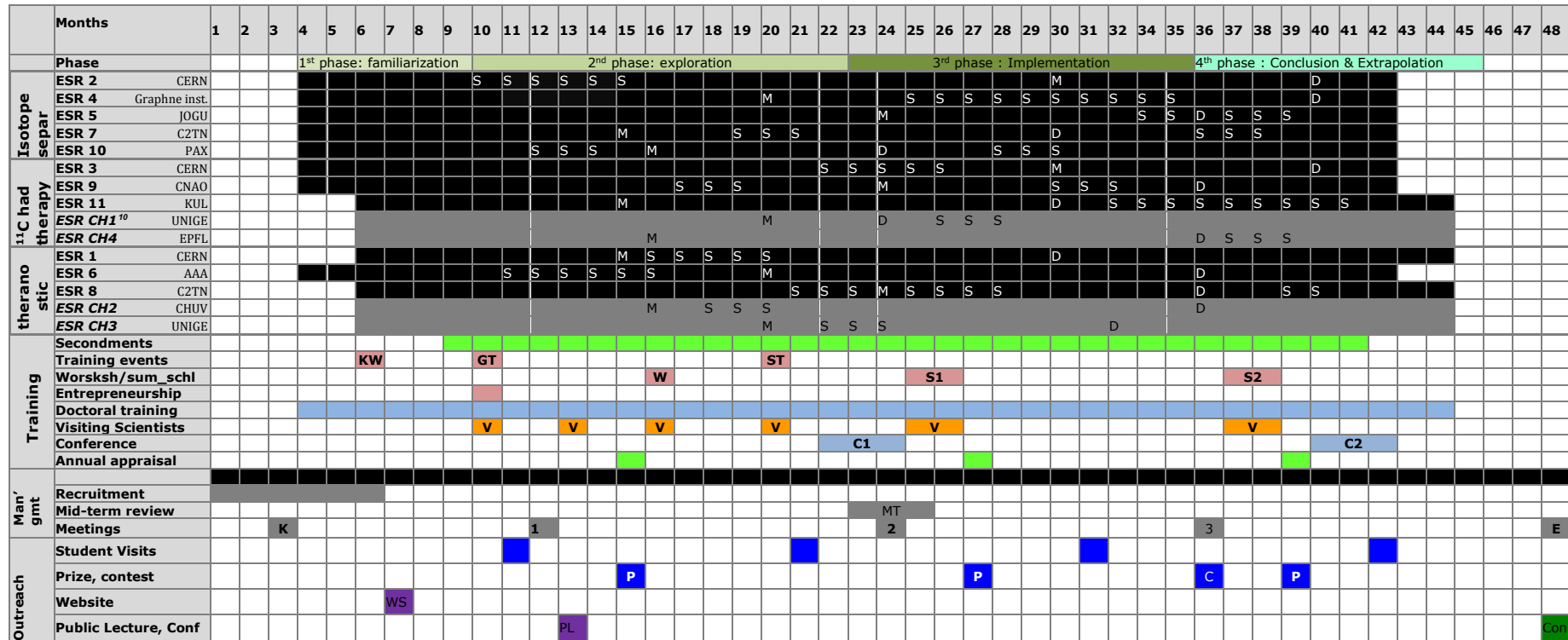
# Overview of the Research Network



# Preparing a 30 (not 31!) pages description: background, management, ethics, ... (1 chapter on budget calculation)

- Gantt chart

*Reflecting ESR recruitments, secondments, training events, management & dissemination / public engagement activities*



K = Kick-off meeting E = End of project S=secondment M=Milestone D=Deliverable



# After ~ 1 year, Submission and... waiting

**From:** European Commission no-reply@ec.europa.eu  
**Subject:** Proposal MEDICIS-PROMED submitted  
**Date:** 9 Apr 2014 12:16  
**To:** Thierry STORA thierry.stora@cern.ch

EC

## Europa / Research / Participant Portal notification

Dear Proposal Participant,

The following proposal has been submitted to the Participant Portal Submission System:

Submitted by : (thierry.stora@cern.ch)  
Proposal acronym : MEDICIS-PROMED  
Proposal ID : 642889 (internal reference number: SEP-210160082)  
Call : H2020-MSCA-ITN-2014  
Type of action : MSCA-ITN-ETN  
Topic : MSCA-ITN-2014-ETN  
Call closure : 2014-04-09 17:00:00  
Date of submission : 2014-04-09 12:16:14



# And results !!

**From:** European Commission no-reply@ec.europa.eu  
**Subject:** INFO: Invitation to grant agreement preparation - 642889 - MEDICIS-PROMED  
**Date:** 4 Sep 2014 17:47  
**To:** Thierry STORA thierry.stora@cern.ch

EC

## Europa / Research / Participant Portal notification

Please be informed that the following message was sent to the **Coordinator**  
**Contact of these organisations:**


- **999988133 - CERN**

*To have access to the below indicated information on the Participant Portal, you need to have the relevant role and access rights in a proposal, project or organisation.*

Dear Coordinator,

The evaluation results of your proposal mentioned in the subject line have been published. You are now invited to the grant preparation phase. To consult more detailed information, please logon with your individual account in the Participant Portal > My Area > My Project(s) and click the Manage Project (MP) button.

# Budget, negotiation, and "surprises" : Swiss Organizations were left out and receive a dedicated budget

Proposal Evaluation Form		
	<b>EUROPEAN COMMISSION</b>  Horizon 2020 - Research and Innovation Framework Programme	<b>Evaluation Summary Report</b>

**Call:** H2020-MSCA-ITN-2014  
**Funding scheme:** Training Networks  
**Proposal number:** 642889  
**Proposal acronym:** MEDICIS-PROMED  
**Duration (months):** 48  
**Proposal title:** MEDICIS-produced radioisotope beams for medicine  
**Activity:** ENG

N.	Proposer name	Country	Total Cost	%	Grant Requested	%
1	EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH	CH	795,680	28.12%	0	-
2	THE UNIVERSITY OF MANCHESTER	UK	273,288	9.66%	0	-
3	JOHANNES GUTENBERG UNIVERSITAET MAINZ	DE	249,216	8.81%	0	-
4	Advanced Accelerator Applications	FR	262,876	9.29%	0	-
5	INSTITUTO SUPERIOR TECNICO	PT	476,713	16.85%	0	-
6	Fondazione Centro Nazionale di Adroterapia Oncologica - Fondazione CNAO	IT	258,061	9.12%	0	-
7	KATHOLIEKE UNIVERSITEIT LEUVEN	BE	250,560	8.86%	0	-
8	LEMER PAX	FR	262,876	9.29%	0	-
	Total:		2,829,270		0	

#### Abstract:

Pure accelerated radioisotope beams have been used for 50 years in fundamental physics R&D, e.g. for nuclear structure studies (pear shaped exotic nuclei, Nature 2013); CERN-ISOLDE plays a central role in developing accelerator technologies and fostering collaborative approaches to advance this field of isotope mass separation online. Our most recent contribution was the use of nanomaterial targets for more intense and reliable beam production, and laser ion sources for their purification (discovery of yet unknown <sup>233</sup>Francium). Radioisotopes are widely used for functional imaging in medicine, based on <sup>99m</sup>Techneium or on <sup>18</sup>Fluorine. This field is expected to rapidly expand, when coupling imaging with new cancer treatments, with isotopes emitting different type of radioactivity, e.g. alpha particles. This is shown with the recently introduced <sup>223</sup>Radium chloride (Xofigo®) used as a treatment drug in advanced bone cancers. However, either shortage in the supply of <sup>99m</sup>Techneium or lack of access to new radioisotope with adequate properties is a severe treat to develop personalized treatment that combine functional imaging and therapy. Ovarian cancers have poor prognosis, are the second most frequent cancer for women and one of the deadliest. They are difficult to treat, because of possible presence of metastasis, and because this region is difficult to irradiate without collateral damages. MEDICIS-PROMED will train a new generation of scientists to develop systems for personalized Medicine combining functional imaging and treatments based on radioactive ion beam mass-separation. This will be done across a coherent intersectorial multidisciplinary network with world-leading scientists in their field. Subsystems for the development of new radiopharmaceuticals, of isotope mass separators at medical cyclotrons, and of mass separated <sup>11</sup>Carbon for PET-aided hadron therapy will be specifically developed to treat the ovarian cancer.

#### Evaluation Summary Report

##### Evaluation Result

**Total score: 92.60% (Threshold: 70/100.00)**

### Criterion 1 - Excellence

Score: **4.70** (Threshold: 0.00/5.00 , Weight: 50.00%)

#### Overall comments

*This proposal is very good in this criterion. Its main strengths are the training program and the research objectives, while its minor weaknesses are the overlapping expertise within the consortium.*

### Criterion 2 - Impact

Score: **4.60** (Threshold: 0.00/5.00 , Weight: 30.00%)

#### Overall comments

*This proposal is very good in this criterion with a minor weakness in terms of the role of the non-academic partners.*

### Criterion 3: Implementation

Score: **4.50** (Threshold: 0.00/5.00 , Weight: 20.00%)

*This proposal is very good in this criterion. Its main strengths are the overall work plan and organisation of the network, whilst its minor weaknesses are the risk analysis and the procedures for quality management.*

### Operational Capacity

Status: **Operational Capacity: Yes**

# MEDICIS-PROMED Team – kick-off meeting Apr 2015



Thierry Stora - CERN  
Scientist in charge  
[Thierry.stora@cern.ch](mailto:Thierry.stora@cern.ch)



John Prior - Lausanne Hospital  
Medical coordination  
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Cristina Ferrari - CERN  
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Fiona Reid :  
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Jean Francois Chatal – Nantes university  
Chairman of the ethical review board  
[jean-francois.chatal@univ-nantes.fr](mailto:jean-francois.chatal@univ-nantes.fr)



Cecile Granier– CERN  
EU& HR matters  
[Cecile.granier@cern.ch](mailto:Cecile.granier@cern.ch)  
(started with Seamus)

Finance : [florence.pesce@cern.ch](mailto:florence.pesce@cern.ch)

# Training : Events and models

**Kick-off week – CERN (EU) – STARTING TODAY !**

**General training 1 – Manchester (UK)**

**Workshop on functional multimodal SPECT/PET imaging – Lausanne/Geneva (CH)**

**Specialized training 2 – Leuven (BE)**

**Summer school 1 at CNAO – Pavia (IT).**

**Summer school 2 at C2TN-IST – Lisbon (PT)**

**K. Novoselov**, Graphene Institute – Physics Nobel Prize 2010 – Scientific Innovation and Advanced Materials

**U. Koester**, ILL- chairman of the NuPECC working group for *Nuclear Physics for Medicine-Radioisotope production*– Production of medical radioisotopes

**P. Van Duppen**, KUL – Adv ERC – Radioactive Ion Beams and Lasers

**S. Buono**, AAA – Radiopharmaceuticals marketing and Entrepreneurship

**G. Coukos**, CHUV – Adv. ERC – Immunotherapy and cancer treatment

**P. Lecoq**, CERN – Adv ERC – Detectors and Medical imaging

**K. Noda-san** – NIRS – PET-aided hadron therapy with carbon ions

Program cohesion : Oxford University Said Business School (ECTS, PhD)



# Outreach

**High School** and undergraduate classes 1-day visits to CERN-MEDICIS/AAA/HUG :  
Discussions started to organize a summer camp for teenagers

MEDICIS-PROMED **young scientist award** every year,

**Public lecture** by Dr. S. Buono, CEO of AAA in the Globe of Innovation (Geneva), on radiopharmaceutical marketing and entrepreneurship.

**MEDICIS-PROMED contest** 2 teams of ESRs (ca 6-8 each) will compete during 24 hours

**Final conference**

**Web site : [www.cern.ch/medicis-promed](http://www.cern.ch/medicis-promed)**

# And onto ... budget

- Questions, comments ?

