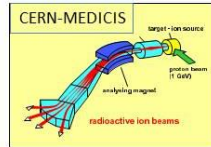




# Overview of MEDICIS-Promed

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

Pure innovative Radioisotope beams from 2015 on



Mass purification at medical cyclotrons



New packaging



Radiopharmaceuticals targeting ovarian cancer



Transport

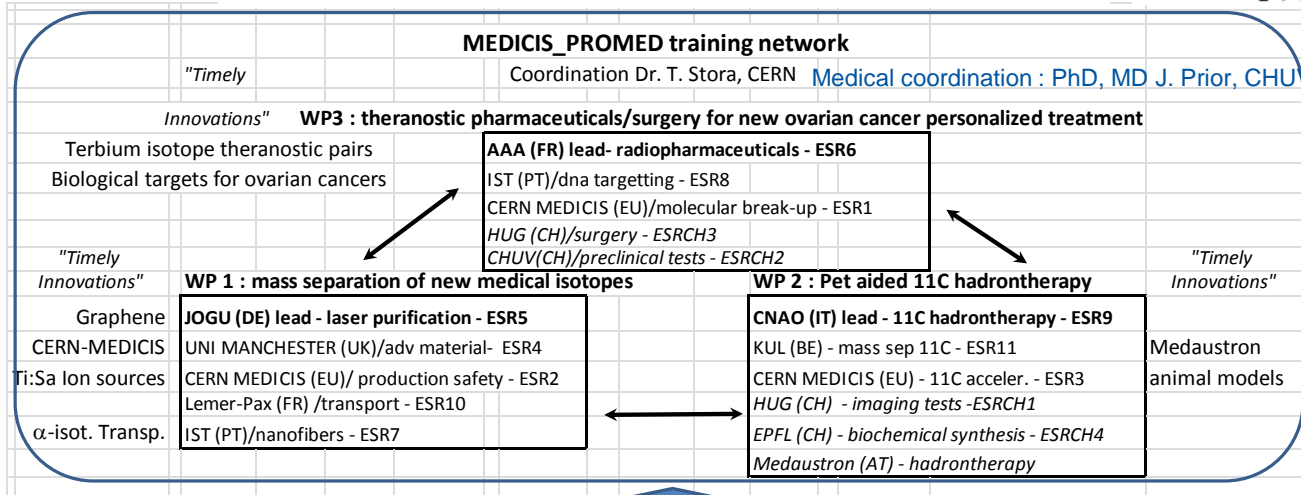


Functional Imaging



New Personalized Treatment

11C PET aided hadrontherapy



Defense : 12<sup>th</sup> Feb

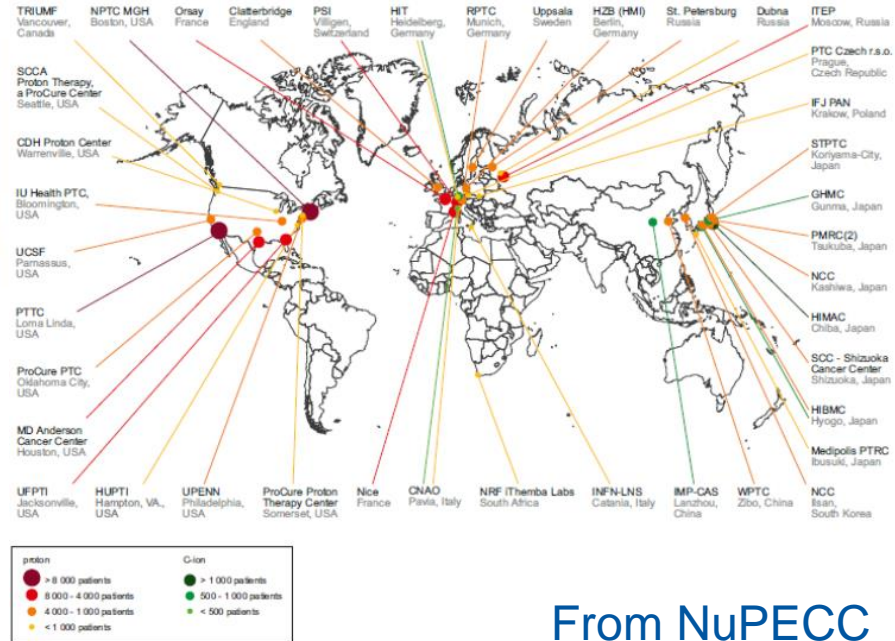
Graduated !

Soon graduated! →

1	RINGVALL-MOBERG	Annie	SWE	CERN	EU	Academic	01.06.2016	29.03.2019	7	University of Gothenburg June 2016
2	VUONG	Nhât-Tân	CH	CERN	EU	Academic	01.01.2016	01.01.2019	12	EPFL May 2016
3	PITTERS	Johanna	AT	CERN	EU	Academic	01.10.2015	01.10.2018	15	TU Vienna October 2016
4	NAZAROVA	Marina	RU	UNIMAN	UK	Academic	12.11.2015	12.11.2018	13.5	UNIMAN November 2015
5	GADELSHIN	Vadim	RU	JGU Mainz	DE	Academic	15.01.2016	15.01.2019	11.5	JGU Mainz August 2016
6	FORMENTO	Roberto	IT	AAA	FR	Non-academic	08.02.2016	08.02.2019	11	Uni. Nantes May 2016
7	CHOWDHURY	Sanjib	IN	C2TN	PT	Academic	01.01.2016	01.01.2019	12	IST January 2016
8	D'ONOFRIO	Alice	FR	C2TN	PT	Academic	02.11.2015	02.11.2018	14	IST February 2016
9	CHOI	KyungDon	KR	CNAO	IT	Academic	12.11.2015	12.11.2018	13.5	Uni. Pavia October 2016
10	MAIETTA	Maddalena	IT	LEMER PAX	FR	Non-academic	20.10.2015	20.10.2018	14.5	Uni. Nantes January 2016
11	STEGEMANN	Simon	DE	KULeuven	BE	Academic	01.06.2016	29.03.2019	7	KULeuven June 2016
12*	LITVINENKO	Alexandra	RU	UNIGE/HUG	CH	Academic	01.12.2016	29.03.2019 *	1	UNIGE 2017
13*	CICONE	Francesco	IT	CHUV	CH	Academic	15.10.2015	15.10.2018 *	14.5	UNIL November 2015
14*	PRIONISTI	Ioanna	GR	UNIGE/HUG	CH	Academic	01.01.2017	29.03.2019 *	0	UNIGE 2017
15*	FAM Karateev	Thhe Kyong Grigory	UA RU	EPFL	CH	Academic	01.08.2015 21.03.2017	01.08.2018 *	17	EPFL August 2015

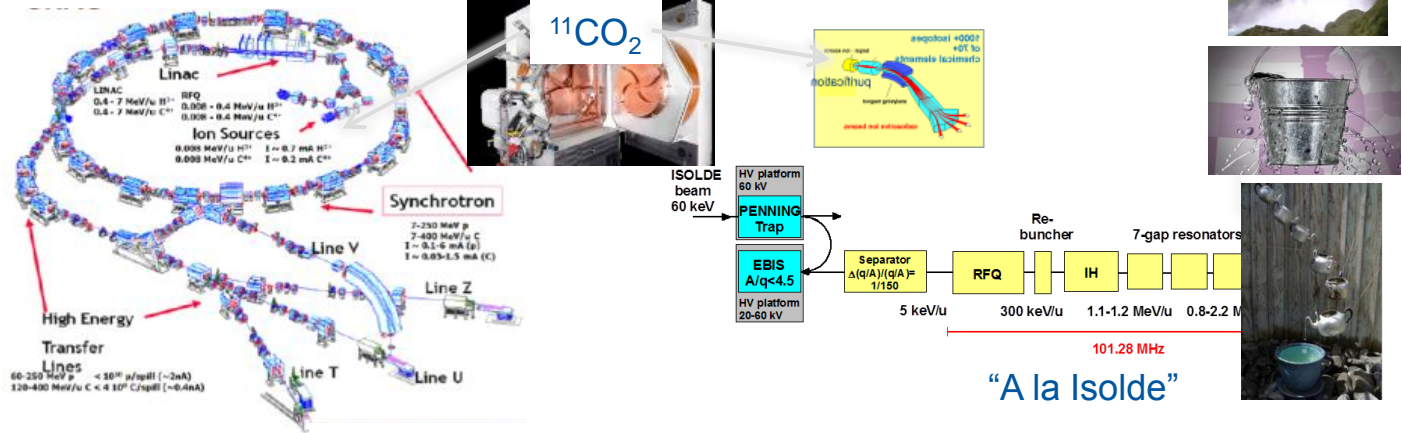


# World map of hadrontherapy centers

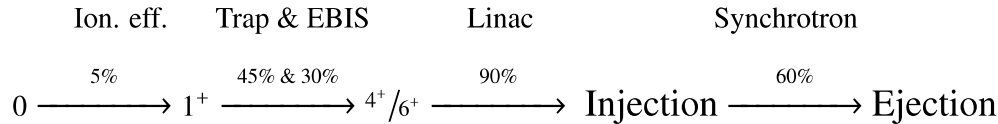


From NuPECC  
2013

# Possible acceleration schemes : efficiencies matter

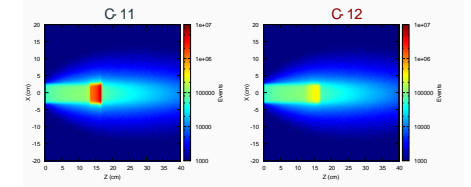


## Directly in the ECRIS



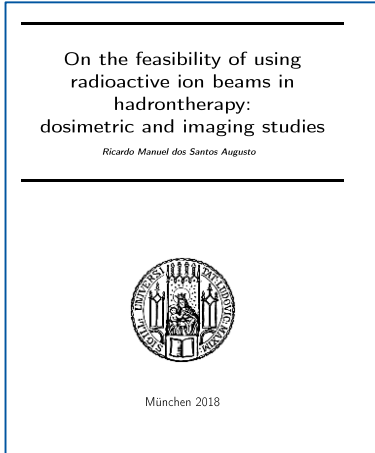
Main parameters for <sup>11</sup>C production.

Method	Cyclotron		Target	Reaction	In target production [pps]	Trap charging time (ms)	Injector [p/injection cycle]	Injector repetition rate [Hz]
	E [MeV]	I [μA]						
PET production (production batch)	22	150	N <sub>2</sub> (≤1 atm)	<sup>14</sup> N(p,x) <sup>11</sup> C	3 × 10 <sup>10</sup>	741	1.5 × 10 <sup>8</sup>	1.3
REX-ISOLDE (ISOL)	70	1200	NaF:LiF eutectic	<sup>19</sup> F(p,2xn) <sup>11</sup> C	4 × 10 <sup>11</sup>	56	1.5 × 10 <sup>8</sup>	18

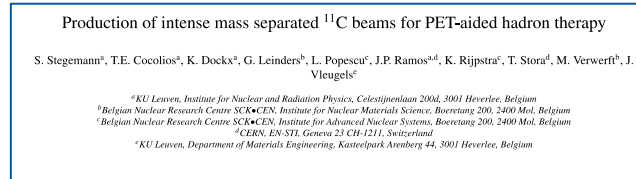


- T.M. Mendonca et al., CERN-ACC-2014-0028
- S. Hojo, et al. NIMB 240, 75 (2005).
- R. Augusto et al NIMB, 376, 374 (2016)

# Some progress



R. Augusto et al.

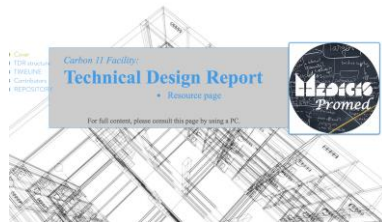


S. Stageman et al.

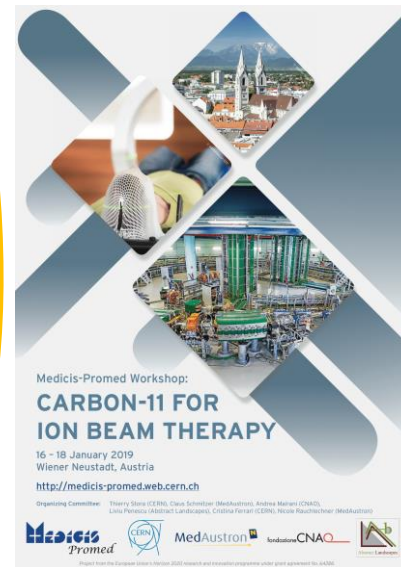


J. Pitters et al.

# Timeline



## Abstract Landscapes



**MEDICIS-Promed Final Conference 2<sup>nd</sup> Circular**

**Invited Speakers**

- Accelerator techniques for medical isotope production:  
**Dr. FORTON, Eric** (IBA, Brussels, BE)
- Devices and Engineering for Radioisotope Handling:  
**Dr. CUTLER, Cathy** (Brookhaven National Laboratory, New York, USA)  
**Dr. KERSHAW, Keith** (CERN, Geneva, EU)
- Methods for production of novel radioisotopes for theranostics:  
**Prof. HADDAD, Ferid** (Arronax, Nantes, FR)  
**Prof. SEVERIN, Gregory** (MSU, Michigan, USA)
- Radioisotope beams in hadron therapy:  
**Dr. KITAGAWA, Atsushi** (NIRS, Chiba, JP)  
**Prof. DURANTE, Marco** (GSI, Darmstadt, DE)
- Preclinical research and development of new radiopharmaceuticals:  
**Dr. BORGNA, Francesca** (PSI, Villigen, CH)  
**Prof. HASEKOP, Jives** (University of Heidelberg, DE)
- Molecular imaging and immunotherapy in patients with cancer:  
**Prof. De VRIES, Elisabeth** (BNL, Groningen, NL)

**Important dates!**

- Start of registration and Hotel reservation: 21<sup>st</sup> January 2019
- Deadline for Contributed Abstracts: 28<sup>th</sup> February 2019
- Notification of abstract acceptance: 28<sup>th</sup> March 2019
- Early Bird Registration fees deadline: 31<sup>st</sup> March 2019
- Deadline for Registration: 15<sup>th</sup> April 2019
- Deadline Proceedings submission: 15<sup>th</sup> September 2019

**Participation Fee**

Categories	Payment before March 31 <sup>st</sup> 2019	Payment after March 31 <sup>st</sup> 2019
Students-Post-grads	500€	600€
Regular participants	700€	800€
Accompanying persons	600€	600€

**Conference Secretariat**  
Cristina Ferrari  
Email: [cristina.ferrari@cern.ch](mailto:cristina.ferrari@cern.ch)  
Phone: +41 76 5725157  
<http://medicis-promed.web.cern.ch>

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- Looking forward for a very fruitful workshop (and a CDR/TDR ) !

