







"HADRONTHERAPY FORLIFE"

10-11 MARCH 2025

MRSH Campus 1 – CAEN UNIVERSITY

NORMANDY 2025









IMPLEMENTING A NEW HEAVY-ION RADIOTHERAPY PROGRAM

WELCOME ADDRESS

It is our pleasure to welcome you to this first symposium in France, organized by the Region of Normandy, the University of Caen-Normandy, the François Baclesse Comprehensive Cancer Center and the CYCLHAD Proton Therapy Center. This event will be devoted to the implementation of our forthcoming clinical heavy ion radiotherapy program. The experience of the radio-oncological group in Caen, has been built so far on advanced photon and proton technologies. But it might be dramatically broadened within a few years with the introduction of an innovative concept of medical accelerator, the "C400®", designed to accelerate a panel of multiple ions (from protons to Carbon+). This workshop will mark the completion of its assembly and open up new perspectives for innovative clinical and pre-clinical programs. The symposium has been designed like a "think-tank" bringing together the experience of renowned international experts (clinicians, scientists and health authorities), encouraging interactions between them, and discussing the potential impact of this new technology on highly challenging medical conditions. Pancreatic cancer, whose increasing incidence, and poor prognosis are well known, is for us the paradigm of a privileged indication. Encouraging experiences conducted by oncological groups abroad have also represented a major incentive for choosing this as main topic. The whole project will be examined in detail with respect to technical, financial, and also safety constraints and international collaborations, through presentations and panel discussions. We are eagerly expecting, from this symposium, clear strategical guidelines that could take the form of at least one, or several "white papers". Other challenging topics could also emerge from our discussions. The meeting will end up with a tour of the facility, along with some local cultural sightseeing. Not to mention the Gala-Dinner on Monday, at the prestigious "Abbaye Aux Dames" (Abbey to the Laddies), founded c1060, by Queen Mathilde, the King of England and Duke of Normandy William the Conqueror's spouse. It is our hope that this initiative be the first in a long series that would help clarify and expand the place in radiation-oncology of this fascinating discipline. Welcome to "multi-ions" radiotherapy!

PR. JEAN-LOUIS HABRAND, MD, GABRIEL GAUBERT, ON BEHALF OF THE LOCAL ORGANIZING COMMITTEE



EXPANDING THE SCOPE OF PARTICLE THERAPY

Protontherapy has attracted considerable interest in the oncological community for over four decades, due to its remarkable ballistic properties, which allow improved normal tissue sparing and reduction of toxicity, compared with conventional photons. But its role, demonstrated in selected iconic indications like ocular primaries and skull base sarcomas, remains more controversial on improved tumour-control of more common "radioresistant" cancers. This has paved the way for new research programs, based on light ions that combine an attractive ballistic selectivity with biological properties.

S OHM

EXPANDING EXPERTISE AND ATTRACTING STUDENTS

Following early experiments conducted with heavy ions in US (Berlkeley) and Sweden (Uppsala), and pions in Europe (Villigen), Japan has become, since 1994, the world leader of heavy-ion radiotherapy through radiosurgical and fractionated programs, conducted initially in Chiba (NIRS), and nowadays in six extra facilities. More recently, a significant contribution has been brought by European countries (Germany, Italy, Austria,) and Asia (China, Taiwan, Korea). The renewed interest for this approach has conducted US to contemplate new clinical programs that are under development. France, a pioneer in protontherapy since 1991, is planning to start her first heavy ion radiotherapy program, in Caen, at the heart of a vast regional research and industrial complex, build up on the WW II vastly damaged landscape of Western Normandy, which has become one of the world-leaders in civil and military applications of nuclear research. To mention a few: GANIL in Caen (Grand Accélérateur d'Ions Lourds), EPR (European Pressurized water Reactor) power plant in Flamanville, Nuclear waste reprocessing factory at La Hague, or Military shipyards in Cherbourg. Last but not least: the University of Caen (Founded in 1432 by the British Crown) and its affiliated engineering schools and labs (approx. 35,000 students), awarded in 2022, "second best" French city, by students. Since 2023, the University of Caen has hosted an international intensive course in particle radiobiology, financially supported by the Euratom program PIANOFORTE, the University of Caen, the François Baclesse Comprehensive Cancer Center and the Caen Town Hall. This prestigious program annually attracts approximately 22 young researchers, PhD students, and medical doctors eager to deepen their knowledge and expertise in particle radiation research.

WHERE?

A WINTER SYMPOSIUM IN NORMANDY

About 80 French and international experts will meet for a two-day symposium through presentations and round tables reflecting evidence-based literature, case-reports, consensus and personal opinions, in order to come up with a strategic roadmap for the treatment and research program in Normandy developed at CYCLHAD Center, combining a Proteus-One IBA proton therapy solution (since 2019) with an innovative compact cryogenic multi-ions cyclotron (C400), specifically designed for future particle programs, in confined space and limited resources.







WHEN?

VENUE

Monday March 10 and Tuesday March 11, 2025.

University of Caen, Campus One, Esplanade de la Paix, 14032 Caen, Cedex 5, France

Tel: 33 (0)2 31 56 55 00

HOW?

TRANSPORTATION

Separated information on flights and trains will be provided soon. Overseas participants who are not familiar with traveling in France, can find a support from the international department, Caen-University – Contact Mme Aurélie Ménard:

<u>dri.recherche-innovation@unicaen.fr</u>;

Tel: +33 2 31 56 59 63

ACCOMMODATION

Rooms for participants have been booked at:
Hôtel MERCURE****/IBIS***
CAEN PORT DE PLAISANCE
I, rue De Courtonne, 14018 Caen, Fr
Tel: 33 (0)2 31 47 24 24



HOWMUCH?

- Participants are supposed to make their own arrangements for transportation and will be reimbursed based on economy class flying-tickets, and 2nd class train-tickets.
- Accommodation for two nights 9 and 10 March 2025 (check-out on the 11th) - (including breakfast) has been booked for all participants and will be free. Any additional night will be at the charge of the participants
- Pre-arranged transports to the Gala Dinner place & CYCLHAD will be provided for free

ORGANISATION

SCIENTIFIC COMMITTEE:

- Manjit DOSANJH, University of Oxford, ICEC, CERN
- Pr Jérome DOYEN, Centre Antoine-Lacassagne
- Pr Marco DURANTE, GSI, PTCOG
- Gabriel GAUBERT, CYCLHAD
- Pr Jean-Louis HABRAND, CFB
- Siamak HAGHDOOST, UNICAEN ABTE-ToxEMAC
- Bradford HOPPE, Mayo Clinic, Jacksonville, Florida, USA
- Egen HUG, MedAustron
- Oliver JÄKEL, HIT
- Virgile LETELLIER, NHa
- Arnold POMPOS, UTSW, Dallas, Texas, USA
- Pr Claire RODRIGUEZ-LAFRASSE, Fac Médecine Lyon-Sud
- Sandro ROSSI, CEO, CNAO + HITRI+
- Pr Juliette THARIAT, CFB

LOCAL ORGANIZING COMMITTEE:

- UNICAEN: Aurélie MÉNARD, S. HAGHDOOST
- CYCLHAD : Alexandre WAHL, Gabriel GAUBERT, Véronique FRAYÉ
- CFB: Pr Jean-Louis HABRAND, Pr Roman ROUZIER
- NHA: Christophe LE FOLL, Virgile LETELLIER



Day 1 (10/03/25)

MORNING: 8:30-13:00

Arrival 8:30 - Registration & coffee

SCHEDULE	TITTLE PRESENTATION	NAME OF SPEAKER
9:00 - 9:15	Welcome addresses	L. Adoui, A. Wahl, R. Rouzier
9:15 - 9:20	Symposium objectives	G. Gaubert
9:20 - 9:30	"Three decades of hadrontherapy in France"	JL. Habrand

Session 1 – Clinical indications (part A) (Chairs: E. Hug + B. Vischioni)

BACKGROUND: INTERNATIONAL CLINICAL PROGRAMS

SCHEDULE	TITTLE PRESENTATION	NAME OF SPEAKER
9:30 - 9:45	Medaustron	E. Hug
9:45 - 10:00	CNAO	E. Orlandi
10:00 - 10:15	HIT	S. Harrabi
10:15 - 10:30	Japan (NIRS)	S. Yamada
10:30 - 10:45	Japan (Gunma)	T. Ohno
	-COFFEE BREAK-	
11:15 - 11:30	ETOILE: experience and heritage regarding CIRT	J. Balosso
11:30 - 11:45	UK meta-analysis	E. Light

Session 1 – Clinical indications (part B) (Chairs: B.Hoppe + D. Stefan)

STRATEGY FOR THE FUTURE:

SCHEDULE	TITTLE PRESENTATION	NAME OF SPEAKER
	Under investigation: PANCREAS CANCER	
11:45 - 12:00	Background, strategy & novel approaches	C. Neuzillet
12:00 - 12:15	Surgery	J. Lubrano
12:15 - 12:30	Radiotherapy	V. Vendrely
12:30 - 12:45	Particle Therapy – Japanese experience	S. Yamada
12:45 - 13:00	Particle Therapy – Chinese experience	Z. Wang
	-LUNCH BREAK -	
14:30 - 14:45	PEDIATRICS: Is there a role?	S. Harrabi
14:45 - 15:00	BASKET TRIAL proposals	J. Thariat

AFTERNOON: 14:30 - 18:30

Session 1 – Clinical indications (part C)

(MODERATORS: J. DOYEN + J. THARIAT)

SCHEDULE	TITTLE PRESENTATION	NAME OF SPEAKER
15:00 - 15:30	Round table: case mix & requirements	

Session 2 - Radiobiology & carcinogenesis of particles (part A)

(CHAIRS: S. HADGHOOST + W. TIGANELLI)

SCHEDULE	TITTLE PRESENTATION	NAME OF SPEAKER
15:30 - 15:45	Combined RT - Immuno	B. Frey
15:45 - 16:00	Hypoxia	L. Toma-Dasu
16:00 - 16:15	Molecular specificities	C. Rodriguez-Lafrasse





Session 2 – Radiobiology & carcinogenesis of particles (part A)

SCHEDULE	TITTLE PRESENTATION	NAME OF SPEAKER
16:30 - 16:45	GSI – Lab + heavy part flash	W. Tiganelli
16:45 - 17:00	HIT – Lab + Helium	I. Dokic
17:00 - 17:15	CNAO – Lab + animals	A. Facoetti
17:15 - 17:30	MedAustron - Lab	P. Fossati
17:30 - 17:45	NIRS - Lab	T. Shimokawa
17:45 - 18:00	Radiobiology activities in Caen	S. Haghdoost

Session 2- Radiobiology & carcinogenesis of particles (part B)

(MODERATORS: A. FACOETTI, C. LAURENT)

SCHEDULE	TITTLE PRESENTATION	NAME OF SPEAKER
18:00 - 18:30	Round table	



18:45 - 19:45 Presentation of the Rome plan model





19:45- TRANSPORT TO "ABBAYE AUX DAMES"

20:00-22:30 - WELCOME & GALA DINNER



Day 2 (11/03/25)

MORNING: 8:15-13:00

Arrival 8:15 - Openning & coffee

Session 3 - Medical Physics & instrumentation

(CHAIRS: O. JAKEL + V. LETELLIER)

SCHEDULE	TITTLE PRESENTATION	NAME OF SPEAKER
8:30 - 8:45	Treatment planning in particule therapy	T. Tessonnier (HIT)
8:45 - 9:00	Beam Delivery Commissioning/QA of a Carbon ion Therapy Center	M. Stock (MedAustron)
9:00 - 9:15	Pioneering Helium-Beam Radiotherapy: from Berkeley to Heidelberg	O. Jäkel (HIT)
9:15 - 9:30	Upright particle therapy and image guidance	M. Ciocca (CNAO)
9:30 - 9:45	Biological models in CIRT	T. Inaniwa (QST)

Session 3 – Medical Physics & instrumentation

(MODERATORS: T. TESSONNIER + JM. FONTBONNE)

SCHEDULE	TITTLE PRESENTATION	NAME OF SPEAKER
09:45 - 10:05	Round table	

Session 4 – Technological aspects & future facilities

(CHAIRS: A. POMPOS+S. ROSSI)

SCHEDULE	TITTLE PRESENTATION	NAME OF SPEAKER
10:05 - 10:20	MayoClinic	B. Hoppe
10:20 - 10:35	Dallas	A. Pompos
10:35 - 10:50	Caen	V. Letellier





Session 4 – Technological aspects & future facilities

(MODERATORS: A. POMPOS + M ROUSSEAU)

SCHEDULE	TITTLE PRESENTATION	NAME OF SPEAKER
11:15 - 11:30	Round table	

Session 5– Medico-economics & Networks (Part A)

(CHAIRS: B. QUESNEL + JY. BLAY)

SCHEDULE	TITTLE PRESENTATION	NAME OF SPEAKER
11:30 - 11:45	Cost-benefit analysis: CNAO	S. Rossi
11:45 - 12:00	EU networks	M. Dosanjh

Session 5 – Medico-economics & Networks (part B)

(MODERATORS: G. PINA, R. ROUZIER)

SCHEDULE	TITTLE PRESENTATION	NAME OF SPEAKER
12:00 - 12:30	Round table	

12:30 - 12:45 - WHITE PAPER GUIDELINES - J. THARIAT 12:45 - 13:00 - CONCLUDING REMARKS - J.L. HABRAND



-LUNCH BREAK -



Transport to CYCLHAD - 14h30

- VISIT OF THE CYCLHAD HADRONTHERAPY CENTER (14H30 16H30)
 - P-ONE FACILITY (DINU STEFAN, A. LARNAUDIE, F. MISSOHOU, PHYSICIENS CFB)
 - SRTH (J. SORRIAUX, V. LETELLIER, G. GAUBERT)









SPONSORS: UNICAEN, RÉGION NORMANDIE, CYCLHAD, CENTRE FRANÇOIS BACLESSE, NORMANDIE HADRONTHERAY, ION BEAM APPLICATIONS

SUPPORTS: PTCOG, HITRIPLUS, SFRO, INCA

ATTENDANCE: ON INVITATION ONLY. RECORDING WITHOUT BROADCASTING.

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