



# Radiobiology

Annelie E. Meijer



<b>Collaborating Institutes</b>	Number of researchers
CERN, European Organization for Nuclear Research (Coordinator)	4ESR
Fondazione CNAO (IT)	2ESR +2ER
GSI, Gesellschaft für Schwerionenforschung (DE)	2ESR
HIT, Heidelberg Ion Therapy Inc (DE)	3ER
Karolinska Institutet (SE)	3ESR
University of Surrey, (GB)	2 ESR
TERA Foundation (IT)	2 ESR
IBA, Ion Beam Applications (BE)	2ESR
MedAustron (AT)	1 ESR
Siemens Medical Solutions (DE)	2 ESR
<b>Associated Partners</b>	
ETOILE Project (FR)	
IFIC, IFIMED Project (ES)	

ESR- Early stage researcher, ER- Experienced Researcher



Giovanna Martino

**Characteristics of light-ion beams;  
measurements of depth-dose profiles  
(Bragg curves), lateral scattering,  
fragmentation characteristics, and including  
these data into the TRiP**

***Supervisors:***

Dieter Schardt  
Michael Krämer  
Marco Durante



**Biological effectiveness of  
light and heavy ions on clonogenic cell  
survival and measurements of the RBE in  
dependence on energy, LET and OER**



Walter Tinganelli

***Supervisors:***

Wilma Kraft-Weyrather

Marco Durante



Chitraleka Mohanty

## Comparative analysis of cellular and molecular responses of cancer and normal cells towards high and low LET radiation

### *Supervisors:*

Margareta Edgren

Annelie Meijer

Anders Brahme





Katarzyna Zielinska-Chomej

**Modelling of different types of radiation-induced cell deaths following exposures to low linear energy transfer (LET) photons and high LET accelerated ions**

***Supervisors:***

Margareta Edgren

Annelie Meijer

Anders Brahme





## Effects of different ion species, nano-beams and chemotherapy in combination with radiation exposures on cell survival

Chew Ming Tsuey

***Supervisors:***

Karen Kirkby

Norman Kirkby





Lara Barazzuol



**Mathematical modelling and investigation of  
chemotherapy in combination with  
radiotherapy and hadron therapy.  
Effects of ion species, nanobeams on cell  
survival**

***Supervisors:***

Karen Kirkby

Norman Kirkby

Raj Jena





**Karolinska  
Institutet**



**UNIVERSITY OF  
SURREY**



# Detectors and Accelerators

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Marta Lazzeroni

## Application of PET imaging in light ion therapy

### *Supervisors:*

Anders Brahme

Iuliana Toma-Dasu

Johanna Kempe





Silvia Verdú Andrés



## Design of the linac for the carbon ion cyclinac proposed by TERA

### *Supervisors:*

Ugo Amaldi

Angeles Faus-Golfe

Thank you for your attention!

