

## Contact the HITRIplus Industry Relations Team



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# NEXT GENERATION TOOL AGAINST CANCER

## FROM DECADES OF ACCELERATOR DESIGN, CONSTRUCTION AND OPERATION

X-ray radiotherapy (RT) is a standard technique in 3,500 treatment units of European hospitals



Proton beam radiotherapy is now available in 25 European operational units and new centres are under construction

Ion therapy is the next frontier in cancer treatment offering advantages in:

- dose conformity
- efficacy against radio-resistant tumors
- integration with modern immunotherapy



4 European facilities, based on CERN's (CH) and GSI's (DE) pioneering work, offer ion therapy with carbon ions:



**CNAO**  
Pavia (IT)



**HIT**  
Heidelberg (DE)



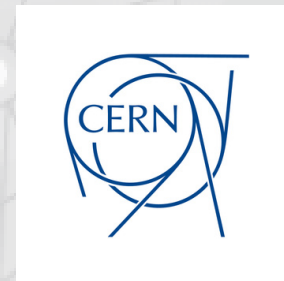
**MedAustron**  
Wiener Neustadt (AT)



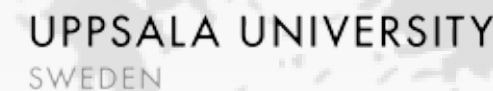
**MIT**  
Marburg (DE)

# HITRIplus CONSORTIUM CONSISTS OF:

- ▶ 2 major European heavy ion physics laboratories
- ▶ 4 European ion therapy centres
- ▶ 8 world-class research institutions
- ▶ 5 leading universities
- ▶ 3 innovative SME's



Cyril and Methodius University in Skopje



# THE CORE OF THE HITRI*plus*' PROJECT

- ▶ **Clinical Networking**
- ▶ **Combined knowledge and background in hadrontherapy**
- ▶ **Experience of running four state-of-the-art treatment facilities and committed user communities**
- ▶ **Clinical and Research transnational access**
- ▶ **Education and Training**



# EUROPE AT THE FOREFRONT OF HEAVY ION THERAPY

**2009**  
HIT starts  
treatments  
(DE)

**2015**  
Marburg  
starts  
treatments  
(DE)

**2021-2025**  
HITRIplus

## Future opportunities

**After 2025**  
Potential  
Upgrade of  
Gantry at  
MedAustron

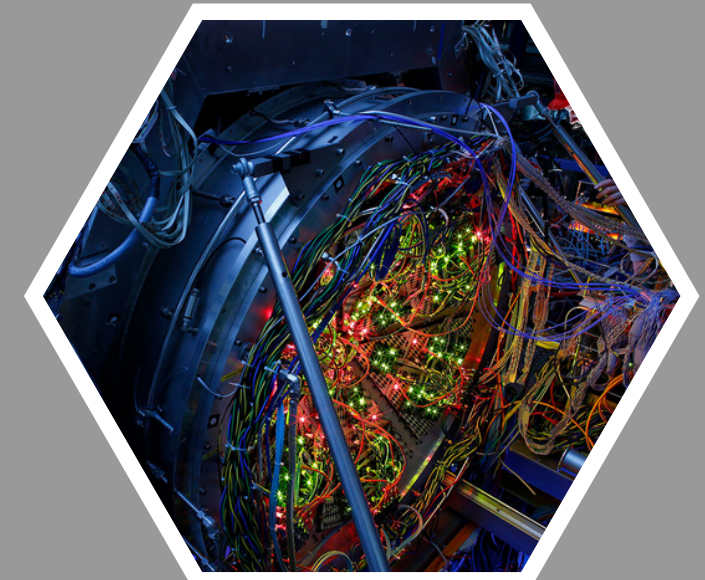
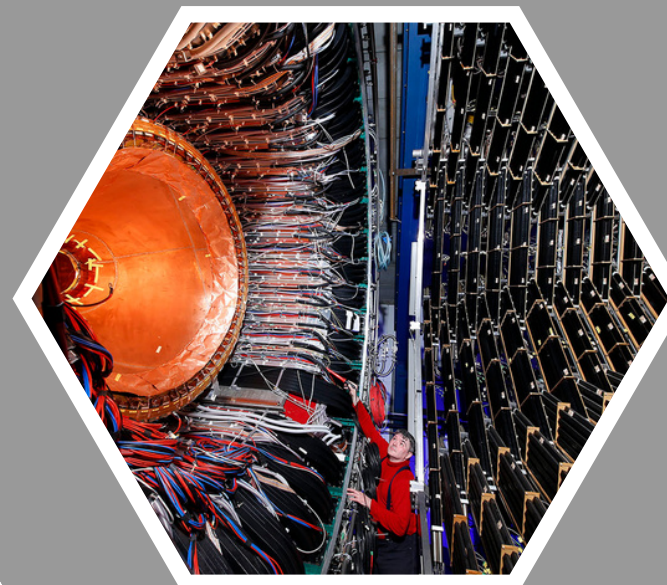
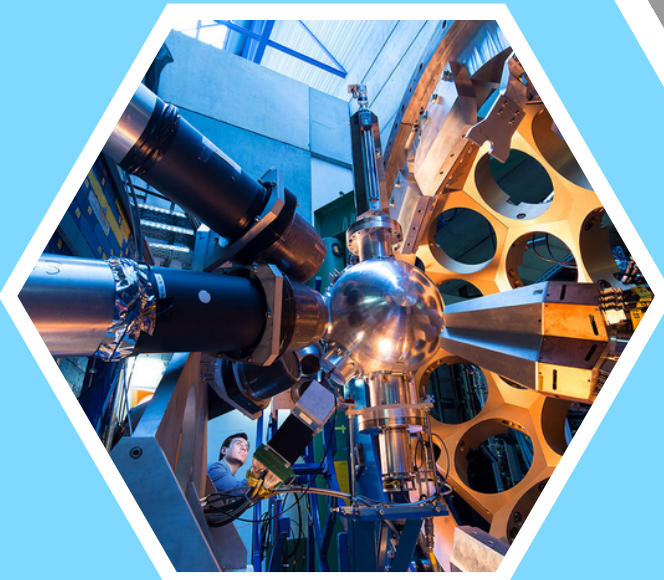
**After 2025**  
Helium  
Synchrotron  
Facility

**2011**  
CNAO  
starts  
treatments  
(IT)

**2019**  
MedAustron  
starts  
treatments  
(DE)

**After 2025**  
Potential  
Upgrade of  
Gantry at  
CNAO

**After 2025**  
SEEIIST  
Facility



# EXPLORE HITRIplus OPPORTUNITIES

- ▶ 500 HOURS OF TRANSNATIONAL ACCESS AT ONE OF THE 4 HEAVY ION CENTRES IN EUROPE AND THE WORLDWIDE LEADING ACCELERATOR FACILITY OF THE GSI
- ▶ PARTECIPATE TO CLINICAL RESEARCH
- ▶ SHARE RESEARCHERS HIGH LEVEL KNOWLEDGE AND BE
- ▶ INVOLVED IN RESEARCH NEW CHALLENGES

