

How Medicine Meets Science - Perspective from a Neurosurgeon -

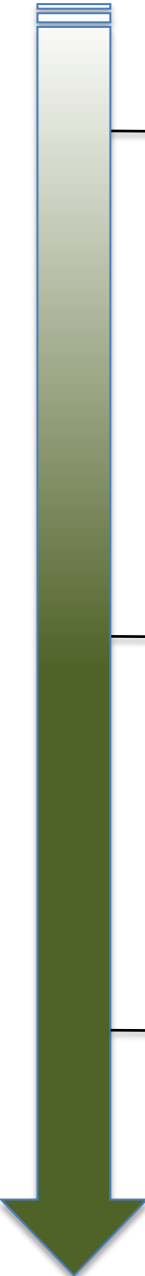
Claudia Faria, MD

IMM's 10th Anniversary Celebration
September 21, 2013



CENTRO HOSPITALAR
LISBOA NORTE, EPE





2004 – 2010

Neurosurgery Residency

Hospital de Santa Maria



2009

Programme for Advanced Medical Education

F. Calouste Gulbenkian, F. Champalimaud

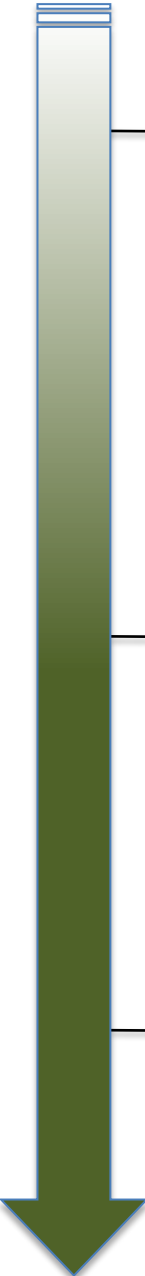
Ministério da Saúde, FCT

2010 – 2013

Research Residency

Labatt Brain Tumour Research Centre

Hospital for Sick Children, Toronto, Canada



2004 – 2010

Neurosurgery Residency

Hospital de Santa Maria



2009

Programme for Advanced Medical Education

F. Calouste Gulbenkian, F. Champalimaud
Ministério da Saúde, FCT

2010 – 2013

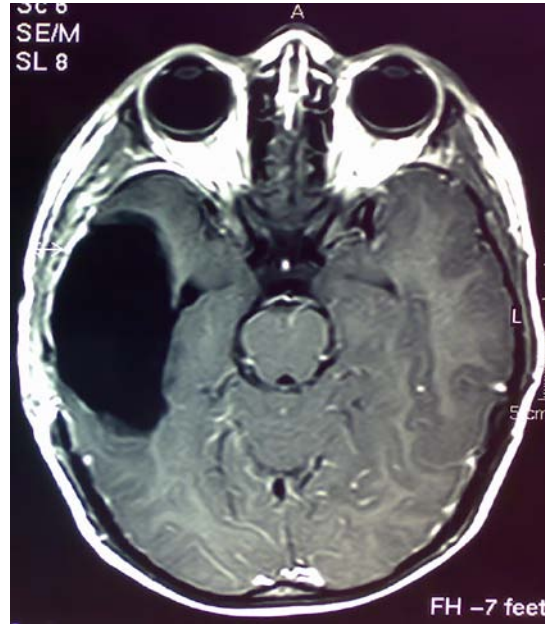
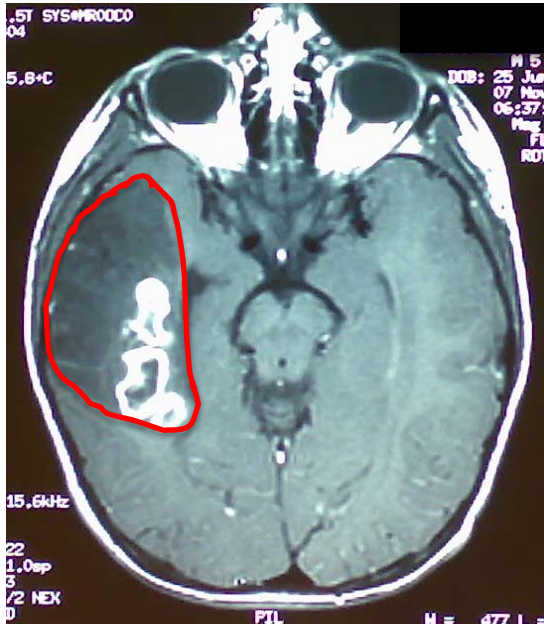
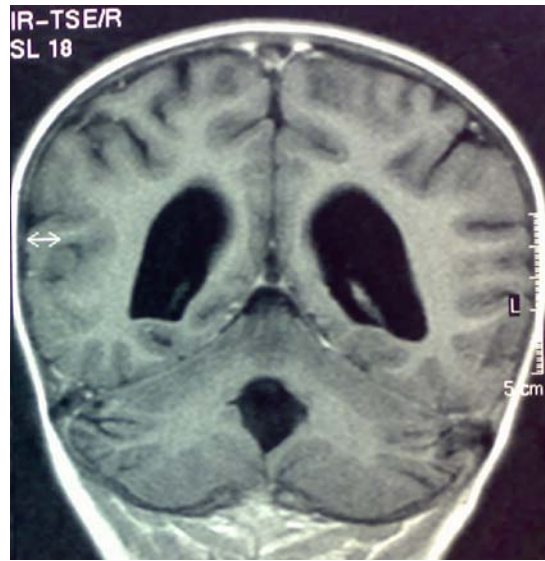
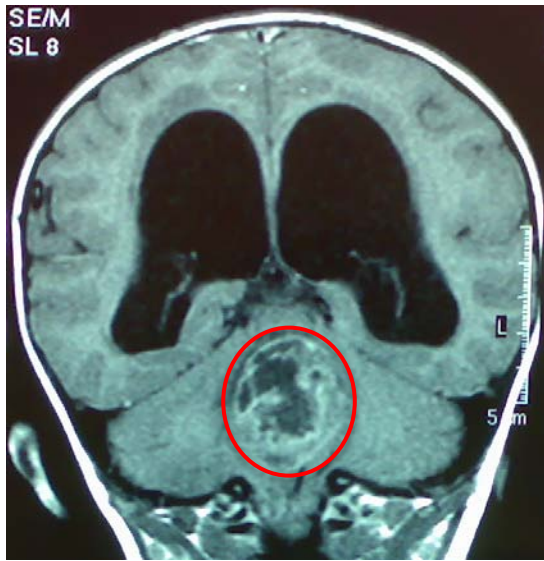
Research Residency

Labatt Brain Tumour Research Centre
Hospital for Sick Children, Toronto, Canada

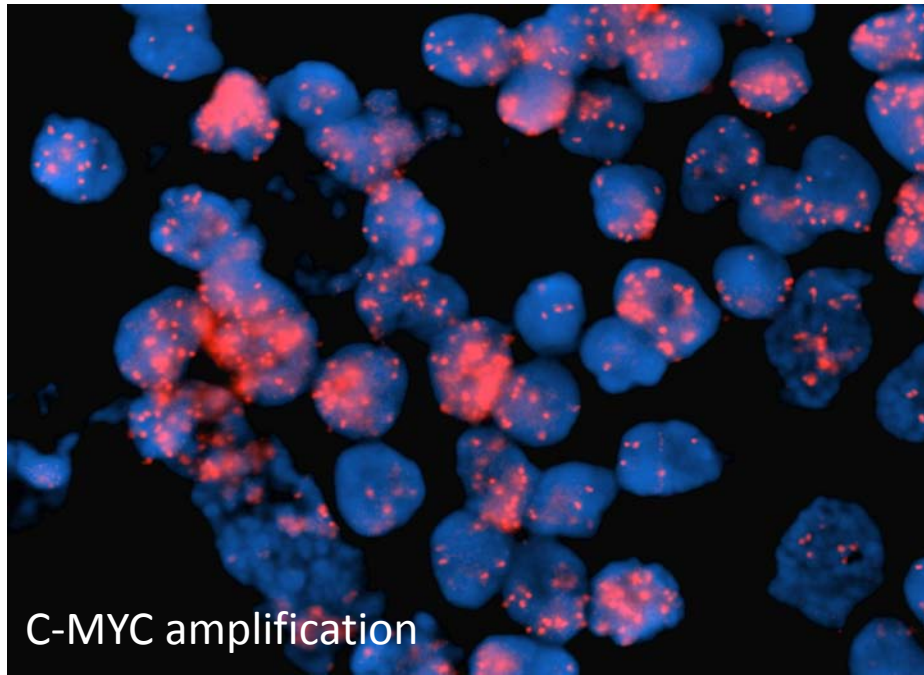
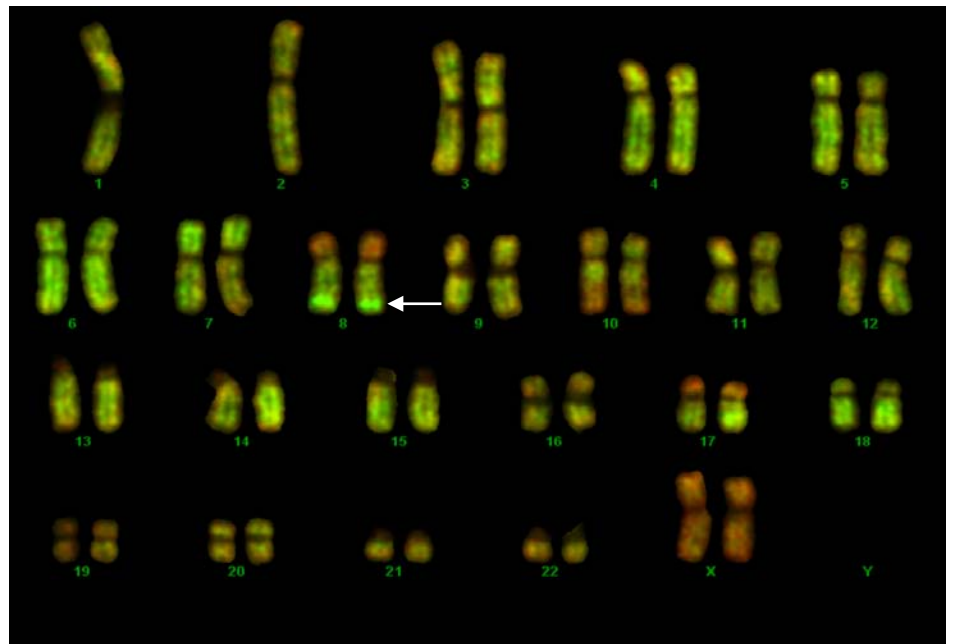
Cell culture
PCR
DNA and RNA extraction
Western Blot
Proliferation assays
Migration/invasion assays
Immunofluorescence
Flow cytometry
Mouse handling/surgery
Bioluminescence Imaging
Bioinformatic analysis



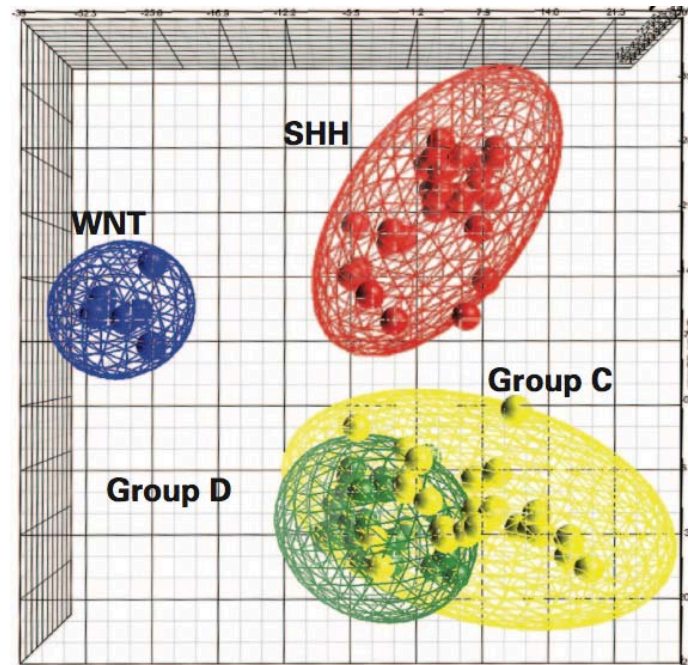
Neurosurgery = Brain Tumor Research



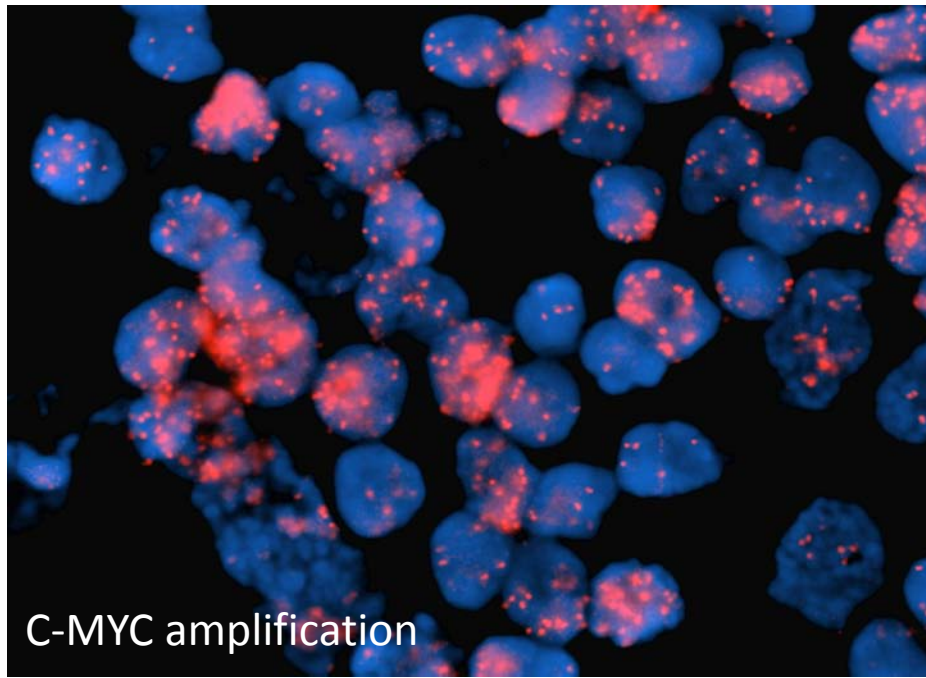
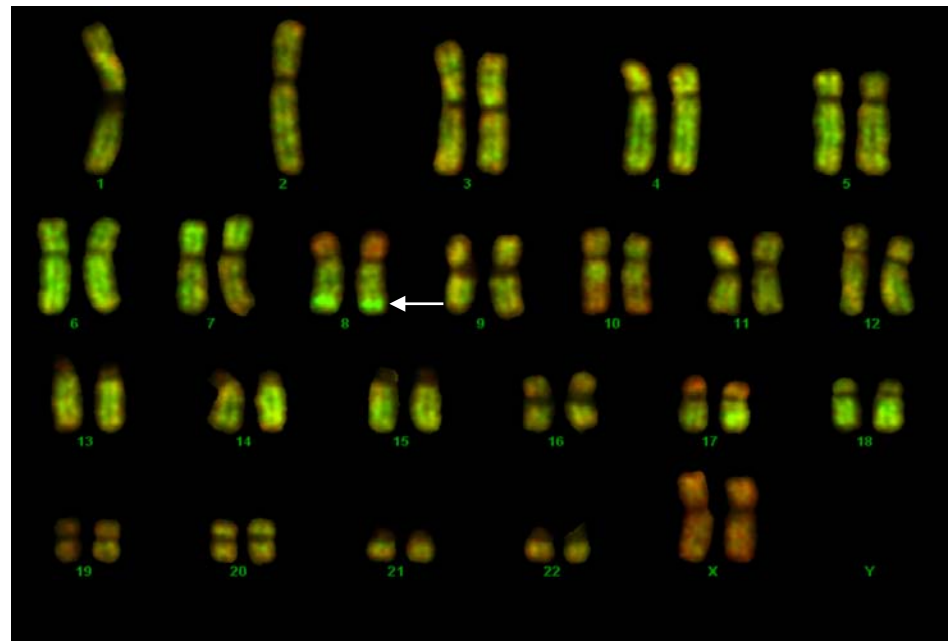
What we see is just the tip of the iceberg...



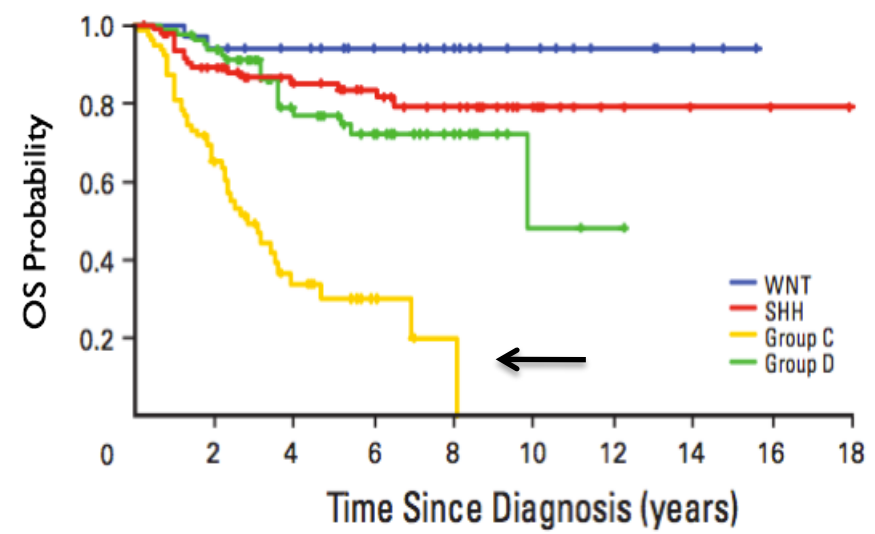
Courtesy of Lucia Roque



Northcott *et al*, *Journal of Clinical Oncology*, 2010



Courtesy of Lucia Roque

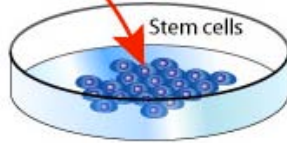


Northcott *et al*, *Journal of Clinical Oncology*, 2010

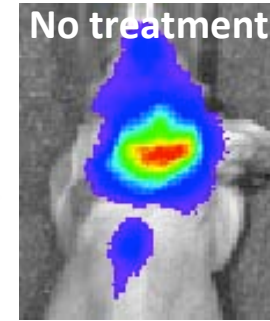
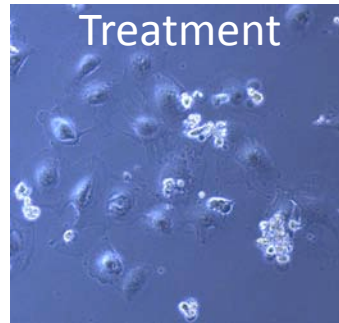
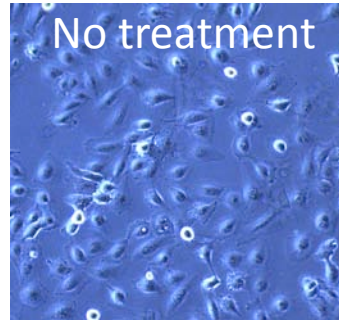
Clinical Problem



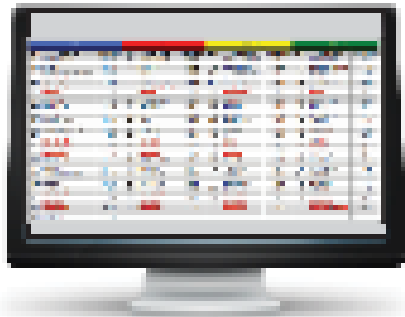
Genomic
Data Analysis



Experimental Model



Drug Discovery



Clinical Trials



How can Medicine help Science?

- **Patients** (resource of fundamental research questions)
- Access to biological **samples** (blood, urine, tumor tissue...)
- **Networking** (collaborations between clinicians from different specialties and institutions)
- Building **bridges** (between clinicians and scientists, between hospitals and research institutes)
- **Translate discoveries** from the research laboratory into timely and effective clinical trials for patients
- **Fundraising events**: participate in runs or walks for a cause, gala dinners...
- Create **awareness**: among patients and their families



The Labatt Brain Tumour Research Centre

Principle Investigators



11 clinician-scientists; 7 neurosurgeons

To become a Clinician-Scientist in Portugal

- **Protection:** time protected for research is the key for high quality research and should be included in the job description.
- **Recognition:** scientific achievements should be considered when evaluating a clinician's productivity (publications, grants and awards, teaching...).
- **Support:** the strategic plan of any University Hospital should insure policies to support clinician-scientists and to evaluate whether these policies accomplish the intended goals.
- **Evaluation:** at 3 or 5 years to start and then every 6 years.
- **Clinician-Scientist Program:** including a Review Committee to enhance the viability of research excellence across Departments.

To become a Clinician-Scientist in Portugal

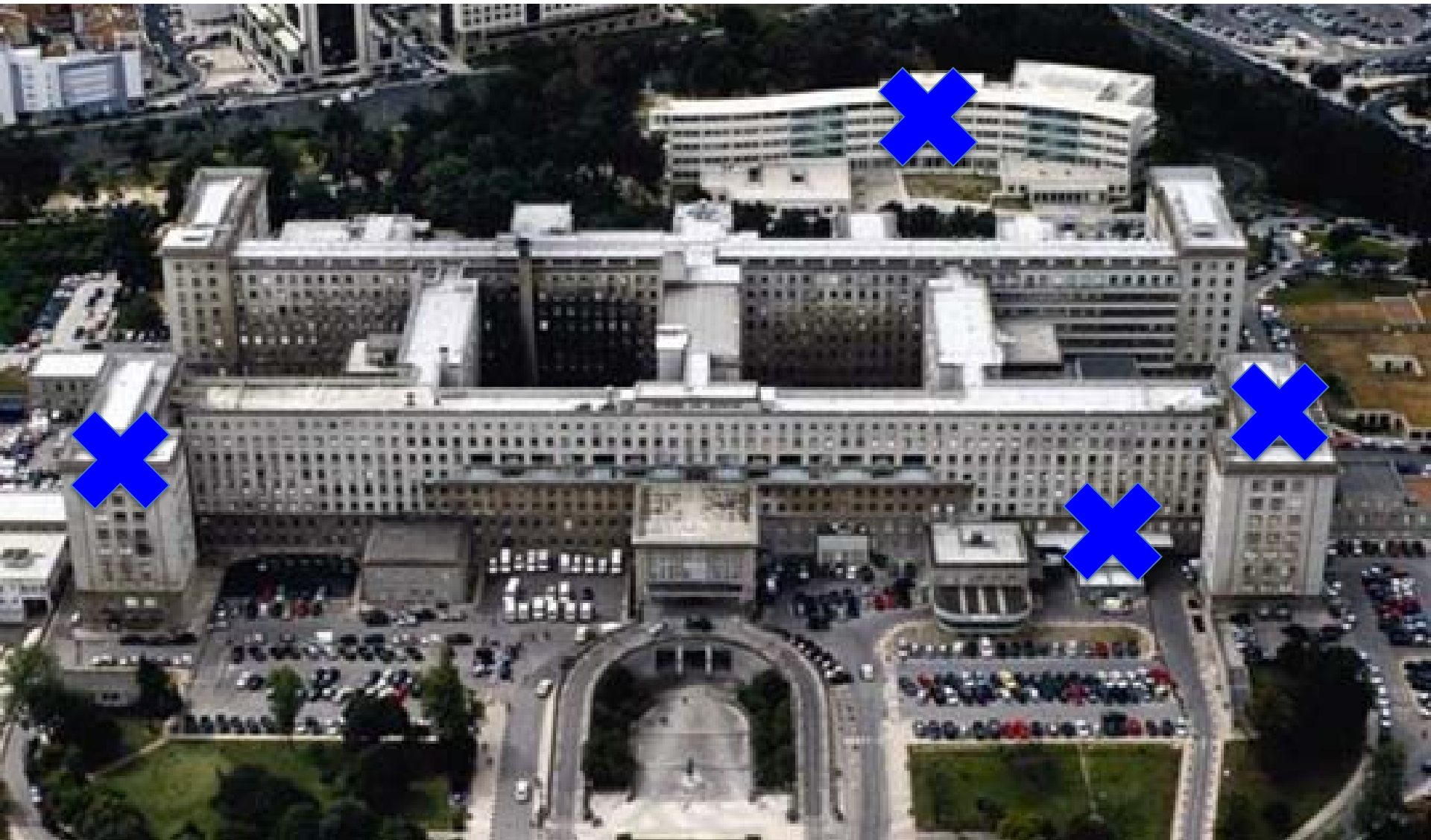
- **Residency Programs:**

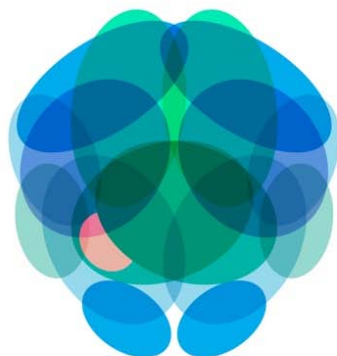
- Mandatory research training (full-time): 6 months to 1 year in all specialties
- Mandatory publication of scientific articles in indexed journals
- Time protected for research (institutional support, department support)

Not all clinicians have to be scientists but...

...all clinicians should know enough about science to collaborate with scientists and to recognize the importance of research to improve patient care.

January 2014



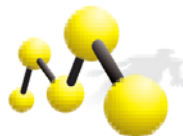


CENTRO DE INVESTIGAÇÃO DE TUMORES CEREBRAIS



CENTRO ACADÉMICO
DE MEDICINA DE LISBOA

CENTRO HOSPITALAR
LISBOA NORTE, EPE



**INSTITUTO DE
MEDICINA MOLECULAR**
FACULDADE DE MEDICINA DA
UNIVERSIDADE DE LISBOA

**BIOBANCO
-IMM**
CENTRO
ACADÉMICO
DE MEDICINA
DE LISBOA

