

# Building an MD/PhD program as a scientific hub to promote biomedical research

**Tiago Gil Oliveira**

**School of Medicine, University of Minho**

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# Post-Graduate Medical Education in Portugal

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→ Until early 2000s most MDs did their PhD work after medical degree either during or after residency training

→ There were no formal MD/PhD programs until 2007

# Goals

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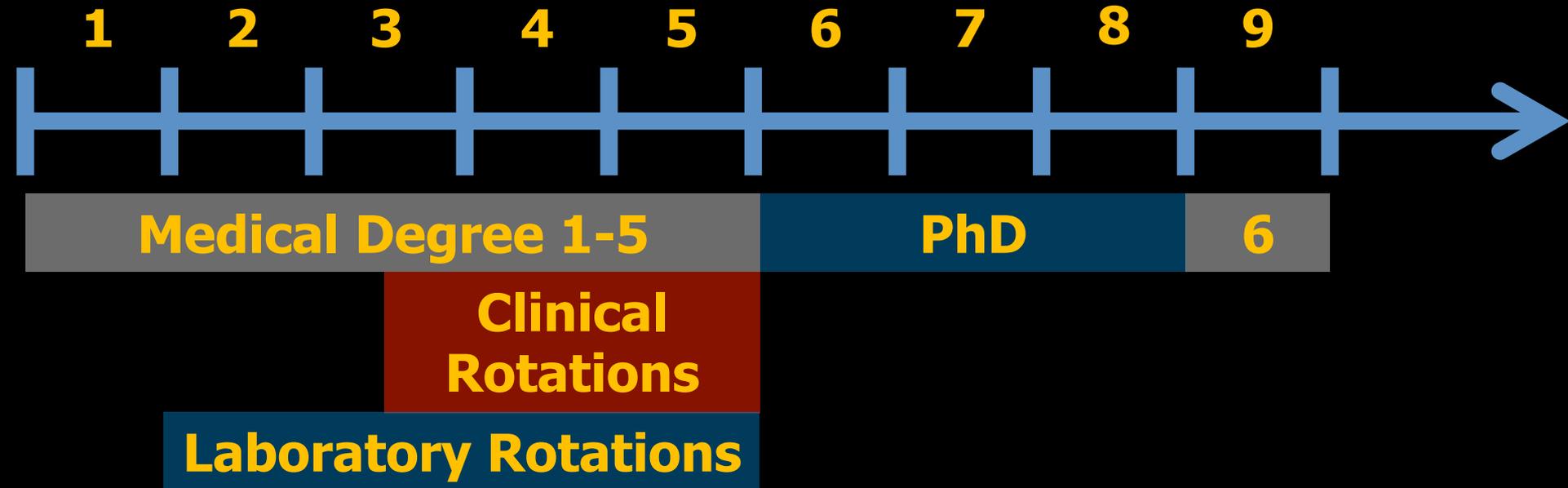
→ Motivate and involve young medical students in basic and clinically oriented research projects.

→ Prepare MDs with a PhD degree before entering in the formal clinical practice in the residencies →  
"contaminate" the hospitals with young MDs with training in research.

# MD/PhD program in the US



# MD/PhD program at Minho



# MD/PhD program at Minho – Lab Rotations

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- Themes (from our Institute Research Domains)
- Integration in a Research Team for 1 month (Summer)
- Techniques
- Report
- 2 evaluated rotations

# MD/PhD program at Minho

- Project
- Interview



# MD/PhD program in the US



**First group of PhD students started in 2007**

# MD/PhD program at Minho



**First Graduates in 2010**

# MD/PhD program at Minho

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- **Since 2007**
- **2013 – funded program by FCT**
- **1300 students**
- **137 students did laboratory rotations ( $\approx 10\%$ )**
- **28 students entered the program ( $\approx 20\%$ )**
- **9 students finalized (until 2018)**

# MD/PhD Program as a hub for biomedical science

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## Laboratory Rotations

- Medical Students  $\leftrightarrow$  Basic Researchers

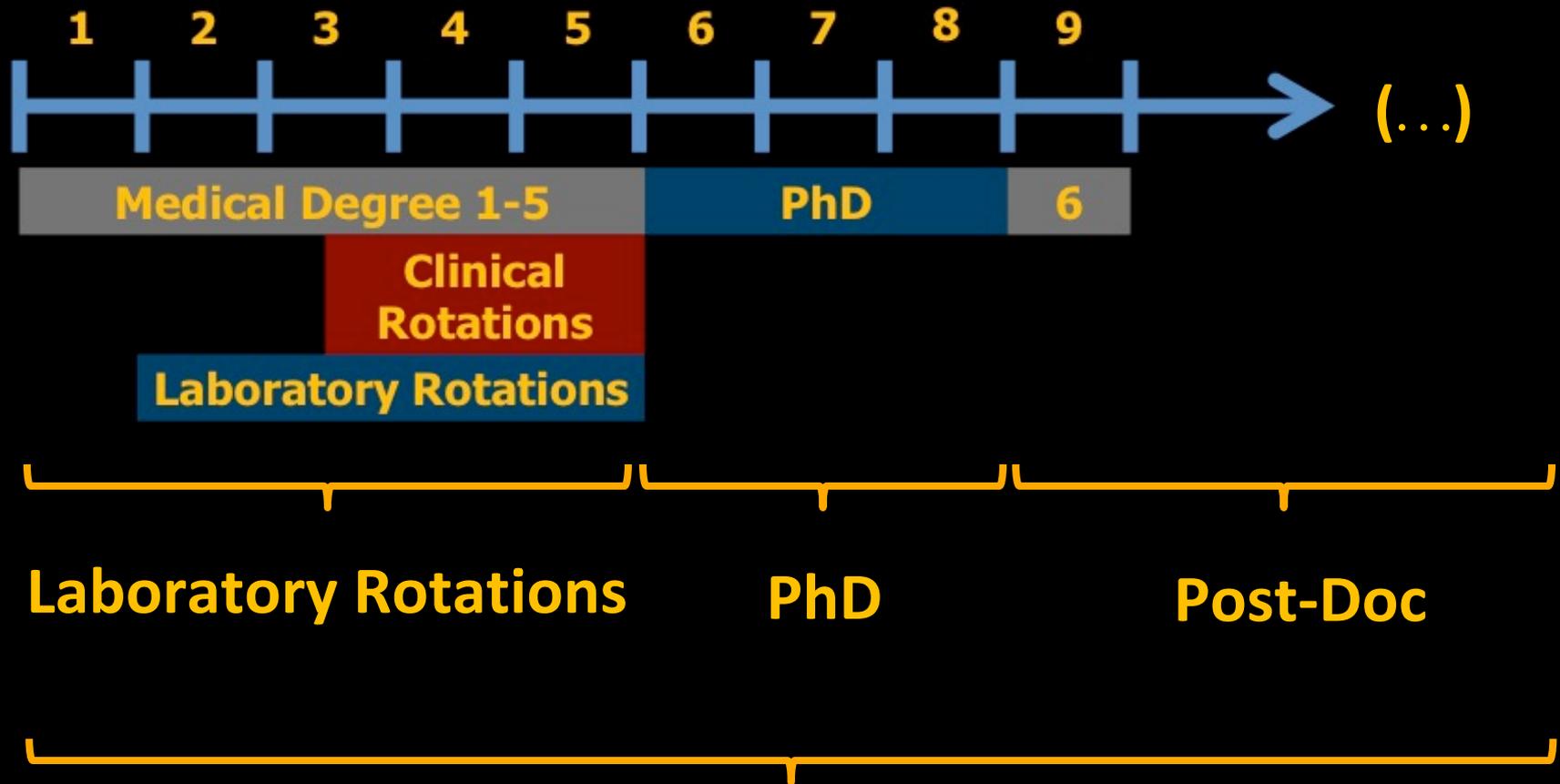
## PhD

- Medical Students  $\leftrightarrow$  Basic Researchers
- Minho  $\leftrightarrow$  Jefferson/Columbia

## Post-PhD

- MD/PhDs  $\leftrightarrow$  Basic Researchers
- MD/PhDs  $\leftrightarrow$  Jefferson/Columbia
- Minho  $\leftrightarrow$  Jefferson/Columbia; Others?

# MD/PhD Program as a hub for biomedical science

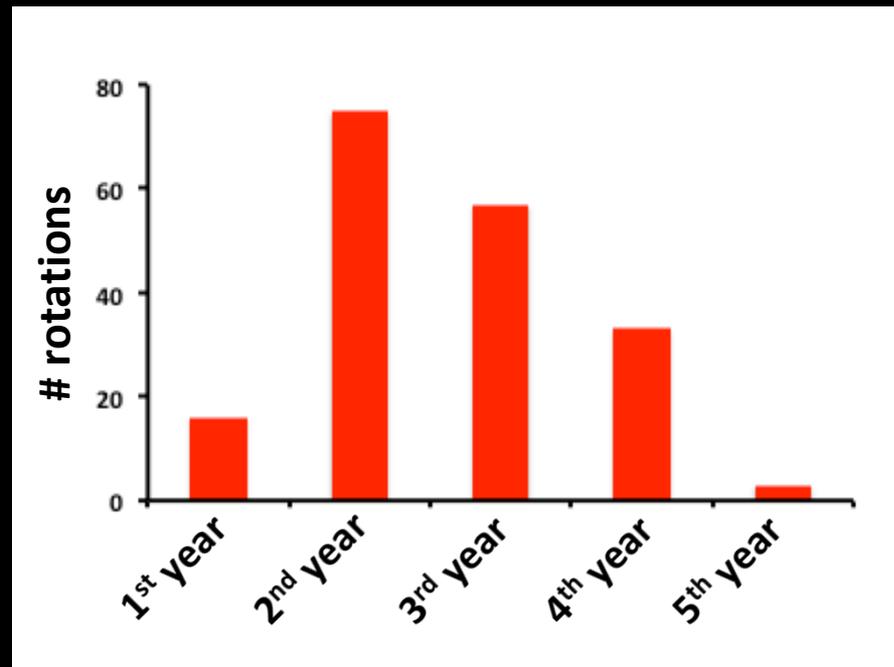


Impact → Minho, Hospital de Braga, Portugal

# MD/PhD Program as a hub for biomedical science

## Lab rotations - 137 students

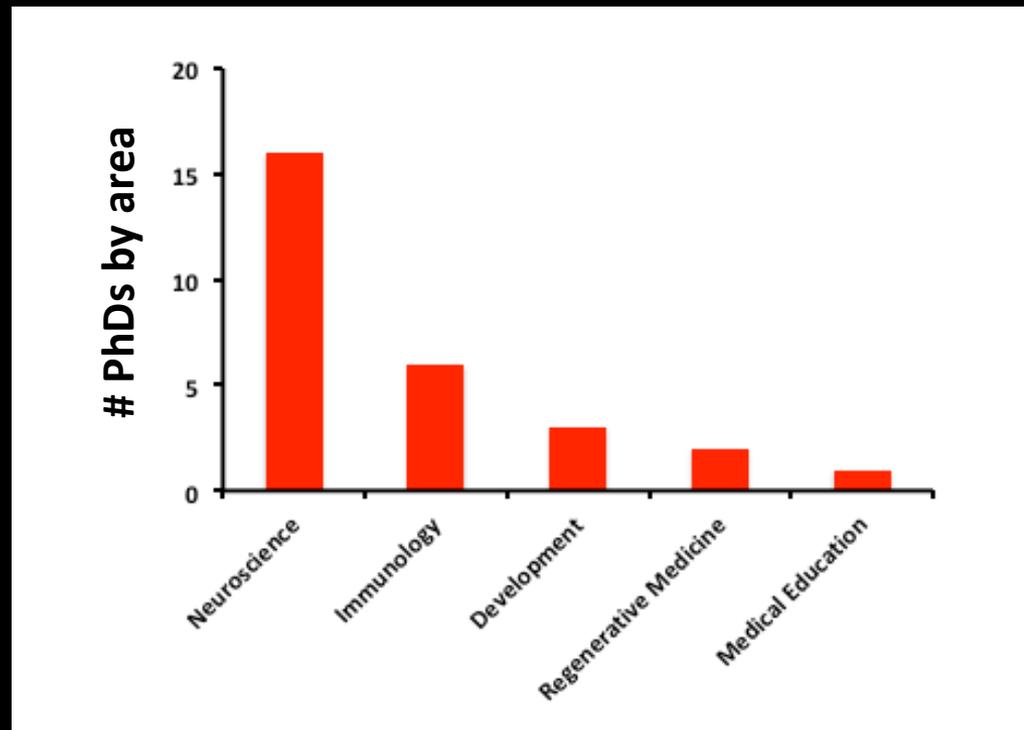
- 54% rotations – 2<sup>nd</sup> year



# MD/PhD Program as a hub for biomedical science

## PhD - 28 students

- Main area for PhD - Neuroscience



# MD/PhD Program as a hub for biomedical science

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## 28 students - 9 students finalized MD/PhD

- **3 faculty appointment**
- **1 board certified specialist (neuroradiology)**
- **4 residents (surgery, pathology, medical genetics)**
- **6 general residents**
- **1 clinical practice ER**
- **1 full time post-doc**

# NIH – Physician-Scientist Workforce Working Group Report

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1. Sustain strong support for the training of MD/PhDs
2. Individual post-doc funding for MD/PhDs
3. Promote grants for early investigators
4. Assess and track the career of MD/PhDs
5. Granting systems to facilitate transition to independence (rigorously enforce protected time – at least 75% - and provide sufficient salary)
6. Support pilot grants with novel approaches
7. Increase diversity in the physician-scientist workforce (gender)
8. Leverage the existing resources of Clinical and Translational Science Awards

# MD/PhD Program – 2007-2019



**Thank you!**

**tiago@med.uminho.pt**