

# fundamentals in neuroscience

## Programme

### Week 1 - September 6<sup>th</sup> to September 10<sup>th</sup>

#### Monday, September 6<sup>th</sup>

- 14:00 - 14:10 *Course presentation* - Fernanda Marques, Hugo Almeida, Tiago Gil Oliveira [\[G2.02\]](#)
- 14:10 - 15:00 *The nervous system cells and their origin* - Hugo Almeida [\[G2.02\]](#)
- 15:00 - 16:00 *Brain Anatomy* - Tiago Gil Oliveira [\[G2.02\]](#)  
*Coffee-break* [\[G2.01\]](#)
- 16:30 - 18:00 *Brain Anatomy - hands-on* - João Carlos Sousa, Fernanda Marques, Hugo Almeida, Tiago Gil Oliveira [\[Lab I2.04\]](#)

#### Tuesday, September 7<sup>th</sup>

- 09:00 - 10:00 *Sensory Systems* - João Cerqueira [\[G2.02\]](#)
- 10:00 - 11:00 *Motor Systems* - João Cerqueira [\[G2.02\]](#)  
*Coffee-break* [\[G2.01\]](#)
- 11:30 - 13:00 *Nervous impulse* - Hugo Almeida [\[G2.02\]](#)  
*Lunch*
- 14:00 - 15:00 *Barriers of the brain and brain metabolism* - Fernanda Marques [\[G2.02\]](#)
- 15:00 - 16:00 *Neurotransmission and neurotransmitters* - João Carlos Sousa [\[G2.02\]](#)  
*Coffee-break* [\[G2.01\]](#)
- 16:30 - 17:30 *Learning and Memory* - Nuno Sousa [\[G2.02\]](#)

#### Wednesday, September 8<sup>th</sup>

- 09:00 - 10:00 *Emotional and Cognitive Behavior* - Hugo Almeida [\[A2.09\]](#)  
*Coffee-break* [\[G2.01\]](#)
- 10:30 - 11:30 *Regulatory Systems - neuroendocrinology* - Joana Palha [\[A2.09\]](#)  
*Lunch*
- 14:00 - 18:00 *Mini-workshop: A Primer on Brain Imaging* - Tiago Gil Oliveira, Neuroimaging team [\[A2.09\]](#)

#### Thursday, September 9<sup>th</sup>

- 09:00 - 10:30 *Brain Anatomy - hands-on* - Fernanda Marques, Hugo Almeida, Tiago Gil Oliveira [\[Lab A1.14\]](#)  
*Coffee-break* [\[G2.01\]](#)
- 11:00 - 12:00 *Behavioral Flexibility and decision-making* - Pedro Morgado [\[A2.09\]](#)  
*Lunch*
- 14:30 - 16:00 *Motor Behavior* - Sara Silva, Marta Costa [\[A2.09\]](#)

#### Friday, September 10<sup>th</sup>

- 09:00 - 11:30 *Electrophysiology: Basic Background and Hands-on* - Luis Jacinto, Patrícia Monteiro [\[A2.09\]](#)  
*Lunch*
- 14:00 - 16:00 *Imaging tools - neuronal function & modulation* - Carina Cunha, Bárbara Coimbra [\[A2.09\]](#)

# fundamentals in neuroscience

**Week 2 - September 13<sup>th</sup> to September 17<sup>th</sup>**

***Self-paced learning on brain basics: anatomy, histology and neurotransmission***

**Wednesday, September 15<sup>th</sup>**

10:30 - 11:30 *Guidance for the self-paced learning week* – Monitoring of progress concerning projects for posters -  
Tiago Gil Oliveira, Fernanda Marques, Hugo Almeida [\[G2.02\]](#)

**Friday, September 17<sup>th</sup>**

10:30 - 11:30 *Mid-week self-paced learning process assurance* - Tiago Gil Oliveira, Fernanda Marques, Hugo  
Almeida [\[G2.02\]](#)

**NOTE:** *The presence in the above indicated sessions is facultative, thus not mandatory for the completion of the course*

# fundamentalsin neuroscience

## Week 3 - September 20<sup>th</sup> to September 24<sup>th</sup>

### Monday, September 20<sup>th</sup>

09:30 - 10:30 *Written Assessment* [A2.06]

*Coffee-break* [A2.13]

11:00 - 12:30 *Stem cell and Biomaterial Based Strategies for CNS Regenerative Medicine* – António Salgado [A2.09]

*Lunch*

14:00 - 15:30 *Spinal Cord Injury* – Nuno Silva and Susana Monteiro [A2.09]

15:30 - 16:30 *Multimodal Pharmacotherapies for neurologic disorders* – Fábio Teixeira [A2.09]

### Tuesday, September 21<sup>st</sup>

09:00 - 10:00 *Of brain cells genesis (and cell death)* – Luísa Pinto [A2.09]

*Coffee-break* [A2.13]

10:30 - 11:30 *Glia and gliotransmission: the other brain* - João Oliveira [A2.09]

11:30 - 12:30 *Neurooncology and glioblastomas* - Bruno Costa [A2.09]

*Lunch*

14:00 - 15:30 *Neurobiological basis of reward and aversion* - Ana João Rodrigues [A2.09]

*Coffee-break* [A2.13]

16:30 - 17:30 *Unravelling brain cell diversity with transcriptomics* – Ana Falcão [A2.09]

### Wednesday, September 22<sup>nd</sup>

09:00 - 10:00 *Synaptic and circuitry mechanisms of basal ganglia dysfunction* - Patrícia Monteiro [G2.02]

10:00 - 11:00 *Modulation of Pain* - Hugo Almeida [G2.02]

*Coffee-break* [G2.01]

11:30 - 12:30 *Multiple Sclerosis - disease mechanisms* - Fernanda Marques [G2.02]

12:30 - 13:30 *Machado-Joseph disease: toward therapies through disease mechanisms and protein function* - Patrícia Maciel [G2.02]

*Lunch*

14:30 - 15:30 *Neurodegenerative disorders - lipid metabolism and membrane trafficking* - Tiago Gil Oliveira, André Miguel Miranda [A2.09]

15h30 - 16:30 *The link between serotonin and neurodegenerative diseases associated with protein aggregation* - Andreia Castro [A2.09]

17h00 - 17:15 *Quiz 1* [A2.08]

### Thursday, September 23<sup>rd</sup>

09:00 - 10:00 *Neurobiology of Depression* - João Bessa [A2.09]

*Coffee-break* [A2.13]

10:00 - 11:00 *Some do it, some don't: exploring executive function* - João Cerqueira [A2.09]

*Lunch*

16:00 - 17:00 *Alzheimer's disease and Stress* - Ioannis Sotiropoulos, Joana Silva [A2.09]

### Friday, September 24<sup>th</sup>

09:00 - 10:00 *Quiz 2* [A2.08]

*Coffee-break* [G2.01]

10:30 - 13:00 *Project/Poster Presentation* [G2.02]

*Lunch*

**Project delivery date deadline: September 23<sup>rd</sup> 2021 - 23:00**

**Project presentation: September 24<sup>th</sup> 2021 - 10:00**