# fundamentalsinneuroscience

# Programme

#### Week 1 - September 7<sup>th</sup> to September 11<sup>th</sup> 2020

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

- 09:00 09:10 Course presentation Fernanda Marques, Hugo Almeida, Tiago Gil Oliveira [Remote Session]
- 09:10 10:30 The nervous system cells and their origin Hugo Almeida [Remote Session]
- 11:00 12:30 Nervous impulse Hugo Almeida [Remote Session]
- 14:00 19:00 Brain Anatomy hands-on João Carlos Sousa, Fernanda Marques, Hugo Almeida, Tiago Gil Oliveira [Lab I2.04] (division in small groups)

#### Tuesday, September 8th

- 09:00 10:00 Brain Anatomy Tiago Gil Oliveira [Remote Session]
- 10:00 11:00 Barriers of the brain and brain metabolism Fernanda Marques [Remote Session]
- 11:30 13:00 Neurotransmission and neurotransmitters João Carlos Sousa [Remote Session]
- 14:00 15:00 Sensory Systems Visual, Auditive and Olfactive Systems João Cerqueira [Remote Session]
- 15:00 16:00 Motor Systems João Cerqueira [Remote Session]
- 16:30 17:30 Learning and Memory Nuno Sousa [Remote Session]

#### Wednesday, September 9th

- 09:00 10:00 Behavioral Flexibility and decision-making Pedro Morgado [Remote Session]
- 10:30 11:30 Regulatory Systems neuroendocrinology Joana Palha [Remote Session]
- 14:00 18:00 Mini-workshop: A Primer on Brain Imaging Tiago Gil Oliveira, Neuroimaging team [Remote Session]

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

09:00 - 12:00 *Brain Anatomy / Histology - hands-on* - Fernanda Marques, Hugo Almeida, Tiago Gil Oliveira [Remote Session] Afternoon Self-study

#### Friday, September 11<sup>th</sup>

- 09:00 -11:00 *Electrophysiology: Basic Background* Luis Jacinto, Patrícia Monteiro [Remote Session]
  11:30 -13:30 *Electrophysiology: Remote Hands-on Demonstration* Luis Jacinto, Patrícia Monteiro [Remote Session]
- Afternoon Self-study

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Week 2 - September 14th to September 18th 2020

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

#### Monday, September 14<sup>th</sup>

10:30 - 11:30 *Guidance for the self-paced learning week* - Distribution of projects for posters - Tiago Gil Oliveira, Fernanda Marques, Hugo Almeida [Remote Session]

#### Wednesday, September 16th

14:30 - 16:00 *Mid-week self-paced learning process assurance* - Tiago Gil Oliveira, Fernanda Marques, Hugo Almeida [Remote Session]

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

# fundamentalsinneuroscience

# Week 3 - September 21st to September 25th 2020

## Monday, September 21st

09:30 - 10:30	Written Assessment [Remote Quiz]
11:00 - 12:30	Animal models, animal behaviour and behavioural analysis - Hugo Almeida, Tiago Gil Oliveira [Remote Session]
14:00 - 15:30	Cognitive Behavior - Hugo Almeida [Remote Session]
15:30 - 16:30	Motor Behavior - Sara Silva, Marta Costa [Remote Session]

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

- 09:00 10:00 Of brain cells genesis (and cell death) Luísa Pinto [Remote Session]
- 10:30 11:30 Stem Cells and Brain Repair Susana Monteiro [Remote Session]
- 14:00 15:00 Glia and gliotransmission: the other brain João Oliveira [Remote Session]
- 15:00 16:00 Neurooncology and glioblastomas Bruno Costa [Remote Session]
- 16:30 17:30 The Neural Basis of Reward and Motivation: Impact of Early Life Stress Ana João Rodrigues [Remote Session]

## Wednesday, September 23rd

- 09:00 10:00 Synaptic and circuitry mechanisms of basal ganglia dysfunction Patrícia Monteiro [Remote Session]
- 10:00 11:00 Modulation of Pain Hugo Almeida [Remote Session]
- 11:30 12:30 Multiple Sclerosis disease mechanisms Fernanda Marques [Remote Session]
- 12:30 13:30 Machado-Joseph disease: toward therapies through disease mechanisms and protein function -Patrícia Maciel, Andreia Castro, Andreia Carvalho [Remote Session]
- 14:30 15:30 *Neurodegenerative disorders lipid metabolism and membrane trafficking* Tiago Gil Oliveira, André Miguel Miranda [Remote Session]
- 15h30 17:00 Self-study
- 17h00 17:15 Quiz 1 [Remote Quiz]

#### Thursday, September 24th

- 09:00 10:00 Some do it, some don't: exploring executive function João Cerqueira [Remote Session]
- 10:00 11:00 Neurobiology of Depression João Bessa [Remote Session]
- 16:00 17:00 Alzheimer's disease and Stress Ioannis Sotiropoulos, Joana Silva [Remote Session]

### Friday, September 25th

- 09:00 10:00 Neuroscience in Population Health Part I Margarida Correia-Neves, Susana Roque [Remote Session]
- 10:30 12:00 Neuroscience in Population Health Part II Margarida Correia-Neves, Susana Roque [Remote Session]
- 14:00 14:15 Quiz 2 [Remote Quiz]
- Afternoon Project Preparation

# Project delivery date deadline: September 25th 2019 - 23:00

#### Project presentation: September 28th 2019 - 14:00 [Remote Session]