

# 14th GABBA COURSE

## Module: IRON BIOLOGY

*Chair: Graça Porto*

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### Objectives

One objective of this course is to introduce students to the most recent developments in the field of iron biology, its regulatory mechanisms, genes and proteins involved, and the clinical implications of its deregulation. The students will be stimulated to discuss the main and most controversial research topics in the field. They are also expected to learn the importance of knowledge transfer from basic science to clinical research. The iron biology field comprises many good examples of such translational research. To attain these objectives, the students will have a close contact, during interactive tutorial classes (IAT), with Portuguese researchers leading projects of basic and clinical research in iron biology and also with other well recognized top quality international experts in the field in sessions designated as “Meet the Experts” (MEX). Students are supposed to organize and chair these sessions. The course will finish with a Symposium on the topic of Iron Biology with the participation of the invited experts.

### Programe Schedule

#### Monday, March 21

11:00 **Introduction to the course and week planning**

12:00 **VISIT TO THE CGPP: “Introduction to a Centre of Genetic Diagnosis, Counseling and Clinical Research”** (guided by Graça Porto). Meeting room C.

14:30 **IAT1: “Hemochromatosis: a clinical model to understand iron homeostasis”**  
Graça Porto (HAS/ICBAS/IBMC). Meeting room A.

16:00 **IAT2: “Iron Biochemistry and Chelators”**  
Conceição Rangel (ICBAS). Meeting room A.

Tuesday, March 22

11:00 **MEX1: “Cellular Iron Trafficking”**

With Caroline Enns (Portland, USA). Meeting room A.  
*Chaired by students*

14:30 **IAT3: “Iron and Lymphocytes: from the concept to the evidence”**

Jorge Pinto (IBMC). Meeting room A.

16:00 **IAT4: “Iron proteins and the ER-stress”**

Susana Oliveira (IBMC). Meeting room A.

Wednesday, March 23

*Free day to attend a PhD examination on Iron Biology at ICBAS:*

**“Modulation of iron intake by red cells: Hfe and macrophages as modifiers of erythropoiesis”**

Pedro Ramos, Weill Medical College of Cornell University, New York, USA.

Thursday, March 24

10.00 **MEX1: “Modifiers of iron overload: how to approach?”**

With Martina Muckenthaler (Heidelberg, Germany). Meeting room B.

11.30 **MEX2: "Erythropoiesis and erythroid iron intake"**

With Stefano Rivella (New York, USA). Meeting room B.

14.30 **MEX3: “Iron homeostasis: lessons from animal models”**

With Sophie Vaulont (Paris, France). Meeting room B.

16.00 **MEX4: “Iron and infection”**

With Hal Drakesmith (Oxford, UK). Meeting room B.

Friday, March 25

12:00 *IBMC Friday Noon Seminar*

**“A balancing act: iron homeostasis in health and disease”**

Martina Muckenthaler (Heidelberg, Germany). Meeting room A.

## **SECOND GABBA SYMPOSIUM ON IRON BIOLOGY**

**Meeting room A**

**“NOVEL THERAPEUTIC CHALLENGES IN IRON RELATED DISORDERS”**

(Chairs: Graça Porto and Jorge Pinto)

14:30 **“Erythropoietin and the treatment of matriptase-2 deficiency”**

Sophie Vaulont (Paris, France).

15:15 **“Hepcidin as a potential therapeutic tool in thalassemia”**

Stefano Rivella (New York, USA).

16:00 *Coffe Break*

16:15 **“Hepcidin regulation during infections”**

Hal Drakesmith (Oxford, UK).

17:00 **“From Bench to bedside: other targets for treating iron refractory anemia and iron overload.”**

Caroline Enns (Portland, USA).

17:45 **Closing**