

Postgraduate course Programme

Molecular diagnosis of neglected parasitic diseases & malaria: Tools for the real world in AI era

Madrid, Spain

9 – 12 June 2026



**Molecular diagnosis of neglected parasitic diseases & malaria:
Tools for the real world in AI era**

Madrid, Spain

**Faculty Members**

Spain	Arancha Amor Aramendía
Egypt	Ayman El-Badry
Spain	Carmen Chicharro
Spain	Daniel Cuadrado
United Kingdom	Debbie Nolder
Spain	Elena Dacal
Italy	Francesca Tamarozzi
Norway	Hanne Brekke
Spain	Javier Nieto Martínez
Spain	Javier Sotillo
France	Jean-Mathieu Bart
Spain	José Miguel Rubio
Netherlands	Lisette van Lieshout
Spain	Maria D Flores-Chavez
Spain	María Jesús Perteguer
Spain	Miriam J Álvarez-Martínez
Switzerland	María Revollo Polo*
Malaysia	Nor Parina Ismail*
Switzerland	Pedro Albajar-Viñas
United Kingdom	Peter Chiodini
Australia	Richard Bradbury*

*Virtual speakers will participate remotely.

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Day 1 Tuesday, 9 June 2026

08:00 – 08:30 Bus Moncloa (Madrid) - ISCIII (Majadahonda)

08:30 – 09:00 Registration

INTRODUCTION

Chair: José Miguel Rubio

09:00 – 09:15 **Welcome to ISCIII/CNM**
Isabel Jado

09:15 – 09:45 **Clinical Parasitology from the European perspective to the Global perspective**
Míriam J Álvarez-Martínez

09:45 – 10:15 **From Paleoparasitology to Parasitology in the XXIst century**
Ayman El-Badry

MALARIA

Chair: Míriam J Álvarez-Martínez

10:15 – 11:00 **Clinical aspects and epidemiology**
Peter Chiodini

11:00 – 11:30 Break

DIAGNOSIS OF MALARIA

Chair: Peter Chiodini

11:30 – 12:00 **Why the gold standard for malaria diagnosis is microscopy?**
Nor Parina Ismail

12:00 – 13:30 **Practical 1: State of the art of antigen detection and molecular tests (Conventional, real time PCR, and capillary electrophoresis for *Plasmodium* sp and multiple hematic parasite detection)**
José M. Rubio, Míriam J Álvarez-Martínez & ISCIII team

13:30 – 14:30 Lunch

MICROSCOPY + AI FOR DETECTION OF MALARIA & NEGLECTED HEMATIC PARASITES

Chair: Jose Miguel Rubio

14:30 – 15:45 **Practical 2: ParasitAI**
Daniel Cuadrado, Elena Dacal & SpotLab team

15:45 – 16:00 Break

16:00 – 17:15 **Practical 3: Microscopy + AI: open vs closed systems**
Daniel Cuadrado, Jose Miguel Rubio, Ayman El-Badry & Debbie Nolder

17:15 – 17:45 **Practical 4: Interpretation of practical results**
Debbie Nolder & Jose Miguel Rubio

17:45 – 18:00 **Lessons from the day**
Míriam J Álvarez-Martínez

18:15 - 18:45 Bus ISCIII (Majadahonda) - Moncloa (Madrid)

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Day 2 Wednesday, 10 June 2026

08:00 - 09:00 Bus Moncloa (Madrid) - ISCIII (Majadahonda)

DISEASES CAUSED BY TRYPANOSOMATIDS

Chair: Maria Delmans Flores Chavez

09:00 – 10:00 **Leishmaniasis: clinical aspects and diagnosis**
Debbie Nolder & Hanne Brekke

10:00 – 11:00 **Chagas disease: interruption of transmission**
Pedro Albajar-Viñas

11:00 – 11:30 Break

11:30 – 12:30 **Sleeping sickness: clinical aspects and diagnosis**
Jean Mathieu Bart

DIAGNOSIS & SURVEILLANCE OF TRYPANOSOMATIDS

Chair: Míriam J Álvarez-Martínez

12:30 – 13:30 **Practical 4: Molecular point of care detection of *Leishmania spp*, African trypanosomatids and American trypanosomiasis**
Javier Nieto Martínez, Carmen Chicharro, Maria D Flores-Chavez, Hanne Brekke & Jean Mathieu Bart

13:30 – 14:30 Lunch

14:30 – 15:45 **Practical 5: Molecular characterization for outbreaks and epidemiological surveillance**
Carmen Chicharro, Maria D Flores-Chavez, Hanne Brekke & Jean Mathieu Bart

15:45 – 16:00 Break

16:00 – 16:45 **Practical 6: Interpretation of practical results**
Javier Nieto Martínez, Carmen Chicharro, Maria D Flores-Chavez, Debbie Nolder, Hanne Brekke & Jean Mathieu Bart

FINAL ASPECTS OF TRYPANOSOMATIDS

Chair: Hanne Brekke

16:45 – 17:45 **Trypanosomatids Road map to 2030**
Pedro Albajar-Viñas

17:45 – 18:00 **Lessons from the day**
Jean Mathieu Bart

18:15 - 18:45 Bus ISCIII (Majadahonda) - Madrid (Center)

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Day 3 Thursday, 11 June 2026

08:00 - 09:00 Bus Moncloa (Madrid) - ISCIII (Majadahonda)

FILARIASIS

Chair: Jose Miguel Rubio

09:00 – 11:00 **Filariasis: clinical aspects, diagnosis and control**
Francesca Tamarozzi & María Jesús Perteguer

11:00 – 11:30 Break

DIAGNOSIS OF FILARIASIS

Chair: Francesca Tamarozzi

11:30 – 13:30 **Practical 7: qPCR and Sanger sequencing for Filarias detection**
José Miguel Rubio, María Jesús Perteguer & ISCIII team

13:30 – 14:30 Lunch

14:30 – 15:30 **Practical 8: Recombinant antigens for epidemiological surveillance**
María Jesús Perteguer, Francesca Tamarozzi & ISCIII team

15.30 – 15:45 **Practical 9: Interpretation of practical results**
José Miguel Rubio, María Jesús Perteguer & Francesca Tamarozzi

FINAL ASPECTS OF FILARIASIS

Chair: María Jesús Perteguer

16:00 – 16.30 **Lessons from the day**
Francesca Tamarozzi

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Day 4 Friday, 12 June 2026

08:00 - 09:00 Bus Moncloa (Madrid) - ISCIII (Majadahonda)

HELMINTHS

Chair: *Miriam J Álvarez-Martínez*

STRONGYLOIDIASIS

09:00 - 9:45 **Clinical aspects and diagnosis**
Richard Bradbury

9:45 - 10:30 **Interruption of transmission**
Arancha Amor Aramendía

10:30 - 11:00 Break

SCHISTOSOMIASIS

11:00 - 11:45 **Clinical aspects and diagnosis**
Lisette van Lieshout

11:45 - 12:30 **Basics and News of Schistosomiasis research**
Javier Sotillo

12:30 - 13:30 **Practical 10: qPCR, Sanger sequencing, DNA barcoding, MALDITOF**
Lisette van Lieshout, Arancha Amor Aramendía, Javier Sotillo & ISCIII team

13:30 - 14.30 Lunch

DIAGNOSIS OF HELMINTHS

Chair: *María Delmans Flores Chavez*

14:30 - 15:45 **Practical 11: qPCR, Sanger sequencing, DNA barcoding, MALDITOF**
Lisette van Lieshout, Arancha Amor Aramendía, Javier Sotillo & ISCIII team

15:45 - 16:00 Break

16:00 - 16:30 **Practical 12: Interpretation of practical results**
Arancha Amor Aramendía, Javier Sotillo & Lisette van Lieshout

16:30 - 16:45 **Lessons from the day**
Lisette van Lieshout

FINAL ASPECTS OF THE COURSE

Chair: *José Miguel Rubio*

16:45 - 17:45 **Road Map to 2030 - NTDs**
Maria Revollo & Pedro Albajar

17:45 - 19:00 **Closing ceremony & farewell party**

19:00 - 19:30 Bus ISCIII (Majadahonda) - Moncloa (Madrid)

ISCIII team

Technicians: Marta Lanza, Begoña Bailó, Daniel Carazo

PhD Student: Ángeles Ceballos

Scientist: Javier Nieto, Carmen Chicharro, María D. Flores-Chavez, Alexandra Martin, Victor Antón, José Miguel Rubio

Programme

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