# XII Parasitology Summer Course (ParSCo)



**Residency Course on**
**PARASITES, ARTHROPOD VECTORS AND TRANSMITTED PATHOGENS IN THE MEDITERRANEAN AREA**

**27 June to 3 July 2026**

A course endorsed by

World Association for the Advancement of Veterinary Parasitology (WAAVP)

European Veterinary Parasitology College (EVPC)

**SPONSORS**

Elanco

MSD Animal Health

Boehringer Ingelheim

and with the participation of

Parasites & Vectors

SOIPA Società Italiana di Parassitologia

Bari, 27 November 2025

*Dear colleagues,*

We are pleased to announce the 12th edition of the Parasitology Summer Course (XII ParSCo) organized by the Parasitology Unit of the Department of Veterinary Medicine, University of Bari (Italy), with the support of the European Veterinary Parasitology College (EVPC) and of *Parasites & Vectors*. Over the last years, more than 150 attendees from all continents have attended the ParSCo.
(see: https://www.youtube.com/watch?v=qpZ6FV9KQVI&feature=youtu.be)

As you are aware, ParSCo is a one-week, intensive course designed for parasitologists and postgraduate students working in the field of veterinary parasitology. This course is primarily focused on practical activities, which account for up to 60% of the entire program. The program includes activities related to the diagnosis of parasites such as *Leishmania infantum* and tick-borne pathogens, as well as the collection and identification of phlebotomine sand flies (e.g., *Phlebotomus* spp. and *Sergentomyia minuta*), ticks (e.g., *Ixodes ricinus* and *Rhipicephalus secundus*), and eyeworms (*Thelazia callipaeda*). Participants will also attend clinical examinations of dogs, cattle, sheep, goats, and reptiles, as well as sample collection from dogs for the diagnosis of arthropod-borne diseases, and tick collection from the environment.

The course traditionally takes place in Basilicata, southern Italy, in the heart of the Mediterranean region.
https://www.youtube.com/channel/UCQaKY0wwTxOsz9QiPAqJ0tA
This region is well-suited for the optimal development of arthropods and, consequently, for the life cycles of many parasites, including those that cause arthropod-borne diseases. A considerable diversity of parasites, inhabiting different microenvironments, can be found in Basilicata. This region has received significant attention from researchers, not only for its outstanding species richness, but also because it represents a potential model for other countries in the Mediterranean area.

We thank Elanco Animal Health and Boehringer Ingelheim for their financial support.

We look forward to meeting you for an enjoyable XII ParSCo meeting and sharing our experience in the field of parasitology with you!

*Domenico Otranto*
*Filipe Dantas-Torres*
*Jairo Mendoza-Roldan*
*Marcos A. Bezerra Santos*
University of Bari, Italy

# GENERAL INFORMATION

For any information, please refer to the secretariat (parscobari@gmail.com). Videos:
Promo
Testimonials

**SCIENTIFIC ORGANIZERS**

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# LIST OF LECTURERS AND TECHNICAL ASSISTANTS

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**VENUE**
La Casa di Caccia, Pietrapertosa, Italy.
Parco Regionale di Gallipoli Cognato, Matera, Italy.

**APPLICATION**
Course applicants should complete the provided registration form (see below), accompanied by a motivation letter (no more than 300 words) and a recent photo, and send them to parscobari@gmail.com by January 15, 2026. Please indicate whether you have already applied for the previous edition of the ParSCo.
By 1st March 2026, selected candidates will be notified and then may proceed with the payment of the registration fee according to the instructions below.

**PARTICIPATION FEE**
The total cost for participation is € 1,100 + 22% VAT (which includes accommodation, coffee breaks, lunches, and dinners at Casa di Caccia).
As soon as you are selected as a participant of the XII ParSCo, to ensure your participation, €200 + VAT (nonrefundable) should be paid in advance to the Meeting Planner by credit card or bank transfer (Click here to register/pay). For any further information regarding the payment, please email saveria@meeting-planner.it. The remaining cost (€900 + VAT) should be paid at Casa di Caccia, at the beginning of the course.

**ITALIAN SOCIETY OF PARASITOLOGY YOUNG SCIENTIST GRANT**
The Italian Society of Parasitology (Società Italiana di Parassitologia - SoIPa) will cover the participation fee for a young member of SoIPa. A commission nominated by the SoIPa

executive board will select the grant winner. For more information, please visit https://www.soipa.it/bandi/.

**OFFICIAL LANGUAGE**
English.

**ATLAS by plane**
The Bari International Airport (Aeroporto di Bari "Karol Wojtyla") runs daily flights to and from the main European cities and many domestic flights from main Italian cities.

**By train**
Bari can also be reached from any Italian city by train (Ferrovie dello Stato: 8 hours from Milan, 5 hours from Rome, and 4 hours from Naples).

**ACCOMODATION 1st night**
We will suggest where to reserve the 1st night along with the acceptance letter. In any case, participants may opt for alternative accommodations.

**Venue of the course - La Casa di Caccia**
Contrada Visciglietta
Pietrapertosa, Potenza - 85010
Basilicata, Italy
Phone: +39 0971 983101 https://lacasadicaccia.it
A 25x10 m swimming pool, surrounded by the park's greenery, is available.
Attendees will be allocated to rooms with double to five bedrooms, according to availability and personal arrangements.

**WEATHER**
The area exhibits the typical characteristics of a Mediterranean climate. In June, temperatures range from 20°C to 32°C, with rainfall of 0.3 mm. A sweater and/or jacket may be useful for the evening, but during the daytime, a swimsuit may be more suitable (please note that the swimming pool is available for free time use only).

# OBJECTIVES AND CONTENTS

The main objective of the course is to provide, by means of oral lectures (OL) and practical activities (PA), an overview of the following topics:

**TICKS AND TICK-BORNE DISEASES**

- Tick taxonomy, biology, and ecology
- Tick-borne diseases
- Tick collection from hosts and from the environment
- Tick identification
- Tick dissection
- Tick slide mounting

**SAND FLIES AND CANINE LEISHMANIOSIS**

- Sand fly species in the Mediterranean area: biology and ecology
- Sand fly collection
- Sand fly slide mounting
- Sand fly identification
- Sampling collection for the diagnosis of leishmaniosis

***PHORTICA VARIEGATA* AND *THELAZIA CALLIPAEDA***

- Thelaziosis
- *Phortica variegata* collection and identification
- *Thelazia callipaeda* collection and identification

**CLINICAL PARASITOLOGY**

- Clinical presentation and diagnosis of vector-borne diseases
- Canine filarioid detection and identification

**HELMINTHS**

- General pipeline for gastro-intestinal parasite identification and control
- Sample collection from wild animals (e.g., reptiles)

**OTHERS**

- Updates on chemicals available for prevention and treatment of ectoparasites - field studies in parasitology

# GENERAL GOAL

The main goal of the course is to provide attendees with updated information on the biology and ecology of ticks, sand flies, and other vectors of pathogens in the Mediterranean area. At the end of the course, they should be able to collect and identify important arthropod vectors (i.e., ticks, sand flies, and *Phortica variegata*) as well as to diagnose vector-borne infections in dogs and/or cats. Elements of clinical parasitology, presentation, and diagnostic procedures of tick-borne diseases and canine leishmaniosis will also be provided.

## PRE-REQUIRED KNOWLEDGE

- Basic knowledge of veterinary and/or medical parasitology
- Selected papers will be sent to the attendees one month before the course initiation

## PEDAGOGICAL APPROACH

- Oral lectures (40%)
- Practical activities (60%)

## LEARNING OUTCOMES

Attendees will be updated on the biology and ecology of the primary arthropod vectors and pathogens in the Mediterranean region. They will be able to: - Collect and identify ticks, sand flies, and fruit flies (*P. variegata*)

- Dissect ticks, sand flies, and fruit flies (*P. variegata*)
- Collect samples from dogs for the detection of dermal and blood circulating microfilariae
- Collect and identify *T. callipaeda*
- Collect samples from dogs infected by *L. infantum* and examine them in the lab
- Exam slides for the cytological diagnosis of canine vector-borne pathogen infection
- Identify onchocercid nematodes infecting domestic animals

## SCIENTIFIC CONTEXT IN THE SPECIFIC AREA OF THE COURSE

Ticks are arthropods of medical and veterinary significance. Together with mosquitoes, they act as the main vectors of pathogens to animals and humans worldwide. Ticks transmit many emerging pathogens that have been discovered over the past decades, including several *Rickettsia* species. The Mediterranean region is particularly suitable for ticks in terms of host availability and climate features. For this reason, ticks can be found throughout the year in urban, suburban, rural, and forested areas. Indeed, some species (e.g., *Ixodes ricinus*) are found even during winter. We have conducted several studies on ticks and tick-borne pathogens in Basilicata. In one of these studies, we collected over 10,000 ticks from the environment and hosts, including humans. *Cercopithifilaria bainae*, a poorly studied filarioid presenting dermal microfilariae, has been diagnosed in dogs and ticks. We have also conducted studies on ticks infesting wildlife, including birds. Altogether, these studies have been published in the international literature and provided interesting insights into the ecology of ticks and their transmitted pathogens in southern Europe.

Phlebotomine sand flies are vectors of several zoonotic pathogens, including viruses, bacteria, and protozoa. In the Mediterranean area, they are the main vectors of *Leishmania infantum*, the causative agent of leishmaniosis in dogs, cats, and humans. The study of the ecology of these insects can provide valuable information about the spread of this infection, as well as other viral agents, in a given area. We have studied the species of sand flies occurring in Basilicata, their ecology, and their role as vectors of *L. infantum*. The richness of sand fly species has been specifically investigated in different localities near the Gallipoli Cognato forest, a protected area located in the Basilicata region of southern Italy. Nearly 9,000 sand flies belonging to six species (*Phlebotomus papatasi*,

*Phlebotomus perniciosus*, *Phlebotomus perfiliewi*, *Phlebotomus neglectus*, *Phlebotomus mascittii*, and *Sergentomyia minuta*) were collected, accounting for about 75% of the species diversity of the sand fly population in Italy. These findings confirmed that sand flies are well-adapted to the environment of the study area, where they find suitable conditions in terms of microclimate and host availability for their perpetuation. Of particular interest, *P. perfiliewi* and *P. perniciosus* were the most abundant species, highlighting the risk for *L. infantum* transmission in the region.

Thelaziosis, caused by *Thelazia callipaeda* (eyeworm), is common in both wild and domestic carnivores in this area. Over the past 20 years, several studies on the biology of this nematode – both in the definitive host and in its vector (*Phortica variegata*) – have been carried out in the natural park of Gallipoli Cognato. These studies allowed us to predict suitable environments for the occurrence and development of *P. variegata* across Italy and Europe using a desktop implementation of the Genetic Algorithm for Rule-Set Prediction (GARP). The attendees of ParSCo will have the unique opportunity to visit the areas where the aforementioned studies have been carried out and to apply the methodologies presented in the published papers.

## PREPARATORY WORK AND FINAL EXAMINATION

- Article reading (selected papers).
- Attendees should prepare a short PowerPoint presentation (up to 10 minutes) in advance about their main research project and interests.
- Final examination (10 multiple-choice questions).
- Course evaluation questionnaire.
- An oral presentation of the ParSCo activities will be delivered at the next EVPC meeting by one of the attendees.

## CANDIDATE SELECTION

The course is also open to researchers and students from any country of the world with a particular interest in parasitology, including those who intend to apply for an EVPC Alternative Training Program and all peers who would like to delve into an intense week of field parasitology in southern Europe. The course organizers will select the candidates based on motivation letter, CV, application date, and training level.

## GROUP FORMATION

- To facilitate the activities, attendees may be divided in two or more groups.

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**27 June to 03 July 2026**

**Application form (Submission deadline: 15th January 2026)**

To the Organizing committee
Fax: +39 080/4679839
E-mail: parscobari@gmail.com
Phone: +39 080/4679837

Name: _____ Surname: _____
Institution: _____
City: _____ Country: _____
Phone (WhatsApp):_____
E-mail: _____
EVPC Resident: ☐Yes ☐No

I will arrive by ☐ Train ☐ Plane
Arrival date: _____
Arrival time: _____

☐ Acceptance of terms and conditions
Please be aware that the course organizers are not responsible for any damage or injury arising from transfers and field, clinical, and laboratory activities during participation in the course. We strongly recommend that you consider personal accident insurance if you do not already have it.

Date: _____

Signature

## DETAILED PROGRAM TIMETABLE AND CONTENTS

# Saturday 27th June

Arrival in Bari.

**18:30-21:00** Welcome to the XII ParSCo!
Welcome dinner (optional participation) in Torre a Mare, Bari. This is a welcome dinner offered by the course organizers. Meeting at the Bari Centrale Railway station at 18:30 for the departure (25' driving by car).

# Sunday 28th June

**8:30** Departure to Basilicata

**11:30** Check-in at the hunting lodge

**13:00-14:00** Lunch

**14:00-14:20** Introduction to the course (D. Otranto and F. Dantas-Torres)
**Contents:** Presentation of the course location, organization, and learning material for attendees (e.g., slides, selected articles, tick and sand fly identification keys).

**14:20-15:30** Ticks (F. Dantas-Torres)
**Contents:** Oral lecture on tick origin, evolution, taxonomy, and biology.

**15:30-16:00** Coffee break

**16:00-16:40** Ticks as vectors of pathogens (D. Otranto)
**Contents:** Oral lecture on the role of ticks as vectors.

**17:00-20:00** Visit to Castelmezzano
**Contents:** Castelmezzano is a town in the province of Potenza, in the Southern Italian region of Basilicata. Castelmezzano is part of *I Borghi più Belli d'Italia* (the most beautiful villages in Italy), an Italian association that notes small towns of strong artistic and historical interest. In 2017, *The Telegraph* ranked Castelmezzano among its "Italy's 19 most beautiful villages" list, defining it "one of southern Italy's most stunningly located villages".

**20:00-22:00** Dinner (La casa di caccia)

# Monday 29th June

**7:30-8:30** Breakfast

**8:30-10:00** Ectoparasites and associated diseases in reptiles (J.A. Mendoza Roldan)
**Contents:** Oral lecture on mites and ticks of reptiles and practical collection.

**10:00-13:00** Ectoparasite collection from the environment and wild hosts (whole team)
**Contents:** Practical activities on ectoparasite collection (Parco Gallipoli Cognato).

**13:00-14:30** Lunch

**14:30-17:00** Tick identification (F. Dantas-Torres)
**Contents:** Practical activity on tick identification.

**17:00-17:30** Coffee break

**17:30-19:00** Mite mounting and identification (J.A. Mendoza Roldan)
**Contents:** Practical activity on mite mounting and identification.

**19:00-20:00** Refreshing break

**20:00-22:00** Dinner

## Tuesday 30th July

**7:30-8:30** Breakfast

**8:30-10:30** Tick and other ectoparasite collection from sheep and cattle (whole team)
**Contents**: Practical activity on tick collection from livestock in a local subsistence farm.

**10:30-11:00** Return to Casa di Caccia

**11:00-13:00** Phlebotomine sand flies (M.A. Bezerra-Santos)
**Contents:** Oral lecture on sand flies (taxonomy, biology, role as vectors of pathogens, and morphological identification) and practical activity on *Leishmania* xenodiagnosis.

**13:00-14:00** Lunch

**14:00-16:30** Sand fly dissection, mounting, and identification (M.A. Bezerra-Santos)
**Contents:** Practical activities on sand fly dissection, mounting, and identification.

**16:30-17:00** Coffee break

**17:00-19:00** Sand fly collection (whole team)
**Contents**: Practical activity on sand fly collection using light traps and sticky traps (*Pizzaiolo*).

**19:00-20:00** Refreshing break

**20:00-22:00** Dinner

**22:00-22:30** *Team game*: sand fly collection (whole team)
**Contents**: After dinner, practical activity on sand fly collection using mouth aspirators.

## Wednesday 1st July

**7:00-8:30** Early good morning in the field! (R. Lia)
**Contents:** Practical activity on the collection of light traps and sticky traps from the field.
**7:30-9:00** Breakfast

**9:00-10:00** Separation of sand flies from non-sand fly insects (M.A. Bezerra Santos).
**Contents:** Practical activity on the separation of sand flies from non-sand flies.

**10:00-11:30** Canine leishmaniosis and beyond (D. Otranto, J.A. Mendoza Roldan)
**Contents:** Oral lecture on canine leishmaniosis in the Mediterranean basin.

**11:30-13:00** Sample collection from sick dogs and diagnosis of vector-borne diseases (whole team).
**Contents:** Practical activities on sample collection from sick dogs (e.g., lymph node, blood, skin, and bone marrow) and diagnosis of vector-borne diseases (whole team).

**13:00-14:00 Lunch**

**14:00-15:00** *Thelazia callipaeda* and its vector (D. Otranto)
**Contents:** Oral lecture on *T. callipaeda* and *Phortica variegata*.

**15:00-16:00** Skin-dwelling filaroids (D. Otranto)
**Contents:** Oral lecture on *Cercopithifilaria* spp. and *Onchocerca lupi*.

**16:00-19:00** *Phortica variegata* field collection (whole team)
**Contents:** Practical activities on fruit fly collection at Monte Croccia and Mastro Giulio.

**19:00-20:00** Refreshing break (use this extended break also for studying)

**20:00-22:00** Dinner

## Thursday 2nd July

**8:00-8:30** Breakfast

**8:30-10:00** Diagnosis of canine and feline vector-borne diseases (V. Barrs)
**Contents:** Oral lecture on the diagnosis of canine and feline vector-borne diseases.

**10:00-10:30** Coffee break

**10:30-13:00** Cytological diagnosis of vector-borne diseases (V. Barrs)
**Contents:** Practical activities (divided into two groups) on the cytological diagnosis of vector-borne diseases.

**13:00-14:00** Lunch

**14:00-16:00** Parasitic eggs/oocyst identification and parasite control (F. Beugnet)

**Contents:** Microscopic observation of parasitic eggs/oocysts

**16:00-16:30** Coffee break

**16:30-18:00:** Integrative taxonomy for the identification of helminths (A. Rojas)
**Contents:** Oral lecture on integrative taxonomy for the identification of helminths of animal concern

**18:00-18:30:** Helminth identification (A. Rojas)
**Contents:** Case analysis for the identification of helminths (divided in groups).

**18:30-19:30** Dissection of ticks (F. Dantas-Torres)
**Contents:** Practical activity on the dissection of ticks.

**19:30-20:00** Refreshing break (use this extended break also for studying)

**20:00-22:00** Dinner

## Friday 3rd July

**7:30-8:30** Breakfast

**8:30-10:00** It's your turn: attendees' talks
**Contents**: Attendees will deliver a short presentation (up to 10 min, including discussion) about their main activities and interests. The idea exchange is to stimulate future collaborations among attendees and the ParSCo team.

**10:00-12:00** Final exam
**Contents**: Attendees will sit a final exam (10 multiple-choice questions) on all topics discussed during the course. Attendees will also receive an evaluation questionnaire to give their impressions on the course.

**12:00-13:00:** Free time for refreshing and packing

**13:00-15:00:** Final results and delivery of certificates
Lunch

**15:00:** Checkout and return to Bari (back to reality!)