

Pet Parasite Lab: Diagnosis and Comprehensive Management of Vector-Borne and Parasitic Diseases in Small Animals

Brief description

The research focus of this group encompasses the study of parasitic diseases and infections of clinical and zoonotic significance, as well as vector-borne diseases transmitted by arthropods (ticks, fleas, mosquitoes, and sand flies) in domestic carnivores (cats and dogs) and native wildlife or captive wild species. Their scientific activity is always approached from the 'One Health' perspective, a global strategy aimed at enhancing interdisciplinary collaboration in the health care of humans, animals, and the environment.

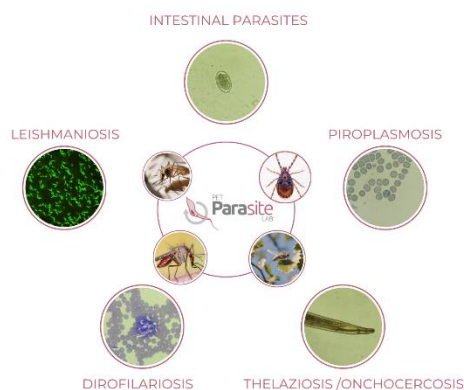


Fig. 1. Diseases researched by the group.

How does it function?

Through its comprehensive diagnostic and technical advisory service (intended for clinical veterinarians, the pharmaceutical industry, private companies, or public institutions), it ensures accurate diagnosis and provides support, under the most up-to-date scientific rigor, in the management of these important diseases in companion animals. It provides specialized and precise diagnosis and also offers advice, training, and a direct link to cutting-edge science, resulting from more than 25 years of continuous research.

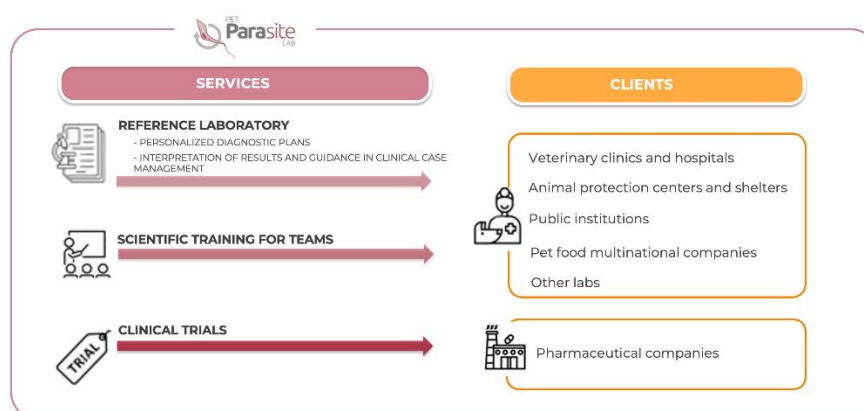


Fig. 2. Services offered through Pet Parasite Lab (PPL)



What problem does it solve?

- Parasitic and/or vector-borne diseases (ticks, fleas, sandflies, and mosquitoes) are increasing exponentially worldwide, posing a serious risk to both animal and human health, due to climate change and globalization.
- These diseases may be partially or incorrectly diagnosed, leading to inadequate or incomplete treatments, which constitute a significant public and animal health concern.
- The clinical signs of these diseases are often similar, making diagnosis and proper clinical management challenging. Clinical veterinarians face a high workload and lack the time to stay updated.
- The pharmaceutical industry in the companion animal sector is experiencing unprecedented growth and requires technical, scientific, and logistical support to assist clinical veterinarians and conduct clinical trials to assess the efficacy and safety of new molecules under development.

What future products will result? What are the future applications?

This highly qualified and specialized team, with expertise in the latest research areas, is prepared to deliver fast and reliable results, as well as a rapid response in the event of a health emergency.

- It has the "know-how" and sufficient technology to set up diagnostic tests for present and future emerging diseases, making future applications a priority on which it is currently working.
- Accurate diagnosis and appropriate management of these diseases contribute to the present and future maintenance of public and animal health.
- Training and updating veterinary professionals in the proper identification, diagnosis, and treatment of these diseases.
- Support for the pharmaceutical industry in the design and development of clinical trials to evaluate the efficacy of new drugs and molecules, which will play a crucial role in controlling these diseases.

Competitive advantages over other research studies

The competitive advantages of this research team lie in the specialization of all its members and the solid structure built over the years, providing comprehensive management of these diseases.

- As a result of ongoing research and training, they have developed and fine-tuned exclusive diagnostic techniques, making them a reference laboratory with a well-established reputation across Spain and internationally.
- It is a reference center for periodic epidemiological surveillance of zoonoses of infectious or parasitic etiology, through the monitoring of companion animals and/or stray animals that serve as sentinels.
- Access to a significant caseload of the main transmissible diseases affecting dogs and cats, through the Infectious and Parasitic Pathology specialty consultation service at the Complutense Veterinary Teaching Hospital.
- The team has a network of national sentinel veterinary clinics and animal shelters established nationwide to conduct clinical and/or epidemiological studies.
- International projection: prominent participation of some team members in specialized scientific societies at the European level and external collaborations with highly regarded researchers from universities worldwide.

Where has it been developed? Presentation of the group or the researcher

The research group specializes in the Faculty of Veterinary Medicine at the Complutense University of Madrid and is led by Dr. Guadalupe Miró, Full Professor at the Department of Animal Health at the Faculty of Veterinary Medicine (UCM). She has been a professor since 1991 and is in charge of the Infectious and Parasitic Pathology specialty consultation service at the Veterinary Teaching Hospital of the same faculty.

It is a multidisciplinary team focused on research lines aimed at studying the epidemiology and control of major parasitic and vector-borne diseases, some of which are zoonoses, that affect companion animals.



Fig. 3: Research lines

Additionally

A team driven by challenges, collaborations, and the contribution of its know-how and projects to other teams. You can find us at:

Pet Parasite Lab (PPL)
Dpto. Sanidad Animal (Lab. 126)
Facultad de Veterinaria (UCM)
Avda. Puerta de Hierro s/n
28040 Madrid.
Tlf: +34 91 394 39 06 / info@petparasitelab.com

Responsible for the research

Guadalupe Miró, gmiro@ucm.es
Department: **Sanidad Animal**
Faculty: **Facultad de Veterinaria UCM**
Web: <https://petparasitelab.com>