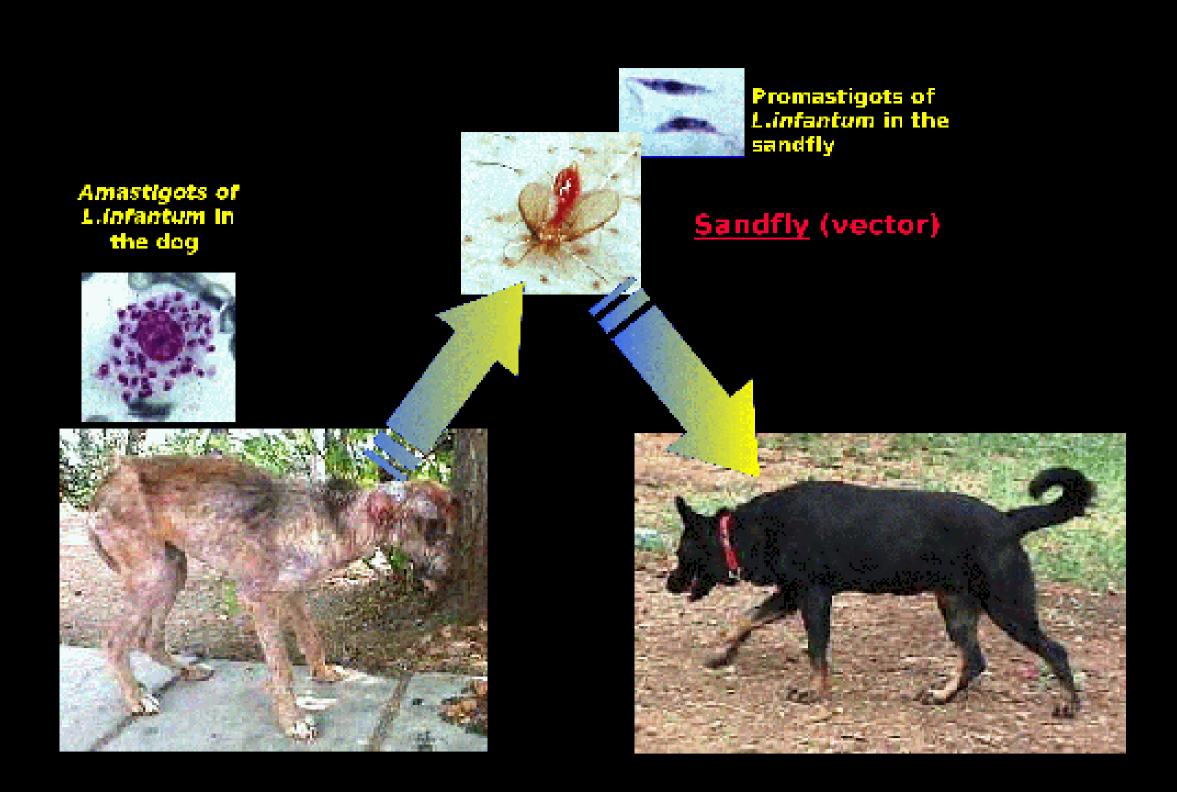
## Leishmaniosis (Leishmania infantum) in the Greece

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In the Greece, the 0.7-48.7% of the dogs, the 1.2% of the rodents (Citellus citellus) and the 3.9-9.2% of the inhabitants are seropositive, while each year 18-106 cases of visceral leishmaniosis are reported (mean annual rate 25 cases during the last seven years).

The sand fly *Phlebotomus neglectus* (0.12% infected by *L.infantum*) is considered as vector for the visceral leishmaniosis in Greece. Additionally, the species *P. sergenti*, *P. balcanicus* and *P. simici* are possible vectors.

No proven vector for the transmission of <u>canine leishmaniosis</u> has been found in Greece. *P.perfiliewi* and *P.tobbi* are suspected as possible vectors.

The infection rate in the dogs and in the humans is depended of the local population of the sand flies and their Sting habits off. In Greece has been found no direct relation between the incidence of the canine leishmaniosis and the cases of the human infection.



The development of the sandflies in the external environment

The sand flies and their **preferable** hosts in Greece are:

P.perfiliewi (dog, fox, cattle, sheep, horse, swine, hare, rabbit, rodents), P.tobbi (sheep, dog, rabbit),

P.neglectus (cattle, horse, swine, rat, rarely human and never the dog),

P.balcanicus (bat, fowls, human),

P.simici (rabbit, bat, human),

P.papatasi (human), P.sergenti (human, rabbit, bat),

P.similis (bat, rarely the human),

P.alexandri (human, rodents),

P.mascittii (dog, fox, human), Sergentomyia minuta (lizard, probably the fowls), and

S.dentata (lizard, probably the fowls).

The disease is characterized by a Th2 pattern, while the effective cellular response of the host (Th1 pattern) results in the

self limitation of the disease. The multiplication of the parasites inside of the monocytes cause the rupture of the cells resulting to the lessions and the disfunction of the spleen, bone marrow, liver, skin, lymphnodes, intestine, eye, membrans e.t.c., through the chronically high concentrations of immunocomplexes and the activation of complement e.t.c.

Diagnosis is mostly established by the detection of the parasite and the detection of the anti-leishmanial antibodies.

The commonly used drugs in visceral leishmaniosis and canine leishmaniosis are leishmanicids (meglumine antimoniate, aminosidine sulphate), leishmaniostatics (allopurinol, miltefosine®, ketoconazole) and as immunostimmulant, levamisole.

## Canine leishmaniosis

1) Protocol A for 7 months

Milteforan (1 ml/10 kg, per os, once a day for 28 days) +Allopurinol (10 mg/Kg/12 hours, per os for 7 months).

2) Protocol A for 6 months

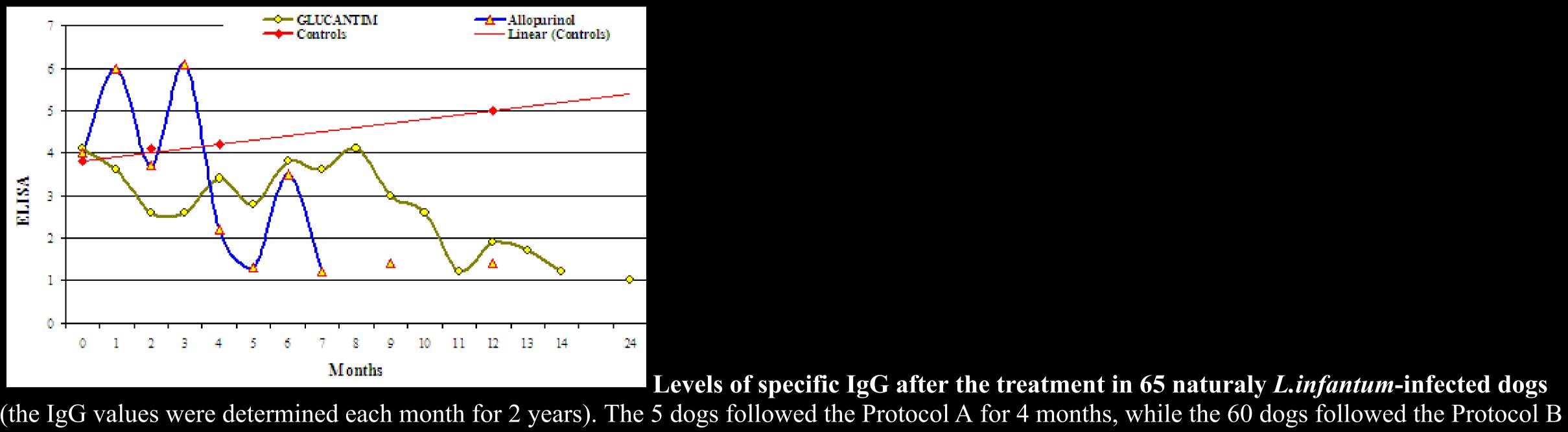
Allopurinol (15 mg/Kg/12 hours, per os) + levamizole (5 mg/Kg/3 days, per os or i.m.).

3) Protocol B for 21 days

Glucantime® (0.33 ml/Kg/day, s.c.) + aminosidine sulphate (0.1 ml/Kg/day, s.c.) + ketoconazole (50 mg/20 Kg/day, per os or allopurinol 10-20 mg/Kg/day, per os) + levamizole (5 mg/Kg/3 days, per os or i.m.).

4) Protocol C for 12 months

Glucantime®(75 mg/Kg/day, s.c., for 20-30 days) + allopurinol 20-30 mg/Kg/day, per os, for 20-30 days). Then, only allopurinol (20-30 mg/Kg/day, per os) for 12 months.



Levels of specific IgG after the treatment in 65 naturaly *L.infantum*-infected dogs

(3 times in one month intervals). A further group of 5 dogs served as controls. In the GLUCANTIM® treated animals, the IgG values remained high for 10 months, while in the allopurinol treated animals, the IgG values achieved a high point in the first, the third and the sixth month. After this period, the values of specific IgG were negative in both groups of animals. Lesions and/or symptoms of the disease were disappeared in all animals after the first 2 weeks of the treatment.

## Visceral leishmaniosis

1) Protocol A for 10-21 days

**Amphotericin B** (AmBisome®) 20-30 mg/Kg, 5 times in the day, i.v.

Miltefosine® (100 mg/day, per os).

2) Protocol B for 30 days

3) Protocol C for 28 days

Glucantime® or Pentostam® (20 mg/Kg/day, i.m. or i.v.).

November, 15 mg allopurinole/kg/12 hours). Moreover, the infected dogs should be early diagnosed and treated. A preventive treatment of all the dogs every year the period August to November (the most dangerous period for the infection in the Greece) would reduce the chance of infection of the dog.

To protect the dogs in the Greece, repellents and insecticids (collars, shampoos, sprays) should be used (May to