

# Endemic fungal pathogens in a rural setting of Argentina: seroepidemiological study in dogs

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## Endemic fungal pathogens in a rural setting of Argentina: seroepidemiological study in dogs

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## Abstract

**Background:** Three fungal species causing human disease, namely *Paracoccidioides brasiliensis*, *Histoplasma capsulatum* and *Coccidioides* sp., Are endemic in different areas of Argentina. Rates of infection in domestic dogs have been used in other Latin American countries as indicators of the presence of these pathogens in a given area. We used such an approach to investigate the epidemiological relevance of paracoccidioidomycosis, histoplasmosis and coccidioidomycosis in our country.

**Aim:** To investigate the presence of *P. brasiliensis*, *H. capsulatum* and *Coccidioides* sp. in a rural area of Argentina called Interfluvio Teuco-Bermejito, located in Chaco province.

**Methods:** We applied Western Blotting to determine the presence of specific antibodies in sera from 89 domestic dogs inhabiting the area. Antibodies against the following extra-cellular fungal antigens were investigated: gp43 of *P. brasiliensis*, H / M of *H. capsulatum* and 120, 82 and 48 kDa antigen bands of *Coccidioides* sp.

**Results:** Specific antibodies against *H. capsulatum* were found in 9/89 (10%) sera: 8 reacted against both H and M antigens and 1 only reacted against antigen M. Of these 9 sera, one showed additional anti-gp43 activity and another reacted against all the fungal antigens tested.

**Conclusions:** This is the first study using dog infection to assess the presence of endemic fungal pathogens in Argentina. Our results suggest that *H. capsulatum* is the main dimorphic fungal pathogen in the Interfluvio Teuco-Bermejito area. Therefore, the diagnosis of histoplasmosis should be taken into account in patients living in this geographic region who show pulmonary or mucocutaneous symptoms compatible with the disease.

**Keywords:** Paracoccidioidomycosis, Histoplasmosis, Coccidioidomycosis, Seroepidemiology, Dogs

### **References**

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