



I SIMPÓSIO INTERNACIONAL DE SAÚDE ÚNICA

I INTERNATIONAL ONE HEALTH SYMPOSIUM

III SIMPÓSIO PARANAENSE DE SAÚDE ÚNICA

III INTERNATIONAL ONE HEALTH SYMPOSIUM OF PARANÁ

# Vulnerabilidades Sociais interação humano-animal



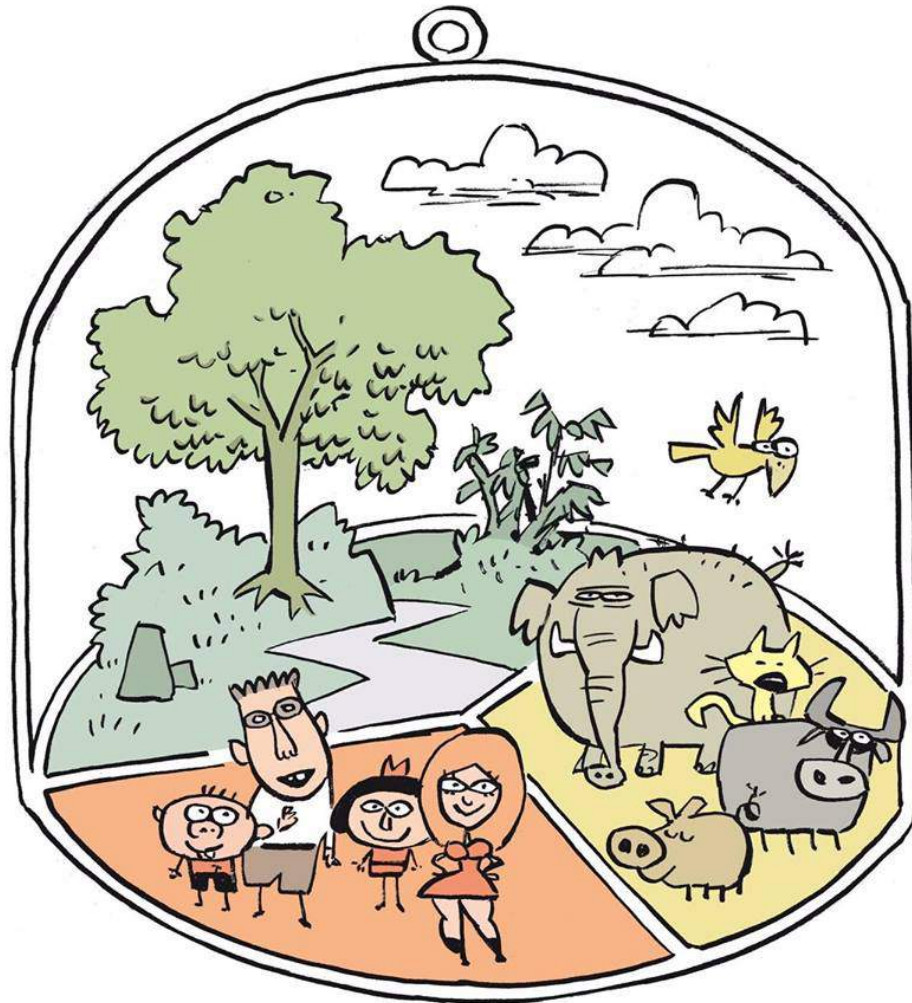
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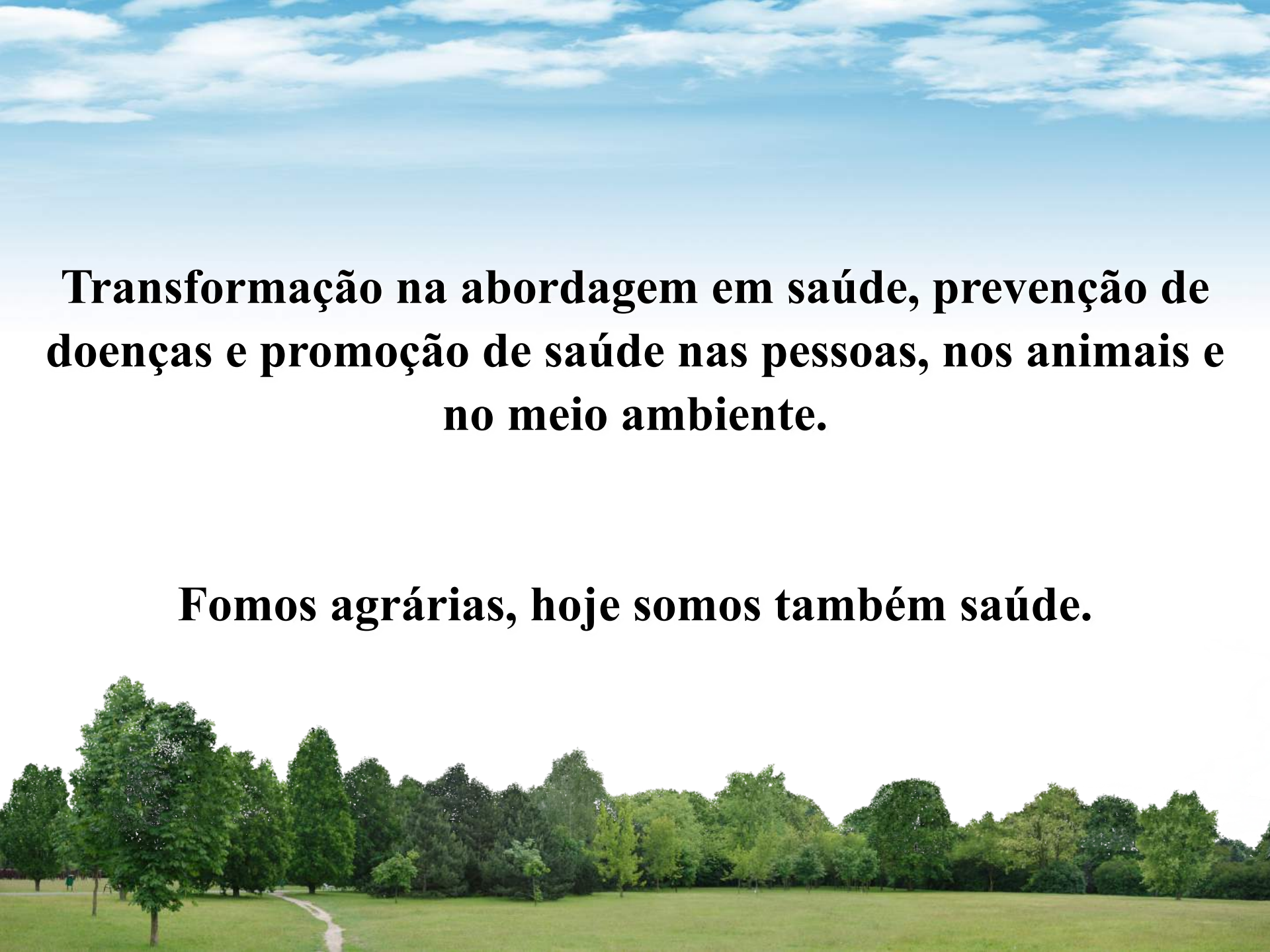
*Curitiba, 07 de outubro de 2019*

# Domínio ambiental



**Domínio  
humano**

**Domínio  
animal**

The image features a bright blue sky with scattered white clouds at the top. Below the sky, the text is centered. At the bottom of the image, there is a lush green landscape with a dirt path leading through a field towards a dense line of trees.

**Transformação na abordagem em saúde, prevenção de doenças e promoção de saúde nas pessoas, nos animais e no meio ambiente.**

**Fomos agrárias, hoje somos também saúde.**

# **Termo Medicina Única**

**Exclui as áreas imediatamente não médicas**

**Saúde Pública**

**Saúde Animal &**

**Saúde Ambiental fazem sentido**

**“Medicina do meio ambiente” ou “Medicina ambiental” não fazem sentido**



**Vulnerabilidade social** é a condição dos grupos de indivíduos que estão à margem da sociedade, pessoas ou famílias em processo de exclusão **social**, principalmente por fatores socioeconômicos.

As principais características que marcam o estado de vulnerabilidade social são as **condições precárias de moradia e saneamento**, os meios de subsistência inexistentes e a ausência de um ambiente familiar.

Vulnerabilidade social **não é sinônimo de pobreza**, mas sim uma condição que remete à fragilidade da situação socioeconômica de determinado grupo ou indivíduo.

O **Índice de Vulnerabilidade Social (IVS)** é um indicador que permite aos governos um detalhamento sobre as condições de vida de todas as camadas socioeconômicas do país, identificando àquelas que se encontram em vulnerabilidade e risco social.





# Atlas da Vulnerabilidade Social

A partir do estudo do conceito de vulnerabilidade foram construídos **16 indicadores** que juntos formam um Índice:

# 16

**INDICADORES ORGANIZADOS EM 3 DIMENSÕES**

=



**Índice de Vulnerabilidade Social**

# Índice de Vulnerabilidade Social



## Dimensão infraestrutura urbana

- Coleta de lixo
- Água e esgoto inadequados
- Tempo de deslocamento casa-trabalho



## Dimensão capital humano

- Mortalidade infantil
- Crianças 0 a 5 fora da escola
- Não estudam, não trabalham e baixa renda
- Crianças 6 a 14 fora da escola
- Mães jovens (10 a 17)
- Mães sem fundamental + filhos até 15
- Analfabetismo
- Crianças em domicílio em que ninguém tem o fundamental completo



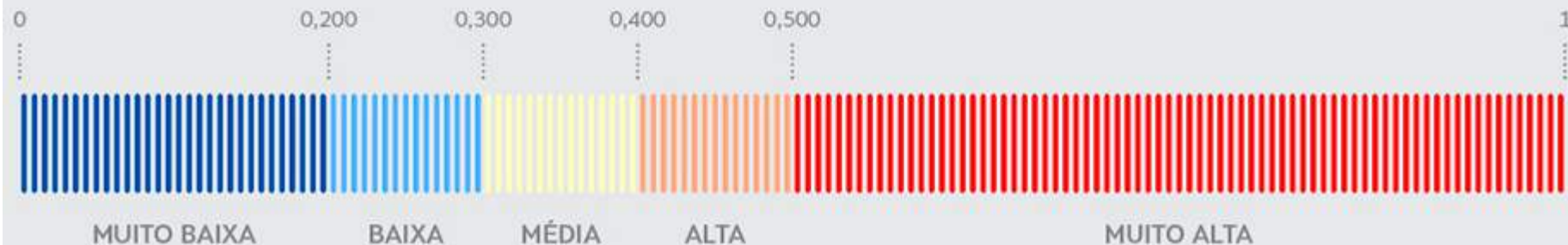
## Dimensão renda e trabalho

- Renda menor ou igual a R\$255
- Baixa renda e dependente de idosos
- Desocupação
- Trabalho infantil
- Ocupação informal s/ ensino fundamental

# Índice de Vulnerabilidade Social

## FAIXAS DE VULNERABILIDADE SOCIAL

Como ler o IVS:



## Planilha

### CONSULTA

#### TERRITORIALIDADE

Macrorregião

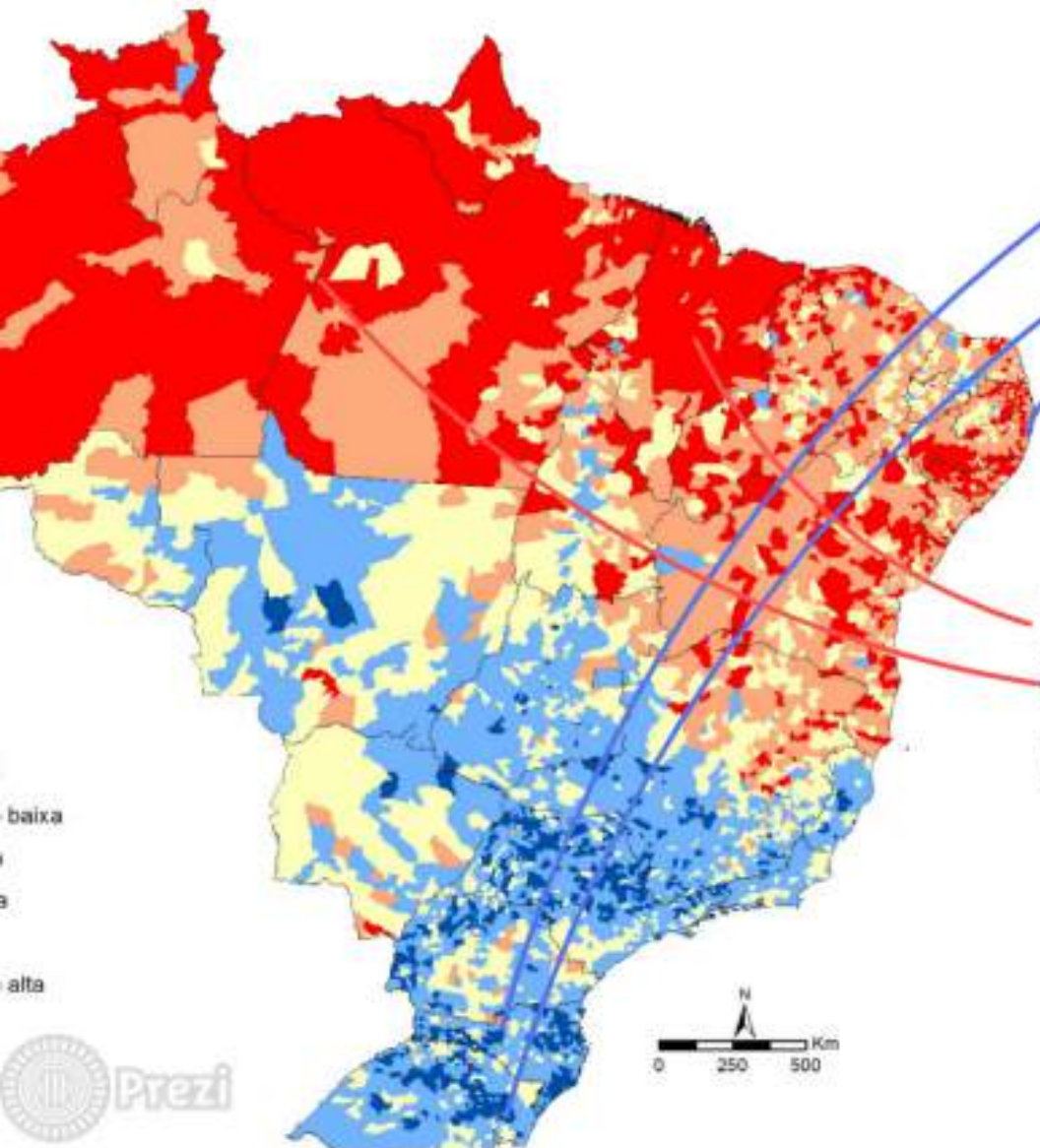
▶ Macrorregiões

Todas as Macrorregiões

Nome da UF	Nome do Município	Ano	IVS	IDHM
Paraná	Curitiba	Selecione		
Paraná	Curitiba	2000	0.337	0.75
Paraná	Curitiba	2010	0.253	0.823
Amazonas	Manaus	2000	0.525	0.601
Amazonas	Manaus	2010	0.387	0.737



# 2010



## Ranking IVS - Top 5

1º Luzerna/SC	0,090
2º Timbó/SC	0,099
Nova Araça/RS	0,099
4º Arroio do Meio/RS	0,102
Westfalia/RS	0,102
5º Fernando de Noronha/PE	0,104

## Ranking IVS - Bottom 5

5565º Fernando Falcão/MA	0,784
5564º Amapá do Maranhão/MA	0,773
5563º Aveiro/PA	0,769
5562º Humberto de Campos/MA	0,764
5561º Icatu/MA	0,759

baixa

alta



# Social Vulnerability Index (SVI) Mapping Dashboard

State:  County:  Theme:  SVI Year:

**Go!** **Reset map**



Now Showing: **Overall Vulnerability** | All States  
[Data Classified by All US Census Tracts excluding PR]

## SVI 2014



Map Layers

Export

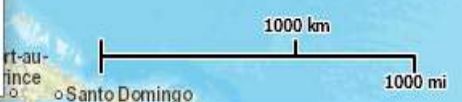
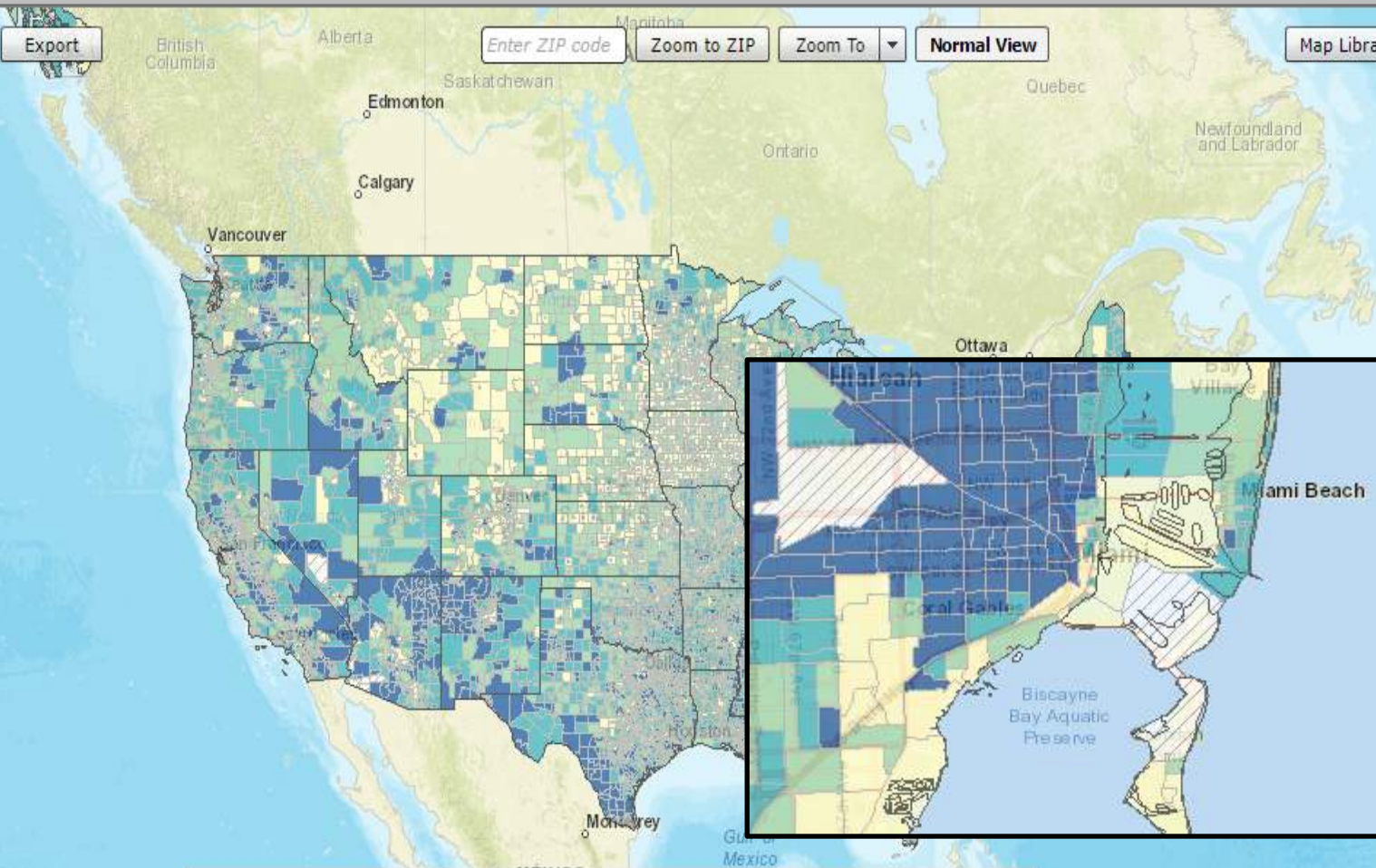
Enter ZIP code

Zoom to ZIP

Zoom To

Normal View

Map Library





## Subdesenvolvimento e mercado de trabalho: uma análise a partir do pensamento latino-americano\*\*

LIANA MARIA DA FROTA CARLEIAL\*

### Resumo

O objetivo deste artigo é analisar em que medida a Teoria da Dependência é ainda capaz de iluminar a discussão sobre o mercado de trabalho em países subdesenvolvidos, especialmente os da América Latina. Inicialmente, ele aborda a discussão clássica sobre desenvolvimento/subdesenvolvimento, baseada na visão centro – periferia. Em seguida, apresenta aspectos centrais da contribuição de Fernando Henrique Cardoso e Enzo Faletto, a qual será contraposta àquela de Rui Mauro Marini, acerca da dependência. O artigo, então, discute os impactos da globalização sobre os mercados de trabalho em países periféricos como o Brasil e reflete sobre as possibilidades de a Teoria da Dependência ainda esclarecer aspectos importantes desta realidade.

Palavras-chave: Desenvolvimento. Subdesenvolvimento. Teoria da Dependência. Mercado de Trabalho.







Nome da UF

Nome do Município

Ano

IVS

IDHM

Paraná



Ivaiporã



Selecione



Paraná

Ivaiporã

2000

0.417

0.623

Paraná

Ivaiporã

2010

0.263

0.73

## RESEARCH ARTICLE

# Socioeconomic vulnerability associated to *Toxoplasma gondii* exposure in southern Brazil

Marcelle Mareze<sup>1</sup>, Aline do Nascimento Benitez<sup>2</sup>, Ana Pérola Drulla Brandão<sup>3</sup>, Fernanda Pinto-Ferreira<sup>1</sup>, Ana Carolina Miura<sup>1</sup>, Felipe Danyel Cardoso Martins<sup>1</sup>, Eloiza Teles Caldart<sup>1</sup>, Alexander Welker Biondo<sup>4,5</sup>, Roberta Lemos Freire<sup>1</sup>, Regina Mitsuka-Breganó<sup>1</sup>, Itamar Teodorico Navarro<sup>1\*</sup>

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# Abstract

Human toxoplasmosis, a protozoonosis caused by *Toxoplasma gondii*, has been described as a worldwide foodborne disease with important public health impact. Despite infection has reportedly varied due to differences in alimentary, cultural and hygienic habits and geographic region, social vulnerability influence on toxoplasmosis distribution remains to be fully established. Accordingly, the present study has aimed to assess *T. gondii* seroprevalence and factors associated to social vulnerability for infection in households of Ivaiporã, southern Brazil, with 33.6% population making half minimum wage or less, ranked 1,055<sup>th</sup> in population (31,816 habitants), 1,406<sup>th</sup> in per capita income (U\$ 211.80 per month) and 1,021<sup>st</sup> in HDI (0.764) out of 5,570 Brazilian cities. Serum samples and epidemiological questionnaires were obtained from citizen volunteers with official City Secretary of Health assistance in 2015 and 2016. In overall, serosurvey has revealed 526/715 (73.57%) positive samples for anti-*T. gondii* antibodies by Indirect Fluorescent Antibody Test. Logistic regression has shown a significant increase associated to adults ( $p = 0.021$ ) and elderly ( $p = 0.014$ ) people, illiterates ( $p = 0.025$ ), unemployment ( $p < 0.001$ ) and lack of household water tank ( $p = 0.039$ ). On the other hand, sex (male or female), living area (urban or rural), yard hygiene, meat ingestion, sand or land contact, owning pets (dog, cat or both) were not significant variables of positivity for anti-*T. gondii* antibodies in the surveyed population. Although no significant spatial cluster was found, high intensity areas of seropositive individuals were located in the Kernel map where the suburban neighborhoods are located. In conclusion, socioeconomic vulnerability determinants may be associated to *Toxoplasma gondii* exposure. The increased risk due to illiteracy, adult or elderly age, unemployment and lack of household water tank were confirmed by multivariate analysis and the influence of low family income for seropositivity by the spatial analysis.



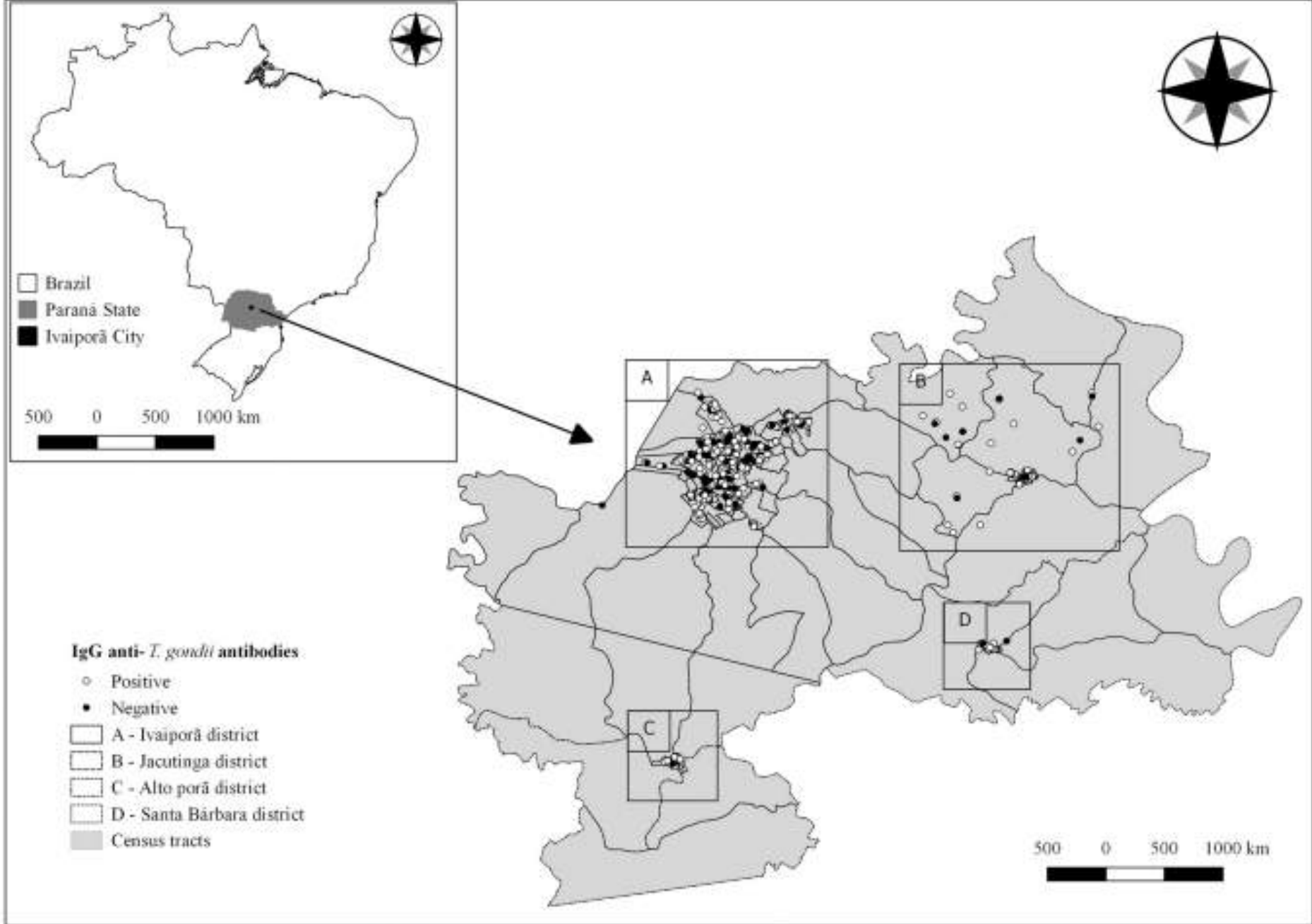
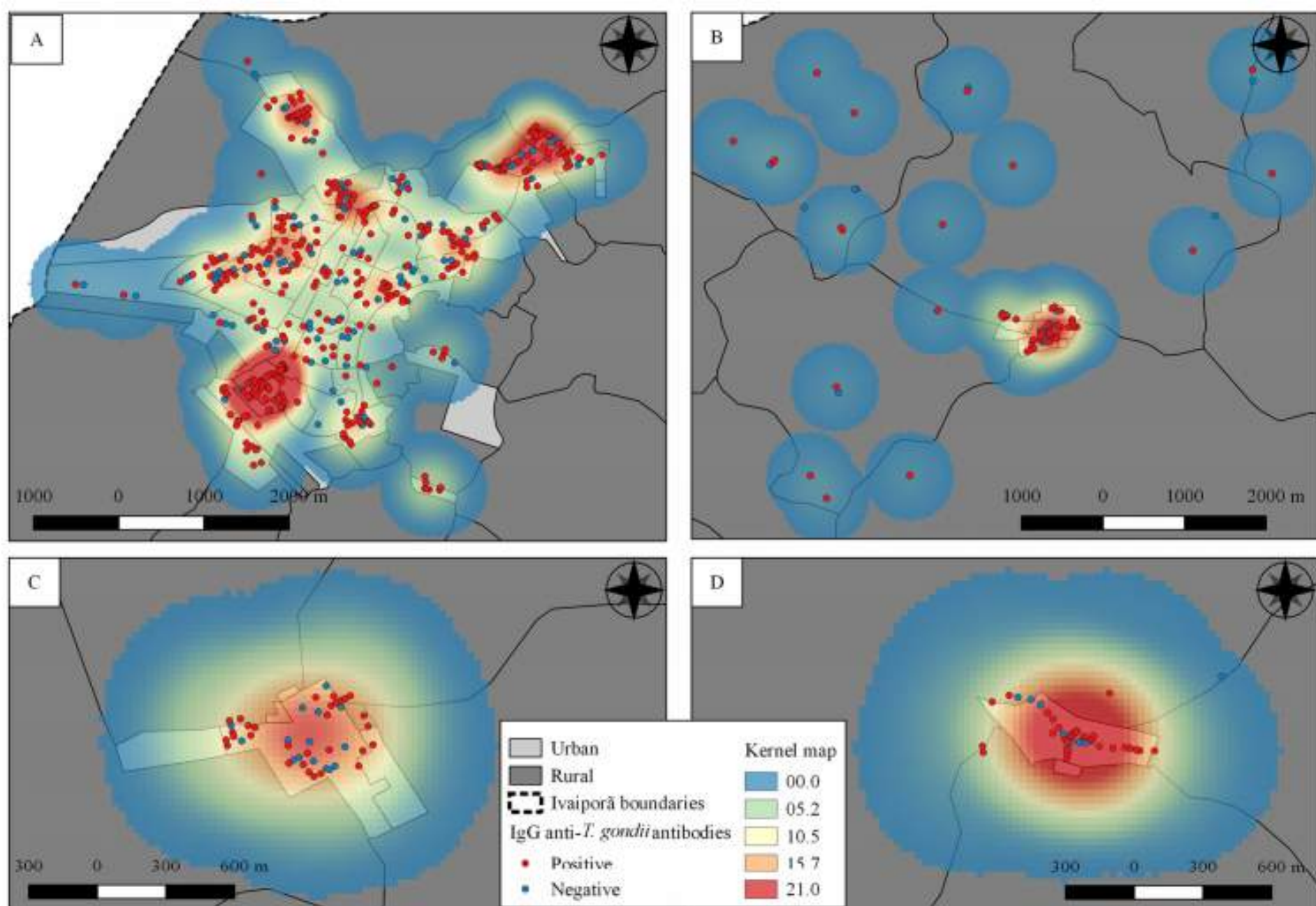


Fig 1. Location of Ivaiporã city, Paraná State, Brazil, including the serology results for IgG anti-*T. gondii* antibodies in 715 human samples tested by IFAT, from 2015 to 2016.



**Fig 2.** Kernel map of the seropositivity results for IgG anti-*T. gondii* antibodies in 715 human samples tested by IFAT, from 2015 to 2016 in the city of Ivaiporã, Paraná State, Brazil<sup>17</sup>. Letters represent the four municipal districts: A: Ivaiporã; B: Jacutinga; C: Alto Porã; D: Santa Bárbara.



Cats and dogs have been identified as potential sentinels for numerous diseases that also affect people. Companion animals are effective sentinels, as they share a common environment with their owners. In intimate contact with members of the human family, companion animals often eat similar foods, share the same beds, and serve as travel companions, making their disease risk similar to that of their owners. Thus, the health of the companion animal often mirrors the health of or suggests the health risks to humans in the same household. The following examples highlight just a few specific situations where companion animals can serve as sentinels for both animal and human health.



# Interação Homem-animal



## RESEARCH ARTICLE

# Spatial and simultaneous representative seroprevalence of anti-*Toxoplasma gondii* antibodies in owners and their domiciled dogs in a major city of southern Brazil

**Aline do Nascimento Benitez<sup>1</sup>, Felipe Danyel Cardoso Martins<sup>1</sup>, Marcelle Mareze<sup>1</sup>, Nelson Jessé Rodrigues Santos<sup>1</sup>, Fernanda Pinto Ferreira<sup>1</sup>, Camila Marinelli Martins<sup>2</sup>, João Luis Garcia<sup>3</sup>, Regina Mitsuka-Breganó<sup>3</sup>, Roberta Lemos Freire<sup>3</sup>, Alexander Welker Biondo<sup>4</sup>, Itamar Teodorico Navarro<sup>3\*</sup>**

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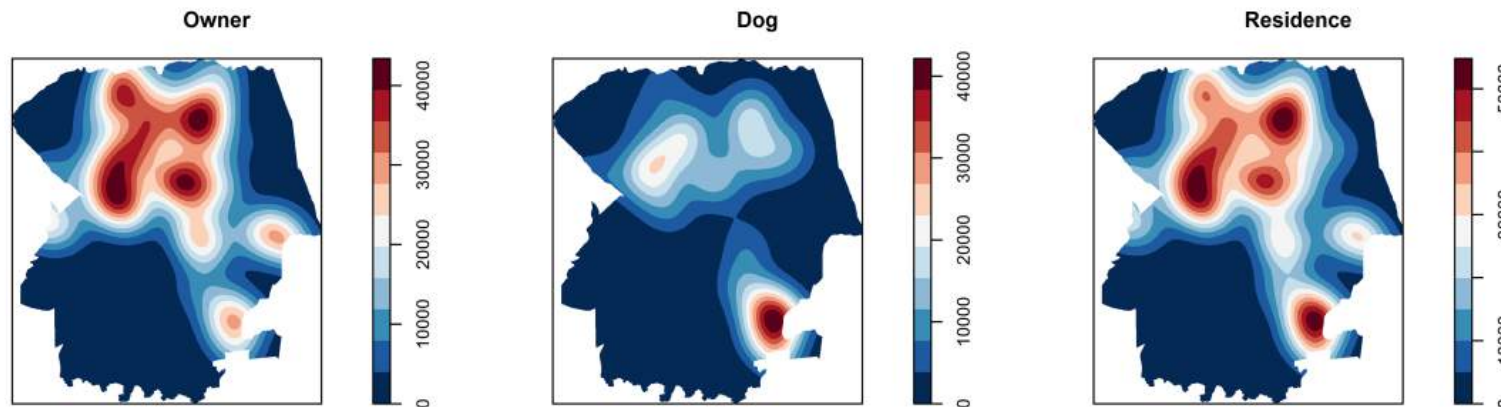


## Abstract

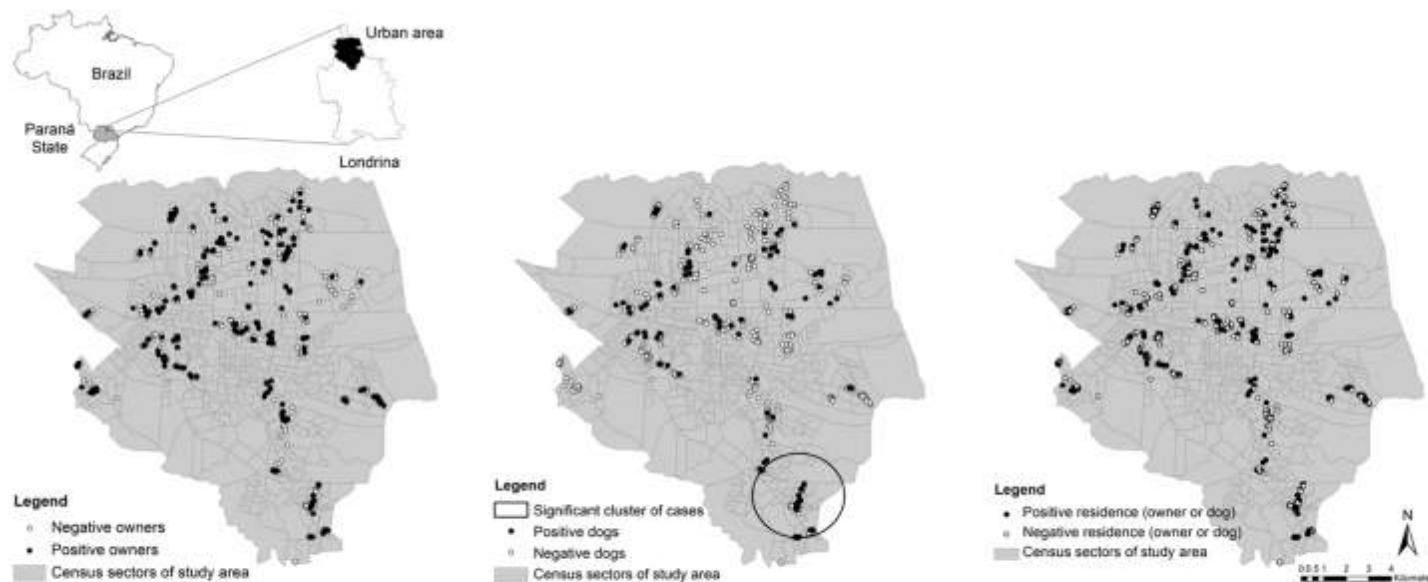
Toxoplasmosis, caused by *Toxoplasma gondii*, has traditionally been considered an important water and foodborne protozoonosis with important public health considerations. Although felids play a well-established role as definitive hosts, canine epidemiological involvement in the parasite's life cycle remains questionable and controversial. The increasing closeness of the human-dog bond, particularly seen in urban settings, has been recognized as a historically unprecedented worldwide movement. Sharing daily lives in the same households, dogs may be exposed to similar associated risks of *T. gondii* infection as their owners. Thus, epidemiological assessment of the intra-domiciled environment, especially among socio-economically different human populations, may provide novel information regarding the actual role of dogs in animal and human toxoplasmosis. Despite spatial approaches being recently used for other water and foodborne diseases, no study has been conducted on the simultaneous spatial seroprevalence of both human and animal IgG anti-*T. gondii* antibodies in urban areas of major cities. Accordingly, the aim of the present study was to assess the seroprevalence and associated variables of *Toxoplasma* infection in owners and their domiciled dogs in Londrina, southern Brazil. Human and canine seroprevalence rates and variables associated with seroprevalence were investigated through representative random sampling among 564 households, which included 597 owners and 729 dogs. Overall, statistically significant differences between the seroprevalence of human and dog anti-*T. gondii* antibodies were found by Immunofluorescence Antibody Testing in 248/597 (41.54%) owners and 119/729 (16.32%) dogs. Through multiple analysis, significant concomitant variables for seropositivity of household individuals (people and dogs) were determined, including public sewer service, yard cleaning frequency, and having a dirty yard. Although no statistically significant multiple logistic model was observed among owners, univariate analysis detected associations with monthly income, soil contact, and occupation. Among dogs, the absence of other dogs and the absence of a dirty yard were concomitant significantly protective associated factors. Age differences between seropositive and seronegative individuals was significant only for human beings, with the median age of negative individuals significantly higher than positive individuals. Although no spatial clusters were identified for humans or residences, a significant cluster was identified for dogs. In conclusion, characteristics of urban toxoplasmosis may include significantly higher owner seroprevalence than their owned dogs, with canine seroprevalence directly associated with having more dogs and a dirty backyard, and spatial differences in both human and dog exposures. Although not a good indicator for human foodborne diseases, dogs may be a reliable sentinel for environmental infection. Moreover, such a holistic approach may provide crucial information for more focused prevention and monitoring programs, particularly in households with multiple pets and trash-filled backyards.

## Área urbana de Londrina

- 564 residências
- 597 donos (tutores)
- 729 cães
  
- 248/597 (41,54%) donos
- 119/729 (16,32%) cães



**Fig 4. Kernel density analyses of human, dog and household (human and/or dogs) positivity and negativity for *T. gondii* infection in the urban area of Londrina, from July 2015 to July 2016.**



**Fig 3. Yersle distribution and relative spatial risk for positive and negative humans, dogs and households (human and/or dogs) for *T. gondii* infection in the urban area of Londrina, from July 2015 to July 2016.**



# Populações Vulneráveis

- *Acesso reduzido ou limitado*
  - Populações de fronteira e índios.
  - Populações ribeirinhas e ilhas.
  - Populações privadas de liberdade (presos)
- *Fatores de desigualdades sociais*
  - Profissionais de sexo
  - Usuários de drogas e pessoas em situação de rua
  - Homossexuais, negros, idosos e favelados
  - Indivíduos sob o estigma social de doenças infecciosas.





Grazi: 9151-3272  
Maysa: 9219-1251  
Vivien: 9113-7372



- Mercaria Nova Horizonte
- Mercado Oliveira
- Marju's Cabeleiros
- Mercado Lima e Silva
- Lanchonete Mariano





## Sobre o Projeto

Explicar ao proprietário que será feito exame com o sangue dos animais.

Na próxima visita, em JANEIRO aplicaremos vermífugo e serão pedidas aos animais participantes:

Exames: o proprietário que acompanhar os o animal por UM ano inteiro, a cada três meses.

















## Seroprevalence and seroincidence of *Leptospira* infection in dogs during a one-year period in an endemic urban area in Southern Brazil

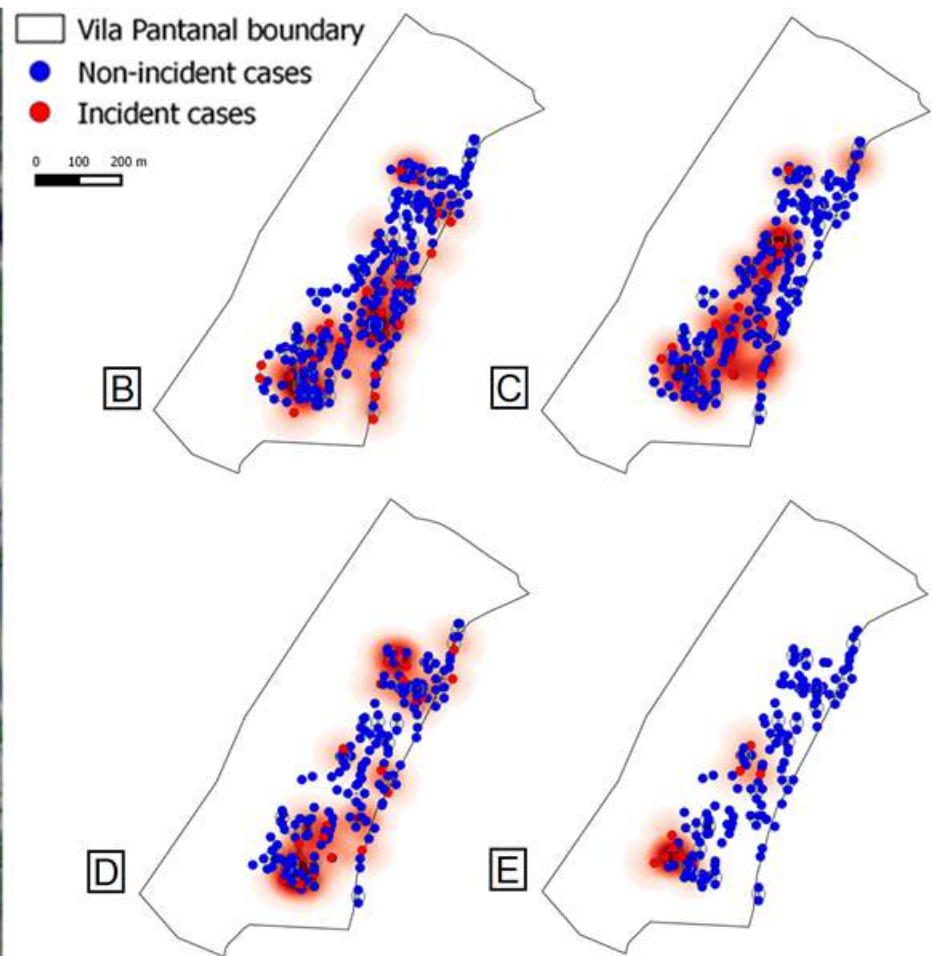
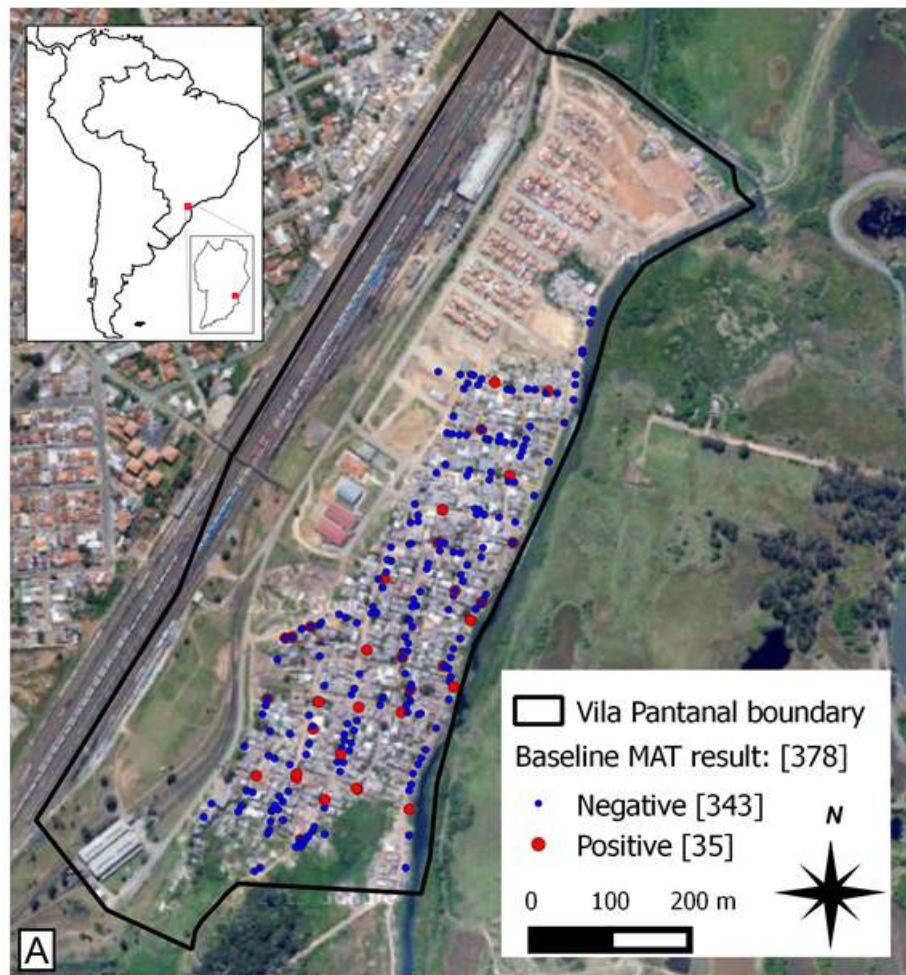
Vivien Midori Morikawa<sup>[1],[2]</sup>, Daniele Bier<sup>[1]</sup>, Maysa Pellizzaro<sup>[1]</sup>, Leila Sabrina Ullmann<sup>[3]</sup>, Igor Adolfo Dexheimer Paploski<sup>[4]</sup>, Mariana Kikuti<sup>[4]</sup>, Hélio Langoni<sup>[5]</sup>, Alexander Welker Biondo<sup>[1],[6]</sup> and Marcelo Beltrão Molento<sup>[1]</sup>

### ABSTRACT

**Introduction:** Leptospirosis is a zoonosis that affects both humans and animals. Dogs may serve as sentinels and indicators of environmental contamination as well as potential carriers for *Leptospira*. This study aimed to evaluate the seroprevalence and seroincidence of leptospirosis infection in dogs in an urban low-income community in southern Brazil where human leptospirosis is endemic. **Methods:** A prospective cohort study was designed that consisted of sampling at recruitment and four consecutive trimestral follow-up sampling trials. All households in the area were visited, and those that owned dogs were invited to participate in the study. The seroprevalence (MAT titers  $\geq 100$ ) of *Leptospira* infection in dogs was calculated for each visit, the seroincidence (seroconversion or four-fold increase in serogroup-specific MAT titer) density rate was calculated for each follow-up, and a global seroincidence density rate was calculated for the overall period. **Results:** A total of 378 dogs and 902.7 dog-trimesters were recruited and followed, respectively. The seroprevalence of infection ranged from 9.3% (95% CI; 6.7 - 12.6) to 19% (14.1 - 25.2), the seroincidence density rate of infection ranged from 6% (3.3 - 10.6) to 15.3% (10.8 - 21.2), and the global seroincidence density rate of infection was 11% (9.1 - 13.2) per dog-trimester. Canicola and Icterohaemorrhagiae were the most frequent incident serogroups observed in all follow-ups. **Conclusions:** Follow-ups with mean trimester intervals were incapable of detecting any increase in seroprevalence due to seroincident cases of canine leptospirosis, suggesting that antibody titers may fall within three months. Further studies on incident infections, disease burden or risk factors for incident *Leptospira* cases should take into account the detectable lifespan of the antibody.

**Keywords:** Leptospirosis. Dogs. Seroincidence. Seroprevalence. Slum.





**Figure 1** A. Spatial distribution of dogs according to their serologic status at baseline; Kernel density of incident cases with infected (red dots) and non-infected (blue dots) dogs from follow-up 1 (B), 2 (C), 3 (D) and 4 (E).

“Incidence and spatial distribution of *Leptospira* infection in dogs during a one-year period on an endemic urban area in Southern Brazil”

Authors: [Morikawa](#), Vivien Midori; [Bier](#), Daniele; [Pellizzaro](#), Maysa; [Ullmann](#), Leila Sabrina; [Paploski](#), Igor Adolfo [Dexheimer](#); [Kikuti](#), Mariana; [Langoni](#), Hélio; [Biondo](#), Alexander Welker; [Molento](#), Marcelo Beltrão.

# Populações Animais Vulneráveis (Companhia)

- *Animais de Companhia de:*
  - Populações de fronteira e índios.
  - Populações ribeirinhas e ilhas.
  - Populações privadas de liberdade (presos)
- *Fatores de desigualdades sociais*
  - Animais comunitários, abandonados e/ou ferais
  - Animais de pessoas em situação de rua e favelados
  - Animais de acumuladores



606 - Ctba/Araucária  
(Sentido Araucária)



Fumar  
proibido





# Cães que vivem em terminais de ônibus recebem tratamento médico

20/02/2014 16:53:00

Compartilhe



Equipes da Rede de Proteção Animal da Secretaria Municipal de Meio Ambiente percorreram os terminais de ônibus do Campo Comprido e da Fazendinha na tarde desta quinta-feira (20) para monitorar os cães que vivem nestes locais.

Os animais tiveram sangue coletado para exames laboratoriais e receberam medicamentos para controle de pulgas e de endoparasitas, além de coleiras com identificação. A ação faz parte do projeto Cães Comunitários, da Prefeitura de Curitiba.

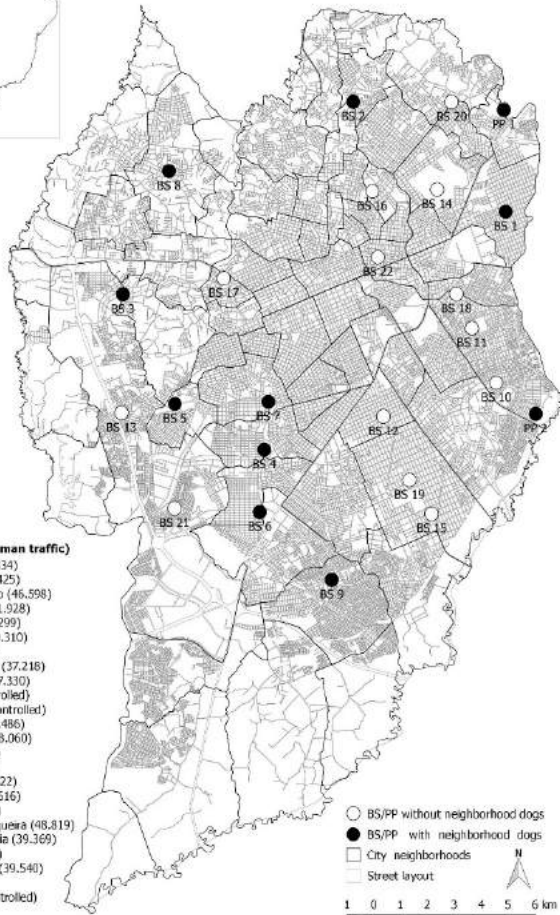
Atualmente, 30 cães que vivem em 13 terminais da cidade são monitorados constantemente por veterinários da Rede. "No ano passado, o número de cães era maior porque, após receberem tratamento, vários cães acabaram sendo adotados por famílias curitibanas, o que mostra a eficácia do projeto", disse o zootecnista Edson Evaristo, da Divisão de Monitoramento e de Proteção Animal da Secretaria.

Em 2013, quando o projeto teve início, 43 cães de rua que viviam nos terminais de ônibus foram identificados com microchips, castrados e vacinados. Destes, 13 foram adotados. "Após serem castrados e receberem tratamento, eles se tornam mais atraentes para a adoção, o que é ótimo", disse Evaristo.



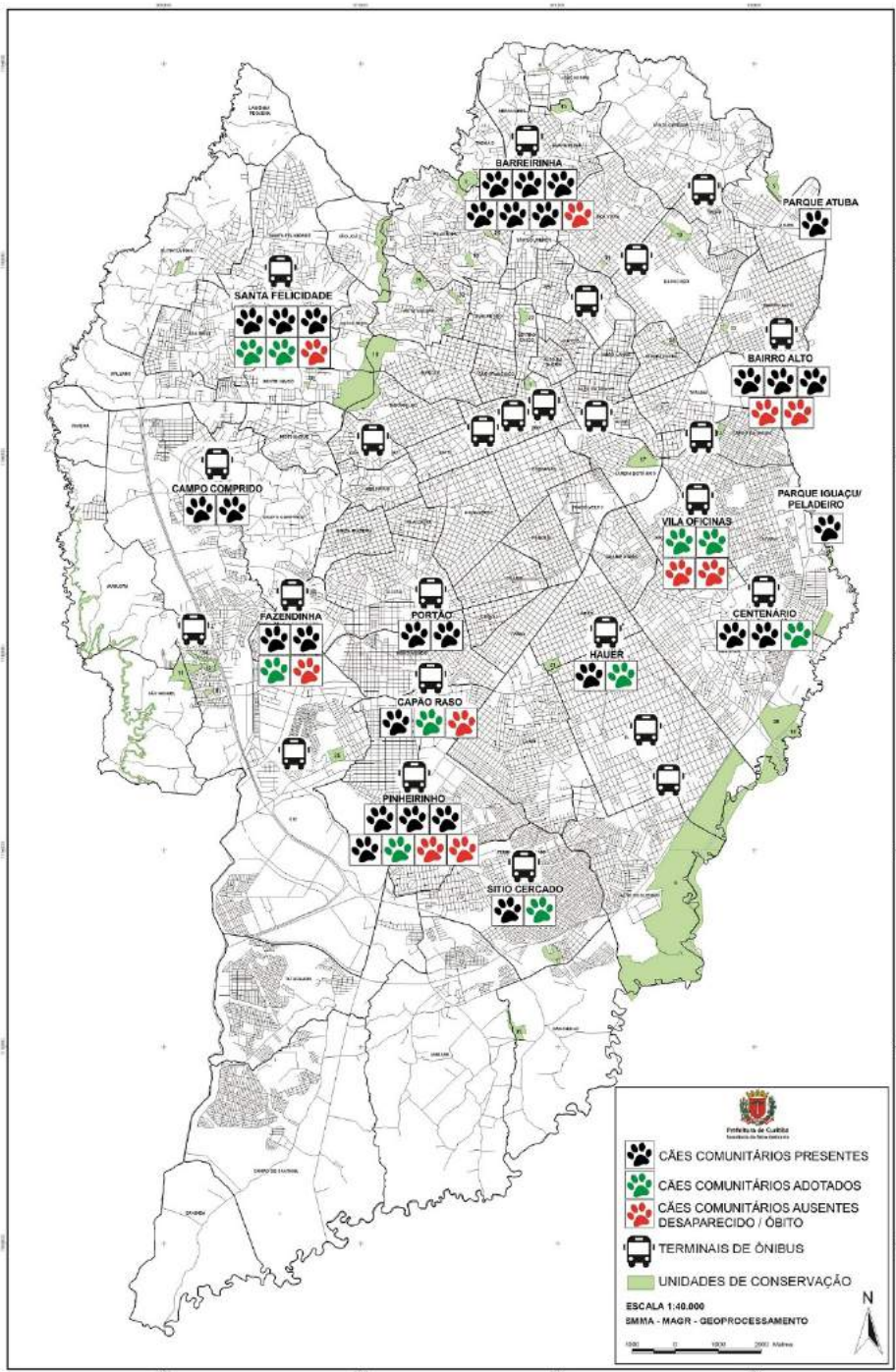
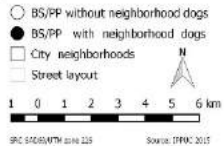






**Local name (Daily human traffic)**

- BS 1 Bairro Alto (18.834)
- BS 2 Barreirinha (28.425)
- BS 3 Campo Comprido (46.598)
- BS 4 Capão Raso (121.928)
- BS 5 Fazendinha (55.299)
- BS 6 Pinheirinho (130.310)
- BS 7 Portão (67.348)
- BS 8 Santa Felicidade (37.218)
- BS 9 Sítio Cercado (57.330)
- PP 1 Atuba (Not controlled)
- PP 2 Peladeiro (Not controlled)
- BS 10 Centenário (25.486)
- BS 11 Vila Oficinas (19.060)
- BS 12 Hauer (68.229)
- BS 13 Cauai (16.040)
- BS 14 Boa Vista (25.622)
- BS 15 Boqueirão (76.616)
- BS 16 Cabral (85.536)
- BS 17 Campina do Siqueira (48.819)
- BS 18 Capão da Imbuia (39.369)
- BS 19 Gamito (23.444)
- BS 20 Santa Cândida (39.540)
- BS 21 CIC (59.912)
- BS 22 SITES (Not controlled)



**CÃES COMUNITÁRIOS PRESENTES**  
**CÃES COMUNITÁRIOS ADOTADOS**  
**CÃES COMUNITÁRIOS AUSENTES DESAPARECIDO / ÓBITO**  
**TERMINAIS DE ÔNIBUS**  
**UNIDADES DE CONSERVAÇÃO**

ESCALA 1:40.000  
 SMMA - MAGR - GEOPROCESSAMENTO







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## Survey of spatial distribution of vector-borne disease in neighborhood dogs in southern Brazil

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### Abstract

Neighborhood dogs may act as reservoirs and disseminators of vector-borne diseases in urban areas. Accordingly, the aim of this study was to ascertain the health status and the vector-borne pathogens infecting dogs living in public areas with high levels of human movement in the city of Curitiba, southern Brazil. Blood samples from 21 neighborhood dogs that were found in nine of 22 bus stations and two public parks were subjected to a complete blood cell (CBC) count, serum biochemical profiling, a commercial rapid ELISA test and a commercial real-time PCR panel of vector-borne diseases. The CBC count and serum biochemical profiling were within the normal range for dogs and only 1/21 (4.7%) of the dogs was seroreactive for *Borrelia burgdorferi* sensu stricto. The commercial real-time PCR panel showed that 7/21 (33.3%) of the dogs had *Mycoplasma haemocanis* infection, 9/21 (42.8%) had '*Candidatus Mycoplasma haematoparvum*' and 4/21 (19.0%) had both. No statistical association between infected by the agents found here and abnormalities in physical examinations, laboratory tests or ectoparasite presence was found ( $p > 0.05$ ). In conclusion, neighborhood dogs showed low prevalence of vector-borne diseases and satisfactory wellbeing, and dogs can be used as sentinels for disease exposure.

**Keywords:** *Borrelia burgdorferi*, Community dogs, Hemoplasmas, Sentinel animals, Tick-borne diseases.







# Serosurvey for *Leishmania* spp., *Toxoplasma gondii*, *Trypanosoma cruzi* and *Neospora caninum* in neighborhood dogs in Curitiba-Paraná, Brazil

Inquérito sorológico para *Leishmania* spp., *Toxoplasma gondii*, *Trypanosoma cruzi* e *Neospora caninum* em cães comunitários em Curitiba-Paraná, Brasil

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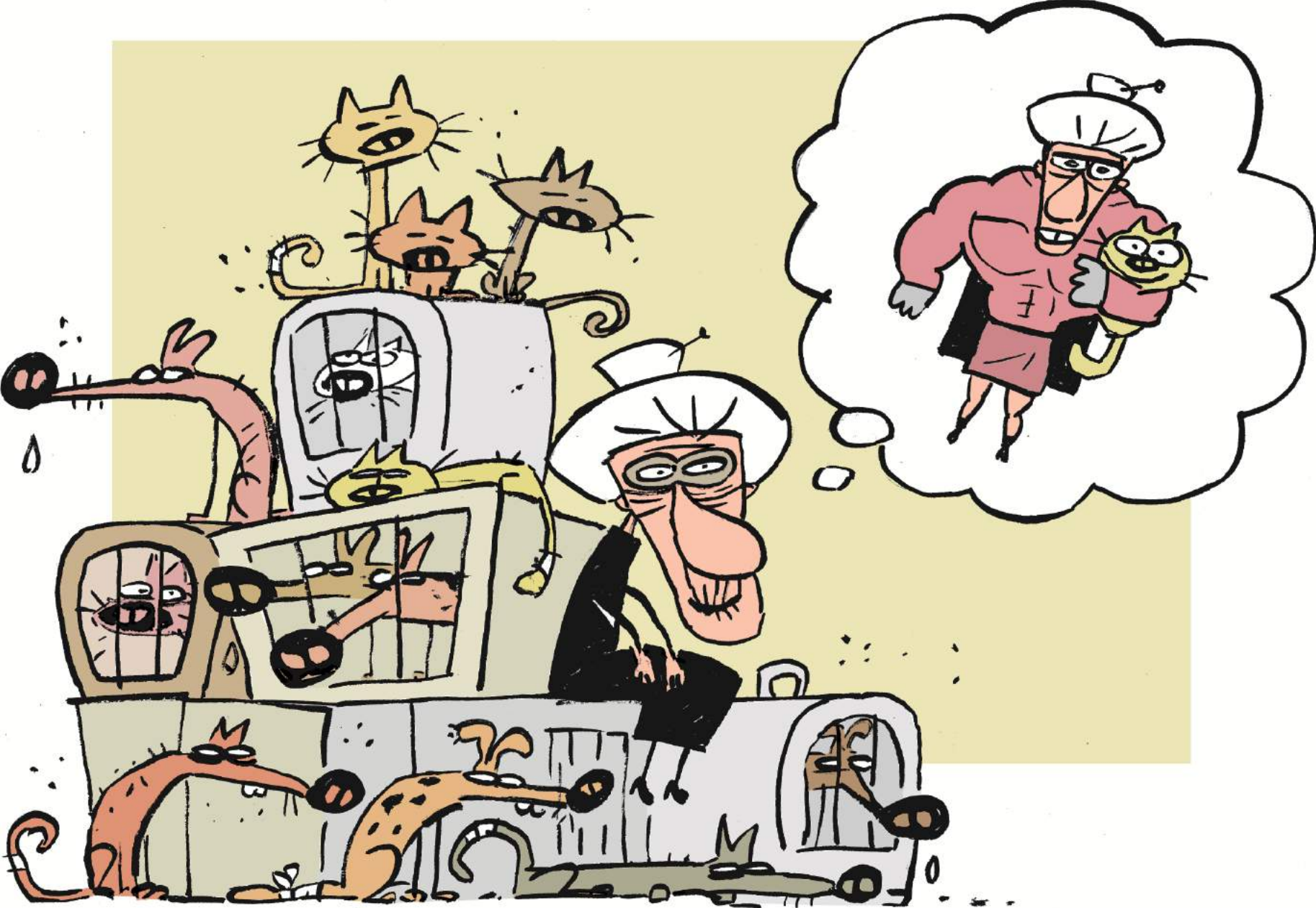
## Resumo

Cães comunitários podem atuar como reservatórios para algumas zoonoses causadas por protozoários, principalmente em áreas urbanas, constituindo potencial ameaça à saúde pública. Portanto, o objetivo do presente estudo foi avaliar a exposição de cães comunitários a quatro protozoários em áreas públicas com alta circulação de pessoas, em Curitiba, Sul do Brasil. Amostras de sangue de 26 cães comunitários foram testadas pela reação de imunofluorescência indireta (RIFI) para *Leishmania* spp., *Toxoplasma gondii*, *Trypanosoma cruzi* e *Neospora caninum*, e um questionário foi respondido pelo respectivo mantenedor. Um total de 8/26 (30,7%) foram sororreagentes para *T. gondii*, 3/26 (11,5%) para *N. caninum* e 2/26 (7,7%) para ambos. Todas as amostras foram soronegativas para *T. cruzi* e *Leishmania* spp. Não houve associação entre sororeatividade para os patógenos pesquisados e o tráfego diário de pessoas e outras variáveis epidemiológicas analisadas ( $p > 0.05$ ). Conclui-se a baixa soroprevalência para *T. gondii* e *T. cruzi* indica baixo risco ambiental e alimentar para a infecção dos animais, e a soronegatividade para *Leishmania* spp. e *T. cruzi* pode refletir a ausência desses patógenos em áreas urbanas de Curitiba. Além disso, os cães comunitários podem atuar como sentinelas ambientais quanto à presença de protozoários e seus vetores.

**Palavras-chave:** Cães comunitários, área urbana, animais sentinela, toxoplasmose, neosporose, RIFI.



# Perfil dos Acumuladores de Animais em Curitiba





# Perfil dos Acumuladores de Animais em Curitiba





## Frequency and spatial distribution of animal and object hoarder behavior in Curitiba, Paraná State, Brazil

Frequência e distribuição espacial do acúmulo compulsivo de animais e objetos em Curitiba, Paraná, Brasil

Frecuencia y distribución espacial del acúmulo compulsivo de animales y objetos en Curitiba, Paraná, Brasil

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### Abstract

*This study aimed to establish the frequency and spatial distribution of animal and object hoarding in Curitiba (Paraná State), the eighth most populous city in Brazil. All hoarding complaints received by the City Secretaries of Health, Environment and Social Assistance between September 2013 and April 2015 were collected (n = 226) and suspicious cases were individually investigated. A total of 113/226 (50%) of complaints were confirmed as hoarding cases, representing an overall ratio of 6.45 cases per 100,000 inhabitants in Curitiba, of which 48/113 (42.5%) involved object hoarders, 41/113 (36.3%) animal hoarders and 24/113 (21.2%) both animal and object hoarders. A correlation of total identified cases with neighborhood population density and all population strata analyzed (total, gender, age) was significantly positive ( $p < 0.01$ ), and with neighborhood mean monthly income ( $r = -0.2$ ;  $p = 0.03$ ) significantly negative. A spatial cluster of cases was found in the north of the city ( $OR = 8.57$ ;  $p < 0.01$ ). Hoarding cases were relatively frequent in Curitiba and were associated with population distribution patterns and inversely related to neighborhood income.*

*Hoarding Disorder; Obsessive Hoarding; Pets*



# Perfil dos Acumuladores de Animais em Curitiba

Figure 1

Map distribution of 113 identified hoarding cases in Curitiba, Paraná State, Brazil, from September 2013 to April 2015 showing urbanization and spatial cluster and mean monthly income per neighborhood.

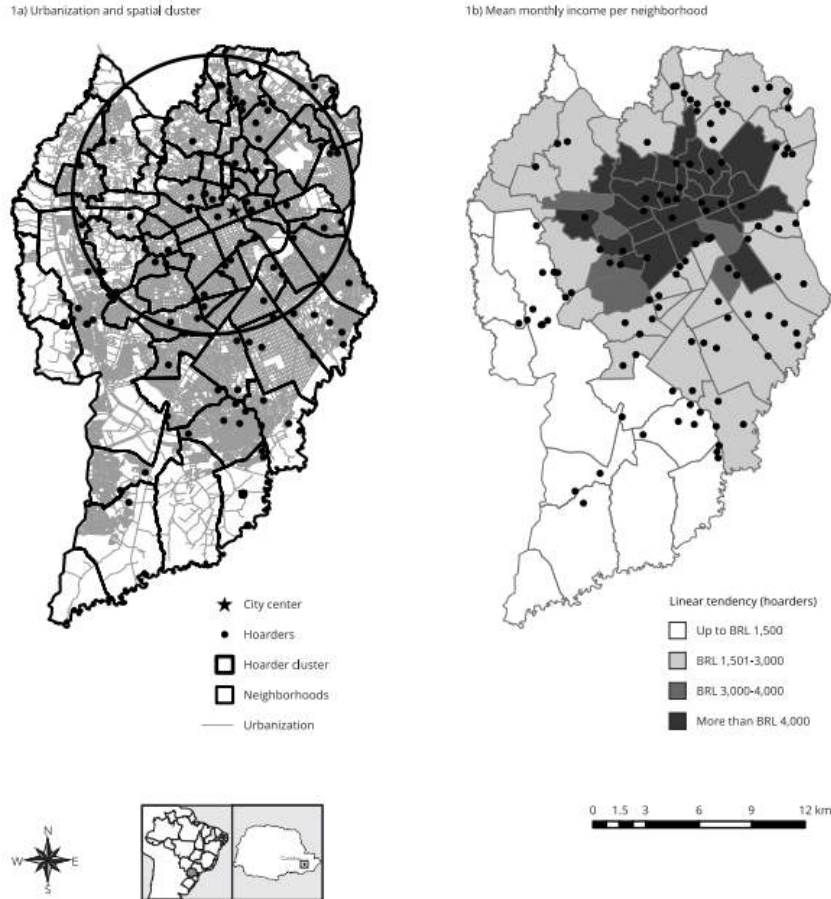
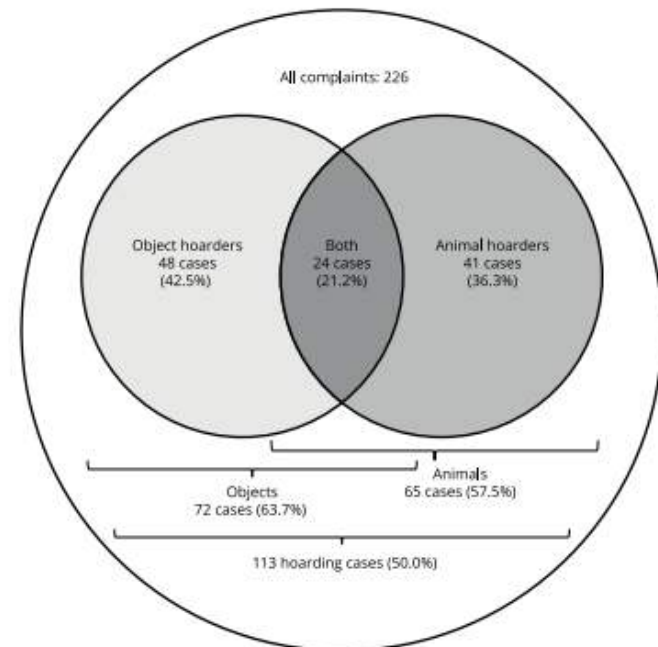


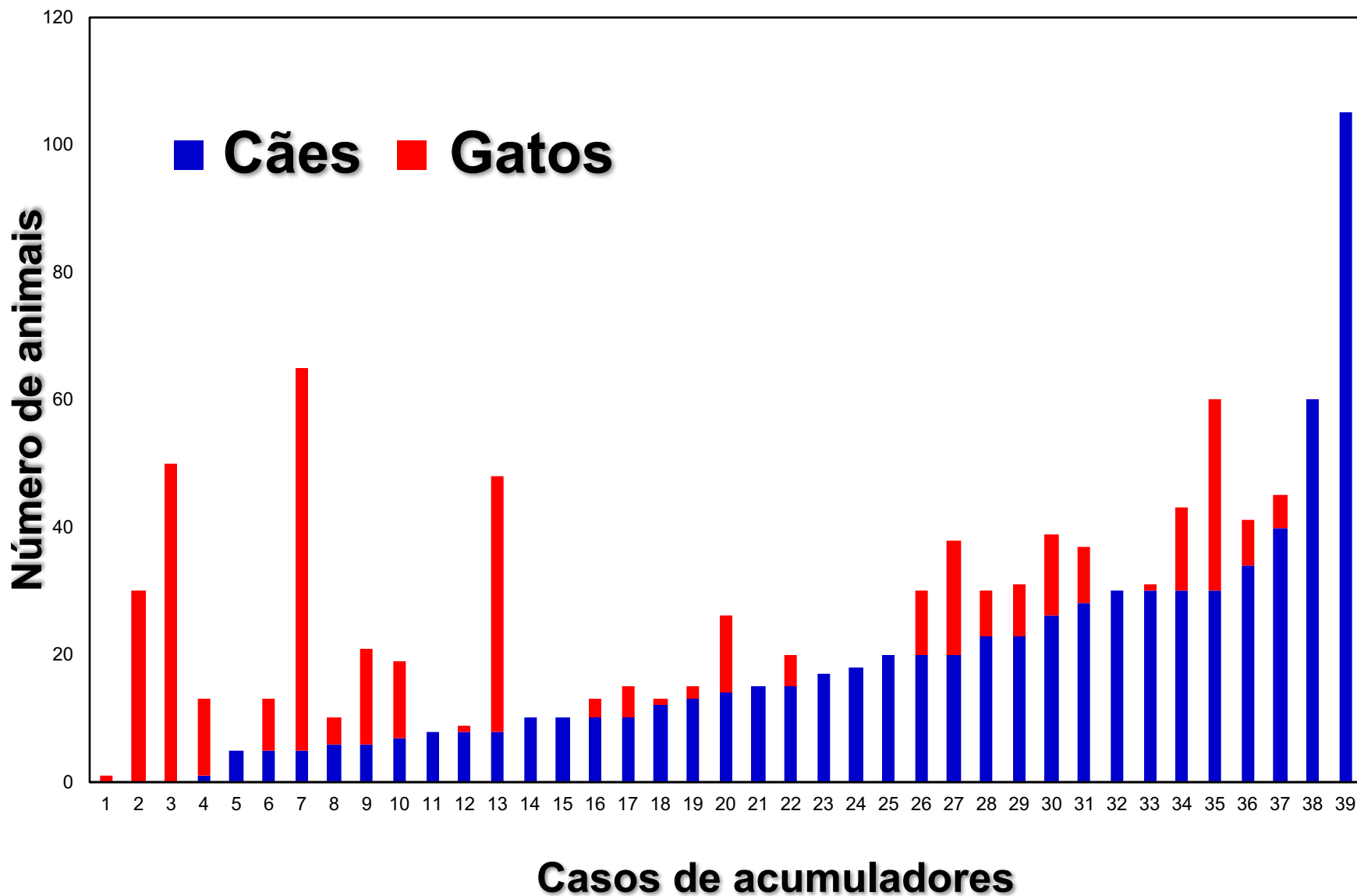
Figure 2

Schematic diagram of investigated complaints and identified hoarding cases in Curitiba, Paraná State, Brazil, from September 2013 to April 2015.

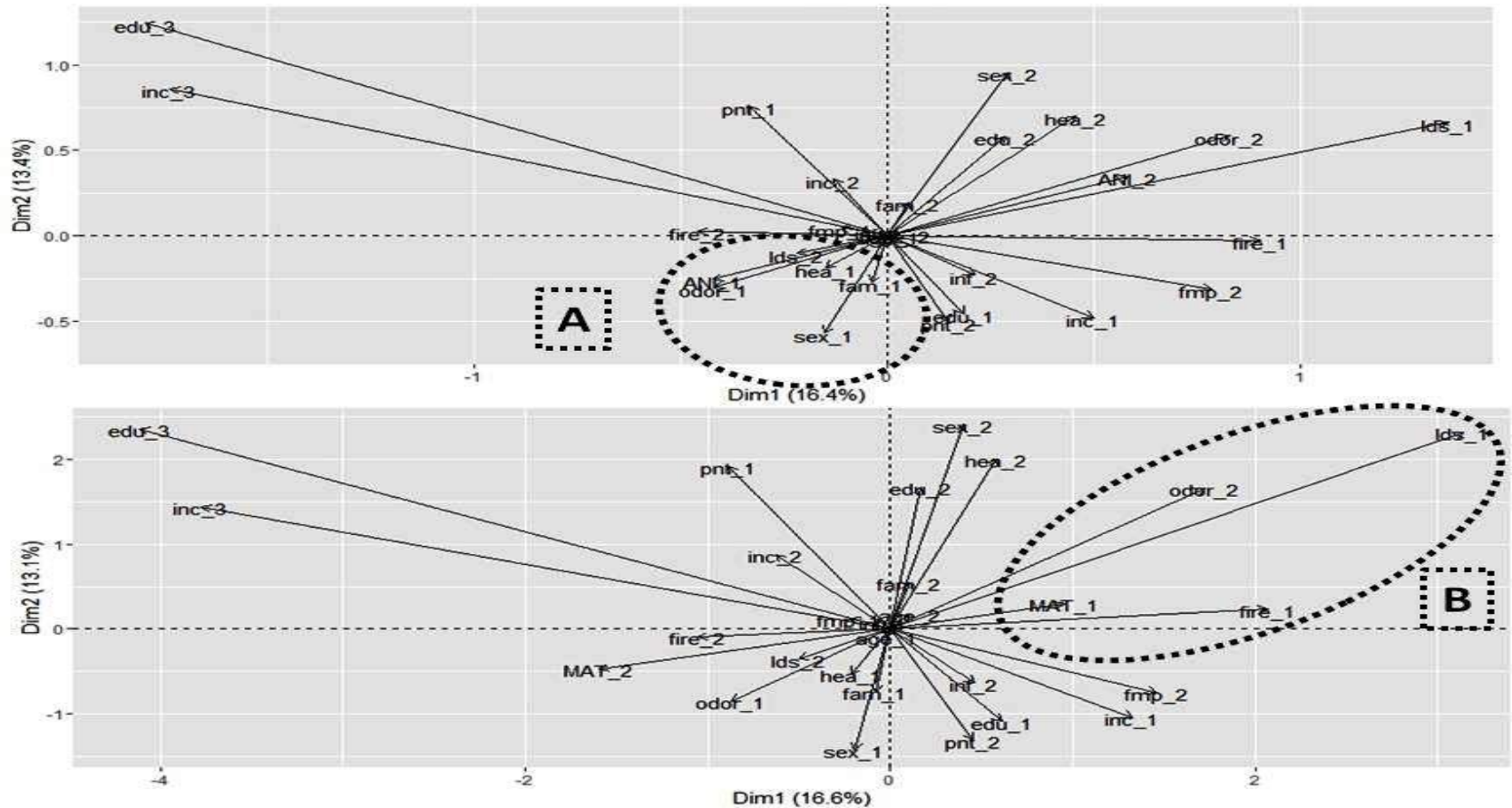




# Perfil dos Acumuladores de Animais em Curitiba



# Perfil dos Acumuladores de Animais em Curitiba



Em resumo, acumuladores no Brasil podem ser caracterizados como em sua maioria ( $p < 0.05$ ) mulheres, idosas, com problemas de saúde, com baixa renda, nível educacional básico e vivendo sozinhas sob a proliferação de vetores e odor desagradável.



# Perfil dos Moradores de Rua em Curitiba





# Perfil dos Moradores de Rua em Curitiba





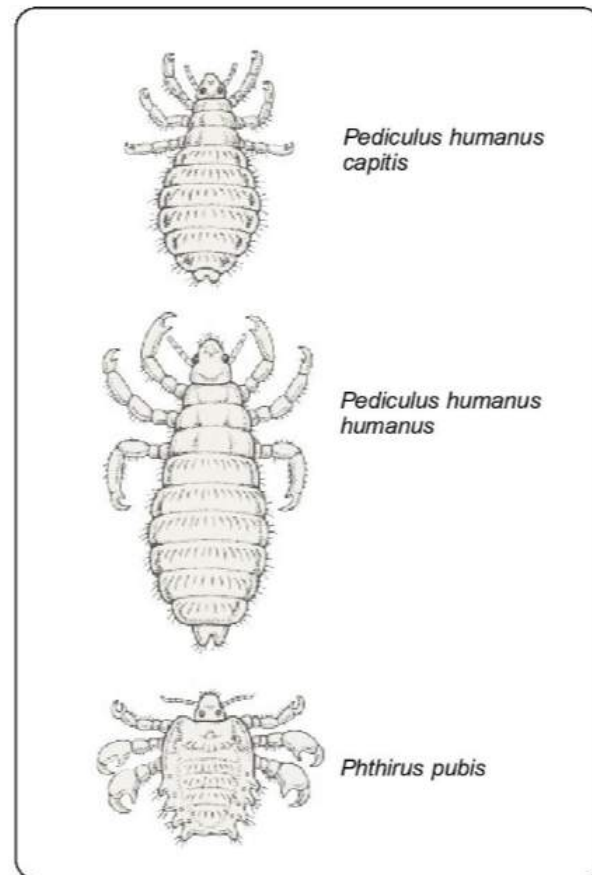


## Vulnerabilidade dos moradores das ruas

Primeiros relatos de piolhos-do-corpo em moradores de rua em Curitiba e São Paulo



- *Pediculus humanus capitis* (piolho-da-cabeça)
- *Pediculus humanus humanus* (piolho-do-corpo)
- *Phthirus pubis* (piolho-do-púbis)



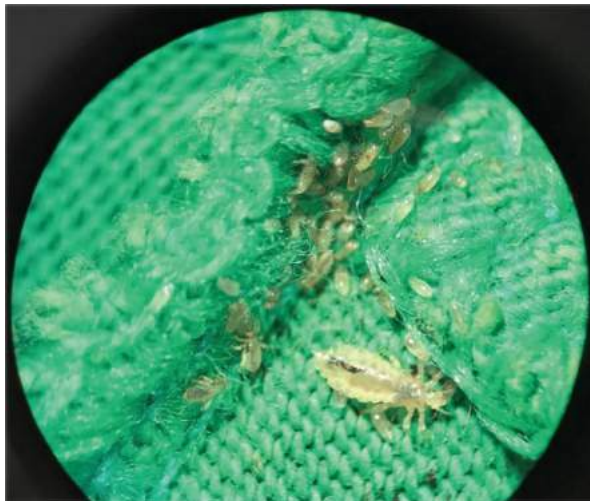




### Preliminary report of body lice infesting homeless people in Brazil

Dear Editor

The *Pediculus humanus humanus* (body louse or Brazilian “muquirana”) has been causing infestations in vulnerable human populations with poor hygiene habits such as homeless, inmates and refugees<sup>1</sup>. *P. h. humanus* is the only of three lice species related to potentially lethal infectious diseases, recognized as a competent vector of *Rickettsia prowazekii*, *Bartonella quintana* and *Borrelia recurrentis*<sup>2</sup>. Recent data from *Marseille*, France (43°17'47"N 5°22'12"E) and *Bogotá*, Colombia (4°42'40"N 74°4'20"W) have described a decrease over time in overall body lice prevalence and have identified independent risk factors (older age, length of stay in France for migrants, frequent consumption of alcohol and tobacco smoking) for infestation among French homeless people<sup>3</sup>, alongside with 11.7% body lice prevalence in Colombian homeless<sup>4</sup>. Despite a Mediterranean climate in *Marseille* (14.5 °C) and a subtropical highland climate in *Bogotá* (12 °C), both cities provide similar mild average temperatures that favor body lice interaction with homeless people.

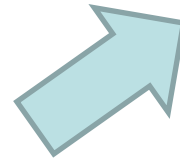
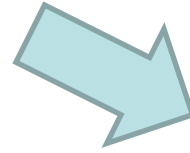


- Anti-*T. gondii* em moradores de rua: 42/120 (35.0%)
- Anti-*T. gondii* em acumuladores: 7/19 (36.84%)
  - Anti-*T. gondii* em
    - 110/339 (32.4%) em São Paulo<sup>1</sup>,
    - 552/1532 (36.0%) em Minas Gerais<sup>2</sup>,
    - 183/344 (53.2%) no Rio Grande do Sul<sup>3</sup>,
    - 131/231 (56.7%) no Amazonas<sup>4</sup>,
    - 618/970 (63.7%) em São Paulo<sup>5</sup>,
    - 225/342 (65.8%) no Acre<sup>6</sup>,
    - 1020/1540 (66.2%) no Rio Grande do Norte<sup>7</sup>
    - 113/116 (97.4%) no Mato Grosso<sup>8</sup>
    - No Paraná
      - 248/597 (41.54%) em Londrina<sup>9</sup>,
      - 526/715 (73.57%) em Ivaiporã<sup>10</sup>
      - 50/80 (62.5%) em Curitiba<sup>11</sup>.





Acumuladores



Moradores de Rua

• • • Perguntas ?





# Agradecimentos

