



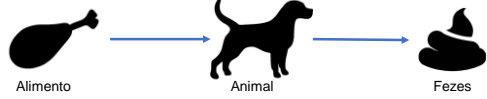
Alimentação crua: aspectos nutricionais e de saúde pública

Prof. Rodrigo O. S. Silva

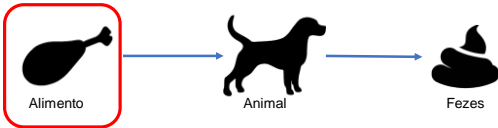
Professor Adjunto - Escola de Veterinária da UFMG



Do que estamos falando?



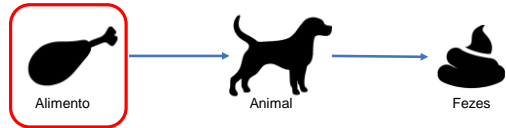
Onde o risco reside?



Risco: contaminação e contaminação cruzada



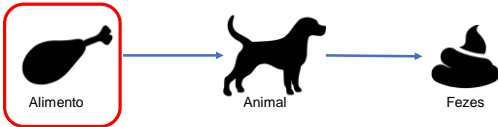
Onde o risco reside?



Risco: contaminação e contaminação cruzada



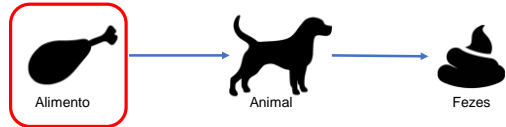
Onde o risco reside?



Risco: contaminação e contaminação cruzada

- Enterobacteriaceae multiresistente
- Salmonella* spp.
- Campylobacter* sp.
- Parasitas diversos

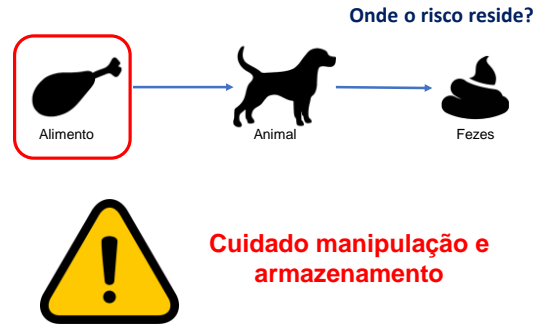
Onde o risco reside?



“Mas eu faço o congelamento preventivo que elimina os patógenos”



Impacta apenas nos ovos de parasitas



PLOS ONE Onde o risco reside?

RESEARCH ARTICLE
 Fecal shedding of *Salmonella* spp., *Clostridium perfringens*, and *Clostridioides difficile* in dogs fed raw meat-based diets in Brazil and their owners' motivation

Flávia Mello Vargas¹, Carolina Pantuzza Ramos, Rafael Gariglio Clark Xavier, Emily Oliveira Lopes², Carlos Augusto Oliveira Júnior, Renata Marques Bagno, Amanda Nadia Diniz, Francine Carlos Faria Lobato, Rodrigo Olívio Silveira Silva^{3*}

Dogs diet	<i>Salmonella</i> spp.
Commercial dry feed (n=192)	1 (0.5%) ^b
Raw meat-based (n=46)	7 (15.2%) ^a
Total (n=238)	8 (3.4%)

Aumento de 30 vezes

antibiotics Onde o risco reside?

RESEARCH ARTICLE
 Fecal Shedding of Multidrug Resistant *Escherichia coli* Isolates in Dogs Fed with Raw Meat-Based Diets in Brazil

Carolina Pantuzza Ramos¹, Carolina Yumi Iwai Kamei¹, Flávia Mello Vargas^{1,2}, Josely de Melo Rabelini¹, João Luis Reis Costa¹, Tereza Malufene Gilão Henriques^{1,2}, Francine Menezes Costa¹, Juliana Almeida Santos¹, Francine Carlos Faria Lobato¹, Andreia Mello Rodrigues^{1,2} and Rodrigo Olívio Silveira Silva^{1,2,3*}

PETS SAVERS ARTICLE
 UK dogs eating raw meat diets have higher risk of *Salmonella* and antimicrobial-resistant *Escherichia coli* faecal carriage

Final multi-variable results	MDR			3GCR	
	OR	95% CI	P-value	OR	95% CI
Feeds non-raw	Ref	—	—	Ref	—
Feeds raw	7.46	2.13 to 11.39	0.002	14.57	3.03 to 70.04
AB not received in last 3 months	—	—	—	—	—
Received AB in last 3 months	0.98	0.98 to 1.19	0.05	—	—
Age (years)	—	—	—	0.41	0.83
Age (years) squared	—	—	—	1.01	1.06
Estimate of household variance (SE)	0.28	(0.63)	—	1.24	(0.82)

antibiotics Onde o risco reside?

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Critically Important Antimicrobials for Human Medicine

5th Revision 2016
 Ranking of antimicrobial agents for risk management of antimicrobial resistance due to non-human use

World Health Organization

Onde o risco reside?

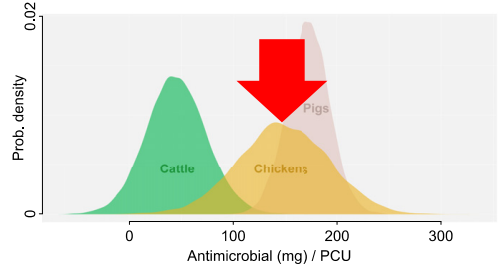
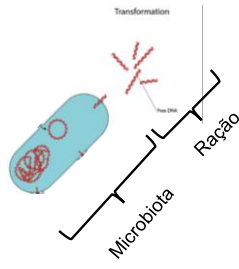


Fig. 2. Posterior distributions for estimates of antimicrobial consumption in cattle, chickens, and pigs in OECD countries.

antibiotics **Onde o risco reside?**

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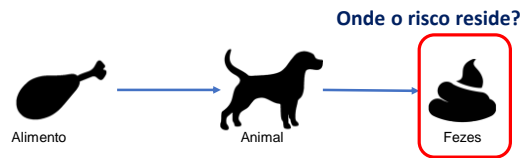
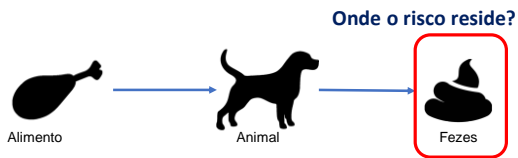
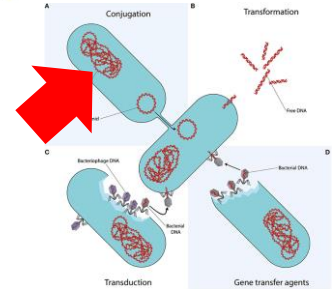
Caroline Ferreira Ramos¹, Carolina Viani Loureiro¹, Fabiana Mello Viegas¹, Inês de Melo Barreto¹, João Luis Reis Cunha², Yvoni Mubone Gilde-Hoernemann³, Fernanda Mourão Costa⁴, Juliana Almeida Nogueira⁵, Francineide Caldas Faria Ladeira⁶, Andreia Wills Ribeiro⁷, and Rodrigo Otávio Ribeiro Silva^{1*}



antibiotics **Onde o risco reside?**

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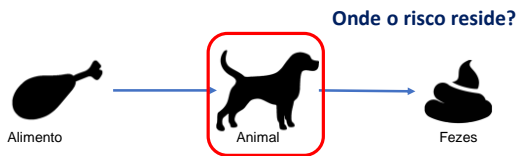


- Aumento da eliminação de bactérias **multirresistentes**
- *Salmonella* spp. – Sorovariedades altamente zoonóticas
- *Campylobacter* sp.
- *C. perfringens*

“É só ter higiene e não tocar nas fezes do cão”



Compartilhamos microbiota com os cães!



Eles são adaptados aos patógenos e por isso não adoecem!



...será mesmo?

Onde o risco reside?



Campilobacteriose



Brucelose



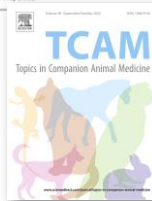
Doenças virais raras

Onde o risco reside?

Onde o risco reside?

Research Article
Enteric Organisms Detected in Feces of Dogs With Bloody Diarrhea: 45 Cases

Carolina Pantuzza Ramos, DVM, Master of Science¹,
 Amanda Nádia Diniz, DVM, Master of Science², Marcio Garcia Ribeiro, DVM, PhD³,
 Carolina Lechini de Paula, DVM, Master of Science⁴, Érica Azevedo Costa, DVM, PhD⁴,
 Luciana Sonne, DVM, PhD⁵, Sílvia Trindade Pereira, DVM, Master of Science⁶,
 Carlos Eduardo Bastos Lopes, DVM, Master of Science⁷,
 Mário Cesar Rennó, DVM, Master of Science⁸, Rodrigo Otávio Silveira Silva, DVM, PhD^{9,10}



Aumento da incidência de diarreia

Enteropathogens	Positives (%)	Characteristics
Canine parvovirus (CPV) type 2 (PCR)	17 (37.8)	All typed as CPV-2b
Isolation	8 (17.8)	
<i>Clostridioides difficile</i>	6 (13.3)	Ribotypes 014/020 (n=5) and 106 (n=1)
Toxigenic (A+B+CDT ₂)		
A/B Toxins (EIA) ¹	6 (13.3)	
Type A	26 (57.8)	
<i>Clostridium perfringens</i>	5 (11.1)	
netF ^{2,3}	5 (11.1)	
Enterotoxin (EIA) ³	5 (11.1)	
<i>Giardia</i> sp. (EIA)	8 (17.8)	
<i>Salmonella</i> spp. (isolation)	3 (6.7)	<i>S. Typhimurium</i> , <i>S. Infantis</i> , <i>S. Heidelberg</i>

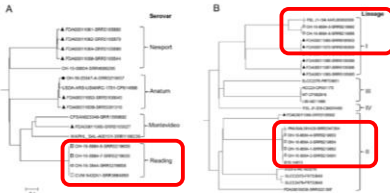


Casos letais causados por *Salmonella* spp.
 Sorovariedades de alto risco para seres humanos

Journal of Veterinary Diagnostic Investigation
 2020, Vol. 34(2), 225-230
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 DOI: 10.1080/10897775.2019.1661000

Whole genome sequencing confirms source of pathogens associated with bacterial foodborne illness in pets fed raw pet food

Jennifer L. Jones¹, Leyi Wang, Olga Coric, Sarah M. Nemer, David S. Rotstein, Damián A. Jurkovic, Yamir Rosa, Beverly Byrum, Jing Cui, Yan Zhang,² Cathy A. Brown, Anne L. Burnum, Susan Sanchez, Renate Reimschuessel



Legend:
 Case 1 food (square), Case 2 food (triangle), Case 1 pet (circle), Case 2 pet (square), Turkey isolate (diamond), Human isolate (circle)

Received 22 March 2020 | Revised 22 September 2020 | Accepted 18 October 2020
 DOI: 10.1111/wvd.12888

ORIGINAL ARTICLE

Feline tuberculosis caused by *Mycobacterium bovis* infection of domestic UK cats associated with feeding a commercial raw food diet

Conor O'Halloran¹ | Camilla Ternqvist-Johnsen¹ | Glynn Woods¹ | Jordan Mitchell² | Nicki Reed² | Paul Burr² | Deborah Gascoyne-Binzi² | Michaela Wegg² | Sarah Beardall² | Jayne Hope³ | Danielle Gunn-Moore⁴



Onde o risco reside?

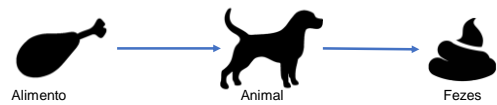
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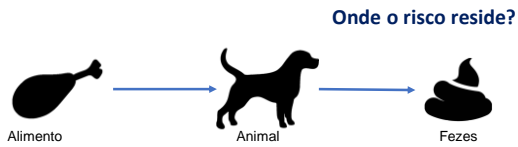
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- **84 felinos infectados**
- **Transmissão confirmada para tutores**

- Salmonelose
- Campilobacteriose
- Toxoplasmose
- Tuberculose
- Brucelose
- Infecções por bactérias multirresistentes



Por que RMBD continua crescendo?

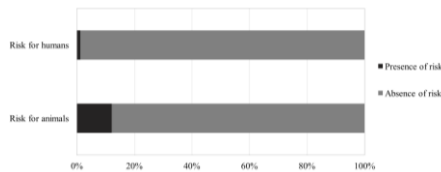
PLOS ONE

Por que continua crescendo?

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c) Perception of risks for humans and animals associated with RMBD for dogs (n = 166)



Por que continua crescendo?

Falácia: “apelo a natureza”

Desconhecimento ou recusa do risco

Redes sociais e a venda da ideia de saúde



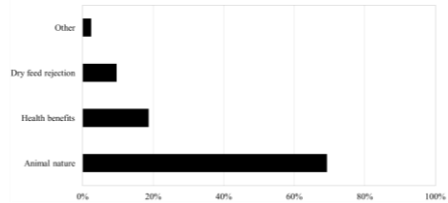
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a) Main reasons associated with adoption of RMBD for dogs in Brazil (n = 166)



Por que continua crescendo?

RESEARCH ARTICLE
 Raw meat-based diets for dogs: survey of owners' motivations, attitudes and practices

Tutores RMBD:

- Baixa confiança nos veterinários, alta confiança em redes sociais
- Baixa confiança nos ingredientes das rações convencionais

Órgãos oficiais que se posicionaram contra



Mensagens principais



Riscos na manipulação do alimento

Riscos de infecção: **diarreia, sepse (...)**

Resistência antimicrobiana

Questão filosófica e ideológica

Obrigado

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