Ursula Gonzales-Barron¹
Vasco Cadavez¹
Pauline Kooh²
Anne Thebault²
Moez Sanaa²

¹: CIMO Mountain Research Centre, Polytechnic Institute of Bragança (IPB), Portugal
²: French Agency for Food, Environmental and Occupational Health and Safety (Anses)
Editorial note to the special issue “Risk factors for sporadic foodborne diseases by meta-analysis of observational studies”

Ursula Gonzalez-Barron, Vanco Cadaver, Anne Thebault, Pauline Koch, Moet Santa

Risk factors for sporadic Yersinia enterocolitica infections: a systematic review and meta-analysis

Laurent Guiller, Philippe Favalo, Alexandre Leclercq, Anne Thebault, Pauline Koch, Vasco Cadaver, Ursula Gonzalez-Barron, Moet Santa

Risk factors for sporadic listeriosis: A systematic review and meta-analysis

Alexandre Leclercq, Pauline Koch, Jean Christophe Augustin, Laurent Guiller, Anne Thebault, Vanco Cadaver, Ursula Gonzalez-Barron, Moet Santa

Strategy for systematic review of observational studies and meta-analysis modelling of risk factors for sporadic foodborne diseases

Ursula Gonzalez-Barron, Anne Thebault, Pauline Koch, Laurent Water, Moet Santa, Vasco Cadaver

Risk factors for sporadic salmonellosis: a systematic review and meta-analysis

Laurent Guiller, Anne Thebault, Philippe Favalo, Lupo Mughini-Gras, Nathalie Jourdan-du Ska, Julie David, Pauline Koch, Vasco Cadaver, Ursula Gonzalez-Barron

Risk factors for sporadic campylobacteriosis: A systematic review and meta-analysis

Philippe Favalo, Pauline Koch, Lupo Mughini-Gras, Julie David, Anne Thebault, Vasco Cadaver, Ursula Gonzalez-Barron

Risk factors for sporadic Shiga toxin-producing Escherichia coli: a systematic review and meta-analysis

Jean Christophe Augustin, Pauline Koch, Lupo Mughini-Gras, Laurent Guiller, Anne Thébault, Frédérique Auclair-Primo, Vanco Cadaver, Ursula Gonzalez-Barron, Moet Santa.
Special issue
Volume 17, April 2021

Risk factors for sporadic toxoplasmosis: A systematic review and meta-analysis
Anne Thibault, Pauline Kooh, Vasco Cadavez, Ursula Gonzalez-Barron, Isabelle Vianna

Risk factors for sporadic hepatitis E infection: A systematic review and meta-analysis
Nicole Pena, Pauline Kooh, Vasco Cadavez, Ursula Gonzalez-Barron, Anne Thibault

Risk factors for sporadic cryptosporidiosis: A systematic review and meta-analysis
Pauline Kooh, Anne Thibault, Vasco Cadavez, Ursula Gonzalez-Barron, Isabelle Vianna

Risk factors for sporadic norovirus infection: A systematic review and meta-analysis
Anne Thibault, Julie David, Pauline Kooh, Vasco Cadavez, Ursula Gonzalez-Barron, Nicole Pena
Monitoring Data versus Data Published in the Scientific Literature

Sampling design
- Target/Representative samples
- Description of the sampling frame
- Individual/aggregated data

Analytical tools
- Sensitivity-Specificity-Reproducibility
- Limit of detection
- Accuracy of pathogen counting
- Typing methods

Food-Pathogen combinations
- Choice of food-Pathogen combinations based on Risk management needs/research needs.
- Point of sampling
Systematic review and Meta-analysis project between IPB and ANSES that started in 2018, whose objective was to gather occurrence (prevalence and counts) data of pathogens in foods consumed in Europe.

- Primary sources: peer-reviewed articles

- Having access to this information in a compiled form would be helpful to researchers and food safety authorities.

Food categories:
- Meat and meat products, milk and dairy products, eggs and egg products, grains and cereal products, seafood, fruits, vegetables, legumes, beverages, composite foods,

Pathogens:
- Salmonella, Campylobacter, Shigatoxin-producing Escherichia coli, Listeria monocytogenes, Yersinia enterocolitica, Bacillus cereus, Clostridium perfringens, Staphylococcus aureus.
- New: Toxoplasma gondii, Norovirus, Hepatitis A virus, Hepatitis E virus, Cryptosporidium and Giardia duodenalis.

Data:
- Number of published studies: 734 primary studies since 2000 - Number of samples: ~4500 sampling occasions (entries).
WEB APPLICATION

At a glance: Descriptive stats of selections

Data retrieval and in-depth analysis

Necessary to log in

PATHOGENS IN FOODS

THE WEB RESOURCES ENABLES YOU TO:
SEARCH FOR DETECTION AND ENUMERATION DATA OF PATHOGENS IN FOODS
OBTAIN OVERALL VISUAL AND DESCRIPTIVE ANALYSES
GENERATE SUMMARISATION STATISTICS OF DATA SELECTIONS
Prevalence and counts – considering variability and uncertainty thanks to advanced statistical model for meta-analysis

**Embedded Expertise**

Studies are reviewed by experts in microbiology, statistics and epidemiology - Studies are assessed for quality - Biases are flagged and when feasible adjustments are made...

**Sustainability**

It is a dynamic database - continuous scientific monitoring - introduction of new data with reactivity according to priorities - Securing a sustainable funding.

**WHAT WE DO OFFER**

We provide risk assessment organizations and scientists with reliable data for quantitative microbiological risk assessment
• This database and the associated web application are intended to be open with free access for researchers and risk assessors.

• Currently its development and maintenance are supported by ANSES and IPB (new contract 2021-2022).

• We would like to propose to EFSA and member states to mutualize our resources to make this database more sustainable and accessible to all.