

RESULTS OF THE 10TH SURVEY ON DRAFT BRIEFING NOTES

2025 - ANTIPARASITIC DRUG RESISTANCE

12 answers

Topic	Yes	No	More info needed
New hazard?	5 (42%)	7 (58%)	---
Increased exposure?	8 (77%)	4 (33%)	---
New target group?	3 (25%)	9 (75%)	---
Emerging risk?	9 (75%)	2 (17%)	1 (8%)

Suggested conclusion:
Emerging risk

Conclusion: Emerging Risk

Emerging Risk Consensus: 75% of institutions identify antiparasitic resistance as a critical threat by 2025, driven by rising resistance in livestock and climate change exacerbating parasite survival.

Parallels to Antibiotic Resistance: Solutions mirror antibiotic resistance strategies, emphasizing preventive measures, though antiparasitic resistance remains under-researched and underfunded despite existing data.

Climate Change as Driver: Warmer climates extend parasite lifespans and reproduction rates, increasing infection risks in animals and potential spillover to humans.

Monitoring and Funding Gaps: Limited livestock funding and insufficient data on resistance prevalence in food chains hinder effective global mitigation efforts.

Debate on Hazard Novelty: Resistance is longstanding (since 1960s) but newly prioritized; undervalued despite recent EU studies showing alarming farm animal resistance rates.



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2025 - BIOPOLYMERS USED AS FOOD CONTACT MATERIALS (FCMs): CONTAMINANTS AND CONCERN

13 answers

Topic	Yes	No	More info needed
New hazard?	8 (62%)	5 (38%)	---
Increased exposure?	11 (85%)	2 (15%)	---
New target group?	6 (46%)	7 (54%)	---
Emerging risk?	7 (54%)	1 (8%)	5 (38%)

Suggested conclusion:
Further info needed

Conclusion: Emerging risk

Emerging Risk Majority (54%): Over half of institutions flag bioplastics as a potential risk due to contaminants (PFAS, pesticides, NIAS), microbial growth from organic materials, and compositional variability.

Exposure Surge (85% Consensus): Rapid adoption driven by sustainability policies (e.g., EU Green Deal, PPWR) and consumer demand increases exposure to poorly studied hazards like migrating chemicals.

62% see "new hazards" from unpredictable contaminant mixtures, recycled waste streams, and untested bioplastic formulations, though critics argue risks are amplified, not novel.

Regulatory & Knowledge Gaps: 38% demand urgent research on migration pathways, safety thresholds, and harmonized standards, as current frameworks lag behind bioplastic innovation.

Target Group Uncertainty: Split views on whether risks disproportionately affect vulnerable groups (allergic individuals, children) or impact all consumers equally.



2025 - BURKHOLDERIA AND FERMENTED FOODS

12 answers

Topic	Yes	No	More info needed
New hazard?	5 (42%)	7 (58%)	---
Increased exposure?	7 (58%)	5 (42%)	---
New target group?	6 (50%)	6 (50%)	---
Emerging risk?	6 (50%)	1 (8%)	5 (42%)

Suggested conclusion:
Further info needed

Conclusion: Emerging risk

Fatal Toxin Concerns: Comments emphasize bongrekic acid (produced by Burkholderia gladioli) as a critical hazard, with fatal cases reported globally. Lack of validated analytical methods and low awareness in the EU risk underreporting and misdiagnosis.

Home Fermentation Surge: Rising popularity of DIY fermentation (accelerated post-pandemic) and multicultural diets introduce risks, especially with improper pH/salt control in lipid-rich foods (e.g., coconut, rice). Small-scale producers and home fermenters may lack safety protocols.

EU-Specific Knowledge Gaps: While Burkholderia is known in Asia (e.g., outbreaks since 1895), EU data on contamination rates and drivers (e.g., climate change, plant-based cheese trends) is sparse. Competent authorities urge vigilance for unusual outbreaks.

Target Group Tensions: Some argue new at-risk groups include vegan/vegetarian consumers and culturally diverse populations embracing Asian fermented foods. Others stress broad exposure, with no clear demographics beyond "home fermenters influenced by social media trends."

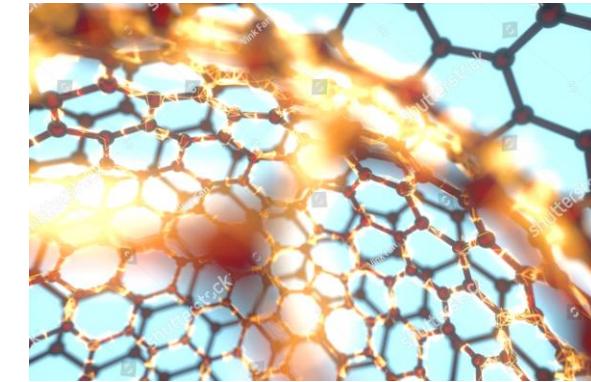
Drivers of Risk: Climate change, sustainability-driven fermentation trends, and lack of consumer/healthcare education amplify hazards. One comment notes: "Social networks relay trendy practices without safety advice."



EDIBLE FOOD COATINGS – ISSUE, UNCERTAINTIES/POTENTIAL MEASURES

Description - The use of substances derived from foods or food by-products as edible coatings is common, but research seems to be more focused on functionality rather than on safety.

Signal - Increase citation in database triggered by new technologies (nano) and development of new functional substances, increase in novel proteins, and consumer trends:



- Edible films that are novel or contain **novel ingredients**, food safety should be considered.
- **Biopolymers** have mainly been derived from plants, but **new sources** are being investigated including algae, microorganisms and food by-products. “Chitosan” has received a lot of attention.
- Risks that may arise through the **increased dietary exposure** to a **biologically active compound** should this be used widely as a food film (example: A study of a film containing the endocrine-disrupting chemical “quercetin”)
- Risks for the films to become **contaminated** during production and use.
- The potential **allergenicity** of protein-based coatings



2025 - EDIBLE FOOD COATINGS

9 answers

Topic	Yes	No	More info needed
New hazard?	3 (33%)	6 (77%)	---
Increased exposure?	7 (78%)	2 (22%)	---
New target group?	2 (22%)	7 (78%)	---
Emerging risk?	2 (18%)	3 (27%)	6 (55%)

Suggested conclusion:

Further info needed

Conclusion: Further info needed

Low Emerging Risk Consensus: Most institutions see minimal immediate risk, citing EFSA regulatory oversight for authorized coatings, though 55% demand more data on novel materials (e.g., nanomaterials, biopolymers) and allergen risks.

77% argue coatings are inherently safe if compliant with EU food additive regulations, while 33% flag potential hazards from untested ingredients/materials (e.g., nanotech interactions)

Exposure Surge (78% Yes): Rising use driven by sustainability goals and ready-to-eat (RTE) food trends, though gaps persist in tracking long-term health impacts of new formulations.

Target Group Clarity: 78% reject "new" at-risk groups, noting coatings target general consumers, though concerns linger about allergens (e.g., non-vegan/vegetarian components) and nanomaterial interactions.

Innovation-Driven Adoption: Growth fueled by tech advancements (e.g., functional coatings) and novel food sources, but regulatory frameworks lag behind rapid material innovation.



2025 - ILLICIT USE OF CAFODOS AS FISH PRESERVATIVE

8 answers

Topic	Yes	No	More info needed
New hazard?	2 (25%)	6 (75%)	---
Increased exposure?	3 (37,5%)	5 (62,5%)	---
New target group?	2 (25%)	6 (75%)	---
Emerging risk?	1 (12,5%)	1 (12,5%)	6 (75%)

Suggested conclusion:
Further info needed

Conclusion: Emerging risk

Low Emerging Risk Consensus (12.5%): Majority (75%) demand more data on fraud prevalence, though Cafodos itself is a known compound (used in some regions for octopus preservation) but banned in the EU.

75% reject "new hazard" claims, noting Cafodos indirectly amplifies histamine risks (regulated hazard) by masking spoilage in fish, linked to a 2009 poisoning outbreak in Italy.

Exposure Uncertainty: Split views—37.5% suggest potential rise due to fraudulent use in aquaculture/wholesale, while 62.5% argue new detection methods may curb illicit practices.

Target Groups: 75% see no new demographics (fish consumers remain the focus), but 25% flag expanded fraudulent use in new species/regions.

Fraud-Driven Risk: Illicit use of Cafodos (to prolong shelf life) is tied to food fraud drivers, with gaps in monitoring and lack of EU-wide data on scale.



MILK ANALOGUE MADE FROM FISH (FISH MILK) - ISSUE

Description - A shortage of dairy cows in some regions of Indonesia has triggered scientists to suggest a novel source of protein: fish milk. This fish milk is a milk analogue/substitute product made from powdered deboned ponyfish flesh (*Leiognathus equulus*), high in protein.



Possible concerns for food safety

- possible exposure to contaminants, such as heavy metals
- as fish is a common food allergen, it must be declared as an ingredient on the food label

Bray D.J. (2022) *Leiognathus equulus* in fishes of Australia, accessed 07 Jan 2025, <https://fishesofaustralia.net.au/home/species/536>



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2025 - MILK ANALOGUE MADE FROM FISH (FISH MILK)

13 answers

Topic	Yes	No	More info needed
New hazard?	3 (23%)	10 (77%)	---
Increased exposure?	4 (31%)	9 (69%)	---
New target group?	6 (46%)	7 (54%)	---
Emerging risk?	1 (8%)	5 (38%)	7 (54%)

Suggested conclusion:
Further info needed

Conclusion: No emerging risk

Contaminant Concerns: Comments stress heavy metals (e.g., mercury, lead), PFAS, and microplastics as risks, with uncertainty about extraction methods concentrating toxins: "Protein extraction could amplify heavy metals in the final product." EU institutions demand data on microbiological hazards and allergen labeling gaps.

Regulatory Hurdles: Most dismiss "new hazards" (77%) since risks (e.g., fish allergens, dioxins) are known, but note novel food authorization is required. Skepticism persists: "Does heavy metal accumulation in raw fish translate to the milk?"

Market Viability & Exposure: "Consumer acceptance in Europe will be very low" dominates comments, with vegans/unlikely adopters cited. However, 31% warn of niche appeal: **"Omega-3 seekers or lactose-intolerant groups might risk accidental exposure if mislabeled."*

Target Group: Proponents suggest "new demographics avoiding ruminant milk," but critics counter: "Vegans won't choose fish milk; it's a contradiction." One warns: "Total ignorance by consumers about undeclared allergens could heighten risks."

Drivers & Data Gaps: Innovation in alternative proteins drives interest, but comments highlight "single Indonesian producer" and "no EU sales data." Urgent calls for heavy metal profiling and extraction process transparency to preempt "unforeseen contamination."



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2025 - STREPTOCOCCUS SUIS: A POTENTIALLY UNDERREPORTED EMERGING ZOONOTIC PATHOGEN

15 answers

Topic	Yes	No	More info needed
New hazard?	5 (33%)	10 (67%)	---
Increased exposure?	4 (27%)	11 (73%)	---
New target group?	6 (40%)	9 (60%)	---
Emerging risk?	2 (13%)	2 (13%)	11 (74%)

Suggested conclusion:

Further info needed

Conclusion: Further info needed

Underreporting & Surveillance Gaps: Comments stress "EU-wide human case data is lacking" and "clinical detection is inconsistent". One notes: "Is improved diagnostics revealing cases, or is this true emergence?" Skepticism persists: "In Denmark, *S. suis* cases are rare and tied to pig industry hygiene, not food."

Transmission Mysteries: A 2025 infant case study highlights potential maternal-fetal transmission: "Vaginal colonization in mothers poses neonatal risks." Others question routes: "No link to food or occupation in cited cases—what's the source?"

Hazard Nuances: While 67% dismiss novelty ("known since 1988"), critics warn: "Emerging zoonotic lineages or AMR strains (from pig antibiotics) could redefine risks." One adds: "Foodborne transmission is unproven in the EU but plausible via raw pork/offal."

Exposure Debates: "Raw pork trends (e.g., niche diets) or imported Asian pork may shift risks," but most counter: "Occupational exposure (farmers, abattoirs) is unchanged; food isn't a major route here."

Target Group Debate: Split on immunocompromised individuals and neonates vs. traditional demographics: "Workers handling pigs remain the primary group, but isolated cases (e.g., non-occupational infant) demand scrutiny."

Drivers & Urgency: Antibiotic Overuse in Farming: "AMR strains are a silent threat—pig industry reliance on antibiotics fuels this." Surveillance Demands: "Mandate reporting to track zoonotic lineages and AMR spread; EU data is fragmented." Niche Consumption Trends: "Rising raw pork consumption in foodie cultures could open new exposure pathways



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2025 - SUGAR AND SUGAR-SWEETENED BEVERAGES IN RELATION TO PREMATURE AGING IN ADULT SURVIVORS OF CHILDHOOD CANCER

12 answers

Topic	Yes	No	More info needed
New hazard?	3 (25%)	9 (75%)	---
Increased exposure?	5 (42%)	7 (58%)	---
New target group?	4 (33%)	9 (67%)	---
Emerging risk?	0 (0%)	8 (67%)	4 (33%)

Suggested conclusion:
No emerging risk

Conclusion: No Emerging risk

Established Sugar Risks: The health impacts of high sugar consumption (e.g., diabetes, aging via glycation) are well-documented, though public adherence to guidelines remains low.

Study Limitations Criticized: Cross-sectional design and self-reported dietary data (prone to error) prevent causal conclusions; experts demand longitudinal studies or meta-analyses for validation.

Niche Population Focus: Childhood cancer survivors' dietary needs (e.g., therapy-linked vulnerabilities) require clinical guidance, not broad public health frameworks, per 33% of comments.

Mechanistic Knowledge Gaps: Links between sugar, gut dysbiosis, and aging biomarkers (e.g., epigenetic clocks) need deeper validation despite known pathways like AGE formation.

Target Group Debate: While 33% suggest survivors as a "new" risk group, most dismiss this, arguing sugar's risks apply universally, not uniquely to this population.



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2025 - TRALOPYRIL AND TRANSFORMATION PRODUCTS IN SALMON EXPOSED TO TRALOPYRIL COATED NET PEN

11 answers

Topic	Yes	No	More info needed
New hazard?	7 (64%)	4 (36%)	---
Increased exposure?	9 (82%)	2 (18%)	---
New target group?	5 (45%)	6 (55%)	---
Emerging risk?	2 (18%)	2 (18%)	7 (64%)

Suggested conclusion:
Further info needed

Conclusion: Further info needed

Toxicity & Data Gaps: Comments stress "no established MRLs for tralopyril in fish" and "insufficient data on genotoxicity of breakdown products", urging EFSA/ECHA to prioritize risk assessments.

Hazard Nuance: While tralopyril is "a known antifouling agent", its use in aquaculture nets introduces "novel foodborne exposure routes" (64% of comments), raising concerns about consumer ingestion via salmon.

Exposure Evidence: Studies detect tralopyril in *40-100% of salmon muscle tissues* from treated nets, yet "EU-wide contamination levels in retail fish are unknown", complicating safety evaluations.

Regulatory Limbo: Norwegian experts note "ECHA's pending assessment" and call for "better genotoxicity data" before setting thresholds, while Cyprus reports "no current use in local aquaculture".

Target Group Debate: center on whether "fish consumers" are a new risk group, given tralopyril's legacy use vs. its "emerging presence in food chains".



UNANTICIPATED RISKS: VERTICAL FARMING – THE ISSUE

- **Description** - detected high concentration of mercury on fresh produce in Singapore vertical farming from an unexpected source: mercury vaporized from the mercury-containing polyurethane coating that protected the Light-Emitting Diodes (LEDs) lights.



The Incident - presence of elevated concentrations of mercury (5.2 to 12.2 ppm) were detected in kale and herb samples grown indoors, but not outdoors. Environmental swabbing identified that the LED lighting system was the mercury source.

Further findings - An encapsulating layer is applied to LED units to protect the LED diodes, which is typically made from silicone, epoxy or polyurethane. The LED polyurethane encapsulant contained mercury, which was being vaporized when the LED lights were in use and then depositing on plants.

Vertical farming and food safety

- Similar hazards than outdoors farms
- Development of new growth media focused on technical and production needs
- Cross-contamination at vertical farms that integrate fish production (aquaculture)
- Possible introduction of food safety hazards associated with growing outdoors



2025- UNANTICIPATED RISKS: VERTICAL FARMING

12 answers

Topic	Yes	No	More info needed
New hazard?	3 (25%)	9 (75%)	---
Increased exposure?	5 (42%)	7 (58%)	---
New target group?	2 (17%)	10 (83%)	---
Emerging risk?	2 (17%)	3 (25%)	7 (58%)

Suggested conclusion:
Further info needed

Conclusion: Further info needed

Mercury Concerns & LED Regulation Gaps: Highlighted by reports of contamination in Singapore but contested as LEDs are typically mercury-free; urgent need to verify EU LED standards and potential leakage risks.

Controlled Environment vs. Novel Risks: While vertical farming's-controlled settings may reduce traditional hazards, emerging risks like Legionella exposure for workers (via water systems) require scrutiny.

Debate on Hazard Novelty: Mercury is a known contaminant, but critics question if vertical farming introduces new exposure pathways (e.g., LED coatings, hydroponic chemicals) needing updated safety frameworks.

Exposure Uncertainties: Growth of vertical farming could increase consumer exposure to undefined risks, though resolved cases (e.g., Singapore mercury) suggest isolated incidents, not systemic issues.

Target Groups: No consensus on new demographics; risks primarily tied to workers (e.g., Legionella inhalation), not consumers, per most comments.

