

The role of wood shavings in the spread of *Aspergillus* section *Fumigati*: From carpentries environments to zoonosis risks in poultry farms

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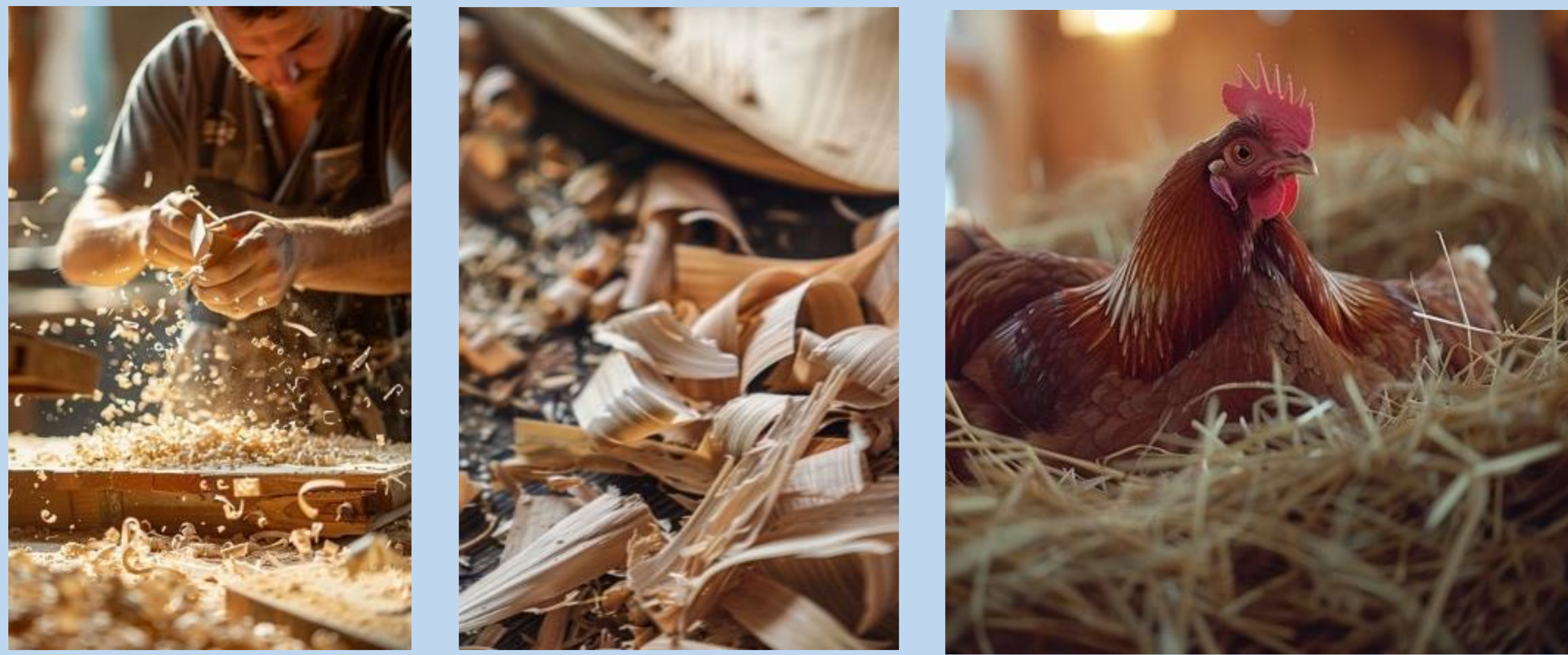
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Introduction

Wood dust is not solely an occupational hazard for carpenters, since this material is commonly used as bedding for poultry industry [1].

Wood shavings are among the various contaminants affecting poultry production and may be a **reservoir of pathogens**. Thus, wood-based litter might contribute to a potential risk of **zoonosis** [1].



Aspergillus section *Fumigati*, is included in the fungal priority pathogens list published by the World Health Organization and has already been detected in woodworking environments [2].

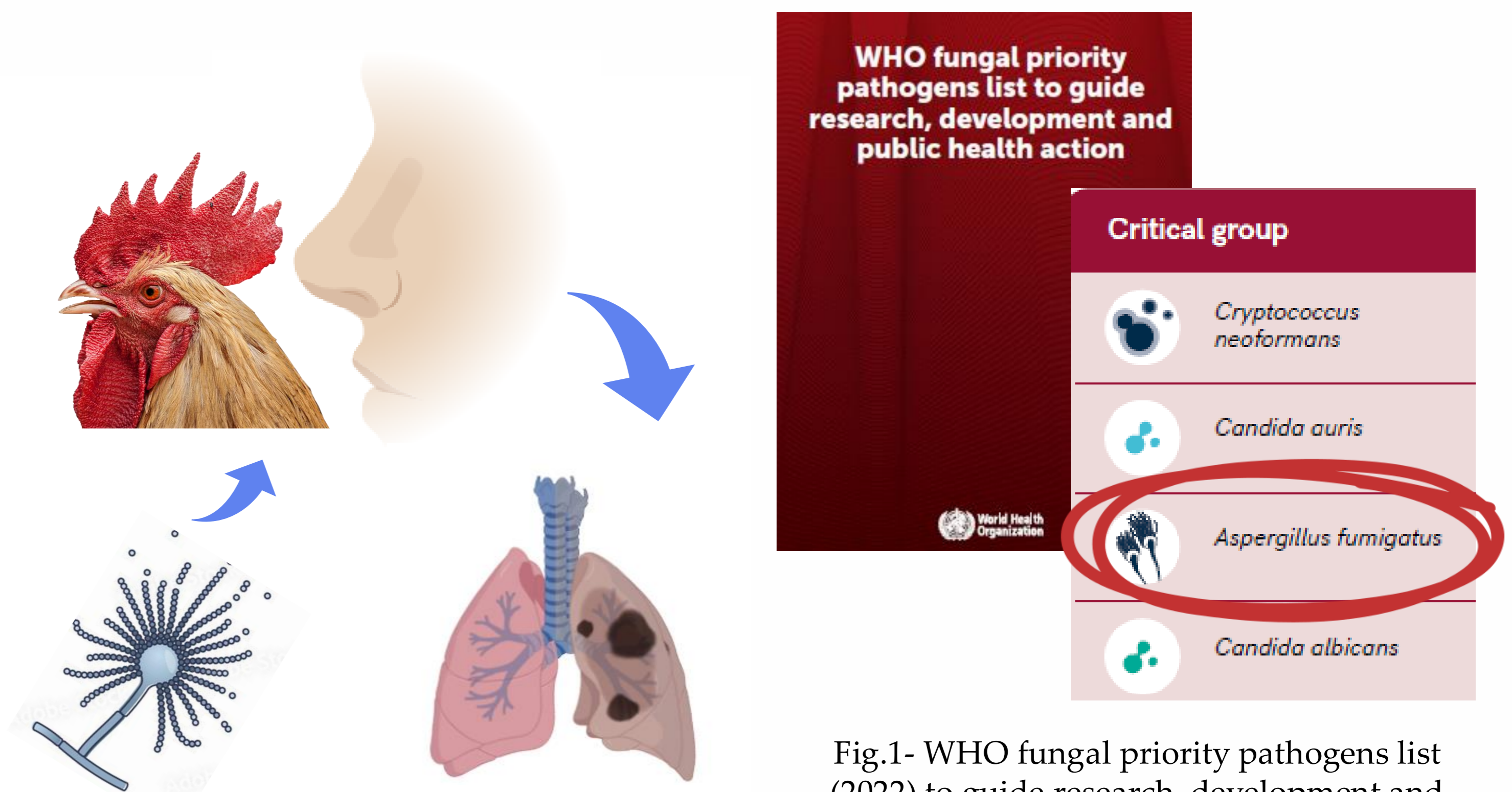
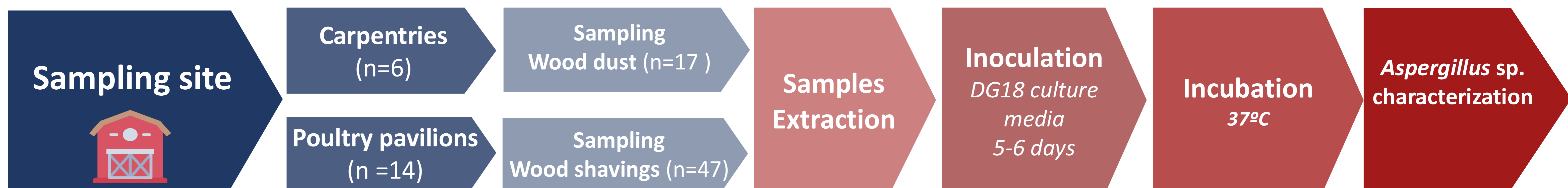


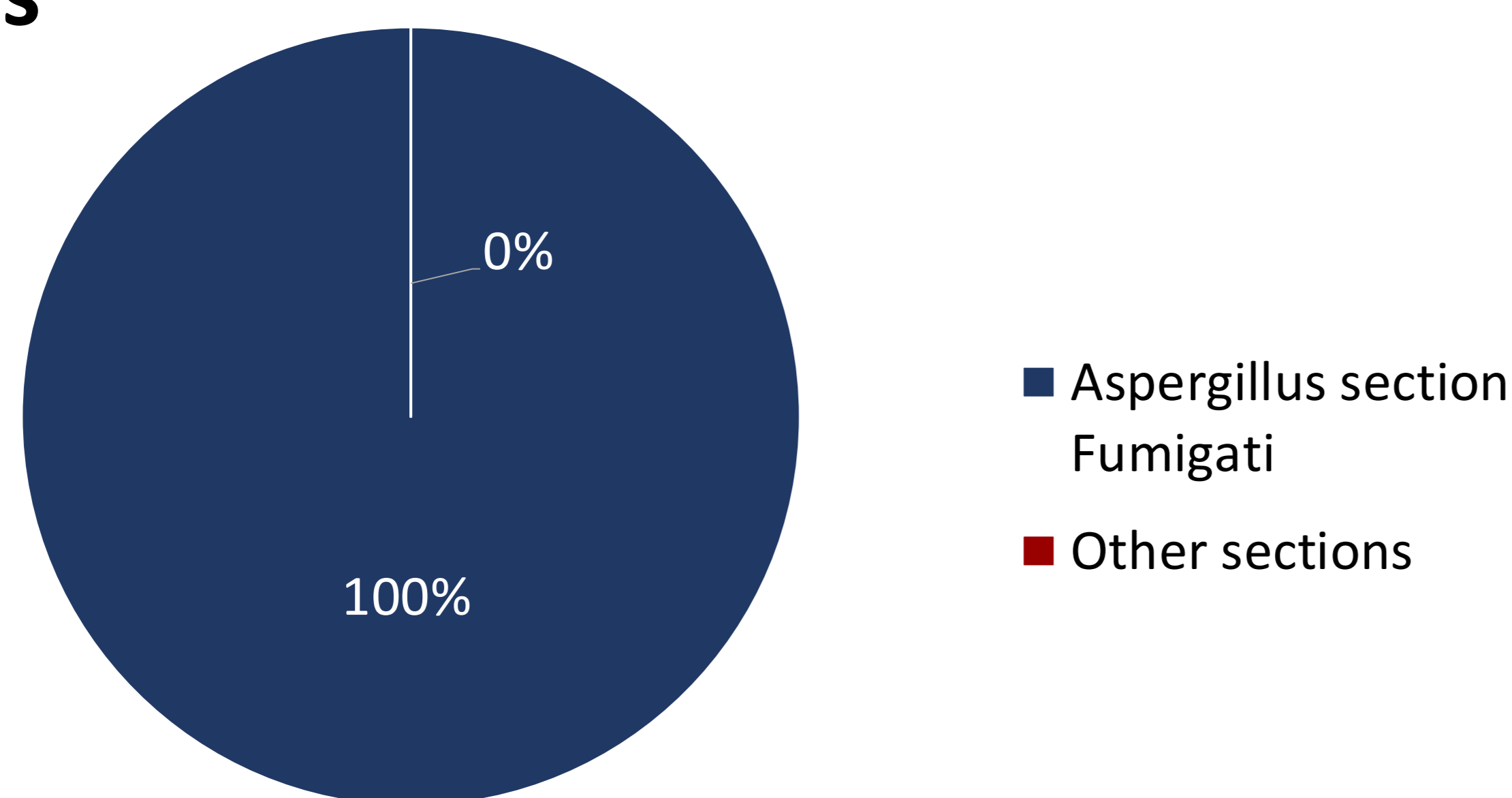
Fig.1- WHO fungal priority pathogens list (2022) to guide research, development and public health action.

Objective: This study aims to perform a contamination assessment to *Aspergillus* section *Fumigati* in both carpentries and poultries

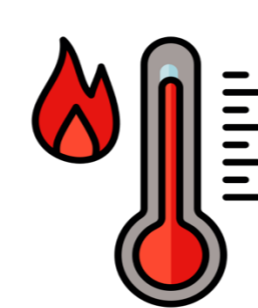
Material and methods



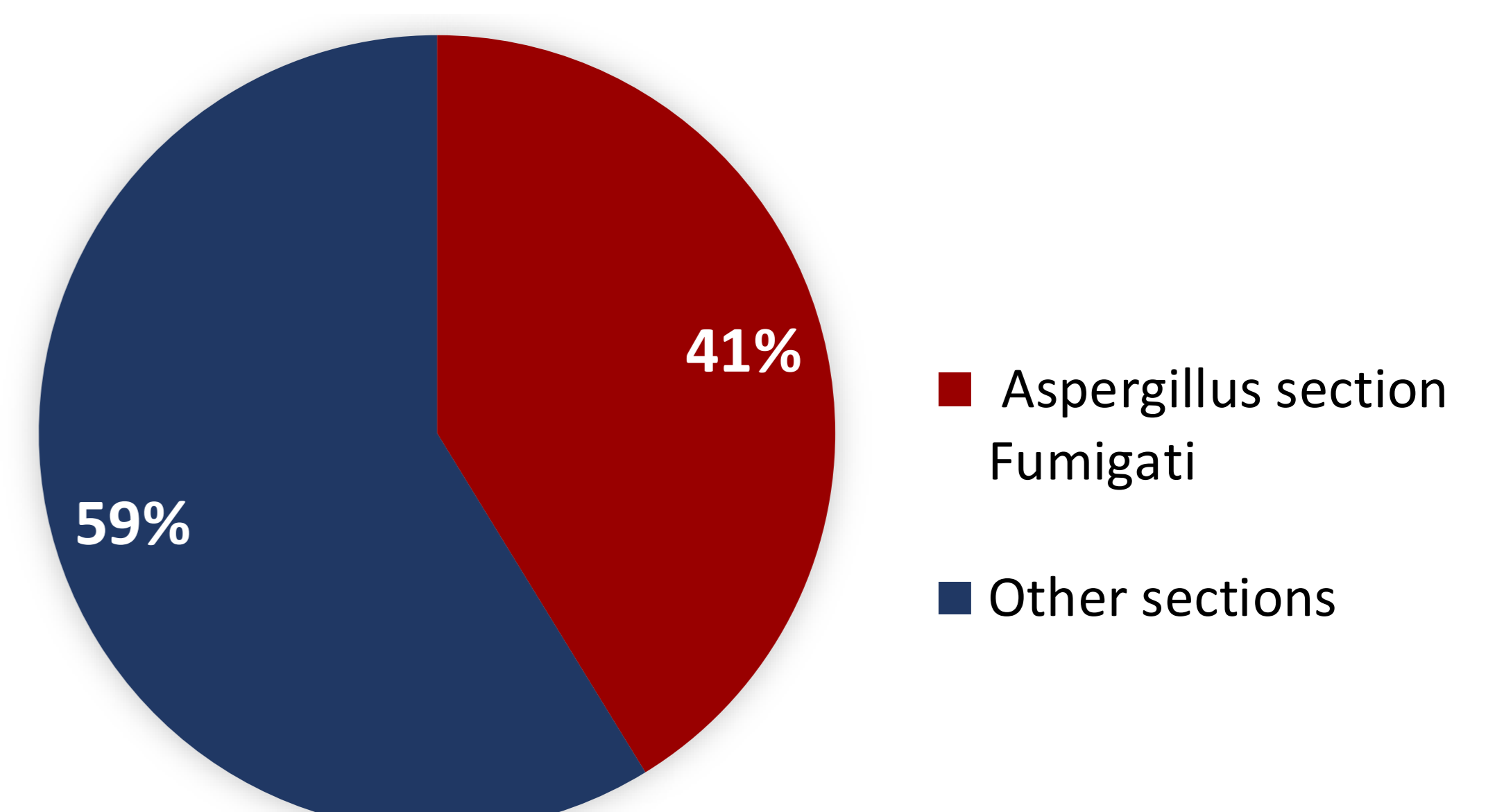
Results



Carpentries: 100% of *Aspergillus* sp. isolates recovered belonged to *A.* section *Fumigati* (17 out of 17).



37°C
Pathogenic potential



Poultries: 70.2% of *Aspergillus* sp. isolates recovered belonged to *A.* section *Fumigati* (40 out of 57).

Discussion

Incubation of DG18 at 37°C is more effective for the recovery of *Aspergillus* section *Fumigati* isolates and gives us information on the fungi with pathogenic potential [3].

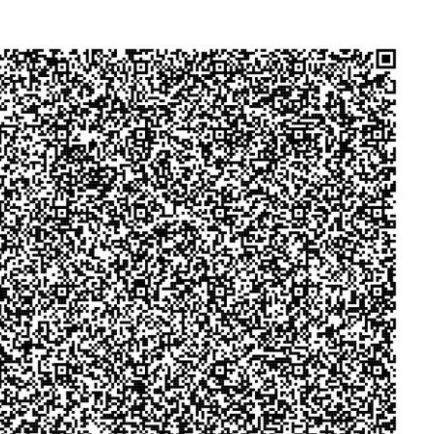
The results obtained evidence **wood shavings as a potential reservoir of *Aspergillus* section *Fumigati*** contamination in **carpentries** and in **poultry pavilions**.

Conclusions

- Fungi are become more thermotolerant as a result of climate change and *Aspergillus fumigatus* resistance is increasing.
- Future studies should focus on characterizing fungal-resistant profiles.
- The **potential of wood shavings in fungal dissemination** between these two sectors should be considered in further research enabling Health Services to prioritize interventions in these specific settings to **protect workers, animals, and consumers**.



References



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