

# Aspergillus fumigatus prevalence on poultry farms: Health concerns in a climate change era

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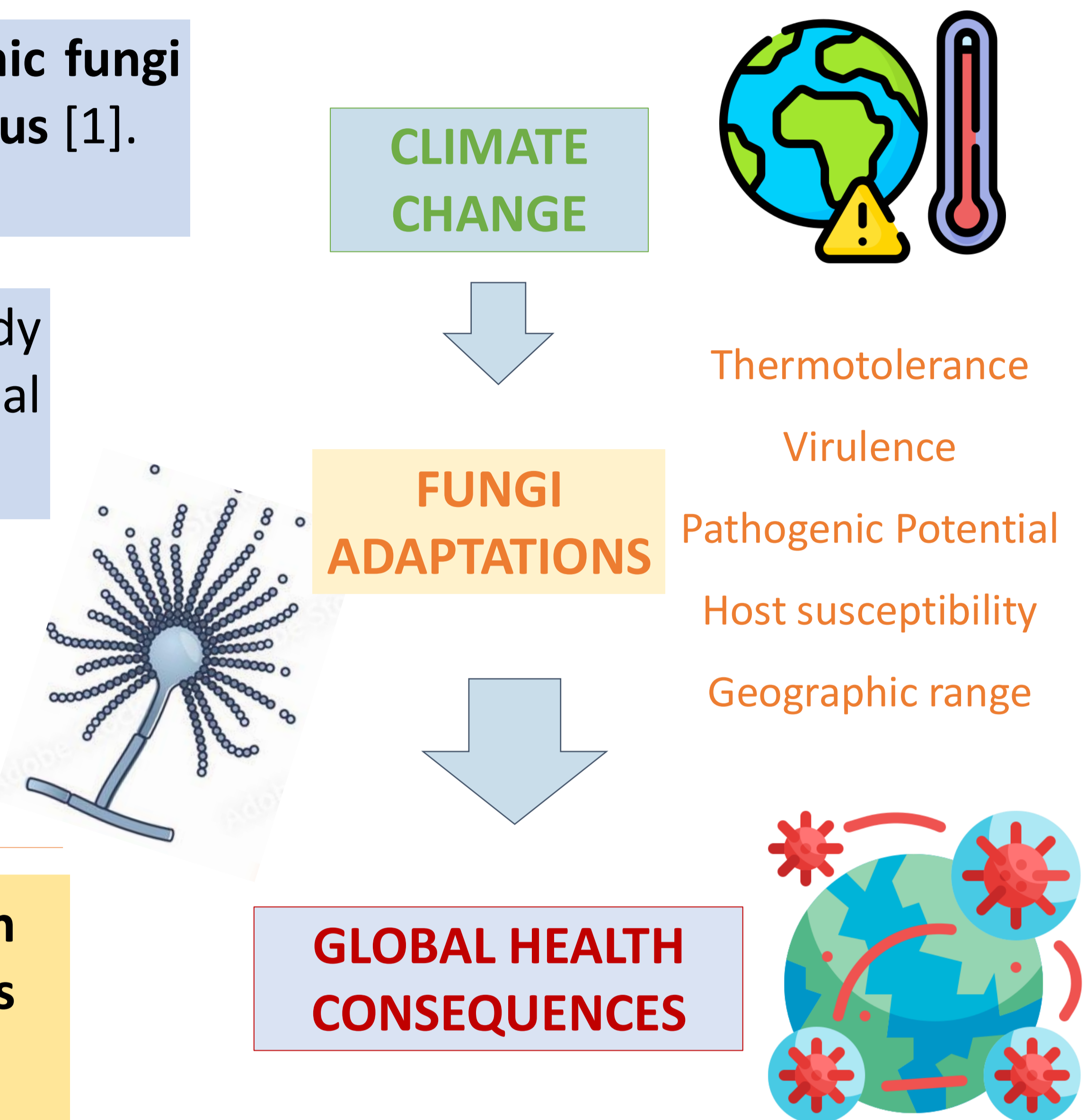
## INTRODUCTION

The **global temperature is rising**, promoting the growth of numerous **pathogenic fungi** that quickly **adapt** to the new environment, becoming **more virulent** and **dangerous** [1].

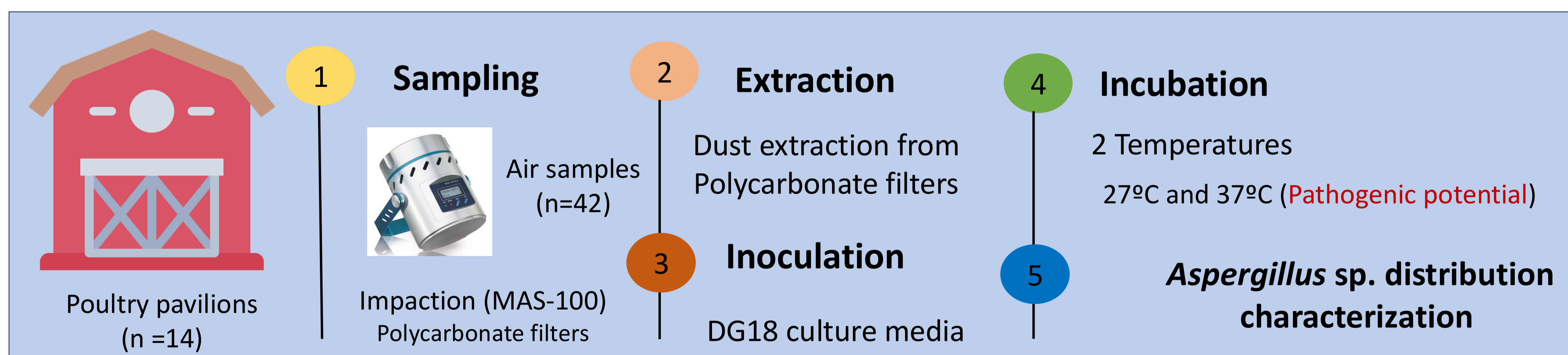
*Aspergillus fumigatus*, one of the most common human pathogens, has already been observed **in poultry farms**. These settings have been spotted as a potential source of fungal pathogens, causing infections [2].

Little is known about **how temperature affects** the spatial and temporal distributions of microbial populations, particularly **human fungal pathogens** [3].

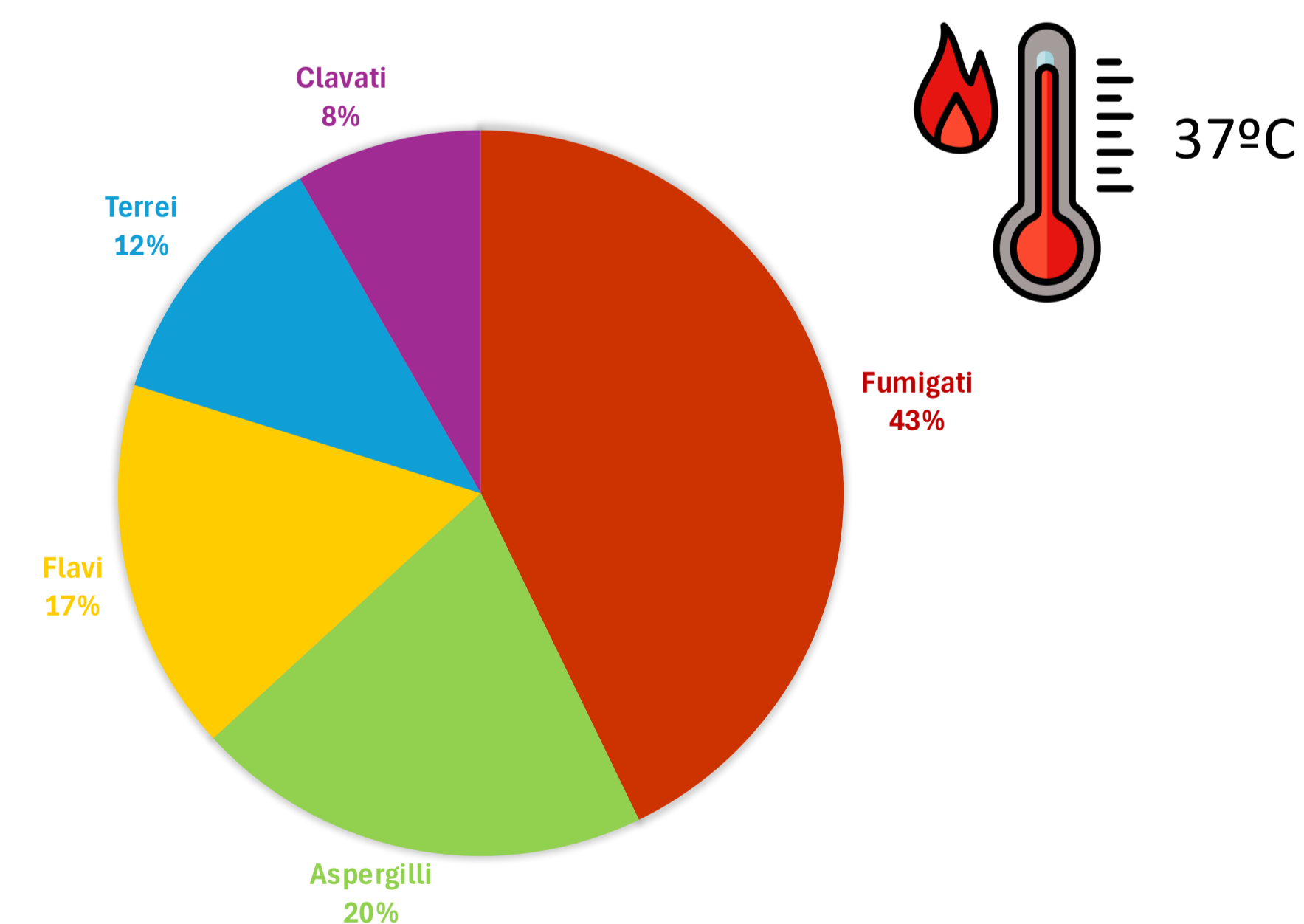
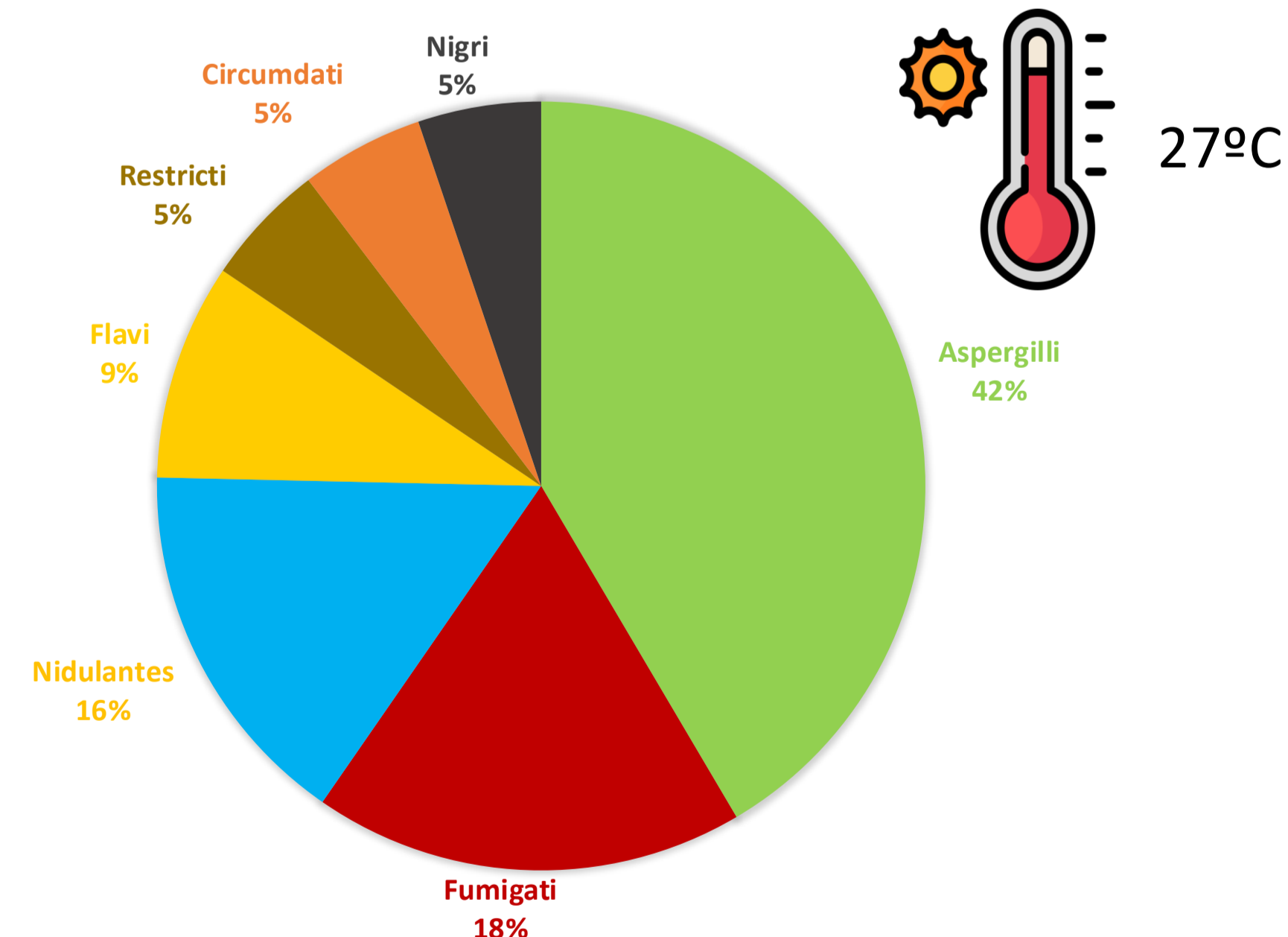
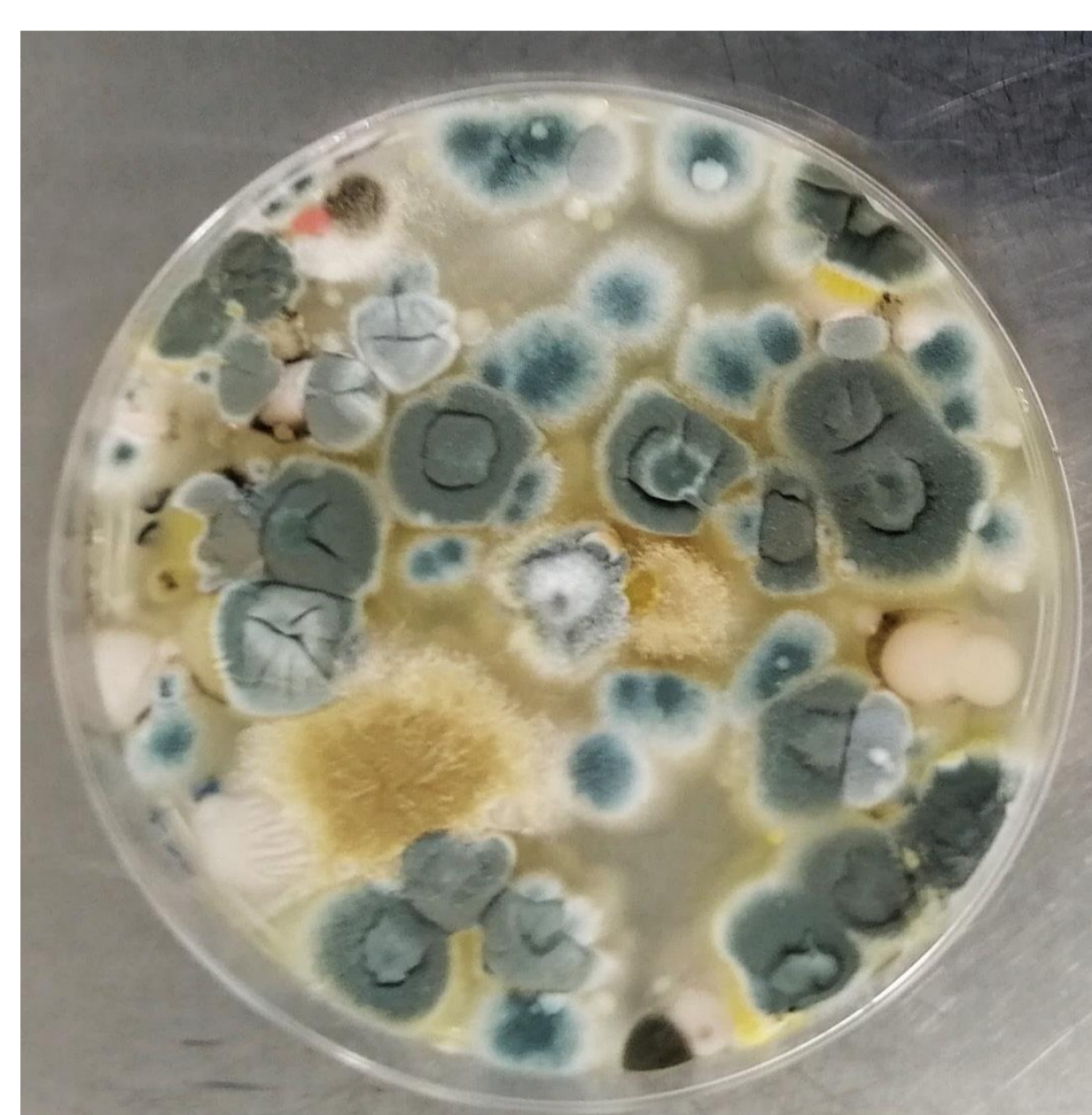
**OBJECTIVE:** This study aims to identify variations in *Aspergillus* sections in air samples from poultry pavilions at different temperatures (27°C and 37°C to assess pathogenic potential).



## METHODS



## RESULTS



• *Aspergillus* sections *Aspergilli* (42%), *Fumigati* (18%), *Nidulantes* (16%), *Flavi* (9%), *Circumdati* (5%), *Nigri* (5%), *Restricti* (5%) at 27°C.

• *Aspergillus* section *Fumigati* was dominant (44%), followed by *Flavi* (36%), *Terrei* (26%) and *Clavati* (18%) at 37°C

## DISCUSSION

- ⚠️ *A. fumigatus* may thrive at **higher temperatures**.
- ⚠️ Due to **climate change**, fungi are becoming more **thermotolerant** [3].
- ⚠️ The presence of toxigenic species such as *Aspergillus flavus*, a well-known **producer of potent mycotoxins** [2], should be considered.

## CONCLUSION

- **Future research** should focus on **mycotoxins assessment** and **fungal-resistant profile** characterization.
- Better understanding of the **connections between fungal diseases** and **climate change** are necessary for the development of preventive, diagnostic, and therapeutic strategies.