#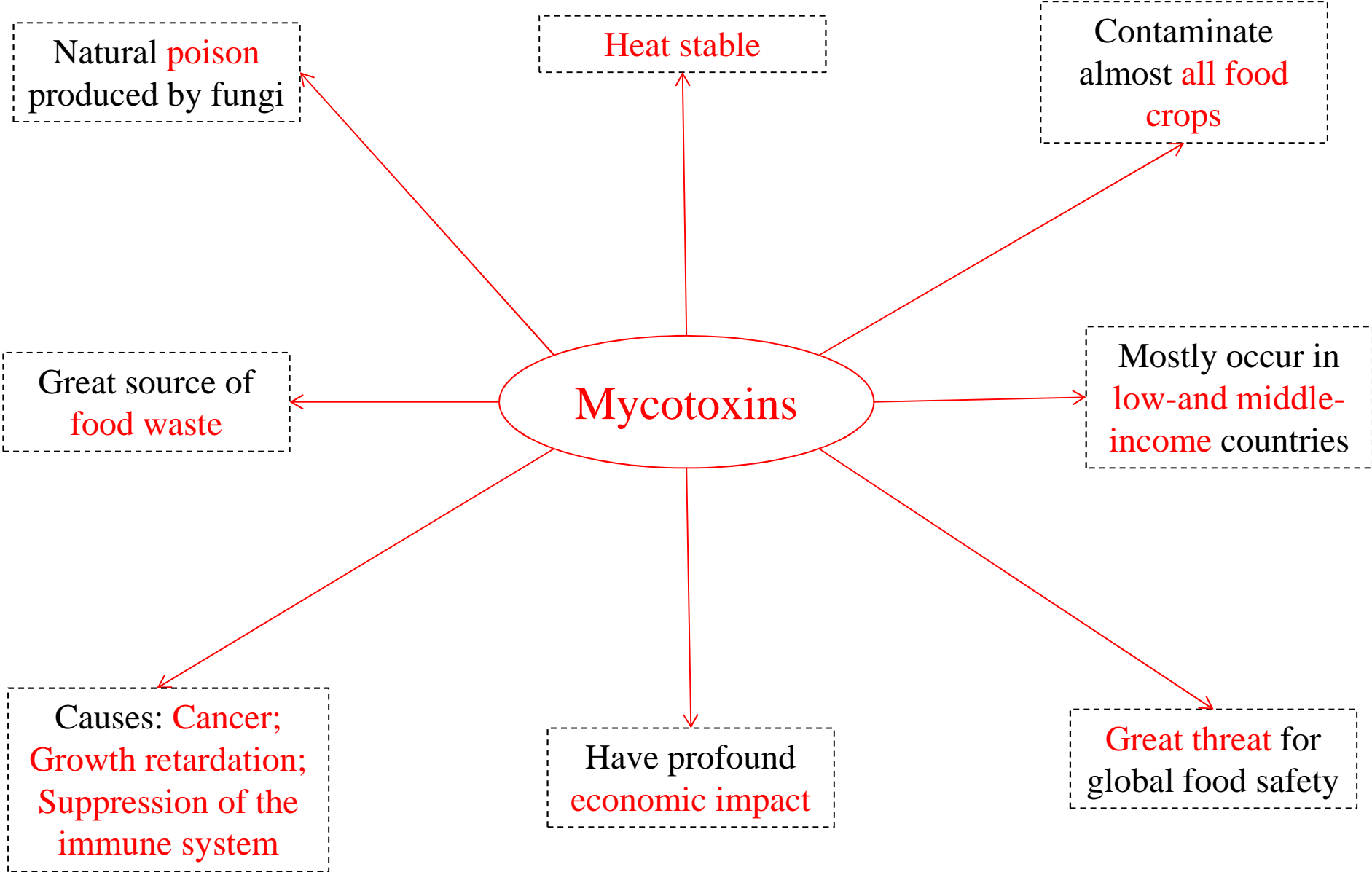 Risk assessment of intoxication associated to mold contamination of food in central African countries (Chad and Cameroon)

Introduction

Natural poison produced by fungi

Heat stable

Contaminate almost all food crops

Great source of food waste

Mycotoxins

Mostly occur in low-and middle-income countries

Causes: Cancer; Growth retardation; Suppression of the immune system

Have profound economic impact

Great threat for global food safety

Statement of problem

- More than 100 countries and organizations have strict regulations for managing mycotoxins in food base on available quantitative risk assessment data (Moss, 2008).

- The current available scientific information existing within Africa are mainly concentrated in evaluating mycotoxins content in food, and the level of exposure in the population (Armachius & Zikankuba 2018).

- In sub-Saharan Africa, particularly in Central African Countries no consistent scientific research output is available on risk assessment associated to mycotoxin intoxication in food (Tchana, *et al.,* 2010).

General objective

The scope of this work is to assess the exposure and the risk of intoxication linked to mycotoxins in food crops in Chad and Cameroon.

Specific objectives

1. Carry out a qualitative analysis to determine the risk factors linked to handling practices that can potentially influence mycotoxigenic food components.

2. To determine the level of exposure to Aflatoxins, Fumosin and Ochratoxin in Chad and Cameroon.

3. To develop predicting model of each targeted mycotoxins as a function of the most pertinent factors affecting their variation in those countries.

4. Carry out a quantitative risk assessment under different conditions in each country which will help to describe the risk posed by those mycotoxins using a Monte Carlo simulation.

Conscious of the huge expertise it require to achieve this work, a collaboration with world's expert in the domain (mycotoxicologists in Ghent university) is therefore a necessity.

Anticipated Lines of collaboration with mycotoxicologists in Ghent university

1. Expertise

- To carry out literature review and frame work on the study
- To better choose risk factors during qualitative analysis
- To setup the best composite design for the experimentation of this work

2. Laboratory technical platform

- For mycotoxin quantifications
- To better reproduce the different parameters required for the experimental part
- For the quantification of biomarkers in blood
- To build technical capacity

3. Analysis softwares

- For qualitative risk analysis
- To develop the predictive mathematical model
- For the quantitative risk analysis

4. Guidance to monitor the co-establishment of mycotoxins awareness Policy for central Africa

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THANK YOU