

PROJECTFICHE (C58)

BILAT CHINA (Call' 010) PROJECTFICHE 'MYCOTOXINS'

Mycotoxins and mycotoxicogenic fungi in China: analytical tools, dietary exposure and Fusarium diversity

Starting date: 01/01/2012

Ending date: 30/06/2014

CO-OPERATION PARTNERS

Belgium

Prof. Sarah De Saeger and Dr. José Diana Di Mavungu. Ghent University (UGent). Faculty of Pharmaceutical Sciences, Laboratory of Food Analysis. Sarah.desaeger@ugent.be, jose.dianadimavungu@ugent.be

Prof. Stephan Declerck, Drs Françoise Munaut and François Van Hove. Université catholique de Louvain (UCL). Earth and Life Institute, Applied Microbiology, Laboratoire de mycologie, Mycothèque de l'UCL (BCCMTM/MUCL). Francois.vanhove@uclouvain.be; francoise.munaut@uclouvain.be

Dr. Alfons Callebaut. CODA-CERVA. Chemical Safety of the Food Chain, Unit Toxins and Natural Components. alcal@var.fgov.be

Prof. Geert Haesaert and Dr. Kris Audenaert. University College Ghent (Hogent). Faculty of Biosciences and Landscape Architecture, Department of Plant Production.

Geert.haesaelt@hogent.be, kris.audenaert@hogent.be

China

Prof. Dabing Zhang and Dr. Aibo Wu. Shanghai Jiao Tong University and Shanghai Academy of Agricultural Science (SJTU/SAAS). College of Life Science and Biotechnology, Institute for Agri-food Standards and Testing Technology. wuaibo@hotmail.com; zhangdb@sjtu.edu.cn

Prof. Jianzhong Shen, Prof. Suxia Zhang and Dr. Zhanhui Wang. China Agricultural University (CAU). College of Veterinary Medicine, National Center for Veterinary Drug Safety Evaluation. sjz@cau.edu.cn; suxia@cau.edu.cn; wangzhanhui@cau.edu.cn

Mr. Shaojie Peng and Mrs. Huijun Gao. Shanghai Food and Drug Administration (SHFDA). Institute of Shanghai Food and Drug Supervision. pengshaojie@smda.gov.cn; gaojun1@gmail.com

Prof. Yu-Cai Liao. Huazhong Agricultural University (HZAU). College of Plant Science and Technology. yucailiao@mail.hzau.edu.cn

Dr. Yanxiang Qi. Chinese Academy of Tropical Agricultural Sciences (CATAS). Environment and Plant Protection Institute. qiyanxiang@126.com

FRAMEWORK AND SIGNIFICANCE OF THE PROJECT

The major aim of this proposal is to bring together experts from both China and Belgium to conduct research on mycotoxins and mycotoxicogenic fungi, including Fusarium and related toxins. The different partners will be complementary as they are focused on different aspects of this research topic. More specifically, the project will have the following objectives:

- Development of analytical tools to assess mycotoxin dietary exposure in China.
- Study on the genetic and mycotoxicogenic diversity of Fusarium on wheat, maize and banana in China.

SPECIFIC TASKS

Workpackage 1

WP1.1 Transfer of expertise on liquid chromatography Survey of Chinese food samples to assess mycotoxin dietary exposure (WP leader: UGent and Shanghai FDA; partners: CODA-CERVA, SJTU/SAAS):-mass spectrometry (LC-MS/MS) from Belgium to China

WP1.2 Collection and analysis of food samples

WP1.3 Set-up of LC-MS/MS proficiency test

Workpackage 2 Genetic and mycotoxicogenic characterization of Fusarium species on wheat, maize and banana (WP leader: UCL and HZAU; partners: Hogent, CODA-CERVA, SJTU/SAAS, CATAS, UGent):

WP2.1 Collect missions in China

WP2.2 Preservation of Fusarium isolates in the BCCMTM /MUCL collection

WP2.3 Identification and characterization of Fusarium species

WP2.4 Mycotoxin biosynthesis pathway

WP2.5 Comparison and/or integration of the data obtained during the 1st project (2008-2011)

Workpackage 3 Development and evaluation of rapid mycotoxin tests (WP leader: CAU and UGent; partners: SJTU/SAAS, CODA-CERVA, Shanghai FDA):

WP3.1 Development of enzyme-linked immunosorbent assays (ELISA) and lateral flow dipstick tests
WP3.2 Evaluation of commercial mycotoxin ELISA test kits

Workpackage 4 Production of reference materials (WP leader: CODA-CERVA and SJTU/SAAS; partners: UCL, Shanghai FDA, CAU, UGent)

Workpackage 5 Organisation of workshops in Belgium and China (all partners):

WP5.1 Workshop organised in China

WP5.2 Workshop organised in Belgium