

MONDAY 9TH MAY 2016

13:30 Validation in an academic environment: achieving quality in analytical data

Speaker : Sarah De Saeger, Ugent, Bromatology and Mytox



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Curriculum

Pharmacist, Ghent University, 1994.

Ph.D. in Pharmaceutical Sciences, Ghent University, 1999. *Title of the thesis : Development of rapid immunochemical field tests for the detection of mycotoxins in food.*

01/10/2011 – now : Director of the Laboratory of Food Analysis, Department of Bioanalysis, Faculty of Pharmaceutical Sciences, Ghent University

01/10/2010 – now : Associate professor at Ghent University, Department of Bioanalysis, Laboratory of Food Analysis, Faculty of Pharmaceutical Sciences

01/10/2005 – 30/09/2010 : Assistant professor at Ghent University, Department of Bioanalysis, Laboratory of Food Analysis, Faculty of Pharmaceutical Sciences

01/11/1999 – 30/09/2005 : Post-doctoral assistant at Ghent University, Department of Bioanalysis, Laboratory of Food Analysis, Faculty of Pharmaceutical Sciences

01/07/1999 – 31/10/1999 : Post-doctoral researcher at Ghent University, Laboratory of Food Analysis, Department of Bioanalysis, Faculty of Pharmaceutical Sciences

01/07/1994 – 30/06/1999 : PhD researcher at Ghent University, Laboratory of Food Analysis, Faculty of Pharmaceutical Sciences

Prof. Dr. Sarah De Saeger is director of the Laboratory of Food Analysis which is accredited since 1996 according to ISO 17025 (BELAC No 049-TEST). Prof. Dr. Sarah De Saeger is head of a research group of about 15 PhD students and 3 full-time postdoctoral researchers. She is teaching all food-related courses in the Faculty of Pharmaceutical Sciences (Bromatology, Bioanalytical Practical, Food Safety, Special Nutrition). The Laboratory of Food Analysis performs in particular research on the issue of mycotoxins on both national and international

level (including developing countries). In the last 3 years 27 research projects were granted with funding from EU, FAO, EFSA, as well as national funding (HERCULES, FWO, FOD, BELSPO, IWT, BOF, VLIR-UOS). The laboratory focuses on 4 research lines: mycotoxins and human health, detection methods, metabolomics and untargeted analysis, and mycotoxin occurrence. The research covers the characterization (eg. masked mycotoxins), exposure and screening through biomarkers as well as the development of innovative detection methods such as 'molecularly imprinted polymers' and biosensors next, chromatographic and immuno-based techniques. Research results are published in more than 175 A1 peer reviewed papers (h-index 31). Sarah De Saeger is coordinating the MYTOX platform (www.mytox.be). In June 2015 she established the Joint Laboratory of Mycotoxin Research of the Ghent University-Shanghai Jiao Tong University-Chinese Academy of Sciences (Shanghai Institutes of Biological Sciences).

Expertise

- Chemical analysis of food and feed
- Chemical food safety
- Mycotoxins

Training experience (Coördinator)

- "Intensive training on mycotoxin analysis". Short Training Initiative (STI) for participants from developing countries, 2012 (27.08.2012-07.09.2012), VLIR-UOS.
- "Intensive training on mycotoxin analysis". Short Training Initiative (STI) for participants from developing countries, 2013 (28.08.2013-11.09.2013), VLIR-UOS.
- "Intensive training on mycotoxin analysis". Short Training Initiative (STI) for participants from developing countries, 2014 (28.08.2014-10.09.2014), VLIR-UOS.

Examples of publications 2015

1. Beloglazova N., Goryacheva I., Shmelin P., Kurbangaleev V., De Saeger S.2015. Preparation and characterization of stable phospholipid-silica nanostructures loaded with quantum dots. *Journal of Materials Chemistry B* 3 (2) : 180-183. Q1
2. Beloglazova, N., Goryacheva O., Speranskaya, E., Aubert, T., Shmelin, P., Kurbangaleev, VR, Goryacheva, I., De Saeger, S.2015. Silica-coated liposomes loaded with quantum dots as labels for multiplex fluorescent immunoassay. *Talanta* 134 : 120-125. Q1
3. De Boevre M ., Graniczowska K., De Saeger, S.2015. Metabolism of modified mycotoxins studied through in vitro and in vivo models: An overview. *Toxicology Letters* 233 (1) : 24-28. Q2
4. Ediage E., Van Poucke C., De Saeger S.2015. A multi-analyte LC-MS/MS method for the analysis of 23 mycotoxins in different sorghum varieties: The forgotten sample matrix. *Food Chemistry* 177 : 397-404. Q1
5. Goryacheva I, Speranskaya E., Gofman V., Tang D., De Saeger S.2015. Synthesis and bioanalytical applications of nanostructures multiloaded with quantum dots. *TRAC-Trends in Analytical Chemistry* 66 : 53-62. Q1
6. Jiang W., Beloglazova N., Wang Z., Jiang H., Wen K., De Saeger S., Luo P., Wu.Y., Shen J.2015. Development of a multiplex flow-through immunoaffinity chromatography test for the on-site screening of 14 sulfonamide and 13 quinolone residues in milk. *Biosensors and Bioelectronics* 66 : 124-128. Q1

7. Li S., Dhaenens M., Garmynl A., Verbrughe E., Van Rooij P., De Saeger S., Eeckhout M., Ducatelle R., Croubels S., Haesebrouck F., Deforce D., Pasmans F., Martel A.2015. Exposure of *Aspergillus fumigatus* to T-2 toxin results in a stress response associated with exacerbation of aspergillosis in poultry. *World Mycotoxin Journal* 8 (3): 323-333. Q2
8. Matumba L., Van Poucke C., Monjerezi M., Ediage E., De Saeger S.2015. Concentrating aflatoxins on the domestic market through groundnut export: A focus on Malawian groundnut value and supply chain. *Food Control* 51 : 236-239. Q1
9. Sanders M., De Middeleer G., Vervaeet S., Walravens J., Van de Velde M., Detavernier C., De Saeger S. Sas B.2015. The awareness about mycotoxin contamination of food and feed: a survey in the Flemish population. *World Mycotoxin Journal* 8 (3) : 375-380. Q2
10. Sun W., Han Z., Aerts J., Nie, D., Jin M., Shi W., Zhao Z., De Saeger S., Zhao Y., Wu A.2015. A reliable liquid chromatography-tandem mass spectrometry method for simultaneous determination of multiple mycotoxins in fresh fish and dried seafoods. *Journal of Chromatography A* 1387 : 42-48. Q1

Patents

1. S. De Saeger and C. Van Peteghem. Detection of mycotoxins by flow-through membrane-based enzyme immunoassay. European patent No 0893690 (Bulletin 2004/29, 14/07/04). = 1 patent GRANTED
2. J. Aerts and S. De Saeger. Patent application PCT/EP2014/078117 entitled "Quantification of glucocorticoids in fish scales as biomarkers for chronic stress" and claiming priority of EP13198450.2 filed on Dec 19 '13 and EP14172747.9 filed on June 17 '14. = 3 patent applications