considered with a probability of 3%. The estimation of the *NAT*2 haplotype is important because the assignment of the *NAT*2 alleles *12*A*, *12*B*, *12*C* or *13 to the rapid or slow *NAT*2 status has been discussed controversially. A clear assignment is indispensable in surveys of human bladder cancer caused by aromatic amine exposures. In conclusion, PHASE v2.1.1 software allowed an unambiguous haplotype reconstruction in 2920 of 2921 cases (>99.9%).

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Z30
2007: A special year for Fusarium Head Blight and associated mycotoxins in Luxembourg

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Fusarium Head Blight (FHB) disease is a fungal disease caused by *Microdochium* and *Fusarium,* affecting small-grain plants worldwide. FHB has economic consequences such as yield losses and decreases the nutritive and technological quality of grains. Furthermore, *Fusarium* species produce various trichothecene mycotoxins (deoxynivalenol, nivalenol, T-2 toxin, HT-2 toxin), and zearalenone and moniliformin.

The main objective of our studies was to determine the FHB-occurrence in Luxembourg; to identify the distribution of the *Fusarium*-mycoflora in the fields; to characterize isolated strains and to determine mycotoxin profiles of different geographical locations.

Following mild spring weather in 2007, a high presence of FHB throughout Luxembourg was observed, with an overall prevalence (percentage of infected wheat) of $8.9 \pm 15.5\%$ (mean ± S.D.) and a severity (percentage of infected grains/ear) of $21.0 \pm 17.8\%$. Significant differences of FHB-severity were detected between northern and southern parts of the country, being $13.4 \pm 13.1\%$ (range 0.01–46.4), and $35.1 \pm 18.1\%$ (range 6.2–61.9), respectively (Man-Whitney-Test, $P = 0.027$), highlighting the importance to take regional differences, e.g. climatological aspects, into account.

During the second part of our investigations, *Fusarium*-strains coming from 17 representative fields were isolated and characterized. Using classical microbiological techniques, >600 strains were identified according to morphological characteristics. For 2007, the five most predominant fungal-pathogens associated with FHB were *Fusarium graminearum*, *F. culmorum, F. poae* (potential trichothecene-producers), *F. avenaceum* and *Microdochium nivale*.

The analyses of the presence of mycotoxins in the 17 fields by HPLC–MS–MS are currently ongoing, and additional field observations and strain-isolations are continued in 2008. This study is the first report on FHB in Luxembourg.

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Z31
Chemical contamination of food in Romania, 2001–2007

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Food contamination monitoring is an essential component of assuring the safety of food supplies and managing health risks at the international level. By implementing a sustainable policy, ensure the protection of human health and the environment from the impact of chemical contamination of food by developing and regularly improving the most effective and optimal management system.

The national Romanian Food Contamination Monitoring comprises basic foodstuffs and mostly popular contaminants for Romania including the groups of heavy metals, nitrates, residues of pesticides and aflatoxin.

Material and methods:

Food analyzed was meat products—salamy, sausage; dairy produce—some cheese (telemea, caşcaval, brânză topită); vegetables—lettuce, spinach, carrot, potatoes, apple; bread, flour, maize, rice; natural juice; daily total diets.

Chemical contaminants analyzed were: nitrate/nitrite—UV/vis method; heavy metals—AAS methods; pesticide organochlorurate residues—GC/ECD methods; aflatoxine total (B1 + B2 + G1 + G2)—imunoenzimatic method (kit Elisa).

Results:

Nitrate contents were analyzed in 25.195 food samples. In 2.43% samples were nonconformity.

Heavy metals: Lead was analyzed in 14.694 food samples with 5.1% samples nonconformity and cadmium was analyzed in 11.856 food samples with 3.25% samples nonconformity.

Residues of pesticide (HCH- sum and DDT-sum) were detected in solitary cases.

Aflatoxin total contents were analyzed in 1.121 food samples with 3.5% samples nonconformity (nuts).

Generally, wide variations between in individual samples were observed.

Analysed contaminants consumption data (by 24 h food consumption recall method) shoved that none of the consumed contaminants exceeded ADI-value.

Conclusion: Determinations of these chemical contaminants in food are important in environmental monitoring for the prevention, control and reduction of pollution as well as for occupational health and epidemiological studies.

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Z32
Employing of electroanalytical techniques for detection of silver(I) ions

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Silver(I) ions has been shown to be highly toxic to aquatic life. The aim of this work was to detect silver ions by using various electrochemical instruments. Carbon electrodes were tested as working electrodes. The optimized procedures were utilized for determination of silver(I) at BY-2 tobacco cells and guppy fishes treated with the silver(I) ions. Silver(I) ions gave the response at 200 mV at surface of carbon paste electrodes. Silver(I) ions measured at carbon tip and pencil electrode gave the signal at 250 mV. Moreover we optimized the basic experimental parameters of the high performance liquid chromatography with electrochemical detection (HPLC-ED) to determine silver(I) ions. The most suitable parameters for the determination of silver ions were as follows—mobile phase 0.2 M acetate buffer (pH 4.0) and its flow rate: 0.5 ml/min, guard cell potential: 0 mV, working electrode potential: 200 mV, current *R*: 1 μA, time filter: 2 s. The detection limit obtained was 20 nmol/dm^3. The content of silver(I) ions