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SUPPLEMENT

OLIG2 and NKX6.1 expression in the progenitor cell stage correlated with the differentiation into adult motor neurons, which was verified by confirming the expression of motor neurone markers MNX1, ISL1 and CHAT by RT-qPCR and by immunocytochemistry.

BoNTs enter motor neurons by the interaction with receptor structures, namely SYTI/II, SV2A/B/C, and then cleaves SNARE proteins involved in neurotransmitter release, i.e. STX1A/B, VAMP1/2 and SNAP25. The expression of the motor neurone markers appears not to correlate with the expression of the receptor structures and SNARE proteins. This disparity in expression levels must be investigated while the differentiation protocols are further optimised. As the uptake of BoNTs also depends on gangliosides as co-receptors, their cell surface concentration must be determined and the expression studies must be complemented by functional assays for uptake of the different BoNT serotypes.

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51. Exposure to chemicals from food packaging materials: a total diet study approach

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Nowadays most foods are marketed as packaged and, as a result of the interaction between the packaging and the food, migration of packaging components can occur. Therefore packaging materials are a potential source of contamination and are subject to risk assessment.

The Total Diet Studies (TDS) are widely used to provide dietary exposure data to both beneficial substances and contaminants. The essential steps of a TDS are the following: should be representative of the whole diet; pooling of foods; and foods are analysed as consumed.

In the present work a methodology based on a TDS to evaluate the exposure to chemicals from food packaging materials was developed. The experimental design involves the following steps:

1. a non-target analysis was conducted to identify potential migrated substances, for that purpose gas chromatography-mass spectrometry (GC-MS) was applied;

2. pooling of foods according the consumer survey data;

3. the potential migrated substances previously identified in the packaging were determined in pooled foods;

4. the exposure was estimated by using migrated substance concentration data in food and consumption data.

The method was successfully applied to estimate the dietary exposure to chemicals from cereal-based food packed with plastic materials in the Spanish population. Different compounds such as acetyl tributyl citrate (ATBC), diethyl phthalate (DEP), diisobutyl phthalate (DIBP) and bis (2-ethylhexyl) adipate (DEHA) among others were identified in the packaging materials and the exposure to these contaminants were estimated by using the Spanish national dietary survey Enalia. So, the mean dietary exposure to DEP was 0.179 mg/kg bw/day for people aged 10–17 years and 0.332 mg/kg bw/day for people aged 3–9 years, or for example the mean dietary exposure to DEHA was 0.365 mg/kg bw/day for people aged 6–11 months and 0.104 mg/kg bw/day for people aged 1–3 years. This approach is a simple and useful screening tool for estimating dietary exposure to chemicals from the packaging.

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Key words: exposure assessment, TDS approach, packaging contaminants

52. Deoxynivalenol vs lactic acid bacteria: a biodegradation competition

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The mycotoxin deoxynivalenol (DON) is a secondary metabolite produced by the plant pathogen *Fusarium* spp. It causes serious problems in cereal crops, because of its toxicity in humans and livestock, and it is also responsible for huge economical losses. Biological methods that are specific for degradation, biotransformation and/or reduction of the mycotoxin content in grains, feed and food using microorganisms have gained growing interest over the last few years. In this context, lactic acid bacteria (LAB) represent a promising group and are indicated as 'Generally Recognised as Safe' (GRaS) by the Food and Drug Administration of the United States (USFDA) and by the EU Scientific Committee on Animal Nutrition (SCAN).

This study investigated the ability of two lactic acid bacteria (LAB) strains to remove DON. LAB strains, *L. plantarum* Z1 and *L. rhamnosus* 2411, isolated from various sources, were screened *in vitro*