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Introduction to quantitative nutritional risk assessment: A new approach

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Risk assessment methodology has been applied in different areas in science and technology, including microbiology and toxicology. Nutrition is increasingly considered an important factor contributing to the individual welfare and health status, while there is a proved relationship to several syndromes and diseases. Quantitative and probabilistic risk estimation applied to assess nutrition status of populations allows a better understanding on the real risk in any specific population for the interest nutrient(s). In addition, these studies can be used to compare or rank nutritional risks and therefore helping to put emphasis on the relevant risks. This methodology when applied with classical methods shows important drawbacks, with limited accurate and representativeness. The use of Monte-Carlo analysis and other in-silico simulation techniques can help to yield more accurate and reliable risk estimates and in consequence, improving the effectiveness of nutritional recommendations. In this talk, an overview on the foundations and bases to carry out a nutritional risk assessment are presented going from the traditional methodology and to new simulation techniques.

Biography

Fernando Perez-Rodriguez undertook his degrees in Biological Science and in Food Science and Technology from the University of Cordoba in 1999 and 2002, respectively. He completed his PhD from the University of Cordoba (2007), which dealt with quantitative microbiological risk assessment and cross contamination in foods. He has published more than 40 articles in the most prestigious international food microbiology and nutrition journals and several books concerning predictive microbiology and nutrition in foods. He has been involved in several research projects at national and international level, conducting quantitative risk assessment studies. Due to his expertise, he has participated as a scientific advisor in several expert panels at national and international level, in the Spanish Food Safety Agency and as a Risk Assessment Expert of the European Food Safety Agency (EFSA) and Food and Agriculture Organization FAO providing scientific decisions and reports. He is a member of the International Food Protection Association and the Spanish Society of Microbiology. He has also taught courses in predictive microbiology and he is professor for Food Microbiology and Hygiene at the University of Cordoba (Spain).

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