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FOOD ALLERGY AND SAFETY ASSESSMENT WORKSHOP

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Aberdares Room
Kenyatta International Convention Center
Nairobi Central Business District
Nairobi, Kenya

BACKGROUND AND OBJECTIVES

FOOD ALLERGY: Allergic diseases, including food allergy, have been on the rise for decades. This epidemic seems to be leveling off in some western societies. However, in rapidly developing economies in Asia, South America, and Africa, urbanization and industrialization, accompanied by adoption of a more westernized lifestyle and diet, has resulted in an increasing incidence of allergic diseases. Epidemiological studies on allergic asthma have been carried out all over the world, including in some countries in Africa. While the epidemiology of food allergy on the African continent is not yet studied in a coordinated fashion, ongoing studies focus on comparisons between urban and rural areas with higher and lower prevalence of (food) allergy, respectively, to identify environmental, microbial, lifestyle and dietary factors that are protective or represent risk factors. For a sound allergenicity assessment, basic knowledge on food allergy, its proper diagnosis, and its epidemiology are of great importance.

The aim of the first day of the workshop is to provide a state-of-the art overview of what food allergy is, how it is diagnosed, and why it is expected to be a growing problem in Africa in the decade(s) to come. After these introductory lectures, three sessions will provide an overview of allergy research in Eastern, Western, and Southern Africa, respectively.

AGRICULTURAL BIOTECHNOLOGY SAFETY ASSESSMENT: Evaluating safety is a cornerstone of registering genetically modified (GM) crops. A suite of global guidance directing the appropriate studies supports an assessment of potential effects on human and animal health from a food and feed use perspective. A thorough characterization of the inserted DNA and expressed novel proteins are the starting points that are then used to identify a protein's unique structure, function, and origin. Identifying risk for allergenicity, toxicity, or the presence of unintended adverse effects are key objectives. A global perspective on identifying allergy risk is outlined by the Codex Alimentarius Commission (Alinorm 03/34A) in the form of a weight-of-evidence approach, recognizing that no single endpoint is sufficiently predictive of allergenic potential. Toxicity assessments, including animal studies, support an evaluation of both the trait protein(s) and the crop in which it is included, although the predictive value of such toxicology data, particularly longer-term feeding studies, has not been clearly identified. The GM crop (grain) is also evaluated utilizing a comprehensive compositional analysis that establishes the level of similarity between the GM crop and appropriate comparators to establish the GM variety to be "as safe as" non-GM varieties.

A main objective of the second day of the workshop will be to tie together effective risk assessment processes and study designs that provide the basis for current GM registrations. Objectives also include discussing the framework for commercializing a GM crop and the global regulatory perspective on biotechnology-based foods. The protocols and advances in study methods for characterizing DNA, novel proteins, and GM crop products will be discussed. The workshop program includes time for interaction between the audience and the speakers to encourage information-sharing and an open discussion.