

Editorial: Past and Current Issues in the Meat Chain



Pius Kölbener

Man is an omnivorous being. For millennia, his diet depended entirely on the spontaneous and generous supply of nature. Picking, hunting, and fishing allowed him to feed on plants and game. The emergence and development of agriculture unavoidably fit into the history of human progress, and thus the consumption of meat naturally integrated the evolutionary steps of human beings. Later on, meat consumption was prized and restricted by the dominant classes during the end of the Middle Ages and received various religious interdicts. Nowadays, the consumption of meat products is still increasing on a global scale but provokes a series of societal, economic, ecological, ethical, and even philosophical debates.



Stefan Bieri

Since the original hunter-gatherer issues, we have had to cope with the devastating consequences of meat-derived diseases and scandals. Among them, the bovine spongiform encephalopathy (BSE) outbreak in the late 1980s and the subsequent human deaths linked to Creutzfeldt–Jakob disease had an enormous impact on consumer confidence. All stakeholders were eventually concerned. Risk assessment and management strategies in the meat industry had to be revisited by governmental bodies. The ‘Dioxin Chicken’, the first cloned cow, the horsegate scandal, and the global threat of antimicrobial resistance (AMR) seriously hit the minds of consumers and rocked the foundation of control authorities in recent decades. Current studies have showed that the worldwide overuse of antibiotics given to animals entering the food chain is a major contributing factor to increased antibiotic resistance in humans. This is now a growing threat to public health due to the appearance of human infections that can no longer be treated. The entire meat chain from stable to table must be monitored. If not, a worrying question will soon arise: can we still ensure a high level of food security, safety, and authenticity in the coming years?

Today, the quality control of meat and meat products encompasses a wide scope of different analytical techniques and endpoints. Besides timely topics such as veterinary drugs, dioxins, and PCBs, new topics such as the production of edible insects and vegetable-based meat substitutes are emerging. All these themes formed the basis of the 2017 edition of the Swiss Food Science Meeting dedicated to meat and meat products. This biennial symposium provides an update on emerging issues related to food sciences and represents an excellent opportunity for scientists from academia, industry, government institutions and food control authorities to share their knowledge.

The 2017 speakers provided insight and updates on selected topics of interest, with emphasis on progress in analytical techniques and strategies in the meat chain (e.g. veterinary drug residues, environmental contaminants, and possible adulteration). Experts from academia, food industry and regulatory agencies shared their concepts of risk assessment and risk management of meat products.

We learned that in Switzerland people eat an average of 40.5 kg of meat a year and that, globally, one in 10 persons will change his or her mind and decide to stop eating meat next year. We are still unsure of what is better for our health and to what extent meat consumption is related to cancer risks. But can you imagine living without the pleasure of a summer barbecue with your family and best friends in 2019?

It is our pleasure to present to you a few key subjects that guest speakers agreed to convert into articles, allowing us to compile this special CHIMIA issue. We kindly thank them for their contributions and commitment. Thanks are also due to the reviewers who volunteered time to help realize this volume and for their proofreading. We hope you enjoy reading this issue and we are looking forward to welcoming you at the Swiss Food Science Meeting 2019, which will deal with process and industrial food contaminants as well as some selected hot topics on food science.

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