THE 3RD INTERNATIONAL CONFERENCE “NUTRITION AND HEALTH”, 9–11 DECEMBER 2020

Since 2006, the three largest universities of Latvia — University of Latvia (UL), Latvia University of Life Sciences and Technologies (LULST), and Rīga Stradiņš University (RSU) have been jointly implementing the inter-university Master's study programme “Nutrition Science”. In 2012, they organised the 1st international

conference “Nutrition and Health”, followed by the 2nd conference in 2016 and the 3rd on 9–11 December 2020. For the first two conferences, participants from different countries gathered in Rīga, while the 3rd conference offered remote participation (via Zoom) due to restrictions related to the COVID-19 pandemic.

The aim of the international conferences “Nutrition and Health” has been to provide an opportunity to Latvian and foreign researchers to inform the relevant community about the achievements of research projects they are working on and introduce colleagues with results of their studies. Meanwhile, for students of the master's programme, as well as for those interested in problems of nutrition science and health, the conferences provided an opportunity to gain additional theoretical and methodological knowledge in nutrition science, food science, health science, and research in these fields.

The 3rd conference offered 92 reports including 46 oral presentations and 46 poster reports, prepared by students of the Master's programme in collaboration with the teaching staff of the partner universities (UL, LULST, and RSU), graduates of the programme (PhD applicants and PhD in areas related to nutrition), researchers representing Latvian and foreign scientific institutions, as well as industry professionals. The subject of the reports was related to key issues of nutrition science (public health, medical nutrition therapy, new and functional food, nutrition and human microbiota, nutrition and the COVID-19 pandemic, etc.).

In line with the topics of the research, the reports were presented to the participants, and discussed and evaluated by experts of the Scientific Committee in seven sessions focusing on topics such as: Nutrition policy; Public health and epidemiology; Nutrition during human life (maternal and child health); Nutrition science; Nutrition and prevention of chronic diseases; Diet, nutrition during human life; Health-relevant food products; and Food quality and safety. The audience received comprehensive insights into nutrition science, its cross-sector nature and complexity, as well as its role in preventing and treatment of diseases.

The conference was opened by members of the Conference Board including Rectors and Vice-Rectors of the organising universities: Indriķis Muižnieks and Valdis Segliņš (UL), Irina Pilvere and

Irina Arhipova (LULST), Aigars Pētersons and Agrita Kiopa (RSU), as well as Pēteris Trapencieris representing the Latvian Academy of Sciences. Thematic sessions of the conference were introduced in ten plenary lectures:

- Santa Līviņa (Ministry of Health of the Republic of Latvia, Latvia). “Nutrition policy in Latvia”;
- Janina Petkeviciene (Health Research Institute, Faculty of Public Health, Medical Academy, Lithuanian University of Health Sciences, Lithuania). “Changes in dietary habits of adult Lithuanians during the COVID-19 quarantine”;
- Joao Breda (WHO European Office for Prevention and Control of NCDs). “Towards healthier and sustainable nutrition in Europe”;
- Andrejs Ērglis (JSC “Sistēmu Inovācijas”; Institute of Cardiology and Regenerative Medicine, University of Latvia, Latvia). “Bioactive compounds extracted from sea buckthorn for correction of residual cardiovascular risk in patients with coronary artery disease”;
- Khrystyna Semen (Campus Venlo, Maastricht University, The Netherlands). “Role of dietary flavanols in optimising sports adaptations”;
- Ilze Konrāde (Department of Medicine, Rīga East Clinical University Hospital; Rīga Stradiņš University, Latvia). “Selenium and thyroid disease: from pathophysiology to treatment”;
- Iveta Mintāle (Cardiology Centre, Pauls Stradiņš Clinical University Hospital; University of Latvia, Latvia). “Healthy diet as a part of healthy lifestyle — a cornerstone of chronic disease prevention”;
- Petras Rimantas Venskutonis (Department of Food Science and Technology, Kaunas University of Technology, Lithuania). “Functional ingredients from berry processing by-products and their applications”;
- Elena Bartkiene (Department of Food Safety and Quality, Lithuanian University of Health Sciences; Institute of Animal Rearing Technologies, Lithuanian University of Health Sciences, Lithuania). “Influence of extrusion and fermentation processes on wheat bran amino and fatty acids profile, chemical and biosafety, antimicrobial and antifungal properties”;
- Iuliana Vintila (Food Science, Food Engineering, Applied Biotechnology and Aquaculture Department, University “Dunarea de Jos”; Global Harmonisation Initiative Nutrition WG, Roma-

nia). “Home-made versus outlet catering: comparative analysis of environmental impact and involved costs for daily menu production”.

The three universities implementing the study programme “Nutrition Science” (UL, LULST, RSU) and their partner organisations (scientific institutions, for example, Institute of Horticulture (LatHort), Dobele, Latvia; Department of Plant Breeding and Agroecology, Institute of Agroresources and Economics, Stende, Latvia; Institute of Food Safety, Animal Health and Environment “BIOR”, Riga, Latvia; Riga East Clinical University Hospital; Cardiology Centre, Pauls Stradiņš Clinical University Hospital; Latvian Institute of Organic Synthesis, etc.) unite scientists representing agriculture sciences, natural sciences (biology, microbiology, chemistry) and medicine, and ensure the infrastructure necessary for research in issues of nutrition science and health. The programme provides opportunities to implement projects co-financed by European funds, as well as provides opportunities to elaborate master's works and prepare reports for conferences and articles for publication. Some examples of conference presentations:

- Vera Griņeva *et al.* Rehabilitation centre food service organisation aspects and patient satisfaction with food quality;
- Laila Meija *et al.* Omega-3 and vitamin D status in pregnancy: a study in Latvia;
- Anna Piskurjova *et al.* Dietary habits during lactation;
- Roberta Rezgale *et al.* Changes in health behaviour and emotional well-being of pregnant women during the Covid-19 pandemic in Latvia;
- Vanda Sargautiene *et al.* A retrospective analysis of baseline laboratory parameters for assessment of iron deficiency in patients with inflammatory bowel diseases;
- Valerijs Kņazevs *et al.* Relationship of dietary provocative factors with the incidence of gout attacks;
- Daliņa Segliņa *et al.* *Lonicera caerulea* L. as a source of biologically active compounds for the enrichment of sour milk products;
- Solvita Kampuse *et al.* Nutritional composition of plant-based texture-modified foods for dysphagia patients;
- Ingars Reinholds *et al.* Consumption of herbal teas and exposure to mycotoxin contamination in Latvia;
- Inta Krasnova *et al.* The effect of activated carbon on the biochemical spectrum of different chokeberry processing products;
- Alina Beluško *et al.* Conjugated linoleic acid in human milk: a case study from Latvia;
- Vita Šterna *et al.* *In-vitro* study on fermentation characteristics of different hulless barley cultivars' flakes;
- Laila Ušacka *et al.* Polyprenol liposomes improve efficiency of oxygen usage in well-trained amateur athletes;
- Polina Zalizko *et al.* Body muscle mass metabolic data analysis in association with Crohn's disease activity;
- Melita Videja *et al.* 5-day intermittent fasting reduces proatherogenic metabolite trimethylamine N-oxide level and improves serum biochemical parameters;
- Ieva Kalere *et al.* Selenium intake score in thyroid patients;
- Zane Lukstiņa *et al.* Comparative analysis of daily time restricted feeding and alternate day fasting for weight management;
- Guna Bilande *et al.* An update on bariatric surgery in Latvia;
- Ilze Beitane *et al.* Challenges in the development of food packs for pupil lunches as part of the recovery – LV project;
- Māris Bērtiņš *et al.* Study of rhizobia impact on nutritional element content in legume;
- Sanita Sazonova *et al.* Combined effect of microencapsulated horseradish juice and high pressure treatment on pork quality during storage;
- Ingrida Augšpole *et al.* Phenolic compounds in organic and conventional winter wheat (*Triticum aestivum* L.);
- Irina Sivicka *et al.* Biodiversity of fungi colonizing and influencing the quality and safety of raw material of oregano (*Origanum vulgare* L.);

The conference was supported by Latvian food producers: Food Union “Rīgas Piena kombināts” (Riga Dairy Producer Ltd) and “Latvijas Maiznieku biedrība” (SIA “Maiznīca Flora”, SIA “Dona”, SIA “Lielezers”, SIA “Lāči” and SIA “Puratos Latvija”).

The summaries of the Conference plenary lectures, oral presentations, and posters were posted in the Conferences Programme and Abstracts Book:
https://www.nutritionandhealth2020.lu.lv/fileadmin/user_upload/LU.LV/Apaksvietnes/Fakultates/www.kf.lu.lv/Abstracts_Programma_Uztur_konf_2020-internetam_2_.pdf

Articles based on a part of the presentations were published in two issues of the Proceedings of the Latvian Academy of Sciences, Section B: year 2021, Volume 75, issue No. 6 (<https://sciendo.com/issue/PROLAS/75/6>); and year 2022, Volume 76, issue No. 1.

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