Estonian University of Life Sciences
Honorary Doctor

Petras Rimantas Venskutonis

2025

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Petras Rimantas Venskutonis's long-standing and consistent contribution to fostering cooperation between Estonian scientists and students and their counterparts across Europe, along with his dedication to educating the next generation of scholars and researchers, warrants recognition through the conferral of an Honorary Doctorate by Estonian University of Life Sciences.
Professor Petras Rimantas Venskutonis graduated from Kaunas University of Technology (KTU) in 1976 with a Diploma Engineer qualification and began his academic career that same year at the Department of Food Science and Technology. His early research interests centred on enhancing the nutritional value and flavour of bakery products through biotechnological processes, particularly the targeted fermentation of cheese whey using carefully selected lactic acid bacteria.
These processes, along with a novel method for analysing food aroma compounds, were patented. The findings were presented in his PhD thesis, which he defended at the National University of Food Technologies in Kiev.

Subsequently, he turned his attention to the study of lesser-known plants as potential sources of flavour and bioactive compounds for use in food as natural antioxidants, antimicrobials, and flavouring agents or additives. His research focused on the discovery and characterisation of novel phytochemicals biosynthesised by botanicals from the northern climatic zone, and their application in functional foods, nutraceuticals, and related products.

The most productive period of Professor Venskutonis's career began following the restoration of Lithuania's independence in 1990, which enabled active participation in the international research community. Although some international collaboration had already commenced in 1989 at the University of Copenhagen, where he studied the effects of various drying methods and gamma/beta irradiation on the volatile metabolites of selected spices, the real breakthrough came in 1992. That year, he successfully secured a Tempus project, which laid the groundwork for the development of EU-funded INCO-Copernicus

projects in 1994 and 1996. These projects focused on exploring the antioxidant and antimicrobial properties of natural preparations. During this early period, he undertook sabbatical research at the universities of Leeds, Wageningen, and Ghent. Furthermore, he supervised six joint PhD projects under bilateral agreements between KTU and these universities. The research focused on the study of phytochemicals. As a result, more than ten new natural compounds were identified, characterised, and tested in food products. Numerous articles were published, including one in Food Chemistry, which ranks among the top 1% of the most cited papers in the field of food science and technology.

Professor Venskutonis served as the national coordinator for numerous research and academic initiatives under the EU Framework programmes, as well as Tempus, Erasmus, NordForsk, and Gilbert projects and networks. These efforts led to the establishment of new partnerships in various research projects, including joint PhDs with Lund University, the Technical University of Graz, and Toulouse University. During this period, he pioneered the use of supercritical fluid extraction technology in Lithuania, which has since been adopted by industry, with three plants now operating using this method.

Over the past two decades, Professor Venskutonis's research has focused on developing biorefining technologies for the upcycling and valorisation of agro-food processing side-streams and waste, thereby laying a significant scientific and technological foundation for enhancing the sustainability of the sector. According to publications indexed in the CA WoS database, his team has emerged as a leader in the innovative biorefining of small fruit processing by-products into high-value, health-promoting bioactive ingredients.

To obtain more comprehensive data on the natural products developed, he established close collaborations with biomedical researchers in Lithuania, France, Portugal, and Spain, who conducted in vitro evaluations of their anticancer and antiviral properties. During this period, he also expanded his phytochemical studies to include endemic plants from regions such as Réunion Island and Laos.

Professor Venskutonis is the co-author of 934 publications, including journal articles, conference proceedings and chapters in edited volumes. He holds seven former USSR patents, four international patents (European Patent, USA, Spain, Poland), and three Lithuanian patents. His work has been cited over 11,100 times, and he has a Hirsch index of 52. Based on standardised citation indicators, he ranks among the top 2% of scientists globally. According to the third edition of Research.com's ranking of leading scientists in the field of Chemistry, he is listed as the third most prominent researcher in Lithuania.

Professor Venskutonis has consistently promoted closer cooperation among the Baltic States. To this end, he established the annual FoodBalt conference in 2005, which continues successfully to this day, rotating each year between Estonia, Latvia, and Lithuania. A significant phase of the collaboration began in 2017, when he joined the PlantValor competence centre at the Polli Horticultural Research Centre, where researchers develop technologies for the full valorisation of plants and the production of high value-added plant-based food supplements. Since 2018, Professor Venskutonis has been contributing to the research of the VALORTECH chair of food and by-product valorisation technologies at Estonian University of Life Sciences.

Under his supervision, two doctoral degrees have been defended by researchers from Estonian University of Life Sciences: in 2023, on the valorisation of fruits of rowan genotypes, and in 2024, on the effect of plant origin ingredients on the quality of meat products. In total, he has supervised 31 PhD and over 75 MSc students. He has also served as chair and as a member in PhD defences in Estonia, France, Italy, the Netherlands, Sweden, and Spain.

Professor Venskutonis served as Head of the Department of Food Science and Technology from 1996 to 2005 and was a member of the KTU Senate. He currently serves as a member of the permanent Expert Committee for Natural and Technical Sciences and the Academic Ethics Committee of the Research Council of Lithuania.

He has previously served as the national delegate to the International Union of Food Science and Technology (IUFoST) and the European Federation of Food Science and Technology (EFFoST). He has also served as a Management Committee member for seven COST Actions.

Professor Venskutonis currently represents Lithuania on the Committee for Research Infrastructures and the European Partnership programme FutureFoodS.

In the early years of his career, Professor Venskutonis received several KTU awards recognising the novelty of his scientific work. Later, he was honoured with the National Science Award of the Republic of Lithuania in 2004 in Technological Sciences and again in 2021 in Physical Sciences, as well as the Kaunas City Science Award in 2022. He received the ISNFF Award in 2019 for his outstanding contributions to the field of nutraceuticals and functional foods and his service to the ISNFF, followed by the ISNFF Fellow Award in 2021.

Since 2022, he has been a Fellow of the International Academy of Food Science and Technology (IAFST), and in 2023, he received the ISEKI-Food Association Academy Award. In 2014, the Lithuanian journal Veidas awarded him the 'Mini-Nobel' in Chemistry.

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