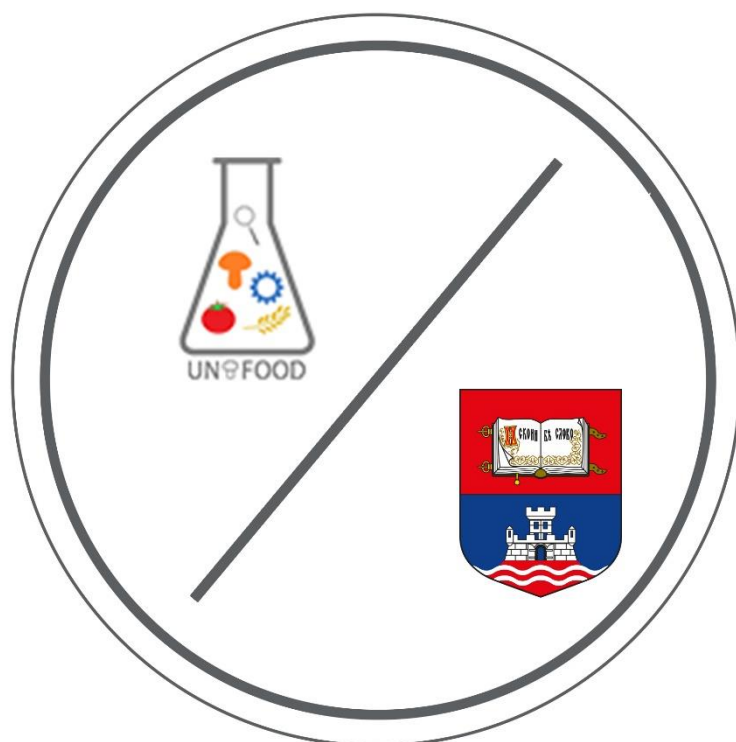


# UNIFOOD CONFERENCE



**University of Belgrade**

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# UNIFood2021 Conference

24<sup>th</sup>-25<sup>th</sup> September 2021 University of Belgrade

## 2<sup>nd</sup> International UNIFood Conference



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## The word of welcome

*Dear colleagues,*

We would like to welcome you to the **2<sup>nd</sup> UNIFood International Conference –UNIFood2021**. We hope that this gathering will engage not only academics, but also the stakeholders from all the relevant industries and business sectors, serving as a meeting point and a platform for proliferation of new ideas and development of new partnerships.

The first UNIFood conference, organized as national, was established 2018. year as one of the events in honor of the **210th Anniversary** celebration of the **University of Belgrade** that ranked at Shanghai list on 35<sup>th</sup> place for the 2017 year in subject *Food Science and Technology*. The University of Belgrade has been recognized as a leading international scientific institution by LERU when it was selected to be a member of CE7, an informal network of seven Central and Eastern European universities collaborating with LERU on key research and education challenges. Furthermore, University of Belgrade joined European University Alliance Circle U. Following the European Commission's launch of the European Universities initiative, a group of research-intensive universities has entered into a Memorandum of Understanding with the intention of establishing a new university alliance: Aarhus University, Humboldt University of Berlin, King's College London, UC Louvain, University of Belgrade, University of Oslo and Université de Paris.

We are pleased that you have decided to take part in this mutual conversation, where many will present their recent work, through poster sessions, oral communications or simply by asking questions. One of the goals of this Conference is cooperation between academia and food industry. Food scientists, technologists, researchers, nutritionists, engineers and entrepreneurs will exchange their knowledge about the latest advances in all aspects of food production, processing, sustainability, safety and security, nutrition and health, hi-tech equipment, ethics and knowledge transfer supporting environment. At this meeting, over 200 participants from 23 countries will take part.

Belgrade, one of the oldest city in the Europe, always young, at the confluence of the Sava and Danube rivers, will be your host. At the confluence of new ideas and experiences we again wish you a warm welcome.

*Sincerely,*

*Prof. Dr Mirjana Pešić*

*President of the Scientific Committee  
of UNIFood2021*

*Prof. Dr Ivanka Popović*

*Rector of the University of Belgrade*

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**UNIFood2021 Conference**  
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## **CHARACTERISTICS OF *PSEUDOMONAS* SPP. ISOLATES FROM FOOD OF ANIMAL ORIGIN**

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*Pseudomonas* spp. as ubiquitous microorganism is often found in environmental raw materials as a contaminant. *P. aeruginosa* and *P. fluorescens* but also *P. putida*, *P. fragi* and *P. cochorii* may be isolated from milk and meat. From the view point of food hygiene synthesis of thermostable lipolytic and proteolytic enzymes in the cold chain of food production, can cause the spoilage of final product. As a causative agent of nosocomial infections, *Pseudomonas* spp. are often resistant to a large number of antimicrobial substances. Due to their ubiquity and ability to acquire resistance represents a potential risk to human health. The aims of the study were to assess antimicrobial susceptibility of *Pseudomonas* spp. isolated from food and to evaluate their proteolytic and lipolytic activity. A total of 40 isolates (20 from raw milk; 20 from carcasses of slaughtered pigs) were examined. All of the isolates were oxidase and, catalase positive, produced a pigment on Tryptone Soy Agar and had a characteristic odour. They also showed haemolysis on Blood agar, lipolysis on Tributyrin and proteolysis on Casein agar. Antimicrobial susceptibility testing was performed by disk diffusion test on piperacillin/ tazobactam, ticarcillin, imipenem, meropenem, aztreonam, amikacin, gentamicin, levofloxacin and ceftazidime. The sensitivity of milk isolates was 100%; 65%; 100%; 100%; 25%; 75%; 30%; 65% and 100%, whereas the susceptibility of carcass-derived isolates was 95%; 55%; 95%; 95%, 0%; 95%, 10%, 25% and 100%. Susceptibility of milk and carcass-derived isolates to piperacillin/tazobactam, ticarcillin, imipenem, meropenem, aztreonam, amikacin, gentamicin, levofloxacin and ceftazidime was 100%, 65%, 100%, 100%, 25%, 75%, 30%, 65%, 100% and 95%, 55%, 95%, 95%, 0%, 95%, 10%, 25%, 100%, respectively. There was no resistance to ceftazidime indicating no ESBL strains. MDR strains resistant to three or more antibiotics were 2 (10%) from milk and 4 (20%) from meat, namely ticarcillin, gentamicin, levofloxacin in milk isolates and ticarcillin, gentamicin, levofloxacin in three and piperacillin / tazobactam, ticarcillin, gentamicin, levofloxacin of one carcass isolate. In the present study, four MDR isolates were detected, 2 (10%) being isolated from milk and 4 (20%) from meat. Their resistance patterns were as follows: resistance to ticarcillin, gentamicin, levofloxacin (milk: n=2); resistance to ticarcillin, gentamicin, levofloxacin (carcass: n=3), resistance to piperacillin/tazobactam, ticarcillin, gentamicin, levofloxacin (carcass: n=1). In conclusion, pseudomonads might contaminate raw food of animal origin consequently leading to spoilage and considered as a reservoir of *Pseudomonas* spp. resistance.

**Keywords:** *Pseudomonas* spp., food, spoilage, antibiotic, susceptibility

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