

FUNIPRO

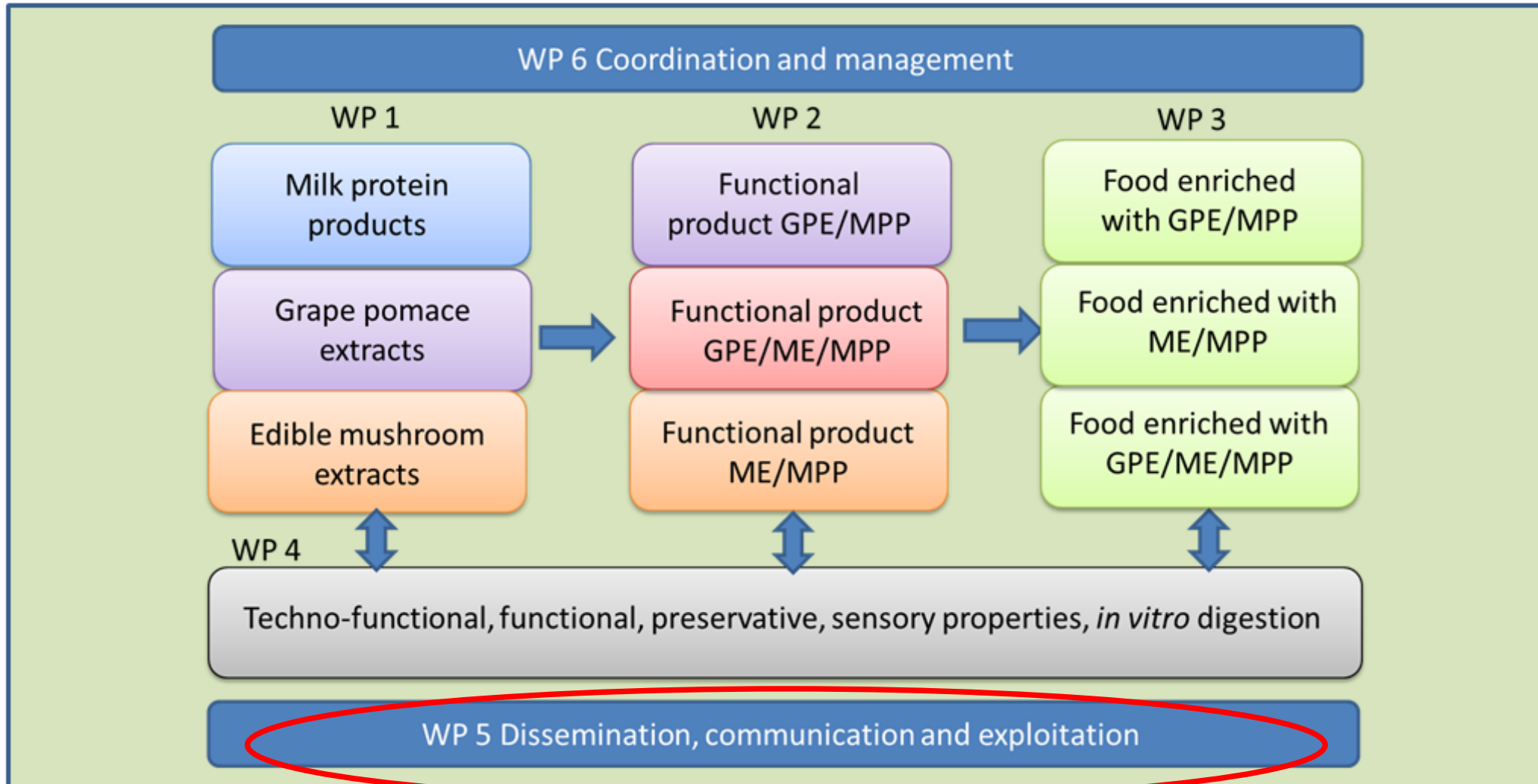


For healthy food products

**DISSEMINATION, COMMUNICATION AND
EXPLOITATION - 2022-2025**



ORGANISATION OF WORK 2022-2025



M21a

4 papers

Antioxidants (11(11), 2164,, 2022) <https://doi.org/10.3390/antiox11112164> **IF₂₀₂₂= 7.0**

Food Chemistry (402, 134299, 2023) <https://doi.org/10.1016/j.foodchem.2022.134299> **IF₂₀₂₃= 8.5**

Critical Reviews in Food Science and Nutrition (2023) <https://doi.org/10.1080/10408398.2023.2195519> **IF₂₀₂₂= 10.2**

Food Hydrocolloids (146, Part B, 109293, 2024) <https://doi.org/10.1016/j.foodhyd.2023.109293> **IF₂₀₂₃= 11.0**



antioxidants



Article

Bioaccessibility of Phenolic Compounds and Antioxidant Properties of Goat-Milk Powder Fortified with Grape-Pomace-Seed Extract after In Vitro Gastrointestinal Digestion

Danijel D. Milinčić¹, Nemanja S. Stanisavljević², Aleksandar Ž. Kostić¹, Uroš M. Gašić³, Slađana P. Stanojević¹, Živoslav Li. Tešić⁴ and Mirjana B. Pešić^{1,4}

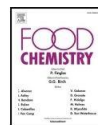
Food Chemistry 402 (2023) 134299



Contents lists available at ScienceDirect

Food Chemistry

journal homepage: www.elsevier.com/locate/foodchem



Goat milk proteins enriched with *Agaricus blazei* Murrill ss. Heinem extracts: Electrophoretic, FTIR, DLS and microstructure characterization

Dušanka A. Popović Minić^{a,1}, Danijel D. Milinčić^{a,1}, Stefan Kolašinac^b, Vladislav Rac^a, Jovana Petrović^c, Marina Soković^c, Nebojša Banjac^a, Jelena Ladarević^d, Bojana B. Vidović^e, Aleksandar Ž. Kostić^a, Vladimir B. Pavlović^{f,g}, Mirjana B. Pešić^{a,1}



Critical Reviews in Food Science and Nutrition



ISSN: (Print) (Online) Journal homepage: <https://www.tandfonline.com/loi/bfsn20>

Food nanoemulsions: how simulated gastrointestinal digestion models, nanoemulsion, and food matrix properties affect bioaccessibility of encapsulated bioactive compounds

Danijel D. Milinčić, Ana S. Salević-Jelić, Aleksandar Ž. Kostić, Slađana P. Stanojević, Viktor Nedović & Mirjana B. Pešić

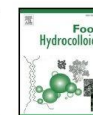


Food Hydrocolloids 146 (2024) 109293

Contents lists available at ScienceDirect

Food Hydrocolloids

journal homepage: www.elsevier.com/locate/foodhyd



Goat milk powders enriched with grape pomace seed extract: Physical and techno-functional properties

Danijel D. Milinčić^a, Aleksandar Ž. Kostić^a, Stefan Kolašinac^b, Vladislav Rac^a, Nebojša Banjac^a, Jelena Ladarević^c, Steva Lević^a, Vladimir B. Pavlović^{d,e}, Slađana P. Stanojević^a, Viktor A. Nedović^a, Mirjana B. Pešić^{a,1}



M21
1 paper

Pharmaceuticals (17(9), 1153, 2024)

<https://www.mdpi.com/1424-8247/17/9/1153>

IF₂₀₂₃ = 4.3



pharmaceuticals



Article

Comparative Chemical Analysis and Bioactive Properties of Aqueous and Glucan-Rich Extracts of Three Widely Appreciated Mushrooms: *Agaricus bisporus* (J.E.Lange) Imbach, *Laetiporus sulphureus* (Bull.) Murill and *Agrocybe aegerita* (V. Brig.) Vizzini

Jovana Petrović¹, Jasmina Glamočlija¹, Danijel D. Milinčić², Ana Doroški², Steva Lević², Slađana P. Stanojević², Aleksandar Ž. Kostić², Dušanka A. Popović Minić², Bojana B. Vidović³, Ana Plečić², Viktor A. Nedović², Mirjana B. Pešić^{2,*} and Dejan Stojković^{1,*}





Pešić Mirjana - the best work by an author in the field of Food Science published in 2022.



Danijel Milnčić - the best work of a young author in the field of Food Science, published in 2022.



Pešić Mirjana - the best work by an author in the field of Food Science published in 2023.

Danijel Milnčić - the best work of a young author in the field of Food Science, published in 2023.

PUBLICATIONS - PhD thesis - results of the FUNPRO project



Faculty of Agriculture,
University of Belgrade



Danijel D. Milinčić

PhD thesis

**Byproducts of the wine industry
as a source of bioactive
compounds: characterization
and possibility of application in
the food industry**

June 10, 2023

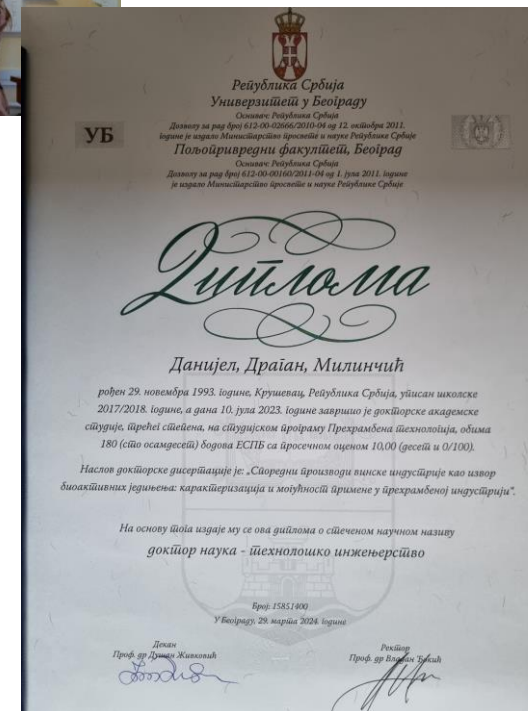
M70



10. June, 2023.



Rectorate of the Belgrade University
3. December, 2024.





Faculty of Agriculture,
University of Belgrade

M70



Dušanka Popović-Minić



PhD thesis

**Functional additives based on
goat's milk proteins and
mushroom extracts from genera
Laetiporus i *Agaricus***

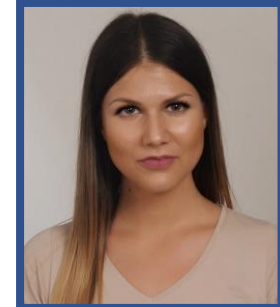
Planned defense in February
2025.

Faculty of Agriculture,
University of Belgrade

M70



Ana Plečić
PhD thesis



**Microencapsulation of bioactive
compounds from Prokupac grape
seeds and the mushroom
Agrocybe aegerita (V. Brig.)
Singer and their application in
the production of dehydrated
food products**

Reported topic 1/17/2023.
Defense is expected in 2025.



PUBLICATIONS - results of collaboration and use of capital equipment purchased with FUNPRO project funds



M21a

5
papers

<i>Antioxidants</i> (12(7), 1424, 2023)	https://www.mdpi.com/2076-3921/12/7/1424	IF ₂₀₂₃ = 6.0
<i>Antioxidants</i> 13(11), 1374, 2024)	https://www.mdpi.com/2076-3921/13/11/1374	IF ₂₀₂₃ = 6.0
<i>Food Chemistry</i> (456, 140044, 2024)	https://doi.org/https://doi.org/10.1016/j.foodchem.2022.134299	IF ₂₀₂₃ = 8.5
<i>Food Chemistry</i> (464(2025), 141777, 2025)	https://doi.org/10.1016/j.foodchem.2024.141777	IF ₂₀₂₃ = 8.5
<i>Food Chemistry</i> (467, 142336, 2025)	https://doi.org/https://doi.org/10.1016/j.foodchem.2024.142336	IF ₂₀₂₃ = 8.5

The collage displays several journal article covers. The top row features covers from *Antioxidants* and *Food Chemistry*. The middle row shows covers from *Antioxidants* and *Food Chemistry*. The bottom row shows covers from *Antioxidants* and *Food Chemistry*. The covers include titles such as 'Monofloral Com Poppy Bee-Collected Pollen—A Detailed Insight into Its Phytochemical Composition and Antioxidant Properties', 'Diversity and Chemical Characterization of Apple (Malus sp.) Pollen: High Antioxidant and Nutritional Values for Both Humans and Insects', 'A systematic UHPLC-Q-ToF MS approach for the characterization of bioactive compounds from freeze-dried red goji berries (L. barbarum L.) grown in Serbia: Phenolic compounds and phenylamides', 'Horseradish (Armoracia rusticana L.) leaf juice encapsulated within polysaccharides-blend-based carriers: Characterization and application as potential antioxidants in mayonn', and 'Bioassay-guided evaluation of antimicrobial properties and profile of bioactive compounds from leaf, peel and mesocarp of four apple cultivars (Malus domestica Borkh.) grown in Serbia: Application of HPTLC-EDA and UHPLC-Q-ToF MS techniques'.



PUBLICATIONS - results of collaboration and use of capital equipment purchased with FUNPRO project funds



M21

6 papers

Journal of Food Engineering (112189, 2024) <https://doi.org/https://doi.org/10.1016/j.jfoodeng.2024.112189> **IF₂₀₂₃ = 5.3**

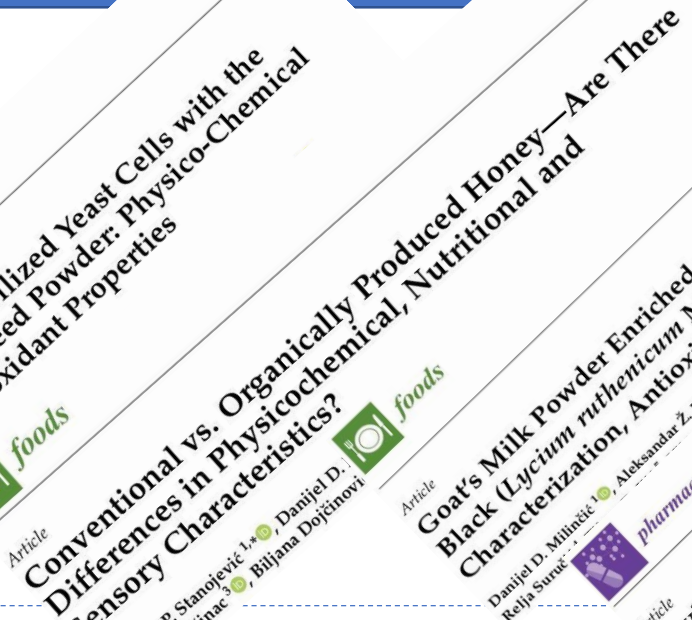
Foods (13(5), 75, 2024) <https://www.mdpi.com/2304-8158/13/5/757> **IF₂₀₂₃ = 4.7**

Foods (13(17), 2801, 2024) <https://www.mdpi.com/2304-8158/13/17/2801> **IF₂₀₂₃ = 4.7**

Foods (13(22), 3573, 2024) <https://www.mdpi.com/2304-8158/13/22/3573> **IF₂₀₂₃ = 4.7**

Foods (14(1), 62, 2025) <https://www.mdpi.com/2304-8158/14/1/62> **IF₂₀₂₃ = 4,7**

Pharmaceuticals (17(4), 518, 2024) <https://www.mdpi.com/1422-0067/17/4/518> **IF₂₀₂₃ = 4,3**



PUBLICATIONS - PhD thesis - results of collaboration and use of capital equipment purchased with FUNPRO project funds



University of Bordeaux
University of Belgrade

M70



Katarina Delić

PhD thesis

Study of the mechanism of interaction between red varietal wines anthocyanins and proteins rich in proline and sensory consequences

In the procedure, the defense is expected in 2025 in France

Agreement on Dual Doctoral Studies signed by the University of Belgrade and the University of Bordeaux.



Dr. Pierre-Louis Teissedre, Full Professor at the Institute of Vine and Wine, University of Bordeaux, is appointed as Mentor 1,



Dr. Mirjana Pešić, Full Professor at the Faculty of Agriculture, University of Belgrade, is appointed as Mentor 2



Cotutelle agreement (<https://mobion.bg.ac.rs/cotutelle>)



PUBLICATIONS - PhD thesis - results of collaboration and use of capital equipment purchased with FUNPRO project funds



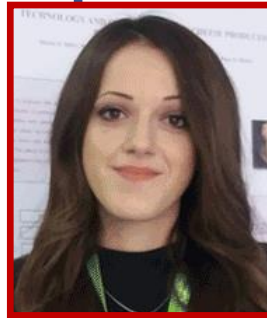
Faculty of Agriculture,
University of Belgrade

M70



Jovana Marković

PhD thesis



Effect of encapsulated juice and lyophilized horseradish roots and leaves (*Armoracia rusticana* L.) on the oxidative stability and quality of mayonnaise during storage

Planned defense in 2025.

Faculty of Agriculture,
University of Belgrade

M70



Sofija Kilibarda

PhD thesis



Productive characteristics, phytochemical profile and antioxidant properties of wild rocket (*Diplotaxis tenuifolia*)

Planned defense in 2025.



PUBLICATIONS - PhD thesis - results of collaboration and use of capital equipment purchased with FUNPRO project funds



Faculty of Agriculture,
University of Belgrade

M70



Spasoje Belošević

PhD thesis

**Obtaining and encapsulation of
juice from micro-herbs of
selected plant species**

Planned defense in 2025.



Faculty of Chemistry,
University of Belgrade

M70



Marko D. Jović

PhD thesis

**Development of a methodology
based on direct bioautography
for the analysis of biologically
active components from natural
products**

Planned defense in 2025.



PUBLICATIONS - PhD thesis - results of collaboration and use of capital equipment purchased with FUNPRO project funds



Faculty of Chemistry,
University of Belgrade

M70



Nikola Horvacki

PhD thesis



**Phytochemical characterization
of autochthonous apple varieties
from Serbia**

Planned defense in 2025.

Faculty of Agriculture,
University of Belgrade

M70



Jelena Miladinović

PhD thesis

**The effect of the drying regime
and extraction agent on the
antioxidant potential of
horseradish root extract
(*Armoracia rusticana* L)**

In the development phase

In collaboration
with IMGGI
under
experimental
guidance
Dr. Nemanja
Stanisavljević



INSTITUT
ZA MOLEKULARNU GENETIKU
I GENETIČKO INŽENJERSTVO
Univerzitet u Beogradu



Summarizing published presentations

PUBLICATIONS - results of the FUNPRO project

M21a - 4 publications

M21 - 1 publication

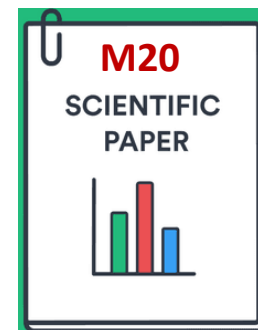
Σ = 5 publications

PUBLICATIONS - results of collaboration and use of capital equipment purchased with FUNPRO project funds

M21a - 5 publications

M21 - 6 publications

Σ = 11 publications



Σ = 16 publications of categories M1a and M21

PhD thesis

3 + 7 = 10 PhD thesis



Abstracts - oral and poster presentations

M32 - 1 publication

M34 - 30 publications

M62 - 7 publications

Σ = 38 publications



Abstracts – results of the FUNPRO project



M32

1 publication

M34

19 publications

M62

3 publications

Abstract – results of collaboration and use of capital equipment purchased with FUNPRO project funds

M34

11 publications

M64

4 publications



All abstracts-publications have been presented at meetings, congresses, conferences and seminars.



CONGRESSES, CONFERENCES AND SYMPOSIUMS



11th Central European Congress on Food and Nutrition - CEFOOD2022

*Čatež ob Savi, Slovenia,
27-30. September, 2022.*



Mirjana Pešić, Steva Lević and Danijel Milinčić presented the results of the FUNPRO project through two oral presentations and one poster presentation.



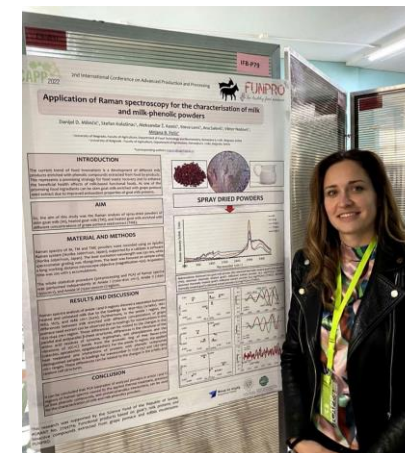
<https://peter-raspor.eu/CEFood-congress/>

2nd International Conference on Advanced Production and Processing – ICAPP2022

*Novi Sad, Serbia
20-22. October, 2022.*



The results of the FUNPRO project were presented as a poster presentation.



<https://www.tf.uns.ac.rs/en/general-information-2022.html>



CONGRESSES, CONFERENCES AND SYMPOSIUMS



National Seminar of I category – Sustainable Nutrition in Sustainable Development

Belgrade, Serbia,
4. November, 2022.

Mirjana Pešić and Slađana Stanojević participated in the seminar as invited lecturers and promoted the FUNPRO project.



<https://drustvozaishranu.rs/dogadjaji/seminar-odrziva-ishrana-u-odrzivom-razvoju/>

32nd International Scientific-Expert Conference of Agriculture and Food Industry

Sarajevo, Bosnia and Herzegovina,
1-2 December 2022.

FUNPRO team members Aleksandar Kostić and Danijel Milinčić presented the results and promoted the FUNPRO project through a poster presentation.



The poster was selected as the best work at the poster sessions and was awarded first place at the Conference.



INTERNATIONAL Scientific-Expert Conference of Agriculture and Food Industry

Anthocyanin profiles of pomace skins of international and indigenous grape varieties determined by UHPLC-MS/MS OrbiTrap

Danijel D. Milinčić*, Aleksandar J. Kostić, Uroš Čabić, Slađana P. Stanojević, Davorin L. Tedić¹, Mirjana P. Pešić²

¹University of Bihać, Faculty of Agriculture, Department of Food Technology and Food Safety, Bihać, Bosnia and Herzegovina; ²University of Bihać, Faculty of Agriculture, Department of Food Technology and Food Safety, Bihać, Bosnia and Herzegovina; ³University of Bihać, Faculty of Agriculture, Department of Food Technology and Food Safety, Bihać, Bosnia and Herzegovina; ⁴University of Bihać, Faculty of Agriculture, Department of Food Technology and Food Safety, Bihać, Bosnia and Herzegovina

*Corresponding author: kostic@unbi.ac.ba

INTRODUCTION

During the winemaking production, a significant amount of ethanol byproducts is generated, which can be used as a rich source of valuable phenolic compounds, primarily anthocyanins.

AIM

The aim of this study was to determine anthocyanin profiles of some international grape pomace (skin) (GPs) of red varieties (Merlot) and indigenous (Bosnian) grape varieties.

MATERIAL AND METHODS

Anthocyanins were extracted from GPs with acetic anhydride (MeOH) and expressed ethanol (EtOH) in EtOH, respectively to GPs, in acetic anhydride (MeOH) water and further analyzed by UHPLC-MS/MS OrbiTrap.

A reference list has been identified based on molecular weight, molecular mass of the molecular ions (M⁺), molecular MS² MS³ and MS⁴ fragment ions and data from the literature.

COMPOUNDS (mg/kg DW)	PROKUPAC		MERLOT	
	method	reference	method	reference
ANTHOCYANIN DERIVATIVES				
Malvidin-3-O-glucoside	45.50	5.70	149.79	39.27
Malvidin-3-O-rutinoside	6.35	0.21	1.84	0.62
Malvidin-3-O-malonic-acid	7	7	2.68	1.98
Malvidin-3-O-pyruvic-acid	4.59	6.48	10.38	106.83
Malvidin-3-O-glucuronide	7	7	34.36	3.91
Malvidin-3-O-malonic-acid	14.81	8.75	48.89	9.47
FLAVONOL DERIVATIVES				
Quercetin-3-O-glucuronide	9.33	3.27	13.03	16.39
Quercetin-3-O-malonic-acid	7	7	9.93	6.48
Quercetin-3-O-pyruvic-acid	7	2.6	9.98	4.54
Quercetin-3-O-glucoside	7	6.45	9.91	1.75
FLAVONOL-3-O-GLUCURONIDES				
Pteridicetin-3-O-glucuronide	7	7	43.18	6.86
Malvidin-3-O-glucuronide	7	7	5.58	5.91
TOTAL				
Epigallocatechin gallate	8.16	7	3.70	6.81
TOTAL	66.44	35.58	493.31	179.31

CONCLUSION

Based on data, GPs can be a good source of anthocyanins (primarily from Merlot variety) and other phenolic compounds and functional additives in the food industry.

This research was supported by the Science Fund of the Republic of Serbia, Grant No. 7747/14. Functional products based on grape pomace and other bioactive compounds extracted from grape pomace and other bioactive...



XXII European Food Chemistry Congress – EuroFoodChem 2023

Belgrade, Serbia
14-16. June, 2023



Kostić, presented the results and promoted the FUNPRO project through a poster presentation



4th Balkan Eco Fair, 4th International fair of Medicinal, Spice, Ornamental plants, Bee Products and Mushrooms

Vranje, Serbia,
3-4. June, 2023.

Dejan Stojković presented the results of the FUNPRO project with an oral presentation



Dejan Stojković received a certificate of appreciation for his outstanding contribution to the realization of the 4th Balkan Eco Fair

<https://xxiieurofoodchem.com/book-of-abstract/>

<https://vranje.org.rs/vtext/4-medjunarodni-sajam-lekovitog-zacinskog-ukrasnog-bilja-pcelinjih-proizvoda-i-gljiva>



XV International Symposium “Novel Technologies and Sustainable Development”

Leskovac, Serbia,
20-21. 2023. October

INTERNATIONAL
15symposium
NOVEL TECHNOLOGIES AND SUSTAINABLE DEVELOPMENT



The results of the FUNPRO project were presented by Mirjana Pešić, Slađana Stanojević and Aleksandar Ž. Kostić through the poster presentation

<https://www.tf.ni.ac.rs/symposium/>

6th Scientific-professional symposium with international participation - „Beer, Brewing raw materials and equipment“

Zrenjanin, Serbia,
25–27. October, 2023.

Mirjana Pešić, Danijel Milinčić and Jovana Petrović presented the results of a bilateral project with China on the production of beer with improved functionality.

UHPLC-QToF-MS equipment was used, which was acquired within the FUNPRO project



<https://www.simpozijumopivu-zrenjanin.org/home/>

CONGRESSES, CONFERENCES AND SYMPOSIUMS



14th European Nutrition Conference FENS 2023 (Federation of European Nutrition Societies)

*Belgrade, Serbia,
14–17. November, 2023.*



Mirjana Pešić, Danijel Milinčić, Slađana Stanojević and Aleksandar Kostić presented the results of FUNPRO projects in one oral and two poster presentations



<https://www.mdpi.com/2504-3900/91/1>

3rd Bleak Sea Association of Food Science and Technologists Congress, BFoST2023

*Belgrade, Serbia,
3-14 December, 2023.*

Mirjana Pešić, Slađana Stanojević, Aleksandar Kostić, Danijel Milinčić, Jovana Petrović, Dejan Stojković and Jasmina Glamočlija participated with three presentations: one plenary, one oral presentation and one poster presentation



<https://www.bfost2023.com/en/abstract-book/>



CONGRESSES, CONFERENCES AND SYMPOSIUMS



60th Conference of the Serbian Chemical Society

Niš, Serbia,
8-9.June 2024.

Danijel Milinčić gave a lecture as a recipient of the medal of the Serbian Chemical Society for commitment and success in science.



The results of the FUNPRO project were presented at a poster session.

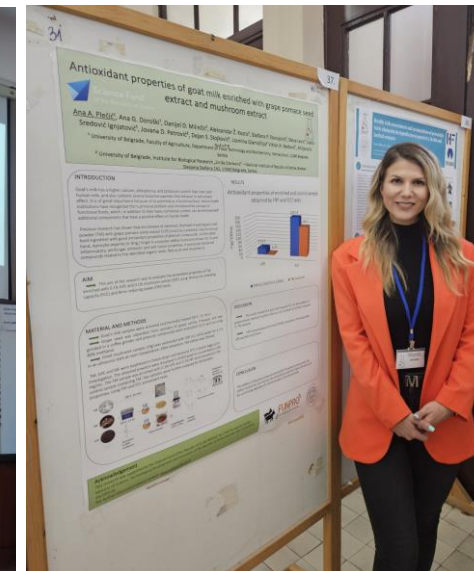
<https://www.shd.org.rs/wp-content/uploads/2024/06/Book-of-abstracts-SHD-2024.pdf?script=lat>

3rd UNIFood International Conference – UNIFood2024

Belgrade, Serbia,
28-29. June, 2024.



Ivana Sredović Ignjatović, Danijel Milinčić, Ana Doroški and Ana Plečić presented the results of the project with one invited lecture and one sectional lecture, as well as with two poster presentations



12th International Medicinal Mushrooms Conference - IMMC2024

*Bari, Italy,
24th-27th September, 2024.*

Jasmina Glamočlija predstavila je rezultate projekta u posterskoj prezentaciji.



<https://www.dl.begellhouse.com/journals/708ae68d64b17c52,7a3cf59c1ad4775a,5d522a053722d42d.html>

4th Athens Conference on Advances in Chemistry – ACAC 2024

*Athens, Greece,
5-8, November, 2024.*



Mirjana Pešić i Dejan Stojković su usmenim prezentacijama predstavili rezultate FUNPRO projekta



<https://www.acac2024.gr/abstract-guidelines>



CONGRESSES, CONFERENCES AND SYMPOSIUMS



26th Symposium on Separation Sciences, ISSS2022



Ljubljana, Slovenia
28th June - 1st July, 2022.

Mirjana Pešić and Danijel Milinčić presented the results of the FUNPRO project as oral and poster presentations



27th Symposium on Separation Sciences, ISSIS2023



Cluj-Napoca, Romania, 24-27. September, 2023.

The results of the FUNPRO project were presented and promoted through a poster presentation

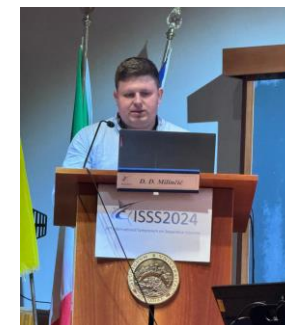


28th Symposium on Separation Sciences, ISSS2024



Messina, Sicily, Italy,
22-25. September, 2024.

Three oral and two poster presentations were presented by Mirjana Pešić, Danijel Milinčić, Slađana Stanojević and Aleksandar Kostić



<https://www.euchems.eu/events/26th-international-symposium-on-separation-sciences-iss-2022/>

<https://iss2023.conference.ubbcluj.ro/>

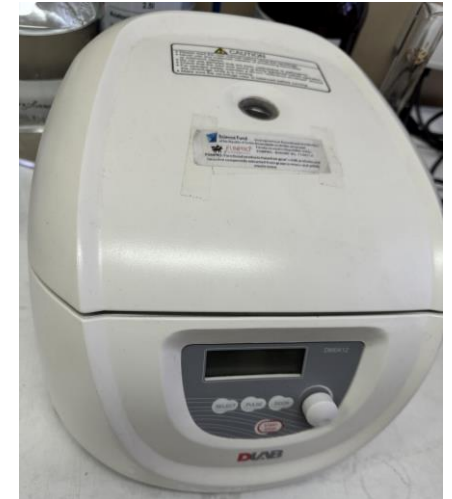
<https://www.sepscisoc.com/iss2024>



Capital and other equipment purchased with funds from the FUNPRO project

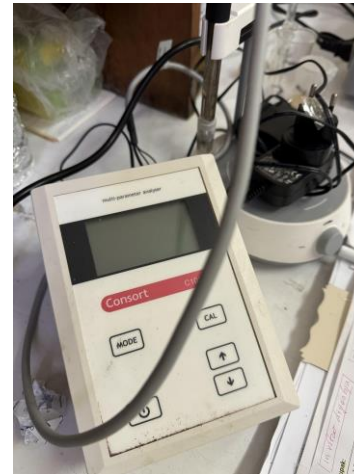


Spektrofotometar; Microplate Reader PlexA.200; FAITHFUL Instrument (Hebei Province, China)



Centrifuga DLAB, DMO412, Rotir A60-50 (Amtast, USA)

Agilent 1290 Infinity ultra-high-performance liquid chromatography (UHPLC) system coupled to a quadrupole time-of-flight mass spectrometer (6530C Q-ToF-MS) (Agilent Technologies, Inc., CA, USA)



PH metar; Consort C1010 (Angers, France)

Analitička vaga; JOANLAB FA2204 (hejiang Province, China)



During the project duration - equipment, chemicals, supplies and laboratory utensils were procured

Thanks to the foreseen budget lines of the FUNPRO project for laboratory equipment and chemicals, procurement was carried out during the duration of the project.



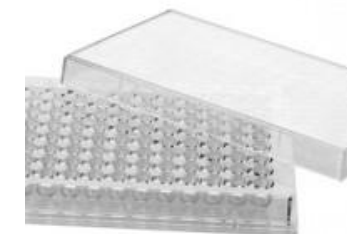
chemicals



automatic pipettes



glass ware



plastic laboratory utensils

14th European Night of Researchers



Organized by the Center for the Promotion of Science and the Institute for Biological Research "Siniša Stanković"

Beograd, Pančevo i Indija, Srbija, 30.09.2022.

The goals of this project are presented in a scientific and popular way.



columns in various magazines

Business magazine

FUNPRO projekat



Mirjana Pešić
redovni profesor
Univerziteta u
Beogradu Poljoprivredni fakultet



21.04.2022

Pekar & Poslastičar



<https://pekariposlasticar.rs/funpro-projekat/>



Interview of Prof. Dr. Mirjana Pešić for the daily "Novosti"

- ❖ ciljevima projekta FUNPRO,
- ❖ zašto su za formulaciju funkcionalnih aditiva odabrani
- ❖ ko je u projektom timu

- goat's milk
- grape pomace
- edible mushrooms

вечерње
НОВОСТИ

09. 05. 2022.



STRESS IS "ERASED" WITH ADDITIVES FROM GOAT'S MILK: Professors of the Faculty of Agriculture reveal that they are on the trail of a formula for healthier food



<https://www.novosti.rs/drustvo/vesti/1114567/stres-brisu-aditivima-kozjeg-mleka-profesori-poljoprivrednog-fakulteta-otkrivaju-tragu-formule-zdraviju-hranu>

The event on the occasion of the opening of the IDEA 2024 program and the DIASPORA program - grants for visits by diaspora researchers to scientists in Serbia

Belgrade, October 8, 2024.

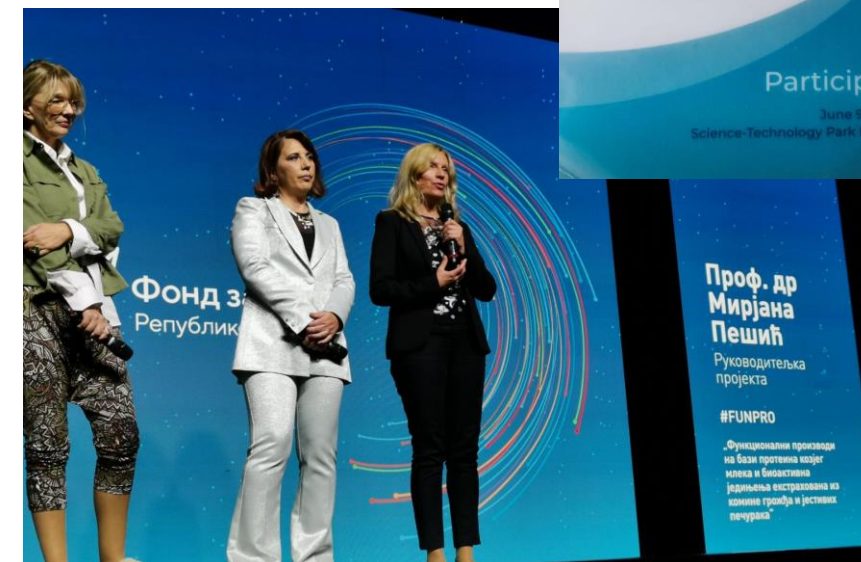
Participants

- ❑ acting director of the Science Fund of the Republic of Serbia - Prof. Dr. Nenad Filipovic
- ❑ Director of the World Bank for Serbia - Nikola Pontara
- ❑ EU Ambassador and Head of the EU Delegation in Serbia - H.E. Emmanuel Giaufret
- ❑ Minister of Science, Technological Development and Innovation - Dr. Jelena Begović
- ❑ four elected IDEAS project managers (one from each sub-program) who lead the implementation of current projects

Prof. Dr. Mirjana Pešić presented the results of the FUNPRO project within the *Engineering and Technological Sciences* sub-program.

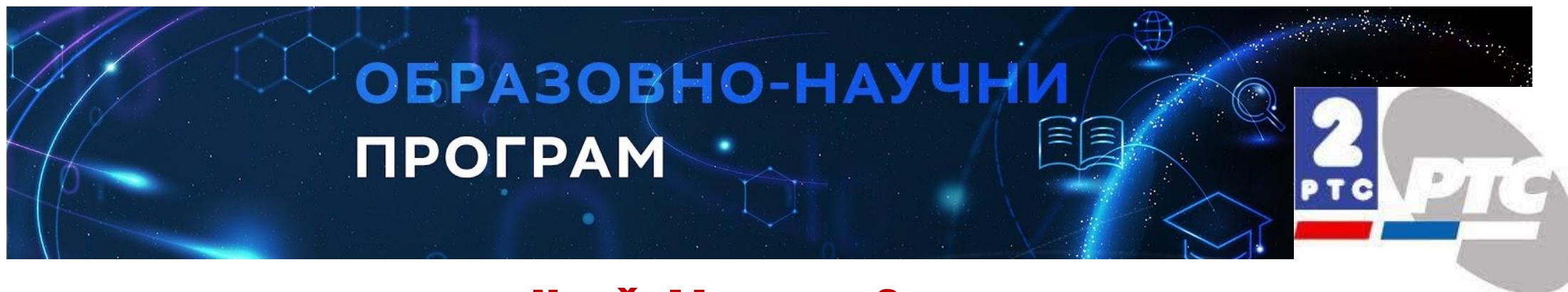


Science Fund
of the Republic of Serbia



<https://fondzanauku.gov.rs/2024/10/fond-za-nauku-otvara-2-nova-programa-za-naucnike-sa-ukupnim-budzetom-od-248-miliona-evra/>





Naučni kompas 2 (Scientific Compass 2)

Mirjana Pešić gave an overview of the goals and focus areas of the project, while researchers Aleksandar Kostić and Slađana Stanojević demonstrated the experimental realization of the project's tasks.



The entire episode titled „**Prirodni aditivi**“ (**"Natural additives"**) it is available on the YouTube channel: <https://www.ioutube.com/vatch?v=vPOdi4AMAHv>

You 



MultiCultiMed Project

- ❑ strategic project of Serbia and China
- ❑ Study on the effectiveness of medicinal plant components using modern technologies



MULTICULTI kick-off meeting

Divčibare, Serbia,
24-25. December, 2024.

The FUNPRO team shared its experience in the analysis of bioactive compounds with the MULTICULTI team, presenting the results and methodology

<https://www.ibiss.bg.ac.rs/sr-yu/istrazivanja/projekti/medjunarodni/4994-multiculti-china-2024>



FUNPRO project PROMOTIONS



<https://funpro.agrif.bg.ac.rs/>



project link created

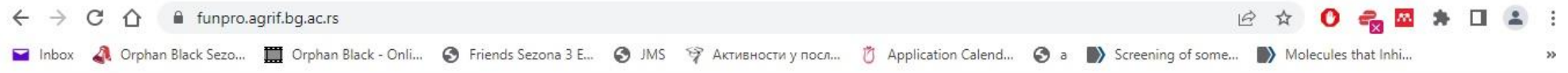


Team Leader:

- Dr. Mirjana Pešić, F

Team Members:

- Dr. Miroљub Bar
- Dr. Slađana Stan
- Dr. Aleksandar
- Dr. Ivana Sred
- Danijel Milin
- Ana Doroški,
- Ana Bjeković
- Steva M. Lev
- Dr. Jasmina
- Dr. Jovana
- Dr. Dejan S



About

FUNPRO Project

Functional products based on goat's milk proteins and bioactive comp

Goat's milk production is growing industry worldwide due to its beneficial prop... (bioactive peptides). Furthermore, goat's milk can be used as carrier for functional c...

ABOUT TEAM ACTIVITIES PARTNER SERIES

Activities

Organisation of work 2022-2025
Organisation and timeline of the work for the next 3 years.
[Read More](#)

...y, valuable
...od matrix still remain

Program IDEAS



Science Fund
of the Republic of Serbia



FUNPRO project PROMOTIONS



Instagram page opened



FUNPRO project PROMOTIONS



the project logo was designed



Program IDEAS

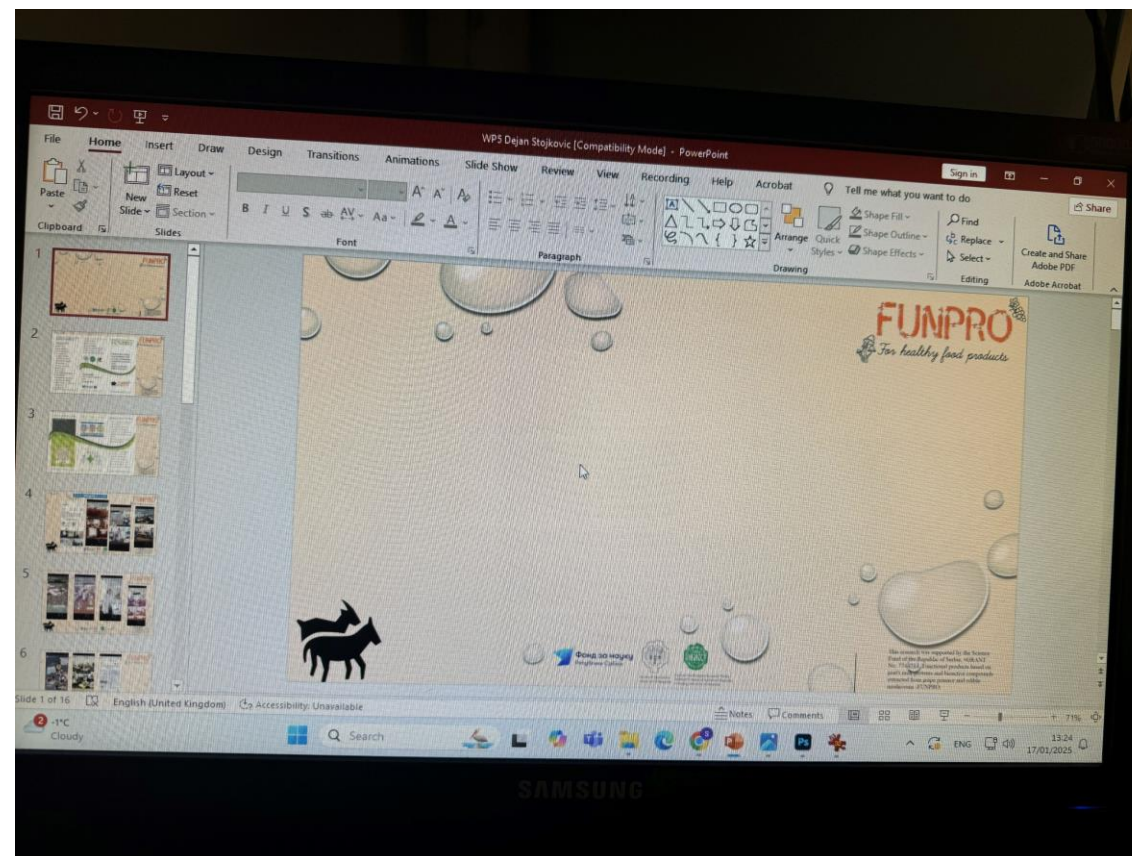


Create.



Creative Powerpoint Template

A PowerPoint template was created for the purpose of uniform project presentations.



FUNPRO project PROMOTIONS

PRINTED MATERIAL



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University of Belgrade:

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Prof. dr Slađana Stanojević

Prof. dr Aleksandar Kostić

Prof. dr Ivana Sredović Ignjatović

MSc Danijel Mlinčić

MSc Dušanka Popović Minić

MSc Ana Doroški

MSc Ana Bjeković

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Serbia University of Belgrade:

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dr Jovana Petrović

MSc Dejan Stojković

Project Participants:

• Faculty of Agriculture,
University of Belgrade

• IBISS, National Institute of Republic
of Serbia, University of Belgrade

• EKOFUNGI - SME involved in Project



FUNPRO

Functional products
based on goat's milk
proteins and bioactive
compounds extracted
from
grape pomace and
edible mushrooms

Project Funding:

Science Fund of the Republic of
Serbia

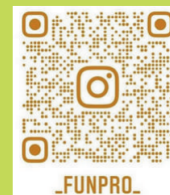
Grant No. 774471



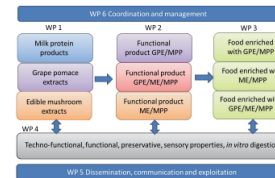
FUNPRO INFORMATION:

- <http://agrif.bg.ac.rs/FakultetU2163>
- <https://www.ibiss.bg.ac.rs/index.php/en/present/national/item/2231-funpro>
- https://www.instagram.com/_funpro_/

Follow us on Instagram by
simply scanning QR code:



IMPLEMENTATION PLAN:



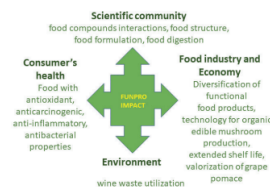
SUMMARY

Healthier and sustainable foods are great challenges
facing food industry nowadays.

Food scientists and technologists have been
encouraged to develop new functional food
ingredients and to lower the environmental impact
during food production. FUNPRO has launched in
January 2022

aiming to develop new multipurpose high value
functional protein products (FMPP).

FUNPRO IMPACT:



These products will be developed using goat's
milk, wine waste (from autochthonous and
international grape varieties) and/or edible
mushrooms in an innovative way in line with
consumers' needs. Further, they will be used for
enrichment of different already present food
products to improve their quality and functionality.





FUNPRO
For healthy food products

Innovating Functional Foods

Project Overview

The FUNPRO project developed functional milk protein products (FMPP) by enriching goat's milk proteins with bioactive compounds from grape pomace and edible mushrooms. This innovative approach enhances food properties, nutrition, and sustainability.



Key Findings



1. Grape Pomace Extracts (GPE)

- **Rich in Phenolics:** Prokupac grape seed extract - the highest phenolic content (6467.9 mg GAE/100g DM).
- **Antioxidant Power:** Significant ABTS and DPPH activity, with catechin bioaccessibility reaching 18.16%.
- **Best Practices:** Methanol/water extraction and lyophilization preserved maximum phenolics.



2. Mushroom Extracts (ME)

- **Potent Bioactivity:** *A. aegerita* aqueous extract - superior β -glucan (34.95%) and phenolic content (23.72 g GAE/100g DW).
- **Wound Healing:** *A. aegerita* - 100% closure in 24 hours.
- **Antimicrobial Strength:** Effective against *Bacillus cereus* - notable antifungal and antibiofilm properties.



3. Goat Milk Protein Products (MPP)

- **Thermal Advantage:** Heat-treated goat milk (TRM) formed stable casein-whey complexes for bioactive integration.
- **Improved Functionality:** Enhanced emulsifying, foaming, and binding properties for versatile applications.



4. Functional Milk Protein Products (FMPP)

- **Health Benefits:** Combined GPE/ME mixtures - strong anti-inflammatory and antioxidant effects.
- **Cancer Prevention:** M/ME formulations inhibited breast and colorectal cancer cell proliferation.
- **Bioactive Delivery:** Digestive bioavailability of phenolics and glucans ensured long-lasting functional activity.

FUNPRO

Structural Innovations

- Spectroscopy: FTIR confirmed homogeneous bioactive integration.
- SEM Analysis: Revealed honeycomb structures in enriched products, optimizing functional performance.
- DLS measurement: Good stability of particles, unimodal distribution

Functional dehydrated soups – with addition of M/GPE, M/ME and M/GPE/ME

- Health benefits: Good antioxidant properties
- Preservative properties: Good antibacterial, antifungal and anticandidal activity
- Sensory analysis: High sensory scores – very good quality

NEW Final Products



FUNPRO combined dairy proteins with plant- and mushroom-based bioactives to create innovative, health-enhancing, and sustainable food solutions.



Contact:

PI: Prof. Dr. Mirjana Pešić

mpesic@agrif.bg.ac.rs

<https://funpro.agrif.bg.ac.rs>



Follow us on Instagram



This research was supported by the Science Fund of the Republic of Serbia, #GRANT No. 7744714, Functional products based on goat's milk proteins and bioactive compounds extracted from grape pomace and edible mushrooms-FUNPRO.



ADVERTISING MATERIAL



recognition to Danijel Milinčić for his contribution to the development of methods for the analysis of secondary metabolites in food



Home of the Serbian Academy of Sciences
December 18, 2023.



66. MEĐUNARODNI SAJAM TEHNIKE

**POSEBNO PRIZNANJE
SAJMA TEHNIKE**

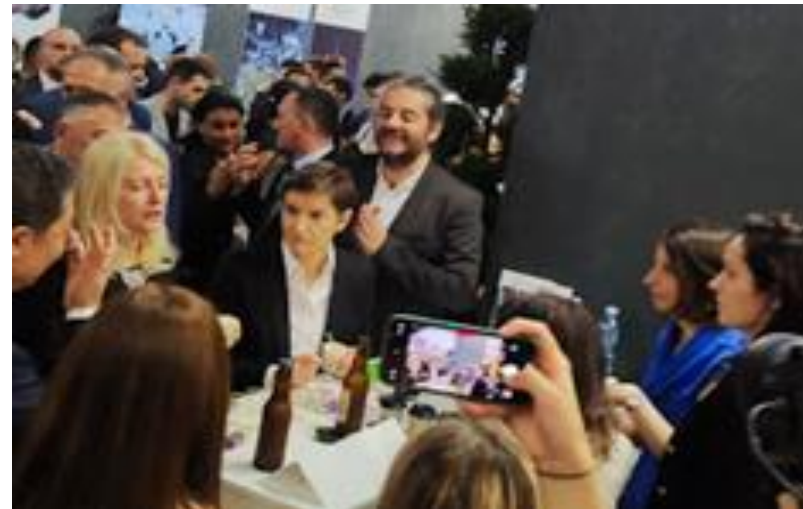
za eksponat koji doprinosi razvoju tehnike



66. MEĐUNARODNI SAJAM TEHNIKE



„Tehnologija proizvodnje funkcionalnog piva obogaćenog fenolnim jedinjenjima iz semenki grožđa“ (2024)



Constructive meetings and workshops



In the plan!



participation in congresses



23rd International Congress of Nutrition of IUNS



IUNS-ICN 2025
International Congress of Nutrition
24-29 August 2025 | Paris, France
SUSTAINABLE FOOD FOR GLOBAL HEALTH

1 peer-reviewed publication in the journal Foods

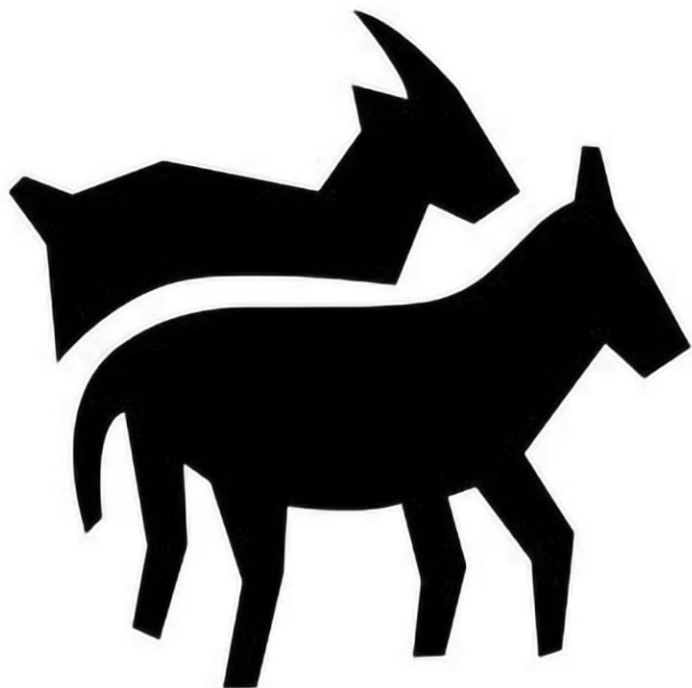


1 publication in preparation



preparation of materials for participation in a new project of IDEAS program





FUNIPRO



For healthy food products

January, 2022. – January, 2025.

