

**SVETOVNI DAN VARNOSTI HRANE
2021
World Food Safety Day 2021**

**3. KONFERENCA OB SVETOVNEM DNEVU
VARNOSTI HRANE 2021**
3rd Conference On World Food Safety Day 2021

Ljubljana, 7-6-2021
Državni svet Republike Slovenije

Organizira/organized by
Uprava za varno hrano, veterinarstvo in varstvo
rastlin (UVHVVR)
European Declaration on Food, Technology and
Nutrition Network
in
Državni svet Republike Slovenije

Svetovni dan varnosti hrane 2021

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VARNOSTI HRANE 2021
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Državni svet Republike Slovenije**

**Izbral in uredil
Peter Raspor**

3. konferenca ob svetovnem dnevu varnosti hrane 2020

Večavtorska monografija

Urednik in selektor del: zasl. prof. dr. Peter RASPOR, dr. h.c. mult.

*Organizatorji: Državni svet Republike Slovenije,
Uprava za varno hrano, veterinarstvo in varstvo rastlin (MKGP),
European Declaration on Food, Technology and Nutrition Network*

Lektoriranje: avtorji so odgovorni za jezik v svojih prispevkih

*Izdal: Državni Svet republike Slovenije, 1000 Ljubljana
Ljubljana, 2021*

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Lokacija digitalnega zapisa:

<http://eftndeclaration.aeuropae.org/Events/>

CIP - Kataložni zapis o publikaciji
Narodna in univerzitetna knjižnica, Ljubljana

3. KONFERENCA OB SVETOVNEM DNEVU VARNOSTI HRANE 2021:
[večavtorska monografija] / izbral in uredil Peter Raspor. - Ljubljana :
DS RS, 2020

ISBN

1. Raspor, Peter

COBISS.SI-ID 302112512

Kazalo

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Uvodnik/ Editorial

Varnost, v nevarnosti koronavirusne epidemije in oskrbe s hrano

Peter Raspor

Od prve konference mineva tretje leto. Če smo ob snovanju prve konference govorili o varnosti in higieni, nas je lani že spremljala epopeja COVID19. Z radovednostjo in strahom smo zrlj kaj bo dala prihodnost. Prihodnost v tretjem letu ne kaže, da bi lahko in smeli pričakovati vrnitev v čas pred korona virusno epidemijo, ki je objela celo zemeljsko oblo. Lani smo potihoma upali, da bo epidemija izzvenela. Obenem smo iskali cepiva in režime, ki bi pohod korona virusa zajezili. Mnogi optimistično niso pričakoval tako usodnih pretresov, ki bi zamajali svet in njegovo globalno zdravje. Izkazalo pa se je, da so imeli pesimisti v mnogo čem prav, kar zadeva COVID19.

Vsa dogajanja na svetu vplivajo neposredno in posredno na sisteme oskrbe s hrano vzdolž celotne kmetijsko živilsko prehranske oskrbovalne verige. Leto je tako minilo v osamitvi in ohladitvi vseh proizvodnih in delno tudi oskrbovalnih sistemov. Toda kljub restrikcijam smo leto pretolkli in skakali iz vala na val epidemije in kolikor toliko smelo vstopamo v novo poletje. Državniki so si izmišljevali rešitve za narod, ki se niso vedno izkazale. Pa tudi niso vedno doživele aplavza ulice. Mogoče pogosteje obratne odzive. Tako je vedno v krizah in zakaj bi bilo sedaj drugače, saj smo samo ljudje.

3. konferenca o varnosti hrane vstopa v dogajanje neposredno po tem, ko se vrata v delno normalizacijo delovanja družbe, po izkušnji COVID19 preudarno razklepajo. Čeprav smo ta dogodek planirali nismo do zadnjega vedeli ali sploh bo. Končno smo se v aprilu odločili da bo. Želimo ostati zvesti komunikaciji z javnostmi na svetovni dan varne hrane oz varnosti hrane. Pojmovanje varne hrane in varnosti hrane tako dobiva nove pomenke in nianse tako v stroki kot tudi med laično javnostjo. Sedaj lahko rečemo da že tradicionalno prihajamo v v hram politike predstaviti svoja stališča. Žal še vedno ni možno, da bi prostor napolnili do zadnjega kotička, smo pa zato organizirali virtualni svet in se povezali preko njega z vsemi deležniki, ki željo biti na ta dan z dogajanjem povezani. Čeprav se zdi, da nam je vse kar se tiče varnosti hrane poznano in blizu, se vedno pojavljajo novi izzivi, ki jih velja pbljže pogledati.

Številne so institucije in strokovnjaki, ki v očeh sistema predstavljajo ključne aktivnosti v zagotavljanju varnosti na področju hrane. Zato se

nam je zdelo prav, da jih povabimo da spregovorijo z njihovimi vidiki in argumenti in se dotaknejo nekaj ključnih izzivov.

Vsi so bili soočeni s štirimi izhodiščnimi vprašanji, na katera bodo ta dan razvili stališča in poglede. Ta vprašanja so postavljena v krog relevantnih institucij, ki redno sodelujejo z Upravo za varno hrano, veterinarstvo in varstvo rastlin.

Prav ti ključni laboratoriji na tem področju omogočajo udejanjanje varnosti v vsakdanjem življenju ljudi in delu vseh deležnikov od njive do mize. Zato se avtoriji iz izbranih institucij v svojih prispevkih osredotočajo na pomembne elemente:

- Kaj počnejo in nudijo na področju analitike živil in ostalih aktivnosti- tudi raziskovalnih, da bi bila živila varna?
- Kaj bi lahko še dodali v nabor pogodbenih aktivnosti med svojo institucijo in UVHVVR in bi povečalo stopnjo varnosti?
- Na kaj so najbolj ponosni v vseh teh letih od sprejema uredbe 178/2002?
- Kaj pogrešajo na področju obvladovanja varnosti živil v R Sloveniji?

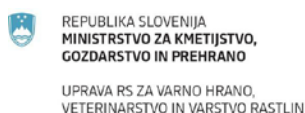
Še mnogo drugih izzivov, ki bi zaslužili pozornost na svetovni dan varnosti hrane, bo ostalo neizpovedanih, bodo pa zaslužili pozornost in lahko samo upamo, da bomo kot družba in posamezniki dovolj zreli, da bomo dali politikom jasne zahteve, kaj hočemo in česa nočemo, ko je govora v našem primeru o varnosti vzdolž živilsko prehranske oskrbovalne verige.

Takemu razmišljanju je namenjen svetovni dan varne hrane leta 2021. Zavedamo se, da predavanja ne odpirajo vseh pomembnih vidikov. To pa je ravno tisto kar vleče akterje, da razpravo in aktivnosti peljejo naprej v naslednje leto, ko se bomo spet dobili in spregovorili in ugotovili kaj vse dobrega smo storili, da bi bilo prehranjevanje varnejše in ljudje pomirjeni, ko segajo po živilih na trgovskih in trženjskih policah.

Pobudnik in eden od pripravljavcev dogodka »Svetovni dan varne hrane 2021«

zasl. prof. dr. Peter Raspor

Program/ Programe



REPUBLIKA SLOVENIJA
DRŽAVNI SVET

PROGRAM DOGODKA

WORLD FOOD SAFETY DAY 2021
Svetovni dan varne hrane 2021
Ljubljana, 7. 6. 2021
Državni svet Republike Slovenije

Organizirajo
**Uprava za varno hrano, veterinarstvo in varstvo rastlin,
MKGP R. Slovenije, Državni Svet Republike Slovenije in
European Declaration on Food, Technology and
Nutrition Network**

8:30 – 9:00 Registracija udeležencev

09:00 – 9:30 Dobrodošlica

Predsedujoča:

*g. Matjaž **GUČEK** dr. vet. med., generalni direktor, Uprava za
varno hrano, veterinarstvo in varstvo
rastlin*

*dr. Peter **RASPOR**, zaslužni profesor Univerza v Ljubljani*

*g. Alojz **Kovšca**, univ. dipl.
obramb. predsednik državnega
sveta republike Slovenije*

*dr. Jože **Podgoršek**, univ.dipl.inž.kmet.
minister za kmetijstvo, gozdarstvo in prehrano, Republika Slovenija*

*Predstavitev programa in namena dogodka
zasl. prof. dr. Peter **Raspor**, univ.dipl.inž.
živil.teh., dr. HC, multi. predsednik
programsko organizacijskega odbora*

Predsedujoča:

*dr. Mojca **JEVŠNIK**, dipl. san. inž., Zdravstvena fakulteta,
Univerza v Ljubljani dr. Janez **POSEDI**, dr. vet. med.,
Veterinarska fakulteta, Univerza v Ljubljani*

9:30 - 9:45 Vpliv pandemije COVID-19 na izvajanje
postopkov uradnega

- nadzora na področju varnosti hrane
Matjaž Guček, dr. vet. med., generalni direktor,
Uprava za varno hrano, veterinarstvo in varstvo rastlin
- 9:45 – 10:00 EFSA, *Codex Alimentarius* in varnost hrane v izrednih razmerah,
- 10:00 – 10:15 Urška Bolha, dr. vet. med., **Uprava za varno hrano, veterinarstvo in varstvo rastlin**
Okolje pandemije COVID-19 in vpliv na medicinsko in sorodne stroke, izr. prof. dr. Miroslav Petrovec, dr. med., **Institut za mikrobiologijo Medicinska fakulteta, Univerza v Ljubljani**

10:15 - 10:45 Odmor za kavo

Predsedujoča:

dr. Bety BREZNIK, dr. vet. med., Ministrstvo za kmetijstvo, gozdarstvo in prehrano R Slovenije

dr. Bojan BUTINAR, *Znanstveno raziskovalno središče Koper*

10:45 – 11:00 Delovanje KIS na področju varnih živil, dr. Helena Baša

Česnik, uni.dipl.kem., Špela Velikonja Bolta, Veronika Kmecl, **Kmetijski inštitut Slovenije, Ljubljana**

11:00 - 11:15 Delovanje NIB na področju varnih živil, dr. Tanja Dreo, univ. dipl. biol., **Nacionalni inštitut za biologijo, Ljubljana**

11:15 – 11:30 Delovanje NVI na področju varnih živil, dr. Matjaž Ocepek, dr. vet. med., Majda Biasizzo, Jožica Dolenc, Stanka Vadnjal, Andrej Kirbiš, Irena Zdovc, Janez Posedi, **Nacionalni veterinarski inštitut, Veterinarska fakulteta, Univerza v Ljubljani**

11:00 – 11:45 DISKUSIJA

11:45 – 12:30 Odmor

Predsedujoča:

dr. Sonja SMOLE MOŽINA, univ.dipl.inž. živil.teh., *Biotehniška fakulteta, Univerza v Ljubljani*

12:30 – 12:45 Delovanje IJS na področju varnih živil, dr. Benjamin Zorko, univ. dipl. fiz., Nives Ogrinc, Marko Štok, Marijan Nečemer, Jasmina Kožar

- 12:45 – 13:00** Logar, **Inštitut Jožef Štefan Ljubljana**
Delovanje ZRS na področju varnih živil,
dr. Milena Miklavčič, uni.dipl.kem., Bojan Butinar,
Vasilij Valenčič, Maja Podgornik, **Znanstveno**
raziskovalno središče Koper
- 13:00 – 13:15** **Delovanje NLZOH na področju varnih živil,** Vesna
Viher
Hrženjak, dr. med., Katja Zelenik, Jerneja Franko,
Jerica Ivanoš, **Nacionalni laboratorij za zdravje,**
okolje in hrano, Maribor
- 13:15 – 13:30** **DISKUSIJA**

13:30 – 15:00 **OKROGLA MIZA**
Vpliv globalnega trga s hrano na percepcijo potrošnikov z vidika
varnosti živil

Predsedujoči:

Matjaž **GUČEK**, dr. vet. med., *generalni direktor, Uprava za varno*
hrano, veterinarstvo in varstvo rastlin

Moderator:

dr. Peter **RASPOR**, *zaslužni profesor Univerza v*

Ljubljani *Pisanje povzetka in priprava zaključkov:*

Janez **PODOBNIK**, dr. med., ECPD Slovenija

SODELUJOČI:

- 1. Ministrstvo za kmetijstvo, gozdarstvo in prehrano:** mag. Aleš Irgolič,
univ.dipl.inž.kmet.,
- 2. Biotehniška fakulteta, Univerza v Ljubljani:** dr. Aleš Kuhar,
uni.dipl.inž.kmet.,
- 3. Zveza potrošnikov Slovenije:** Breda Kutin, univ.dipl.iur,
- 4. Trgovinska zbornica Slovenije:** mag. Mariča Lah,
univ.dipl.oec., predsednica
- 5. Gospodarska Zbornica Slovenije:** dr. Tatjana Zagorc,
univ.dipl.inž.živil.teh.,
- 6. Kmetijsko Gozdarska zbornica Slovenije:** Roman Žveglič, kmet

ZAKLJUČNE MISLI:

dr. Peter **RASPOR**, *zaslužni profesor Univerza v Ljubljani*

Povzetki prispevkov/ Summaries

1. dr. Helena Baša Česnik, uni.dipl. kem., **Kmetijski inštitut Slovenije**
2. Urška Bolha, dr. vet. med., **Uprava za varno hrano, veterinarstvo in varstvo rastlin**
3. dr. Tanja Dreo, univ. dipl. biol., **Nacionalni inštitut za biologijo, Ljubljana**
4. g. Matjaž Guček dr. vet. med., generalni direktor, **Uprava za varno hrano, veterinarstvo in varstvo rastlin**
5. dr. Milena Miklavčič, uni.dipl.kem., **Znanstveno raziskovalno središče Koper**
6. dr. Matjaž Ocepek, dr. vet. med., **Nacionalni veterinarski inštitut, Veterinarska fakulteta, Univerza v Ljubljani**
7. izr. prof. dr. Miroslav Petrovec, dr. med., **Institut za mikrobiologijo Medicinska fakulteta, Univerza v Ljubljani**
8. Vesna Viher Hrženjak, dr. med., **Nacionalni laboratorij za zdravje, okolje in hrano, Maribor**
9. dr. Benjamin Zorko, univ. dipl. fiz., **Inštitut Jožef Štefan Ljubljana**

Delovanje Kmetijskega inštituta Slovenije na področju varnih živil

*¹Helena Baša Česnik, *¹Špela Velikonja Bolta, *¹Veronika Kmecl

¹ Kmetijski inštitut Slovenije

e-naslov: helena.basa@kis.si

*dr.

Ključne besede: ostanki fitofarmaceutskih sredstev, med, krma, vino, cvetni prah

Kmetijski inštitut Slovenije se z analitiko ostankov fitofarmaceutskih sredstev (FFS) ukvarja že od leta 1987. Trenutno je Centralni laboratorij uradni laboratorij glede analitike ostankov pesticidov za krmo in med v okviru uradnega nadzora, ki ga izvaja UVHVVR. Z analitiko ostankov FFS v medu, cvetnem prahu in vinu se ukvarjamo tudi raziskovalno. V letih 2017 in 2018 smo zbrali 60 vzorcev medu slovenskih čebelarjev (22 iz ekološke pridelave in 38 iz konvencionalne pridelave) iz vseh dvanajstih statističnih regij v Sloveniji. Vzorce smo analizirali z dvema analiznima metodama na prisotnost 136 aktivnih snovi iz okolja (aktivne snovi, ki so na cvetni prah prišle s tretiranjem, ali z driftom pri tretiranju s FFS). V enem ekološko pridelanem vzorcu iz statistične regije Pomurska, smo določili 0,02 mg/kg tiakloprida. Maksimalna dovoljena količina ostankov tiakloprida v medu je 0,2 mg/kg. Ocena tveganja je pokazala, da je ta vzorec medu varen za potrošnika. V okviru Programa ukrepov na področju čebelarstva v Republiki Sloveniji, na KIS spremljamo ostanke kemičnih sredstev za zatiranje varoze. V letu 2020 smo zbrali 100 vzorcev medu slovenskih čebelarjev (22 iz ekološke pridelave in 78 iz konvencionalne pridelave) iz vseh dvanajstih statističnih regij v Sloveniji. Z dvema analiznima metodama smo določali vsebnosti amitraza in njegovih razpadnih produktov, kumafosa in timola. Amitraz smo določili v 37,2 % vzorcev, kumafos v 9,0 % vzorcev in timol v 3,8 % vzorcev. Nobeden izmed vzorcev ni presegal predpisanih maksimalnih količin ostankov. Ocena tveganja je pokazala, da so vsi vzorci medu varni za potrošnika. V letu 2020 smo zbrali 30 vzorcev cvetnega prahu slovenskih čebelarjev iz vseh dvanajstih statističnih regij v Sloveniji. V vzorcih smo z eno analizo metodo ugotavljali prisotnost 49 aktivnih spojin. V enem vzorcu iz Pomurske statistične regije smo določili ostanke azoksistrobina <0,05 mg/kg. Maksimalna dovoljena količina ostankov azoksistrobina v cvetnem prahu je 0,05 mg/kg. Ocena tveganja je pokazala, da je ta cvetni prah varen za potrošnika. Organoklorni pesticidi so insekticidi, ki so se v preteklosti, predvsem po letu 1940, veliko uporabljali. Kasneje je bila ugotovljeno, da so organoklorne spojine zelo toksične, se počasni razgrajujejo v okolju in bioakumulirajo v maščobnem tkivu živali in ljudi. Zaradi tega so bili v razvitem svetu

prepovedani. Organoklorni pesticidi so v krmi nezaželeni in njihova minimalna dovoljena vsebnost je urejena v Evropski direktivi 2002/32/EC. Vzorčenje, ki ga vsako leto opravi UVHVVR, se odvija v sklopu kontrole uvoza krme, prometa s krmo in proizvodnje krme in v okviru uradnega nadzora krme. Na KIS v vzorcih z multirezidualno GC- μ ECD metodo ugotavljamo prisotnost 25 aktivnih spojin. Ostankov organoklornih pesticidov v vzorcih v zadnjih treh letih nismo našli. V letu 2021 smo na trgovskih policah odvzeli 42 vin: 21 belih in 21 rdečih iz vseh 3 vinorodnih dežel Slovenije. Vzorce smo analizirali z dvema analiznima metodama na 77 aktivnih spojin. V 78,6 % vzorcev smo določili fungicide: dimetomorf (<0,002-0,007 mg/L), fludioksonil (<0,01-0,01 mg/L) in piraklostrobin (<0,002 mg/L). Maksimalnih dovoljenih količin ostankov v vinih EU še ni postavila. Ocena tveganja je pokazala, da so vzorci vina varni za potrošnika. Rezultati raziskav sicer kažejo, da razloga za večjo zaskrbljenost ni, a je kljub temu potreben stalen nadzor živil na tržišču, saj smo npr. v ekološkem medu našli ostanke aktivne snovi tiaklopid, ki so jo čebele najverjetneje v panj zanesle iz okolja.

Viri:

Baša Česnik, H., Kmecl, V., Velikonja Bolta, Š. Pesticide and veterinary drug residues in honey - validation of methods and a survey of organic and conventional honeys from Slovenia. *Food additives & contaminants. Part A., Chemistry, analysis, control, exposure & risk assessment*, ISSN 1944-0049, 2019, vol. 36, št. 9, str. 1358-1375.

Baša Česnik, H., Kmecl, V. Investigation on Amitraz, coumaphos and thymol concentrations in honey produced by Slovenian beekeepers in 2020. *Acta Agriculturae Slovenica*, v tisku.

Baša Česnik, H. Pesticide residues in bee pollen - validation of the gas chromatography-mass spectrometry multiresidual method and a survey of bee pollens from Slovenia. *Acta Agriculturae Slovenica*, v tisku.

Activities of Agricultural Institute of Slovenia in the field of food safety

*¹Helena Baša Česnik, *¹Špela Velikonja Bolta, *¹Veronika Kmecl

¹ Kmetijski inštitut Slovenije
e-naslov: helena.basa@kis.si
*dr.

Key words: pesticide residues, honey, animal feed, wine, pollen

The Agricultural Institute of Slovenia has been conducting pesticide residue analyses since 1987. Currently, Central Laboratories is the official laboratory in the field of pesticide residue analyses in animal feed and honey within the framework of official supervision conducted by the Administration of the Republic of Slovenia for Food Safety. Pesticide residue analyses of honey, pollen and wine are also carried out as part of research activities as well. In 2017 and 2018, we collected 60 honey samples from Slovenian beekeepers (22 from organic production and 38 from conventional production) from all 12 statistical regions of Slovenia. The samples were analysed for the presence of 136 active substances from the environment (active substances deposited on pollen after treatment or drifted during treatment with plant protection products) using two analytical methods. In one organic sample from the statistical region of Pomurska, 0.02 mg/kg thiacloprid was found. The Maximum residue level (MRL) for thiacloprid in honey is 0.2 mg/kg. The risk assessment has shown that this sample is safe for the consumer. As part of the Program of measures in the field of beekeeping in the Republic of Slovenia, we monitor the residues of chemical agents used to control varroasis at Agricultural Institute of Slovenia. In 2020, we collected 100 honey samples (22 from organic and 78 from conventional production) from all 12 statistical regions of Slovenia. Using two analytical methods, we measured residues of amitraz and its degradation products, coumaphos and thymol. Amitraz was found in 37.2 % of the samples, coumaphos in 9.0 % of the samples and thymol in 3.8 % of the samples. None of the samples exceeded the valid MRLs. The risk assessment has shown that these samples are safe for the consumer. In 2020, we collected 30 pollen samples from Slovenian beekeepers from all 12 statistical regions in Slovenia. The presence of 49 active substances was searched for using one analytical method. Azoxystrobin was found at <0.05 mg/kg in one sample from the Pomurska statistical region. The MRL for azoxystrobin in pollen is 0.05 mg/kg. The risk assessment has shown that this pollen is safe for the consumer. Organochlorine pesticides are insecticides that were widely used in the past, especially after 1940. Later, organochlorines were found to be highly toxic, slow to degrade in the environment, and

bioaccumulate in the fatty tissues of animals and humans. For this reason they were banned in the developed world. Organochlorine pesticides are undesirable in feed and their minimum permissible content is regulated in European Directive 2002/32/EC. Within the framework of control of feed imports, feed trade and feed production as well as within the framework of official feed control, samples are taken annually by the Administration of the Republic of Slovenia for Food Safety. The presence of 25 active compounds is analysed on Agricultural Institute of Slovenia in samples using the multiresidual GC- μ ECD method. No residues of organochlorine pesticides have been found in the samples for the last three years. In 2021, 42 wines were collected from commercial shelves: 21 white and 21 red wines from all 3 wine-growing regions of Slovenia. The samples were analyzed for 77 active compounds using two analytical methods. Fungicides were determined in 78.6% of the samples: dimetomorph (<0.002-0.007 mg / L), fludioxonil (<0.01-0.01 mg / L) and pyraclostrobin (<0.002 mg / L). The EU has not yet set MRLs for wine. The risk assessment has shown that the wine samples are safe for the consumer. The results of the investigations show that there is no reason for great concern, but continuous supervision of food on the market is nevertheless necessary, as thiaclopyrd residues were found in organic honey, for example, which bees have most probably carried into the hive from the environment.

References:

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EFSA, Codex Alimentarius ter varnost hrane v izrednih razmerah

Urška Bolha^{1*}

¹ UVHVVR, Ministrstvo za kmetijstvo, gozdarstvo in prehrano, Republika Slovenija

e-naslov: urska.bolha@gov.si

* dr. vet. med.

Ključne besede: Evropska agencija za varnost hrane, Codex Alimentarius, varnost hrane

EFSA (European Food Safety Authority) ali po slovensko Evropska agencija za varnost hrane je organizacija pod okriljem Evropske unije, ki je bila ustanovljena leta 2002 na podlagi Uredbe (ES) št. 178/2002 Evropskega parlamenta in Sveta o določitvi splošnih načel in zahtevah živilske zakonodaje, ustanovitvi Evropske agencije za varnost hrane in postopkih, ki zadevajo varnost hrane. EFSA pripravlja neodvisne znanstvene nasvete o tveganjih v zvezi s hrano. Agencija svetuje glede obstoječih in novih tveganjih v zvezi s hrano ter tako prispeva k oblikovanju evropske zakonodaje, pravil in politike in posledično k varstvu potrošnikov pred tveganji v prehranjevalni verigi. Uvaja postopke spremljanja za sistematično iskanje, zbiranje, primerjanje in analiziranje informacij in podatkov zaradi prepoznavanja nepričakovanih tveganj na področjih njenega poslanstva. Vsi naštetih elementi, vzeti iz Uredbe 178/2002, zbujejo tako pri potrošnikih kot tudi nosilcih živilske dejavnosti ter ostalih deležnikih zaupanje v sistem varovanja zdravja z vidika varne hrane od začetka pridelave, predelave, distribucije do končnega potrošnika. Codex Alimentarius (CA) je bil vzpostavljen v okviru programa Združenih narodov za prehranske standarde v sodelovanju z Organizacijo Združenih narodov za prehrano in kmetijstvo (FAO) in Svetovno zdravstveno organizacijo (WHO). Je zbirka mednarodnih standardov, smernic in priporočil, ki jih je sprejela Codex Alimentarius komisija. Komisija, znana tudi kot CAC, je osrednji del skupnega programa FAO / WHO za prehranske standarde in sta jo FAO in WHO ustanovila za zaščito zdravja ljudi, varstva interesov potrošnikov in spodbujanje poštenih praks v mednarodni trgovini z živilom. Prvo srečanje je potekalo leta 1963. CODEX standardi so merilo za varnost hrane. So mednarodni standardi, uveljavljeni na področju Svetovne trgovinske organizacije kot mednarodna merila za varnost živil. To so minimalni standardi, katerim morajo ustrezati živila, da je zagotovljena ustrezna raven varovanja zdravja ljudi in interesov potrošnikov ob upoštevanju raznolikosti pri preskrbi s hrano na svetovnem trgu. Če govorimo o analizi tveganj, nadzorom nad tveganji ter komunikaciji o tveganjih, potem govorimo o Evropski agenciji za varnost hrane ter Kodeksu. Primer Titanov dioksid je zgled dobre prakse v komunikaciji tveganja med omenjenima organizacijama ter potrošniki zato, ker je bila komunikacija načrtovana, pravočasna in sprotna. Javnost je bila v proces ponovnega ocenjevanja varnosti ves čas vključena in zato ob zaključkih ni bilo pomislekov glede prikrivanja podatkov ali česa podobnega. Taka komunikacija v potrošnikih vzbuja zaupanje v sistem, s tem pa spodbuja nadaljevanje poštene prakse. 11. marca 2022 je WHO razglasila pandemijo zaradi širjenja koronavirusne bolezni ali COVID-19. Bolezen povzroča sev vrste SARS-CoV, to

je koronavirusa, ki je povezan z akutnim respiratornim sindromom. Pandemija je povzročila velike svetovne družbene in gospodarske motnje, vključno z največjo svetovno recesijo po veliki depresiji. To je povzročilo široko pomanjkanje ponudbe, ki se je poslabšalo zaradi paničnega nakupovanja, motenj v kmetijstvu in pomanjkanja hrane. Evropska agencija za varnost hrane pozorno spremlja znanstveno literaturo v zvezi z možno vlogo živil pri prenosu SARS-CoV-2 (virus, ki povzroča bolezen COVID-19 ali koronavirusno bolezen) na človeka. Do sedaj ni bilo še nobenih dokazov, da bi bila hrana vir ali možna pot prenosa SARS-CoV-2. Nosilci živilske dejavnosti bi morali skrbno uporabljati enaka načela in postopke, ki že obstajajo v EU za zagotavljanje varne pridelave hrane. Pravzaprav so zdravi delavci in spoštovanje dobrih higienskih praks v vseh fazah pridelave, predelave in manipulacije s hrano ključni za zaščito pred vsemi mikrobiološkimi povzročitelji, ki povzročajo okužbe s hrano.

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EFSA, Codex Alimentarius and Food Safety in the emergencies

Urška Bolha^{1*}

¹AFSVSPP, Ministry of Agriculture, Food and Forestry, Republic of Slovenia
e-mail: urska.bolha@gov.si

* DVM

Key words: European Food Safety Authority, Codey Alimentarius, Food Safety

EFSA (European Food Safety Authority) is the agency organized under the auspices of the European Union, established in 2002 on the basis of Regulation (EC) No 178/2002 of the European Parliament and of the Council laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety. EFSA provides independent scientific advice on food risks. The Agency advises on existing and emerging food risks, thus contributing to the development of European legislation, rules and policies and, consequently, to the protection of consumers against risks in the food chain. In the areas of its mission it introduces monitoring procedures for the systematic search, collection, comparison and analysis of information and data in order to identify unexpected risks. All these elements, taken from Regulation 178/2002, inspire confidence in consumers as well as food business operators and other stakeholders in the health protection system from the point of view of food safety from the beginning of production, processing, distribution to the final consumer. The Codex Alimentarius, or "Food Code" is a collection of standards, guidelines and codes of practice adopted by the Codex Alimentarius Commission. The Commission, also known as CAC, is the central part of the Joint FAO/WHO Food Standards Programme and was established by FAO and WHO to protect consumer health and promote fair practices in food trade. It held its first meeting in 1963. CODEX standards are a measure of food safety. They are international standards established in the field of the World Trade Organization as international criteria for food safety. These are the minimum standards that foods must meet in order to ensure an adequate level of protection of human health and consumer interests, taking into account the diversity of food supplies in the world market. If we are talking about risk analysis, risk control and risk communication, then we are talking about the European Food Safety Authority and the Codex Alimentarius. The case of the Titanium Dioxide is a good example of practice in risk communication between these organizations and consumers because the communication was planned, timely and ongoing. The public was involved in the safety reassessment process at all times and therefore there were no concerns about the concealment of data at the conclusions. Such communication instills confidence in consumers in the system, thereby encouraging the continuation of fair practice. On March 11, 2022, the WHO declared a pandemic due to the spread of coronavirus disease or COVID-19. The disease is caused by a strain of the SARS-CoV type, a coronavirus that is associated with acute respiratory syndrome. The pandemic has resulted in significant global social and economic disruption, including the

largest global recession since the Great Depression. It has led to widespread supply shortages exacerbated by panic buying, agricultural disruption, and food shortages. The European Food Safety Authority is closely monitoring the scientific literature in relation to the possible role of food in the transmission of SARS-CoV-2 (the virus causing the disease COVID-19 or coronavirus disease) to humans. There is, up to now, **no evidence that food is a source or transmission route of SARS-CoV-2**. Food business operators should scrupulously apply the same principles and procedures which are already in place in the EU for ensuring safe food production. In fact, healthy workers and compliance with good hygiene practices during all stages of the production, processing and manipulation of food are key to protecting against all microbiological agents causing foodborne infections.

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Delovanje Znanstveno-raziskovalnega središča (ZRS) Koper na področju varnih živil

*Milena Bučar-Miklavčič, Bojan Butinar, Vasilij Valenčič, Maja Podgornik

Znanstveno-raziskovalno središče Koper, Laboratorij Inštituta za oljkarstvo

e-naslov: milena.bucarmiklavcic@zrs-kp.si

*dr., vodja laboratorija

Ključne besede: oljčno olje, potvorbe, kakovost, pristnost
Hrana/živila

ZRS Koper deluje na področju varnih živil z Laboratorijem Inštituta za oljkarstvo (LAB IZO), ki ga odlikuje visoka specializiranost na področju ugotavljanja kakovosti in potvorb oljčnega olja. Katastrofalni dogodek v Španiji, ko je zaradi potvorjenega strupenega oljčnega olja leta 1981 umrlo več sto ljudi (zdravstveno prizadetih pa več kot 20.000), je v oljkarskem svetu povzročil velik preobrat pri oblikovanju posebne zakonodajne politike, ki je v sektorju oljčnega olja zagotovila sledljivost, kakovost in pristnost in s tem potrošniku ponudila kakovostno in varno živilo. Za ugotavljanje kakovosti in pristnosti ter potvorb oljčnega olja so strokovnjaki s področja oljkarstva v navezi z raziskovalci analitiki uspeli vzpostaviti Uredbo Komisije (EGS) št. 2568/91 o značilnostih oljčnega olja in olja iz oljčnih tropin ter o ustreznih analiznih metodah, ki je edinstven model v evropski zakonodaji. Uredba določa kemijske in senzorične parametre za razvrščanje oljčnega olja v različne kategorije glede na tehnološki postopek pridobivanja olja, z »drevesom odločanja« pa določa analitično pot za ugotavljanje skladnosti s posameznimi kategorijami oljčnega olja in ugotavljanje potvorb z drugimi vrstami olj. Pomembno je dejstvo, da se vse spremembe pri mejnih vrednostih pri ugotavljanju potvorb ažurirajo iz stalno nadgrajevane mednarodne baze podatkov iz agronomskega in raziskovalno analitičnega področja strokovnjakov v okviru Mednarodnega sveta za oljke (IOC). Osebe laboratorija s skupino senzoričnih ocenjevalcev že od svoje ustanovitve sodeluje pri implementaciji te zahtevne zakonodaje v slovenski prostor. Laboratorij vzdržuje in zagotavlja svojo kakovost na slovenskem in mednarodnem nivoju z vsakoletnim obsežnim in analitsko zahtevnim mednarodnim medlaboratorijskim testiranjem s področja svoje dejavnosti. Z uspešnim testiranjem se že vsa leta od 2004 vrstijo na seznamu priznanih laboratorijev IOC, na podlagi katerega Evropska komisija izda listo priznanih senzoričnih laboratorijev za potrebe uradnega nadzora. V letu 2021 so raziskovalci LAB IZO zaključili odmeven raziskovalni projekt OLEUM iz programa Obzorje 2020 – Zagotavljanje kakovosti in pristnosti oljčnega olja - svoje raziskovalno delo pa nadaljujejo na mednarodnem projektu METROFOOD-RI, v okviru katerega se postavlja evropska raziskovalna infrastruktura (RI) s ciljem krepitve

znanstvene odličnosti na področju kakovosti hrane in varnosti s spodbujanjem znanstveno-raziskovalne dejavnosti na področju meroslovja. LAB IZO je nacionalni referenčni laboratorij (NRL) za ugotavljanje skladnosti oljčnega olja za področje kemijskega in senzoričnega preskušanja oljčnega olja. Poleg tega je že vrsto let referenčni laboratorij za senzorično preskušanje oljčnega olja za Češko Republiko. V Uredbi (EU) 2017/625 Evropskega parlamenta in Sveta, ki na novo ureja področje uradnega nadzora in drugih uradnih dejavnosti, je tudi zahteva, da vsi NRL-ji spremljajo najnovejše raziskovalne dosežke, da to spremljanje postane stalnica in pomemben segment njihovega dela, da z njimi seznanjajo ne le vse svoje osebe, ampak tudi skrbijo za prenos znanja na uradne laboratorije. NRL-ji so tudi dolžni zagotavljati strokovno in znanstveno pomoč Upravi za varno hrano, veterinarstvo in varstvo rastlin (UVHVVR) pri izvajanju večletnih nacionalnih načrtov nadzora. Vse te aktivnosti so le v majhnem deležu vključene v nabor pogodbenih obveznosti, saj je dejanska poraba časa za nujno posodabljanje metod, spremljanje novih tehnoloških procesov in klimatskih sprememb, ki močno vplivajo na karakterizacijo oljčnega olja in s tem tudi na nove načine zagotavljanja sledljivosti in novih zakonodajnih mejnih vrednosti, veliko večja. Trdno smo prepričani, da je specializiranost področja in poznavanje živila ključnega pomena za zagotavljanje kakovostne in varne hrane. Nov Evropski pravni red podaja zahteve, država članica pa je tista, ki mora poskrbeti za sistemski pristop. Le-ta je na področju oljčnega olja še pomanjkljiv in želimo si, da bi v sodelovanju z UHVVR čimprej vzpostavili sistemske pogoje za izvajanje uredb 2568/91, 178/2002 in 2017/625 na način, ki je primerljiv s sosednjimi evropskimi državami (uredba o senzoričnem ocenjevanju, stabilna infrastruktura). Leta 2012 je Bojan Butinar v svoji doktorski disertaciji po analogiji z oljčnim oljem zasnoval »drevo odločanja« za ugotavljanje pristnosti in stopnje predelave bučnega olja. Najbrž bi z nadzorom bučnega olja prav tako povečali stopnjo varnosti v Sloveniji, tako kot to zagotavljamo z nadzorom oljčnega olja. Pri obvladovanju varnosti živil pogrešamo močnejše sodelovanje vseh deležnikov pri oblikovanju in izvajanju sistemskih ukrepov.

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Operation of ZRS Koper in the field of safe food

*Milena Bučar-Miklavčič, Bojan Butinar, Vasilij Valenčič, Maja Podgornik

Znanstveno-raziskovalno središče Koper, Laboratorij Inštituta za oljkarstvo
e-mail: milena.bucarmiklavcic@zrs-kp.si

*dr., Head of laboratory

Key words: olive oil, adulteration, quality, genuineness
food/foodstuffs

ZRS Koper operates in the field of safe food with its Laboratory of the Institute for Oliveculture (LAB IZO), which is distinguished by its high specialization in the field of determining the quality and adulteration of olive oil. The catastrophic event in Spain, which killed hundreds of people (and 20,000 more with health problems) as a result of fraudulent and poisonous olive oil in 1981, caused a major turnaround in the olive world in the formulation of a specific legislative policy to ensure traceability, quality and genuineness in the olive oil sector, thus offering the consumer quality and safe food. In order to establish the quality and genuineness and counterfeiting of olive oil, experts in the field of oliveculture, in conjunction with research analysts, succeeded in establishing Commission Regulation (EEC) No. 2568/91 on the characteristics of olive oil and olive-pomace oil and on the relevant methods of analysis, which is a unique model in European legislation. The regulation determines the chemical and sensory parameters for classifying olive oil into different categories according to the technological process of oil production, and with the "decision tree" it determines the analytical path for conformity assessment of individual categories of olive oil and identifying adulteration with other oils. All limit values are updated from an ongoing international database of agronomic and analytical research field within the International Olive Council (IOC). The staff of the laboratory has been cooperating with its group of sensory assessors since its establishment in the implementation of this demanding legislation in Slovenia. The laboratory maintains and ensures its quality at the Slovenian and international level with annual extensive and analytically demanding international interlaboratory testing in the field of its activity. LAB IZO is on the list of recognized IOC laboratories since 2004; as a consequence, this list is the basis of the European Commission's list of recognized sensory laboratories for official control purposes. In 2021, LAB IZO researchers completed the resounding OLEUM research project from the Horizon 2020 program - Ensuring the quality and authenticity of olive oil - and continue their research work on the international METROFOOD-RI project, which sets up the European Research Infrastructure (RI) to strengthen scientific excellence in food

quality and safety by promoting scientific research in the field of metrology. LAB IZO is the national reference laboratory (NRL) for determining the conformity of olive oil for the field of chemical and sensory testing of olive oil. In addition, it has been the reference laboratory for sensory testing of olive oil for the Czech Republic for many years. Regulation (EU) 2017/625 of the European Parliament and of the Council, which regulates anew the field of official controls and other official activities, requires inter alia NLRs to monitor the latest research achievements, so that this monitoring becomes a constant and important segment of their work, to acquaint with the latest research activities not only their staff, but also to take care of the transfer of knowledge to official laboratories. NRLs are required to provide professional and scientific assistance to the Administration for Food Safety, Veterinary Sector and Plant Protection (UVHVVR) in implementing multi-annual national control plans. It has to be emphasized these activities are only to a small extent included in the set of contractual obligations, as the actual use of time for urgent updating of methods, monitoring of new technological processes and climate change, which strongly affect the characterization of olive oil and thus new ways of ensuring traceability and new legislative thresholds, are much higher. We strongly believe that specialization in the field and knowledge of food is crucial for ensuring quality and safe food. The new acquis sets out the requirements, and it is up to the single Member State to ensure a systemic approach. It is still deficient in the field of olive oil and we want, together with the UHVVR, to establish as soon as possible the systemic conditions for the implementation of Regulations 2568/91, 178/2002 and 2017/625 in a way comparable to neighboring European countries (Regulation on sensory assessment, stable infrastructure). In 2012, in his doctoral dissertation, Bojan Butinar, by analogy with olive oil, designed a "decision tree" for determining the genuineness and degree of processing of pumpkin seed oil. Probably, the control of pumpkin seed oil would also increase the level of safety in Slovenia, just as we provide it with the control of olive oil. In managing food safety, we miss the stronger participation of all stakeholders in the design and implementation of systemic measures.

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Varna hrana, naše vsakdanje opravilo

*Tanja Dreo¹

¹ Nacionalni inštitut za biologijo, Slovenija

e-naslov: tanja.dreo@nib.si

*dr., vodja Nacionalnega referenčnega laboratorija za diagnostiko bakterij na Oddelku za biotehnologijo in sistemsko biologijo

Ključne besede: povzročitelji bolezni rastlin, diagnostika, s podatki podprto obvladovanje tveganj

Nacionalni inštitut za biologijo največji neodvisni javni raziskovalni inštitut za naravoslovne vede v Sloveniji. Osnovna dejavnost inštituta ostajajo temeljne, razvojne in aplikativne raziskave na področjih naravoslovja in biotehnologije, biofizike, biomedicine in sistemske biologije. Mnoge dejavnosti so vpete v prakso, tudi na področju kmetijstva in prehrane na katerem inštitut že dolga leta sodeluje z Upravo za varno hrano, veterinarstvo in varstvo rastlin (UVHVVR). Morska biološka postaja Piran izvaja preglede toksičnih vrst fitoplanktona na školjčičih kot opozorilni sistem njihovega morebitnega pojavljanja v školjkah. Oddelek za biotehnologijo in sistemsko biologijo od leta 1998 izvaja zanesljivo diagnostiko povzročiteljev bolezni rastlin. Uradna laboratorija določata bakterije, viruse in viroide tako v rastlinah z bolezenskimi znamenji, kot tudi v rastlinah v katerih so škodljivi organizmi prisotni v prikriti obliki in zato brez uporabe laboratorijskih testov niso opazni. Z analizo več kot 1500 vzorcev letno laboratorija prispevata k uporabi zdravega sadilnega materiala in preprečevanju vnosa nevarnih novih bolezni, kar je osnova pridelave zdrave hrane. Poleg analiz rastlin, bodisi da gre za uvoz mladega krompirja, pošiljko semena paradižnika iz druge celine ali premeščanje ene od več kot 350 gostiteljskih rastlin nevarne bakterije *Xylella fastidiosa*, ki je na jugu Italije opustošila pridelavo oljk, laboratorija določata škodljive organizme tudi v okoljskih vzorcih vode in zemlje. V ta namen razvijamo tudi nove teste, predvsem molekularne teste PCR v realnem času in hitre teste primerne za uporabo na terenu, nove pristope hitrejše in učinkovitejše priprave vzorcev in jih tudi evalviramo. Aktivno sodelujemo pri razvoju mednarodnih diagnostičnih standardov in tudi na ta način v strokovnih panelih regionalne organizacije za varstvo rastlin (Evropska in mediteranska organizacija za varstvo rastlin, EPPO) skrbimo za uravnotežen razvoj diagnostike, ki omogoča varstvo rastlin vsem državam, ne glede na posebnosti njihovega kmetijstva. Znanje delimo in pridobivamo v fitosanitarnih projektih mreže Euphresco, projektih EU in drugih (Tropicsafe GA N°727459; Valitest, GA N°773139). Pomemben del podpore predstavljajo raziskave biologije in epidemiologije povzročiteljev in prenašalcev, razvijamo orodja za sledenje izbruhom, ki olajšajo iskanje izvora okužb. Sodelujemo tudi pri

koordinaciji in izvajanju programov preiskav, analizah tveganja pojavljanja novih škodljivih organizmov in odločevalce UVHVVR opremljamo s podatki, ki so nepogrešljivi za obvladovanje tveganj in učinkovito ukrepanje. Tako smo v nedavno zaključenem ciljnem raziskovalnem projektu (V4-1603) ugotavljali razširjenost gostiteljskih rastlin *X. fastidiosa* in njenih prenašalcev, izboljšali diagnostiko in usposabljali preglednike. Izredna kakovost naših laboratorijev je bila prepoznana tudi z njuno vključitvijo v dva, leta 2019 ustanovljena EU referenčna laboratorija. V prihodnosti pričakujemo pospešen razvoj in uvajanje generičnih metod visoko-zmogljivostnega sekveniranja (HTS), ki poleg tarčnega iskanja omogočajo tudi hkratno določanje večjega števila - tudi neznanih – povzročiteljev bolezni. V širšem raziskovalnem pomenu je NIB opremljen z znanji, ki lahko nudijo pomoč pri vzgoji zdravih rastlin. To vključuje pomoč pri vzgoji sort odpornih na podnebne spremembe npr. iskanje molekularnih markerjev tolerance na sušo, vročino, poplavo, zasoljenost ter nove pristope, ki vodijo v odpornost rastlin na bolezni. Pristopi sistemske biologije lahko podpirajo natančno žlahtnjenje ('precision breeding') in razvoj novih kmetijskih praks kot so RNAi-insekticidi, moduliranje fitobioma in celostno natančno kmetijstvo ('precision agriculture') pri katerih s pomočjo razumevanja delovanja rastline lahko prilagodimo kmetijske prakse. Izzivi izredno hitro se spreminjajočega se področja so veliki, tudi zaradi sprememb trgovine in podnebnih sprememb. Množica rastlin, množica povzročiteljev bolezni, vsak s svojimi posebnostmi in nešteto njihovih kombinacij bo zahtevalo nadaljevanje odličnega sodelovanja in skupne moči.

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Safe Food, Our Daily Task

*Tanja Dreo¹

¹ National Institute of Biology, Slovenia

e-mail: tanja.dreo@nib.si

*PhD., head of the National reference laboratory for diagnostics of bacteria, Department of Biotechnology and Systems Biology

Key words: plant pathogens, diagnostics, evidence based risk management

The National Institute of Biology is the largest independent public research institute for the natural sciences in Slovenia. The basic activity of the institute remains basic, developmental and applied research in the fields of natural sciences and biotechnology, biophysics, biomedicine and systems biology. Many activities are embedded in practice, including in the field of agriculture and food, in which the institute has been cooperating with the Food Safety, Veterinary and Plant Protection Administration (UVHVVR) for many years. The Marine Biological Station Piran conducts surveying of toxic phytoplankton species as an early warning system for their possible occurrence in mussels. Since 1998, the Department of Biotechnology and Systems Biology has been carrying out reliable diagnostics of plant pathogens. Official laboratories detect bacteria, viruses and viroids both in plants with disease symptoms and in plants in which harmful organisms are present in latent form and are therefore not noticeable without the use of laboratory tests. By analyzing more than 1.500 samples a year, the laboratories contribute to the use of healthy planting material and the prevention of the introduction of dangerous new diseases, which is the basis for the production of healthy food. Plant pathogen diagnostics encompasses e.g. checking the import of new potatoes, a shipment of tomato seeds from another continent or trade with one of more than 350 host plants of the dangerous bacterium *Xylella fastidiosa*, which has devastated olive production in southern Italy. To this end, we are also developing new tests, especially real-time molecular PCR tests and rapid tests suitable for field use, new approaches to faster and more efficient sample preparation, and we are also evaluating them in extensive studies. We actively participate in the development of international diagnostic standards and in this way in the professional panels of the regional plant protection organization (European and Mediterranean Plant Protection Organization, EPPO) we take care of the balanced development of diagnostics that enables efficient plant health in all countries, regardless of specifics of their agriculture. We share and acquire knowledge in phytosanitary projects of the Eupresco network, EU projects (Tropicsafe GA N ° 727459; Valitest, GA N ° 773139) and others. An important part of the support is research into the biology and epidemiology of pathogens and vectors, and we are developing outbreak tracking tools that make it easier to identify and

track the source of infections. We also participate in the coordination and implementation of annual survey programs for selected pathogenic bacteria, phytoplasma and viruses, risk analysis of the emergence of new harmful organisms and equip UVHVVR decision-makers with data that are indispensable for risk management and effective action. Among others, in a recently completed targeted research project (V4-1603), we determined the prevalence of host plants of *X. fastidiosa* and its vectors, improved diagnostics, and trained inspectors. The outstanding quality of our laboratories was also recognized by their inclusion in two EU reference laboratories established in 2019. In the future, we expect the accelerated development and introduction of generic methods of high-performance sequencing (HTS), which, in addition to target search, also enable the simultaneous identification of a larger number - even unknown - of pathogens. In a broader research sense, the NIB is equipped with knowledge that can offer assistance in the cultivation of healthy plants. This includes assistance in the cultivation of varieties resistant to climate change e.g. search for molecular markers of tolerance to drought, heat, flood, salinity and new approaches leading to plant disease resistance. Systemic biology approaches can support precision breeding and the development of new agricultural practices such as RNAi-insecticides, phytobioma modulation and precision agriculture, in which we can adapt agricultural practices by understanding plant function. The challenges of an extremely fast-changing field are great, also due to trade and climate change. The multitude of plants, the multitude of pathogens, each with its own peculiarities and innumerable combinations of them, will require the continuation of excellent cooperation and joint strength.

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Vpliv pandemije COVID-19 na izvajanje postopkov uradnega nadzora na področju varnosti hrane

*Matjaž Guček¹

¹ Ministrstvo za kmetijstvo, gozdarstvo in prehrano, Republika Slovenija
Uprava Republike Slovenije za varno hrano, veterinarstvo in varstvo rastlin (UVHVVR)

e-naslov: matjaz.gucek@gov.si

* direktor UVHVVR

Ključne besede: uradni nadzor, varnost živil, kritična infrastruktura

Uprava RS za varno hrano, veterinarstvo in varstvo rastlin (UVHVVR) izvaja naloge uradnega nadzora na področju varnosti, kakovosti in označevanja živil, varnosti in kakovosti krme, uporabe materialov namenjenih za stik z živali in nadzor na področju živalskih stranskih proizvodov. Opravlja naloge tudi na področju identifikacije in registracije živali, zdravja živali, varstva prebivalstva pred zoonozami in zaščite živali, poleg tega pa še naloge na področju varstva rastlin, vključno z varstvom novih sort rastlin, semenskega materiala, ocenjevanja in registracije fitofarmaceutskih sredstev vključno z nadzorom njihovega prometa. Zaradi spremenjenih razmer, ki so nastale kot posledica epidemije Covid-19, je bilo potrebno ustrezno prilagoditi obseg in postopke uradnega nadzora in drugih nadzornih aktivnosti. Ključni izziv za UVHVVR v času Covid-19 je bila zagotovitev obvezno predpisanih pregledov, ki so omogočili, da so izvajalci dejavnosti lahko nemoteno opravljali potrebne aktivnosti in tako ohranjali svoje poslovanje. V to skupino pregledov sodijo obvezni pregledi v odobrenih obratih za proizvodnjo živil živalskega izvora, zagotavljanje vseh predpisanih nadzornih postopkov pri uvozu blaga in izdaja certifikatov, spričeval in druge dokumentacije za potrebe izvoza. V času epidemije je bilo potrebno zagotoviti izvajanje nujnih pregledov ob pojavu škodljivih organizmov, pojavu zoonoz in bolezni živali. Na področju živil so bile aktivnosti UVHVVR usmerjene predvsem v obravnavo vseh primerov pojava nevarnih živil, o katerih smo bili obveščeni preko sistema EU RASFF, s strani izvajalcev dejavnosti oziroma na podlagi rezultatov uradnega vzorčenja, ki je v okrnjeni obliki potekalo tudi v času epidemije. Poleg tega je UVHVVR zagotavljala svojo polno odzivnost tudi v primeru vseh vrst prijav vključno s prijavi s področja dobrobiti živali.

Poleg vsega naštetega je UVHVVR izvajala tudi nadzor nad izvajanjem ukrepov za preprečevanje širjenja okužbe s Covid-19 pri izvajalcih dejavnosti, ki spadajo v njeno delovno področje.

Izvajanje obveznih nalog ob upoštevanju ukrepov za zmanjšanje izpostavljenosti nadzornega osebja na eni strani in zaradi epidemije

prilagojen način dela izvajalcev dejavnosti na drugi strani, je imelo za posledico zmanjševanje obsega dela na področju ostalih rednih nalog uradnega nadzora. Tako je se v času največjega tveganja za pojav in širjenje Covid-19 zmanjšal obseg odvzema uradnih vzorcev ter – v nekaterih primerih – tudi obseg laboratorijskih preiskav. V primerih, ko je to možno oziroma strokovno utemeljeno, bo vzorčenje opravljeno naknadno. V določenih primerih je bilo potrebno izvajalcu dejavnosti uradni nadzor predhodno najaviti. V nekaterih primerih je bil uradni nadzor opravljen brez prisotnosti zavezanca. Na UVHVVR ocenjujemo vpliv epidemije Covid-19 na postopke izvajanja nadzornih aktivnosti kot zmeren in njegovi učinki ne bodo imeli dolgotrajnih posledic. Kljub temu je epidemija jasno pokazala določene pomanjkljivosti sistema. K sreči je bil delež nadzornega osebja, ki je bil odsoten zaradi vpliva epidemije, relativno nizek. Izkazalo se je, da nujno potrebujemo vzpostavitev načrtov ravnanja, ki bodo urejali zagotavljanje ustreznega števila nadzornega osebja, da bo mogoče v takšnih in podobnih primerih zagotoviti stabilno delovanje sistemov, ki spadajo v delokrog UVHVVR in so hkrati del kritične infrastrukture. V fazi, ko se epidemija umirja bi bilo smotrno izkoristiti pridobljene izkušnje drugih držav in z izmenjavo informacij med nadzornimi organi omogočiti čimbolj učinkovit prenos dobrih praks.

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Impacts of COVID-19 pandemic on food safety official controls

*Matjaž Guček¹

¹ Ministry for Agriculture, Forestry and Food, Administration of the Republic of Slovenia for Food Safety, Veterinary Sector and Plant Protection

E-mail: matjaz.gucek@gov.si

*Director General of AFSVSPP

Key words: official controls, food safety, critical infrastructure

Administration of the Republic of Slovenia (AFSVSPP) conducts the tasks of official controls of safety, quality and identification of foodstuffs, safety and quality of animal feed, use of materials coming into contact with foodstuffs, and official controls of animal by-products. Other tasks, inter alia, include the identification and registration of animals, animal health, public health protection against zoonoses, and animal welfare, and plant protection, including the protection of new plant varieties, seeds and propagation material, assessment and registration of plant protection products (PPPs), including official controls of trade in PPPs. On account of the changed circumstances provoked by the Covid-19 pandemic it was necessary to adapt appropriately the scope and procedures of official controls and other control activities. A key challenge for AFSVSPP in the Covid-19 period was providing for the mandatorily required checks, whereby the business operators were in a position to continuously conduct the activities necessary to maintain their business operations. This group of checks includes the mandatory checks in establishments approved for the production of foodstuffs of animal origin, ensuring all the required control procedures in imports of goods and issuing of certificates, attestations and other documents relevant to imports. During the pandemic, it was necessary to provide for the implementation of emergency checks at occurrences of harmful organisms, outbreaks of zoonoses and animal diseases. In the food sector, AFSVSPP activities were focusing on tackling all the cases of detected foodstuffs posing a health risk, notified through the EU-RASFF System by business operators, or based on the results of official sampling that was conducted throughout the pandemic, though in a curtailed manner. Additionally, AFSVSPP maintained the full responsiveness in cases of incoming reports on infringements of all types, including any infringements against animal welfare. In addition to all the above-stated activities, AFSVSPP conducted the controls of implementation of preventive measures against the spread of Covid-19 infection at business operators falling within the remit of the AFSVSPP competences.

Implementation of mandatory tasks, by following the relevant measures of minimising the exposure of the control staff on the one hand, and by observing the adapted working hours of business operators on account of the pandemic on the other, resulted in decreasing the scope of work in other regular official control tasks. Thus, at the time of the highest risk of occurrence and spread of Covid-19, the scope of official sampling decreased and – in certain cases – also the scope of laboratory tests. In cases, where feasible or professionally substantiated, sampling will be conducted subsequently. In certain cases, official controls had to be pre-notified to business operators. In certain other cases, official controls were conducted in the absence of the obligor. AFSVSPP assesses the impacts of the Covid-19 pandemic on the procedures of implementation of control activities as moderate, and the resulting effects will have no lasting consequences. Nevertheless, the pandemic has clearly shown certain deficiencies of the system. Luckily, the share of the control staff that was absent due to impacts of the pandemic, was relatively low. It has become obvious that we urgently need to set up management plans, which will govern the provision of adequate numbers of control staff, and that, in such and similar cases, stable operation of systems within the operative range of AFSVSPP, which are part of critical infrastructure, may be guaranteed. At a stage when the epidemic is calming down, it would be useful to make use of the experience gained from other countries and to enable efficient transfer of good practices by exchanging information between competent authorities.

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Delovanje Nacionalnega veterinarskega instituta na področju varnih živil

*Matjaž Ocepek, Majda Biasizzo, Jožica Dolenc, Stanka Vadjal, Andrej Kirbiš, Irena Zdovc, Janez Posedi

¹ NVI, Veterinarska fakulteta, Univerza v Ljubljani,

e-naslov: matjaz.ocepek@vf.uni-lj.si

*dr. predstojnik NVI

Ključne besede: varna hrana, laboratorijska diagnostika, NVI

NVI deluje kot posebna notranja organizacijska enota Veterinarske fakultete, Univerze v Ljubljani. Področje varnosti živil je v EU harmonizirano in je bilo za področje delovanja NVI dodatno urejeno z Zakonom o veterinarstvu in Zakonom o veterinarskih merilih skladnosti. Področje nadzora je bilo nazadnje urejano z Uredbo vlade zaradi uveljavitve Uredbe (EU) 2017/625 o izvajanju uradnega nadzora in drugih uradnih dejavnosti. Na podlagi Zakona o veterinarstvu ima NVI v koncesijski pogodbi z UVHVVR opredeljene podrobnosti o izvajanju določenih delavnosti tudi s področja varnosti živil. Na sedmih lokacijah sodeluje pri vseh aktivnostih, ki so povezane z zagotavljanjem nemotene preskrbe z živili - tako z uradnimi službami kot z nosilci živilske dejavnosti. Na področju varne hrane, ki je neločljivo povezana z zdravjem ljudi, se ukvarjamo z biološko in kemijsko varnostjo živil ter krme. Biološki dejavniki so bakterijski, virusni, parazitarni in drugi povzročitelji zoonoz. Kemijski dejavniki so predvsem onesnaževala (težke kovine in toksini) in ostanki veterinarskih zdravil (hormoni, antibiotiki, kokcidiostatiki, nesteroidna protivnetna zdravila, zdravila proti zajedavcem, pomirjevala in prepovedane učinkovine). Vse bolj pomembna dejavnost je tudi ugotavljanje odpornosti bakterij proti protimikrobnim zdravilom, ki se od leta 2014 izvaja v skladu s Sklepom Komisije (EC) št. 652/2013 o spremljanju in poročanju odpornosti zoonotskih in komenzalnih bakterij proti protimikrobnim zdravilom. Laboratoriji so povezani v mrežo evropskih referenčnih laboratorijev, katerih vloga je vzdrževanje visoke strokovnosti in poenotenje metodologije v evropskem prostoru. Laboratoriji NVI so za področja, povezana z živili živalskega izvora in krme, od države imenovani tudi za potrebe uradnega nadzora. Na področju kemije, mikrobiologije in vzorčenja so laboratoriji v fleksibilnem obsegu akreditirani za 155 metod po standardu ISO 17025. V primeru zaznavanja novih tveganj se je NVI sposoben odzvati s hitro postavitvijo ali prilagoditvijo analitike. To se je pokazalo v času množičnih zastrupitev v Evropi, katerih vzrok je bila verotoksična *E. coli* O104, problematiki potvorb mesnih izdelkov zaradi prisotnosti konjskega mesa in zdravstveno oporečnega poljskega govejega mesa in mesnih pripravkov, ob pojavu fipronila v jajcih, ugotavljanju

razširjenosti virusa SARS-CoV-2 pri živalih idr. Monitoring kemijske varnosti živil izvaja UVHVVR nenapovedano pri rejcih in kot stalen nadzor na klavni liniji. Vzorčenje izvajajo uradni veterinarji, ki vzorce pošiljajo neposredno v naše laboratorije, kjer izvedemo analize in nudimo naročniku strokovno in znanstveno podporo. Mikrobiološki monitoring živil, ki vključuje ugotavljanje najpogostejših povzročiteljev alimentarnih obolenj, UVHVVR letno prilagaja tudi glede na epidemiološko sliko v Evropi in Sloveniji. Strokovnjaki NVI pri tem sodelujemo s svojim strokovnim znanjem in analitsko kapaciteto. Po pooblastilu UVHVVR osebje NVI izvaja tudi vzorčenje živil in krme in je za ta namen tudi akreditiran. Zdravje živali je predpogoj za proizvodnjo varnih živil. Zato je ena od nalog NVI zagotavljanje neprekinjene 24 – urne diagnostike posebno nevarnih bolezni ter diagnostika zoonoz. Raziskovanje na področju varne hrane poteka kontinuirano v okviru raziskovalnega programa P4-0092 – Zdravje živali, okolje in varna hrana, kjer imamo poseben delovni sklop »Alimentarne zoonoze«. Poleg tega poteka še v okviru številnih temeljnih in ciljnih raziskovalnih projektov, kjer uspešno sodelujemo z drugimi inštitucijami na področju varne hrane. V letih od sprejema Uredbe (ES) št. 178/2002 o določitvi splošnih načel in zahtevah živilske zakonodaje se je način dela v laboratorijih zelo spremenil. Izboljšali smo sledljivost, nadzor opreme, uvedli dodatne kontrole in še vrsto drugih ukrepov, ki so temeljito spremenili celotno organizacijo dela. Področje kemijske varnosti smo izboljšali s številnimi novimi metodami in dopolnitvijo že obstoječih z dodatnimi metodami za ugotavljanje farmakološko aktivnih snovi. Epidemiološko spremljanje bakterijskih zoonoz smo nadgradili s sekvenciranjem celotnih genomov (WGS), ki je v zadnjih letih postal sestavni del medlaboratorijskih kontrol in programa monitoringa zoonoz. Uvedba novih tehnologij in analiznih pristopov je zahtevala obsežno znanje, izkušnje in fleksibilnost. V nabor aktivnosti, ki jih izvajamo za potrebe UVHVVR, bi lahko dodali občasno izvedbo izrednih monitoringov, ki bi okrepili poznavanje stanja proizvodno higienskih kriterijev. S tem bi dobili vpogled v morebitne vrzeli glede rezultatov internega spremljanja bioloških in kemijskih tveganj s strani nosilcev živilske dejavnosti. Prav tako bi bilo z vidika varne hrane potrebno povečati nadzor nad prisotnostjo ostankov protimikrobnih snovi v posameznih živilih. Epidemiološko spremljanje bakterijskih zoonoz bi lahko razširili na več povzročiteljev in izolate iz živali in živil primerjali z izolati iz ljudi, kar bi predstavljalo pomemben doprinos na področju javnega zdravja. Izpostavili bi tudi problematiko glede označevanja živil predvsem z vidiki izvora oziroma porekla surovin z vidika dobrobiti živali. Na področju obvladovanja varnosti živil in krme želimo v sodelovanju z Upravo povečati število raziskovalnih projektov, katerih cilj bi bil preko sodelovanja z drugimi inštitucijami povečati zmogljivosti pri reševanju problemov, ki spremljajo slovensko prehrambno verigo – od vil do vilic.

Viri:

Priloga k akreditacijski listini, LP-021

National Veterinary Institute (NVI) operations in the field of food safety

*Matjaž Ocepek, Majda Biasizzo, Jožica Dolenc, Stanka Vadnjal, Andrej Kirbiš, Irena Zdovc, Janez Posedi

¹ NVI, Veterinary Faculty, University of Ljubljana,

e-naslov: matjaz.ocepek@vf.uni-lj.si

*the head of NVI

Key words: Food safety, laboratory diagnostics, NVI

The National Veterinary Institute operates as a special internal organizational unit of Veterinary Faculty, University of Ljubljana.

The area of food safety is harmonized in the EU and has been additionally regulated for the scope of the NVI by the Veterinary Act and the Veterinary Conformity Criteria Act. The area of control was most recently regulated by a Government Regulation due to the entry into force of Regulation (EU) 2017/625 on the implementation of official controls and other official activities. In accordance with the Veterinary Act, the NVI has laid down details on the performance of certain activities, including in the area of food safety, in the concession agreement with the UVHVVR. At seven locations, it is involved in all activities related to ensuring the uninterrupted supply of food - both with official bodies and with food business operators. In the field of food safety, which is inseparable from public health, we deal with the factors that determine food safety; these are bacterial, viral, parasitic and other zoonotic agents, hormone residues, pollutants and medicines. An increasingly important activity is also the determination of antimicrobial resistance, which has been carried out since 2014 in accordance with Commission Decision (EC) No. 652/2013 for the monitoring and reporting of resistance of zoonotic and commensal bacteria to antimicrobial drugs. The laboratories are linked to a network of European reference laboratories whose mission is to maintain a high level of expertise and harmonize methodologies across Europe. The NVI laboratories also carry out tests for the purpose of official control. In the field of chemistry, microbiology and sampling, we have a flexible range of 155 accredited methods according to the standard ISO 17025 (source: annex to Accreditation Document, LP -021). In case of emerging problems or scandals, the NVI is able to react by quickly setting up or adapting analytics; this was shown in the case of mass poisonings in Europe caused by the verotoxic *E. coli* O104 and problems of adulteration of meat products due to the presence of horse meat, harmful Polish beef, the determining the prevalence of SARS-COV-2 in animals etc. Monitoring of chemical safety of food is carried out by UVHVVR unannounced in breeders and as a permanent control at the slaughter line. Sampling is carried out by authorized official

veterinarians who send the samples directly to our laboratories, where we carry out the analyzes and provide professional support to the client. The microbiological surveillance of foodstuffs, which includes the identification of the most common pathogens of food-borne diseases, is also adjusted annually by the administration to the epidemiological picture in Europe and Slovenia. The experts of the NVI contribute to this with their expertise and analytical skills. On behalf of the administration, NVI also carries out food and feed sampling, which is accredited for this purpose. NVI provides an overview of the animal disease situation, continuous 24-hour diagnostics of highly dangerous diseases and zoonoses. Research in the field of food safety is continuously carried out within the research program P4-0092 – Animal Health, Environment and Food Safety, where we have a specific work package "Alimentary Zoonoses". In addition, within the framework of numerous basic and targeted research projects, where we successfully collaborate with other institutions in the field of food safety. In the years since the adoption of Regulation (EC) No 178/2002 laying down the general principles and requirements of food law, establishing European Food Safety Authority and laying down procedures in matters of food safety, we have fundamentally changed the way laboratories work. We improved traceability, equipment control, introduced additional controls and a number of other measures that fundamentally changed the entire organization of work. In the area of chemical safety, several new methods were implemented and more pharmacologically active substances were added to the existing ones. Epidemiological surveillance of zoonotic agents was improved by the implementation of whole-genome sequencing (WGS), which is already an integral part of proficiency testing and surveillance programs. The implementation of novel technologies and analytical approaches required extensive knowledge and experience as well as flexibility. In the scope of contractual activities, we propose to add the occasional implementation of additional/extended monitoring, which would provide insight into the state of production and hygiene criteria by unraveling the reality of the results of internal controls performed by the food business operators themselves. From a food safety point of view, it would also be necessary to strengthen the monitoring of antibiotic residues in individual foodstuffs. We propose to extend epidemiological surveillance of zoonotic agents to more pathogenic species and to compare isolates from food and animal origin with those from human origin, as this would lead to a significant improvement in public health. In the area of food safety management, we also want to increase cooperation with the administration on research projects that can help solve the problems that accompany the Slovenian food industry - from stable to table.

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Annex to Accreditation Document, LP -Delovanje NLZOH na področju varnih živil

Okolje pandemije COVID-19 in njen vpliv na medicinsko in sorodne stroke

*Miroslav Petrovec¹

¹ Inštitut za mikrobiologijo in imunologijo, Medicinska fakulteta Univerze v Ljubljani, Zaloška 4, 1000 Ljubljana

e-naslov: mirc.petrovec@mf.uni-lj.si

*zdravnik, izredni profesor za področje mikrobiologije in imunologije, predstojnik Inštituta za mikrobiologijo in imunologijo MFUL

Ključne besede: pandemija, porajajoče okužbe, koronavirus

Pandemija COVID-19 se je zelo široko zarezala v medicino in sorodne stroke. V sodobnem času je COVID-19 edina pandemija, s katero sta se globalno uveljavila klasična epidemiološka ukrepa kot sta karantena in izolacija, zelo omejevalna ukrepa s kakršnima državljeni v tem stoletju še niso bili podvrženi. Zaradi tega je javnost te ukrepe po svetu in tudi pri nas pogosto izenačevala ter povezovala s političnimi in ne z zdravstvenimi ukrepi. Tik pred izbruhom pandemije COVID-19 smo bili v Sloveniji in Evropi izpostavljeni izredno hudemu valu influence tipa B, ki je z viškom epidemije v februarju 2020 prizadela predvsem mlajšo populacijo in povzročila ponekod tudi 50% odsotnost v šolah in vrtcih. Kljub izrednim težavam, ki jih je prinesla epidemija influence B, se odgovorne javnozdravstvene institucije v Sloveniji nikoli do sedaj niso odločile za zaprtje šol ali vrtcev, ki so dokazano vir in generator okužb z virusom influence in drugih virusov, ki povzročajo okužbe dihal in imajo celo višjo smrtnost kot okužba s SARS-CoV-2. S prvim primerom okužbe z novim koronavirusom SARS-CoV-2 v Sloveniji, ki je bil dokazan 4.3.2020 se je pandemija uradno razširila na območje Slovenije. Z naraščajočim številom okužb so se mikrobiološki laboratoriji v Sloveniji najprej soočili s situacijo kot so jo poznali z vsakoletnimi epidemijami gripe in okužb z respiratornim sincicijskim virusom. Že v aprilu 2020 pa je postalo jasno, da je epidemija v resnici postala pandemija, ki je dejansko zajela celoten svet in je na svojstven način prizadela vsako posamično državo in njen zdravstveni sistem. Osnovne dejavnosti zdravstva na primarnem in sekundarnem nivoju so bile primorane svoje dejavnosti ustaviti ali nadaljevati delo pod strogo omejujočimi pogoji. Vse to je povzročilo zelo neenakomerno delovno obremenitev, ki se je že v začetku pandemije pokazala kot breme za zaposlene tako v klinični kot laboratorijski medicini. Stroka se je srečevala s fizičnimi obremenitvami zaradi povečanega obsega dela, strahu pred okužbo, izgorelosti in psihičnimi pritiski zdravstvenega osebja, ki je pričakovalo enak obseg in način izvajanja storitev kot so jo laboratoriji nudili v pred-epidemičnih časih. Na Inštitutu za mikrobiologijo in imunologijo Medicinske fakultete v Ljubljani se je diagnostika virusa SARS-CoV-2 začela v januarju 2020.

Pandemija COVID-19 je sprožila številne spremembe. Običajno organiziranost je zamenjalo 24-urno delo vse dni v letu, število dnevno sprejetih vzorcev v mikrobiološko diagnostiko pa se je povečalo za 4-krat. Večina zdravstvene dejavnosti v Sloveniji in svetu se je soočila z vrsto novosti in izzivi. Tako je bilo 95 odstotkov vseh izvajalcev odvzema vzorcev v zelo kratkem času priučenih za odvzem bira nosnega dela žrela z vsemi potrebnimi zaščitnimi ukrepi. Ti odvzeti vzorci pa so bili prvič v zgodovini infekcijskih bolezni podvrženi izjemno sofisticirani in dragi molekularni diagnostiki novega virusa, za katerega je bila rekordno hitro razvita diagnostika. Posebnost COVID-19 pandemije je z laboratorijskega vidika v tem, da se do danes ni za nobeno drugo kužno bolezen izvajala najsodobnejša molekularna diagnostika, ki zahteva visoke standarde, usposobljenost in nadzor, v masovni obliki in s hitrostjo izvedbe preiskave. Ob tem je bila najbolj izpostavljena časovna komponenta, saj je bilo zaradi epidemioloških ukrepov potrebno laboratorijsko testirati ne samo klinične, ampak tudi epidemiološko povezane primere za namen karantene in osamitve, v nadaljevanju pandemije pa tudi kot pogoj za potovanja v tujino. Vse to je v svetovnem merilu povzročilo splošno pomanjkanje dobav in izgorelost osebja tako v laboratorijski kot klinični medicini, povezani s pandemijo. Za mikrobiološko diagnostiko je bilo še posebno pereče pomanjkanje reagentov, pripomočkov, osebja in aparatur. Zaradi obsega pandemije je bila dobava vsega potrebnega globalno ogrožena. Že v začetku pandemije leta 2020 je prišlo do izpada vseh evropskih proizvajalcev za osnovno sredstvo kot je npr. bris za odvzem vzorca iz nosnega dela žrela, ki se ni izboljšal niti do junija 2021. V letu 2020 niti en dobavitelj ali distributer v Sloveniji ni mogel zagotoviti potrebne količine kvalitetnih reagentov za molekularno diagnostiko SARS-CoV-2. Podjetja, ki so bila pred pandemijo glavni dobavitelji kvalitetnih reagentov za mikrobiološko diagnostiko so praktično čez noč ustavila ali zelo restriktivno omejila dobave. Vsi pomembni izvajalci laboratorijske dejavnosti so bili prisiljeni v urgentno iskanje rešitev, ki je temeljila na kontinentalni diverzifikaciji dobaviteljev reagentov in aparatur za diagnostiko SARS-CoV-2. Pritisk pandemije je povzročil nenadzorovano razširitev mikrobiološke diagnostike, kar je povzročilo veliko škodo virološki in mikrobiološki stroki, ki v odločitvah nikjer na svetu zaradi izjemne situacije ni mogla uveljaviti svojih strokovnih zahtev. Diagnostika je bila zaradi pandemije razširjena na številne izvajalce, ki niso ustrezno usposobljeni niti za predanalitični del (odvzem vzorca) niti za analitični del (izvajanje molekularnih in antigenskih testiranj). Pandemija COVID-19 bo v globalnem merilu zagotovo postala zgodovinski mejnik in učni primer ukrepanja za vse morebitne bodoče pandemije.

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Luo Y, Wang J, Zhang M, Wang Q, Chen R, Wang X, Wang H. COVID-19-another influential event impacts on laboratory medicine management. *J Clin Lab Anal.* 2021 May 25:e23804. doi: 10.1002/

COVID-19 pandemic environment and their influence on medical and related sciences

*Miroslav Petrovec¹

¹ Institute of Microbiology and Immunology, Faculty of Medicine, University of Ljubljana, Slovenia

e-mail: mirc.petrovec@mf.uni-lj.si

*MD, PhD, Head of the Institute of Microbiology and Immunology, Faculty of Medicine, University of Ljubljana, Slovenia

Key words: Pandemics, emerging infections, coronavirus

Pandemic of COVID-19 has a big impact on field of medicine and other biomedical sciences. In the modern times COVID-19 represents the first occasion in which quarantine and isolation has been applied as the major epidemiological measures. Due to the objective severe restrictions which these impose on citizens they were often perceived as political, and much less as public health measures. In February 2019, directly before COVID-19 epidemic, there was a big wave of Influenza B infections in Slovenia and Europe which hit hard on young population and has caused up to 50% absence in primary school and preschool children. Public health officials in Slovenia, never formally declared epidemic or closed the schools in the past, despite scientific evidence that school closure has a dramatic impact on influenza and other respiratory viral infections which has much higher mortality than COVID-19, not only in children but also in adult population. First case of SARS-CoV-19 has been detected in Slovenia on 4th March 2020 and this has marked a timepoint for beginning of epidemic. With increasing number of SARS-CoV-2 infections, microbiological laboratories applied their preparedness plan for seasonal respiratory virus infection. But less than a month after it was clear, that we are dealing with truly worldwide pandemic which affected almost all world countries and their healthcare system. Primary and secondary healthcare systems have been severely affected and was forced to close their usual activity almost completely or pursue activity under very strict and limiting circumstances. All these has caused the imbalance in work activities in different healthcare sectors which early in the epidemic shows as a huge burden for healthcare workers in clinical and laboratory based medicine. Professionals has suffered from physical exhaustion, burnout, fear from infection with new virus and pressure from clinical colleagues with demands for timely and accurate laboratory diagnostics service as in pre-pandemic times. At the Institute of Microbiology and Immunology, Faculty of Medicine, University of Ljubljana, laboratory diagnostics has begun in January 2020. Pandemic of COVID-19 has caused several reorganization measures which includes 24/7/365 shifts and up to 4-fold increase in samples number. With Covid-19 waste

majority of healthcare in Slovenia and worldwide has been confronted with tasks, for which they have no formal training and has not been in their list of activities before, which includes taking nasopharyngeal swabs and appropriate infection control. At no point in time there was a highly sophisticated and expensive virological test employed for infection which cause mild infection in majority of people and the test was developed in record timeframe. The uniqueness of COVID-19 laboratory diagnostics lies in the fact that never has a modern, expensive and sophisticated tests been used in such a massive scale and at same time required highly reliable and quick results. Time component has put heavy burden on the laboratories, because not only the urgent patients, but also contacts and international travellers need to be tested at the same time and all required results as soon as possible. All the factors globally caused shortage of laboratory reagents, components, and laboratory equipment as well as burnout staff in clinical and laboratory medicine. Lacking reagents, staff and equipment has been hardest for the professionals in microbiology laboratories. Even at the very beginning there were shortages of swabs, viral transport media, PCR reagents, pipette tips, which soon resulted in complete inability of all available european distributors to match the quantities of goods needed, which still lasted to the June 2021. Even most reliable distributors could not match the demand even from the pre-pandemic times. Laboratories were forced to take steps to diversify intercontinentally all their reagents and supplies demand to many commercial partners to have sufficient leverage. Pandemic pressure also caused almost uncontrolled spread of microbiological diagnostics, which has caused harm to reliable and controlled laboratory diagnostics. Laboratory diagnostics has been spread to previously untrained staff in virology. All this resulted in errors and not optimal practice in preanalytical and analytical phase of laboratory diagnostics. In the global sense, pandemic of COVID-19 will be a history milestone for any of the forthcoming pandemic of infectious disease.

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Delovanje Nacionalnega laboratorija za zdravje, okolje in hrano (NLZOH) na področju varnih živil

Viher Hrženjak Vesna¹, Škrjanc Barbara¹, Zelenik Katja¹, Franko Jerneja¹, Ivanoš Jerica¹

¹Nacionalni laboratorij za zdravje, okolje in hrano, Prvomajska 1, 2000 Maribor, Slovenija

e-naslov: info@nlzoh.si

Ključne besede: NLZOH, NRL, uradni laboratorij, mikrobiološke preiskave, kemijske preiskave

Nacionalni laboratorij za zdravje, okolje in hrano (NLZOH) je osrednji in največji slovenski javnozdravstveni laboratorij, ki se ukvarja s problematiko varovanja okolja, diagnostično in javnozdravstveno mikrobiološko dejavnostjo, kemijskimi in mikrobiološkimi analizami različnih vrst vzorcev ter z raziskovalno dejavnostjo. Zagotavljanje varnosti živil je ena izmed naših strateških dejavnosti. Vključeni smo v procese zagotavljanja varnosti živil v Sloveniji na vseh fazah pridelave, predelave ter distribucije hrane in krme kot ena izmed podpornih strokovnih institucij UVHVVR in ZIRS že od samega začetka veljavnosti Uredbe 178/2002. Sodelujemo pri pripravi nacionalnih programov nadzora, izvajamo vzorčenje živil, kemijska in mikrobiološka preskušanja živil in krme, ocenjujemo označbe živil in na osnovi rezultatov izdelamo ocene skladnosti in varnosti živil in krme ter ocene tveganja. Pripravljamo letna poročila in skupaj s pristojnimi uradnimi organi sodelujemo pri poročanju podatkov o metodah in rezultatih preskušanj vzorcev živil Evropski agenciji za varnost hrane. S strani UVHVVR smo imenovani kot nacionalni referenčni laboratorij (NRL) za sklope kemijskih preiskav v živilih rastlinskega in živalskega izvora, in sicer za ostanke pesticidov in policiklične aromatske ogljikovodike v živilih rastlinskega in živalskega izvora, za težke kovine in mikotoksine v živilih rastlinskega izvora, za živo srebro in ostanke nekaterih veterinarskih zdravil v živilih živalskega izvora, za dioksine in PCB v krmi in hrani in za analize organskih fosforjevih spojin v medu. S strani Ministrstva za zdravje smo imenovani tudi kot NRL za preiskovanje materialov, ki pridejo v stik z živili. Smo tudi uradni laboratorij za izvajanje kemijskih preiskav v živilih rastlinskega in živalskega izvora ter mikrobioloških preiskav v živilih rastlinskega izvora, in sicer za vse skupine spojin, za katere smo imenovani kot NRL ter dodatno za številna druga onesnaževala, dodatke in alergene v živilih rastlinskega in živalskega izvora, kakovost posameznih skupin živil in kemično sestavo živil, mikrobiološke analize živil rastlinskega izvora ter tudi za vzorčenje živil za vzorce, za katere izvajamo analize. Na področju zagotavljanja varnosti živil dodatno zagotavljamo strokovno pomoč

nosilec živilske dejavnosti. Sodelujemo pri verifikaciji HACCP sistemov v javnih ustanovah, izvajamo kemijska in mikrobiološka preskušanja živil za različne naročnike. Sodelujemo pri izobraževanju in osveščanju strokovne javnosti in potrošnikov s prispevki na strokovnih srečanjih in z objavami v različnih medijih. Sodelujemo pri nacionalnih in mednarodnih raziskovalnih projektih s področja varnosti živil. Na področju mikrobiološkega in kemijskega preskušanja nas odlikujejo izjemno dobro opremljeni laboratoriji, visoka strokovna usposobljenost zaposlenih in veliko število različnih metod preskušanja. Preiskave živil, ki jih izvajamo, so številne: preiskave kakovosti / sestave živil, mikrobiološke preiskave (klasične in genetske metode), preiskave alergenov, aditivov (konzervansi, umetna barvila, umetna sladila,...), arom, pesticidov in onesnaževal (kovine, mikotoksini, dioksini in PCB, policiklični aromatski ogljikovodiki, nitrati, procesna in druga onesnaževala). Z akreditiranimi dejavnostmi po SIST EN ISO/IEC 17025:2017 zagotavljamo mednarodno potrjeno neodvisnost in strokovno usposobljenost, zaupanje v rezultate preskušanj ter mednarodno priznavanje izdanih poročil. Kot NRL in uradni laboratorij smo redno presojeni s strani inšpekcije Urada za prehrano in veterino pri Evropski komisiji (FVO), ki vedno potrди strokovno izvajanje našega dela. Ponosni smo na doseženo stopnjo razvoja analiznih metod, ki nas postavlja ob bok in v enakovreden položaj z ostalimi NRL in uradnimi laboratoriji v EU. Ponosni smo, da smo tudi med epidemijo Covid – 19 uspeli ves čas zagotavljati izvajanje naših storitev na področju zagotavljanja varnosti živil. Izredni dogodki (epidemija, okoljske nesreče) so nam pokazali, da je v izrednih razmerah pomembno, da smo na nivoju naše države sposobni hitro povečati kapacitete izvajanja obstoječih analiznih metod ali vzpostaviti nove. Oboje je povezano s prepoznavo pomena NRL in uradnih laboratorijev in zagotovitvijo njihovega systemskega financiranja v času običajnih razmer in dodatno financiranje v času izrednih razmer, kar bo eden izmed glavnih izzivov prihodnosti. Zaradi vedno strožjih zakonodajnih zahtev, pojavljanja novih onesnaževal, vedno nižjih mej določanja analitskih metod, zahtev akreditiranosti vseh metod, tudi ob majhnem številu vzorcev, bodo tovrstni viri nujni.

Viri:

NLZOH. O nas. <https://www.nlzoh.si/>

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Activities of the National Laboratory of Health, Environment and Food (NLZOH) in the area of food safety

Viher Hrženjak Vesna¹, Škrjanc Barbara¹, Zelenik Katja¹,
Franko Jerneja¹, Ivanoš Jerica¹

¹ National Laboratory of Health, Environment and Food, Prvomajska 1, 2000
Maribor, Slovenia

E-mail: info@nlzoh.si

Keywords: NLZOH, NRL, official laboratory, microbiological analyses, The National Laboratory of Health, Environment and Food (NLZOH) is the central and largest Slovenian public health laboratory that deals with the issue of environmental protection, performs diagnostic and public health microbiological activities, chemical and microbiological analyses on various types of samples and also carries out research activities. The assurance of food safety is one of our strategic activities. We are involved in the food safety assurance process in Slovenia in all stages of production, processing and distribution of food and animal feed as one of the supporting professional institutions of the Administration for Food Safety, Veterinary Sector and Plant Protection and the Health Inspectorate of the Republic of Slovenia since the Regulation 178/2002 entry into force. We participate in the preparation of national control programmes, carry out sampling as well as chemical and microbiological analyses of food and animal feed, assess food markings and using the results for assessing food and animal feed compliance, performing safety assessments and risk assessments. We prepare annual reports, and work with competent official bodies in the reporting of data on testing methods and results to the European Food Safety Authority. We are appointed as the national reference laboratory (NRL) for chemical analyses of foodstuffs of plant and animal origin, i.e. analyses of pesticide residues and polycyclic aromatic hydrocarbons in foodstuffs of plant and animal origin, heavy metals and mycotoxins in foodstuffs of plant origin, mercury and residues of certain veterinarian medicines in foodstuffs of animal origin, dioxins and PCB in animal feed and food, organic phosphorous compounds in honey, as well as for the analysis of food contact materials. We are also the official laboratory for the performance of chemical analyses of foodstuffs of plant and animal origin, as well as microbiological analyses of foodstuffs of plant origin, i.e. for all groups of compounds for which we were appointed as the NRL, and additionally for numerous other contaminants, additives and allergens in foodstuffs of plant and animal origin, the quality of individual groups of foodstuffs, the chemical composition of foodstuffs, microbiological analyses of foodstuffs of plant origin and for the sampling of foodstuffs. We additionally provide professional assistance to food industry actors, participate in the verification of HACCP systems, perform chemical and microbiological analyses of foodstuffs

for various clients. We also participate in the education and awareness-raising of the professional public and consumers at professional meetings and through publications in various media. We also engage in national and international research projects in the area of food safety. Our laboratories are well-equipped, our employees highly trained, our numbers of various analysis methods are high: analyses of the quality/composition of food, microbiological analyses (standard and genetic methods), analyses of allergens, additives (preserving agents, artificial colorants, artificial sweeteners, etc.), aromas, pesticides and contaminants (metals, mycotoxins, dioxins and PCB, polycyclic aromatic hydrocarbons, nitrates, process and other contaminants). Our activities are accredited according to the SIST EN ISO/IEC 17025:2017 standard, our independence and professional qualifications are internationally certified, which ensures trust in the results of our analyses and international recognition of our reports. We are proud of the achieved level of development of analysis methods that places us on an equal footing with other NRL and official laboratories in EU. We are proud of having been able to provide our food safety assurance services in all times of the Covid-19 pandemic. Emergencies, such as the epidemic and environmental accidents, have shown us that it is very important for our country to be able to either increase the capacity of the performance of existing analysis methods or set up new ones. Both of these are linked to the recognition of the importance of NRL and official laboratories, and the provision of financial resources for ordinary day-to-day operations, as well as additional financing in emergency situations, which is going to be one of the main challenges in the future. Owing to the increasingly more stringent requirements, the appearance of new contaminants, the decreasing analytical method determination limits, requirements for the accreditation of all methods, even with a small number of samples, such resources will be essential.

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Delovanje Instituta »Jožef Stefan« na področju varnih živil

Benjamin Zorko, Nives Ogrinc, Marko Štok, Marijan Nečemer, Jasmina Kožar Logar

Institut »Jožef Stefan«, Jamova cesta 39, 1000 Ljubljana, Slovenija
e-naslov: benjamin.zorko@ijs.si

Ključne besede: radioaktivnost v hrani, krmi, ugotavljanje porekla živil

Varna živila so temelj zdrave prehrane posameznika in pomemben dejavnik javnega zdravja. Različne bolezni, ki se prenašajo z živil, se pojavljajo zaradi uživanja onesnaženih živil, ki se lahko pojavijo v katerikoli stopnji živilske verige, od pridelave, predelave oziroma proizvodnje živila do njegovega zaužitja. Onesnaženje je posledica onesnaženja okolja, neprimernih kmetijskih ali proizvodnih praks, neustreznega skladiščenja živil ter neznanja in neosveščenosti pri izbiri in pripravi hrane. Vir strupenih snovi v hrani pa ni vedno onesnaževanje okolja, kot je splošno razumljeno in pogosto tudi dokazano, temveč tudi potvarjanje prehranskih izdelkov. Varnost hrane je zato družbena odgovornost vseh nas, kar je tudi geslo letošnjega svetovnega dneva hrane. Lokalno pridelana hrana ima poseben pomen pri razvoju in ohranjanju nacionalnega kmetijstva in gospodarstva ter zagotavljanju trajnostne oskrbe s hrano. Glede na razsežnost globalne trgovine živil jo lahko ogroža uvožena hrana, ki je večkrat neznanega ali nejasnega porekla, dvomljive kvalitete in primernosti za uživanje. Zato je potrebno zagotoviti ustrezen in sorazmeren nadzor vseh stopenj v živilski verigi lokalno pridelane in uvožene hrane. Takšen nadzor izvaja Uprava RS za varno hrano, veterinarstvo in varstvo rastlin (URSVHVVR), njihovi pogodbeni deležniki pa zagotavljajo ustrezno kvaliteto storitev. Institut »Jožef Stefan« na področju varne hrane že desetletja zagotavlja certificirane analitske metode ugotavljanja vsebnosti onesnažil v živilih [1], stopnje onesnaženosti živil [2], razvoj novih metod in pristopov za ugotavljanje porekla živil [3]. Odseka F2 (LMR) in O2 (Radiokemija) sta z odločbo št. U3301-4/2021 z dne 08.01.2021, ki jo je izdala URSVHVVR, določena za uradna laboratorija za opravljanje uradnih analiz radioaktivnosti v vzorcih živil. Poleg tega Odsek O2 z odločbo št. U332-17/2019 z dne 9.9.2019, ki jo je prav tako izdala URSVHVVR, opravlja kot uradni laboratorij analize stabilnih izotopov v vzorcih živil in jih uporablja pri preverjanju pravilnega označevanje geografskega porekla živil. Na ta način IJS prispeva k zagotavljanju varne in zdrave hrane, podpiramo trajnostni razvoj lokalnega kmetijstva ter prepoznavnost regij, kjer pridelujejo ali predelujejo varno hrano. Opažamo, da je odvzetih vzorcev na letnem nivoju premajhno, še posebej tistih iz uvoza. Dodatno bi med pogodbene aktivnosti lahko vključili tudi analize obsevanih živil.

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Activities in the field of food safety at the Jožef Stefan Institute

Benjamin Zorko, Nives Ogrinc, Marko Štrok, Marijan Nečemer, Jasmina Kožar Logar

Jožef Stefan Institute, Jamova cesta 39, 1000 Ljubljana, Slovenia
e-naslov: benjamin.zorko@ijs.si

Key words: radioactivity in food and feed, determination of food origin

Safe foods are the foundation of a healthy diet and an important factor in public health. Various food-borne diseases are caused by the consumption of contaminated food and can occur at any stage of the food chain, from the production, processing or treatment of the food to its consumption. Contamination results from environmental pollution, inappropriate agricultural or production practices, inadequate storage of food, and ignorance and lack of awareness in the selection and preparation of the food for consumption. The source of toxic substances found in food is not always environmental pollution, as is commonly understood and often proven, but also the adulteration of food products. Food safety is therefore a social responsibility for all of us, which is the motto of this year's World Food Day. Locally produced food is of particular importance in developing and sustaining national agriculture and economies and ensuring sustainable food supplies. Given the scale of the global food trade, the locally produced food can be threatened by imported food, often of unknown or unclear origin, of dubious quality and edibility. It is therefore necessary to ensure adequate and proportionate controls at all stages of the food chain for locally produced and imported food. Such control is carried out by the Food Safety, Veterinary and Plant Protection Administration (FVVPA) and their contractual stakeholders ensure an adequate quality of service. In the field of food safety, for decades the Jožef Stefan Institute has been providing certified analytical methods for the determination of contaminants in food [1], the level of contamination of food [2], the development of new methods and approaches for the determination of the origin of food [3]. The F2 (LMR) and O2 (Radiochemistry) sections are designated as official laboratories for the analysis of radioactivity in food samples by Decision No. U3301-4/2021 of 08.01.2021 issued by the FVVPA. In addition, Section O2, by Decision No. U332-17/2019 of 09.09.2019, also issued by the FVVPA, carries out analyses of stable isotopes in food samples and by means of the results the correct geographical origin labelling of foodstuffs are verified. In this way, JSI contributes to ensuring safe and healthy food, supporting the sustainable development of local agriculture and the recognition of regions where safe food is produced or processed. We note that the number of samples taken for the analysis on an annual

basis is too small, especially those imported. In addition, the analysis of irradiated foodstuffs could be included in the contractual activities.

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Predavatelji/Lecturers

1. dr. Helena Baša Česnik, uni.dipl. kem., **Kmetijski inštitut Slovenije**
2. Urška Bolha, dr. vet. med., **Uprava za varno hrano, veterinarstvo in varstvo rastlin**
3. dr. Tanja Dreo, univ. dipl. biol., **Nacionalni inštitut za biologijo, Ljubljana**
4. g. Matjaž Guček dr. vet. med., generalni direktor, **Uprava za varno hrano, veterinarstvo in varstvo rastlin**
5. dr. Milena Miklavčič, uni.dipl.kem., **Znanstveno raziskovalno središče Koper**
6. dr. Matjaž Ocepek, dr. vet. med., **Nacionalni veterinarski inštitut, Veterinarska fakulteta, Univerza v Ljubljani**
7. izr. prof. dr. Miroslav Petrovec, dr. med., **Institut za mikrobiologijo Medicinska fakulteta, Univerza v Ljubljani**
8. Vesna Viher Hrženjak, dr. med., **Nacionalni laboratorij za zdravje, okolje in hrano, Maribor**
9. dr. Benjamin Zorko, univ. dipl. fiz., **Inštitut Jožef Štefan Ljubljana**

Helena Baša Česnik



Življenjepis: Rojena je 1970 v Postojni, študirala je kemijo na Fakulteti za kemijo in kemijsko tehnologijo v Ljubljani (1989–1996). V letih 1996–1999 je bila mlada raziskovalka na FKKT v Ljubljani in magistrirala leta 1999. Doktorirala je na Biotehniški fakulteti leta 2009. V letih 2001–2021 je zaposlena na Kmetijskem inštitutu Slovenije kot kemik analitik na področju ostankov fitofarmaceutskih sredstev v sadju, zelenjavi, vinu, cvetnem prahu, medu in zemlji, ter aromatičnih spojin v vinu in sadju, kot ocenjevalka dosjejev fitofarmaceutskih sredstev in aktivnih snovi na področju ostankov za potrebe registracije v Sloveniji in Evropski Uniji, od 2012 je vodja Agrokemijskega laboratorija. Od leta 2001 je vključena v skupino ocenjevalcev dosjejev fitofarmaceutskih sredstev in aktivnih snovi, ki jo je formirala in jo vodi UVHVVR, pri čemer je v stiku z Evropsko agencijo za varno hrano. Leta 2015 je izvedla TAIEX izobraževanje za analize ostankov fitofarmaceutskih sredstev na Kmetijskem inštitutu Slovenije. Leta 2019 je izvedla sklop predavanj o analizah ostankov fitofarmaceutskih sredstev in ocenjevanja dosjejev fitofarmaceutskih sredstev in aktivnih snovi v okviru Študentskega inovativnega projekta za družbeno korist za študente Fakultete za kemijo in kemijsko tehnologijo. V letih 2005–2019 je vodila akreditacijo po SIST EN ISO/IEC 17025 na področju ostankov fitofarmaceutskih sredstev v laboratoriju na Kmetijskem inštitutu Slovenije. Do danes je objavila 36 izvirnih znanstvenih člankov, 13 strokovnih člankov, 3 poglavja v monografskih publikacijah in 1 strokovno monografijo.

Helena Baša Česnik

Biography: She was born in Postojna in 1970. She studied chemistry at the Faculty of Chemistry and Chemical Technology in Ljubljana (1989–1996). 1996–1999 She was a junior researcher at the FCCT in Ljubljana, where she obtained a Master of Science degree in 1999. In 2009 she completed the PhD in Agronomy at Biotechnical Faculty. In 2001–2021 she worked at Agricultural Institute of Slovenia as an analytical chemist in the field of plant protection product residues in fruits, vegetables, wine, pollen, honey and soil, aromatic compounds in wine and fruits, as a dossier evaluator for plant protection products and active substances in the field of residues for registration purposes in Slovenia and European Union, since 2012 as the head of Agrochemical Laboratory. Since 2001 she has been included in the group of evaluators of plant protection products and active substances, formed and managed by the Administration of the Republic of Slovenia for Food Safety, which requires contact with European Food Safety Agency. In 2015 she conducted TAIEX training on plant protection product residue analyses at Agricultural Institute of Slovenia. In 2019 she conducted a series of lectures on plant protection product residue analyses and evaluation of dossiers of plant protection products and active substances on Student Innovative Project for Social Benefit for students of the Faculty of Chemistry and Chemical Technology. In 2005–2019 she led the accreditation according to SIST EN ISO/IEC 17025 in the field of plant protection product residues in the laboratory at Agricultural Institute of Slovenia. To date she has published 36 original research papers, 13 technical papers, 3 chapters in monographic publications and one technical monograph.



Urška Bolha

Življenjepis: Rojena 1980 v Ljubljani, 1999–2008 opravila študij veterine na Veterinarski fakulteti v Ljubljani. Diplomirala januarja 2011. Od leta 2016 zaposlena na Upravi RS za varno hrano, veterinarstvo in varstvo rastlin (UVHVVR) in sicer 2016–2018 kot svetovalka na območnem uradu Novo mesto s pooblastili za vodenje upravnih postopkov ter postopkov po Zakonu o inšpekcijskem nadzoru, 2018–2021 kot višja svetovalka na glavnem uradu na Sektorju za mednarodne zadeve, od aprila 2021 pa kot EFSA informacijska točka ter kontaktna točka za Codex Alimentarius. V okviru delovnih nalog se udeležuje tudi posameznih sestankov pripravljalnih teles Sveta ter sodeluje kot nacionalni delegat v pripravah na predsedovanje Svetu EU.

Urška Bolha

Curriculum vitae: Born 1980 in Ljubljana, 1999 – 2008 finished veterinary studies at the Veterinary Faculty in Ljubljana. Graduated in January 2011. Employed at the Administration of the Republic of Slovenia for Food Safety, Veterinary Sector and Plant Protection (AFSVSPP) since 2016; 2016–2018 as an advisor at the Regional Office Novo mesto of the AFSVSPP with the with authorizations for conducting the administrative procedures and procedures under the Inspection Control Act, 2018–2021 as a senior advisor at the International Affairs Division of the AFSVSPP and since April 2021 as an EFSA and Codex Alimentarius Contact Point. As part of her work, she also attends individual meetings of the Council's preparatory bodies and participates as a national delegate in the preparations for the EU Council Presidency.



Tanja Dreó

Življenjepis: Rojena 1975 v Celju, 1993-2001 Medoddelčni študij mikrobiologije in 2002-2007 Interdisciplinarni podiplomski študij biotehnologije na Univerzi v Ljubljani. Od leta 2001 zaposlena na Nacionalnem inštitutu za biologijo kjer je sodelovala pri postavljanju in razvoju laboratorija za diagnostiko bakterij in GSO ter raziskovalni dejavnosti. Dodatno se je izpopolnjevala na švicarskem inštitutu Agroscope Changins-Wädenswil ACW (2009-2010) in uspešno vodila projekt iskanja bakteriofagov proti rastlinskim povzročiteljem bolezni v centru odličnosti COBIK (2010-2013). Na NIBu od leta 2020 vodi enoto Bakteriologija in meroslovje, ki opravlja vlogo uradnega in nacionalnega referenčnega laboratorija za določanje bakterijskih povzročiteljev bolezni rastlin ter partner konzorcijskega referenčnega laboratorija Evropske unije za škodljive organizme rastlin za bakterije. Dr. Dreó je s strani Vlade RS imenovana članica Panela za bakteriologijo in Panela za diagnostiko in sistem kakovosti pri EPPO. Je članica Strokovne skupine za analize tveganja s področja zdravja rastlin (UVHVVR), ustanovna članica European Association of Phytobacteriologists in članica Upravnega odbora Društva za varstvo rastlin Slovenije. V zadnjih letih je vodila več nacionalnih projektov (CRP XylVec) ter delovne pakete in naloge v več evropskih projektih (Tropicsafe, Valitest). Za uspešen prenos raziskovalno-razvojnega dela v aktualno diagnostično prakso in za izjemne dosežke na področju dejavnosti Nacionalnega inštituta za biologijo je prejela plaketo Slovenskega mikrobiološkega društva (2017) in nagrado Miroslava Zeia (2019). V priznanih mednarodnih revijah je objavila več kot 30 raziskovalnih z velikim številom citatov.

Tanja Dreó

Biography: Born in 1975 in Celje, 1993-2001 Interdepartmental study of microbiology and 2002-2007 Interdisciplinary postgraduate study of biotechnology at the University of Ljubljana. Employed at the National Institute of Biology since 2001 where she took part in setting up of a laboratory for the diagnosis of bacteria and GMOs, as well as research activities. She further trained at the Swiss Institute Agroscope Changins-Wädenswil ACW (2009-2010) and successfully led a bacteriophage research project at COBIK centre of excellence (2010-2013). Since 2020, she is leading the NIB's Bacteriology and Metrology Unit, which is the official and national reference laboratory for diagnostics of bacterial plant pathogens and a partner of the European Union Reference Laboratory for pests of plants on bacteria. She is a nominated member of expert panels at EPPO and a member of the Expert Group for Risk Analysis in Plant Health (UVHVVR), a founding member of the European Association of Phytobacteriologists, and a member of the Management Board of the Slovenian Plant Protection Society. In recent years, she has led several national projects (CRP XylVec), work packages and tasks in several European projects (Tropicsafe, Valitest). She received a plaque from the Slovenian Microbiological Society (2017) and the Miroslav Zei Award (2019) for the successful transfer of research and development work into current diagnostic practice and for outstanding achievements in the field of activities of the National Institute of Biology. She has published more than 30 highly-cited research papers with in renowned international journals.



Matjaž Guček

Življenjepis: Rojen 1964 v Celju, 1984–1990 študij veterine na Veterinarski fakulteti v Ljubljani. Diplomiral leta 1990. 1990-1995 veterinar praktik na Veterinarski postaji Laško, 1995-2000 pooblaščen veterinar na Veterinarskem zavodu Slovenije. 2000-2004 uradni veterinar na Veterinarski upravi RS Območni urad Celje. Od leta 2007 je vodja Sektorja za Živila, krmo in zdravila, najprej na Veterinarski uprava RS, po reorganizaciji leta 2013 pa na Upravi RS za varno hrano, veterinarstvo in varstvo rastlin (UVHVVR). Marca 2021 je bil imenovan za generalnega direktorja UVHVVR. Hkrati opravlja tudi funkcijo Vodje veterinarske službe za Slovenijo (Chief Veterinary Officer - CVO) Od 2003-2006 soorganiziral in vodil več TAIEX dogodkov na temo varne hrane s poudarkom na živilih živalskega izvora. Je kontaktna točka OIE za področje varne hrane živalskega izvora. 2015 in 2016 je sodeloval v mednarodnem projektu Evropske Komisije – Dobre higienske prakse na področju zakola živali. Kot nacionalni ekspert je sodeloval v presojah Urada za zdravje, presoje in analize (bivši FVO) v Braziliji, Ruski federaciji, Srbiji in Avstriji in sicer na področju perutninskega mesa. Ima opravljen tečaj za notranjega presojevalca skladno z ISO 9001:2008 in certifikat za uporabo načel HACCP v praksi. Trenutno je predstavnik RS v Stalnem odboru EK za rastline, živali, krmo in živila – Sekcija biološka tveganja v prehranski verigi. Je tudi član delovnih skupin Sveta EU za področje veterine ter vodij veterinarskih služb.

Matjaž Guček

Biography: Born 1964 in Celje, 1984–1990 veterinary studies at the Veterinary Faculty in Ljubljana. Graduated in 1990. In 1990 -1995 private veterinary practitioner at the Veterinary practice in Laško, from 1995 to 2000, authorized veterinarian at the Veterinary Institute of Slovenia. 2000-2004 official veterinarian at the Veterinary Administration of the R. of Slovenia Regional Office Celje. Since 2007, he is head of the Food, Feed and Veterinary Medicine Division, first at the Veterinary Administration of the R. of Slovenia, and after the reorganization in 2013, at the Administration of the R. of Slovenia for Food Safety, Veterinary Sector and Plant Protection (AFSVSPP). In March 2021 he was appointed as director general of AFSVSPP. He is also a Chief Veterinary Officer for Slovenia. Since 2003-2006, he co-organized and led several TAIEX events on food safety with an emphasis on foods of animal origin. It is the focal point of the OIE for the safe of food of animal origin. In 2015 and 2016 he participated in EC project "Share of Best Practice and Slaughter Hygiene". As a national expert, he participated in the audits of the Directorate 'Health and Food Audits and Analysis', (formerly FVO) in Brazil, the Russian Federation, Serbia and Austria in the field of poultry meat. Has passed the internal auditor course in accordance with ISO 9001: 2008 and obtained the certificate for the application of HACCP principles in practice (The Royal Institute of Public Health, UK). He is currently a representative of the R. of Slovenia in the EC's Standing Committee on Plants, Animals, Feed and Food - Section of Biological Risks in the Food Chain. He is also a member of the Council Working Party of Veterinary Experts and CVOs.



Milena Bučar-Miklavčič

Življenjepis: Rojena 1957 v Kopru. Učiteljica kemije na Gimnaziji Koper, po diplomi iz kemije 1985 delo v tovarni IPLAS. 1995 z analitsko opremo zasebnega laboratorija LABS postavila temelje oljkarstva na ZRS. Prispevala k vključitvi Ekstra deviškega oljčnega olja Slovenske Istre, prvega slovenskega živila z zaščiteno označbo porekla (ZOP, 2004), v evropski prostor. 2004 je pridobila akreditacijo za Laboratorij Inštituta za oljkarstvo ZRS Koper. Prizadevala si je za premik dejavnosti Laboratorija s področja preskušanja na meroslovje (MIRS 2009), za imenovanje Laboratorija za izvajanje inšpekcijskega nadzora oljčnega olja, za imenovanje Laboratorija za opravljanje strokovnih nalog s področja oljkarstva (2017), za uvrstitev Laboratorija na seznam kemijskih in senzoričnih laboratorijev (IOC 2005), za umestitev Laboratorija med evropske meroslovne laboratorije Euaramet (2011), za vključitev Laboratorija v mednarodno mrežo raziskovalne infrastrukture Metrofood (2018), za imenovanje Laboratorija za nacionalni referenčni laboratorij (2019). Je dolgoletna članica panela vodilnih svetovnih ocenjevanj ekstra deviških oljčnih olj SOL Verona (2004-2021). Bila je članica številnih ne samo evropskih panelov. Pomagala je ustanoviti študijsko smer Dietetika na FVZ UP (2005–2017). Je bivša predsednica Sveta za oljkarstvo pri MKGP (2011-2020), članica skupine kemijskih izvedencev za študij oljčnega olja pri Evropski komisiji (2011), vodja nacionalnega panela za senzorično ocenjevanje oljčnega olja (2004) ter članica skupine strokovnjakov za senzorično ocenjevanje deviškega oljčnega olja pri Mednarodnem svetu za oljke (2001-). Članica ekspertne skupine TAIEX (2014 in 2018, Podgorica). Njen COBISS izpis šteje 268 enot.

Milena Bučar-Miklavčič

Biography: Born 1957 in Koper. Chemistry teacher at Gimnazija Koper, after graduating in chemistry in 1985 work at IPLAS factory. In 1995, using the analytical equipment of the private laboratory LABS, she laid down the basis of oliveculture research of ZRS Koper. Contributed to the inclusion of PDO Extra Virgin Olive Oil of Slovenia in the EC register (2004). In 2004 obtained accreditation for the Laboratory of the Institute for Oliveculture at ZRS Koper. Succeeded in moving the activities of the Laboratory from testing to metrology (MIRS 2009), to appoint a Laboratory for the inspection of olive oil, to appoint a Laboratory for public service in the field of olive growing (2017), to include the Laboratory in the list of chemical and sensory panels (IOC 2005), to place the Laboratory among European metrology laboratories Euaramet (2011), to include the Laboratory in the Metrofood International Research Infrastructure Network (2018), to achieve the designation of a National Reference Laboratory (2019). She is a long-time member of the panel of the world's leading Olive oil competition (SOL Verona 2004-2021). She has been a member of many non-solely European panels. She helped in establishing the study course Dietetics at the FVZ UP (2005-2017). She is a former President of the Olive Growing Council (2011-2020), a member of the Group of Chemical Experts for the Study of Olive Oil at the European Commission (2011), Head of the National Panel for Sensory Evaluation of Olive Oil (2004-) and a member of the Expert Group for Sensory Evaluation at the International Olive Council (2001). Member of the TAIEX expert group (2014&2018, Podgorica). Her COBISS bibliography counts 268 records.



Matjaž Ocepek

Življenjepis: Rojen 1964 v Ljubljani, 1983–1989 študij veterine na Veterinarski fakulteti v Ljubljani. Diplomiral leta 1989 in je od takrat zaposlen na Inštitutu za mikrobiologijo in parazitologijo Veterinarske fakultete v Ljubljani. Leta 1992 je opravil magisterij in 1995 doktorat iz veterinarskih znanosti. Leta 2014 je bil izvoljen v naziv znanstveni svetnik za področje Mikrobiologija z imunologijo. Ustanovil in vodil je Laboratorij za molekularno bakteriologijo (1998) in Laboratorij za posebno nevarne bakterije (2003). Od leta 2009 je vodja raziskovalnega programa P4-0092 Zdravje živali, okolje in varna hrana. Od ustanovitve leta 2012 je vodja Nacionalnega referenčnega laboratorija za govejo tuberkulozo, od leta 2014 do 2017 Inštituta za mikrobiologijo in imunologijo ter od leta 2017 Nacionalnega veterinarskega inštituta. Je član Komisije za raziskovalno dejavnost in Komisije za biovarnost ter svetovalec za strateško blago VF. Poleg tega je tudi nosilec izbirnega predmeta Mikrobiološke tehnike pri podiplomskem študiju Biomedicine. Je član European Society of Mycobacteriology, International Association for Paratuberculosis, International Society for Infectious Diseases, Slovenskega mikrobiološkega društva (predsednik 2014-16) in eden od ustanoviteljev ter Član upravnega odbora »European College of Veterinary Microbiology«. Objavil je več kot 100 znanstvenih člankov v revijah s faktorjem vpliva. V vsem času je močno vpleten v raziskovalno in strokovno delo na področju zoonoz in varne hrane. Pri tem tesno sodeluje z vsemi inštitucijami, ki v Sloveniji delujejo na tem področju.

Matjaž Ocepek

Biography: Born in 1964 in Ljubljana, 1983-1989 studied veterinary medicine at the Faculty of Veterinary Medicine in Ljubljana. He graduated in 1989 and since then has been working at the Institute of Microbiology and Parasitology at Faculty Veterinary Medicine in Ljubljana. In 1992 he completed a master's degree and in 1995 a doctorate in veterinary science. In 2014 he was elected Scientific Councilor for Microbiology with Immunology. He founded and directed the Laboratory for Molecular Bacteriology (1998) and the Laboratory for Particularly Dangerous Bacteria (2003). Since 2009 he is the head of the research program P4-0092 Animal Health, Environment and Food Safety. Since its establishment in 2012, he has been the head of National Reference Laboratory for Bovine Tuberculosis, from 2014 to 2017 of the Institute of Microbiology and Immunology, and since 2017 of National Veterinary Institute. He is a member of the Commission for Research and the Commission for Biosafety and an advisor for strategic goods VF. He is also a Lecturer for subject Microbiological techniques for Biomedicine postgraduate studies. He is a member of European Society for Mycobacteriology, International Association for Paratuberculosis, International Society for Infectious Diseases, Slovenian Microbiological Society (President 2014-16) and one of the founders and a board member of European College of Veterinary Microbiology. He has published more than 100 scientific articles in impact factor journals. He is always heavily involved in research and professional work in the field of zoonoses and food safety. He closely cooperates with all institutions working in this field in Slovenia.

Miroslav Petrovec



Življenjepis: Rojen v Celju leta 1968, kjer je leta 1987 končal srednjo zdravstveno šolo, istega leta se je vpisal na Medicinsko fakulteto v Ljubljani, kjer je diplomiral leta 1995 in se takoj zaposlil kot mladi raziskovalec na Inštitutu za mikrobiologijo Medicinske fakultete. Leta 1999 je doktoriral na Biotehniški fakulteti UL. Specialistični izpit iz klinične mikrobiologije je opravil leta 2003 in leta 2005 postal vodja laboratorija za diagnostiko virusnih infekcij. Leta 2012 je v mandatnem obdobju opravljal naloge predstojnika Katedre za mikrobiologijo in imunologijo, od leta 2014 pa predstojnika Inštituta za mikrobiologij in imunologijo. **Pedagoško delo:** predava na Univerzi v Ljubljani na Medicinski, Biotehniški fakulteti in na Fakulteti za farmacijo. Leta 2014 je za svoje pedagoško delo kot najboljši učitelj Medicinske fakultete prejel Lavričevo nagrado. **Raziskovalno delo:** Že v času študija na MF je za svoje raziskovalno delo na področju tumorske biologije dobil Univerzitetno Prešernovo nagrado UL. Po zaposlitvi se je večino časa ukvarjal s povzročitelji bolezni, ki jih prenašajo klopi, po letu 2006 pa z virusi, ki povzročajo okužbo dihal. V Sloveniji je po letu 2006 uvedel kot osnovno kužnino za odvzem brisa, bris nosnega dela žrela in je še pred začetkom pandemije COVID-19 skupaj z laboratorijskimi in kliničnimi sodelavci raziskoval okužbe dihal, ki jih povzročajo koronavirusi. **Bibliografija** je dosegljiva na servisih PubMed, Google Scholar in Cobiss.si.

Miroslav Petrovec

Biography: Born 1968 in Celje, where in 1987 he finished middle school for health professionals. In the same year he is starting a study for medical degree at Medical Faculty in Ljubljana, where he graduated in year 1995 and immediately take the position in national program as a young researcher. In 1999 he finished the PhD thesis at the Biotechnical Faculty in Ljubljana. In 2003 he completed professional studies as clinical microbiologist. In year 2005 he was appointed as a Head of Laboratory for diagnostics of viral infections at the Institute. From 2012 he was serving as a Head of Chair for Clinical Microbiology and Immunology, and from 2014 as the Head of Institute of Microbiology and Immunology. **Teaching:** He is active as lecturer at Medical, Biotechnical and Pharmaceutical Faculties. In year 2014 he was awarded a Lavrič prize for best lecturer of the year. **Research:** As a medical student he was awarded highest award Prešeren prize for his research accomplishment for the experimental work in the field of tumour biology. From 1995 his research was focused mainly on the field of tick-transmitted diseases, after 2006 he start research in respiratory viral infections. He and co-workers are first in the country to introduce nasopharyngeal swab as a standard sample in diagnosis of viral respiratory infections and before COVID-19 pandemics performing research on human respiratory infections caused by coronaviruses. **Bibliography** and citations can be retrieved at PubMed, Google Scholar and cobiss.si.



Vesna Viher Hrženjak

Življenjepis: Rojena 1970 v Varaždinu, Hrvaška. Študij medicine na Medicinski fakulteti v Ljubljani, 2004, doktorica medicine. Specializacija javno zdravje, opravljeno s pohvalo, 2010 (tema Akrilamid v živilih), specialistka javnega zdravja. 2004 – 2006 Splošna bolnišnica Maribor. 2006 – 2013 Zavod za zdravstveno varstvo Maribor. Od 2014 predstojnica Centra za okolje in zdravje v Nacionalnem laboratoriju za zdravje, okolje in hrano. Od 2007 registrirana raziskovalka pri Javna agencija za raziskovalno dejavnost – šifra 29652. Raziskovalna dejavnost: medicina / javno zdravje. Redno sodeluje v raziskovalnih projektih ARRS in drugih. Glavna področja raziskovanja: dejavniki tveganja v elementih okolja, ki prihajajo v neposreden stik s človekom (pitne vode, živila, barve za tetoviranje, odpadne vode, zrak, drugo). Glavna in neposredna mentorica specializantom javnega zdravja in pripravnikom drugih zdravstvenih strok ter mentorica in somentorica pri diplomskih/magistrskih/specialističnih delih. V letih 2014 in 2015 članica technical expert working group pri Evropski komisiji (Consumer Safety Network Subgroup Tattoos and Permanent Make-up). Od leta 2017 članica Nacionalnega vozlišča za humani biomonitoring (National Hub). Od leta 2017 članica Strokovnega sveta za javno zdravje pri Slovenskem zdravniškem društvu. Recenzentka revije Zdravstveno varstvo (Slovenian Journal of Public Health). Cobiss izpis 32 enot, 2 izvirna znanstvena članka, sicer strokovni ali znanstveni prispevki na konferencah in druga gradiva na področju javnega zdravja.

Vesna viher Hrženjak

Biography: Born in 1970 in Varaždin, Croatia. Medicine study at the Faculty of Medicine in Ljubljana, 2004, medical doctor. Specialisation in public health, with honours, 2010, Public Health Specialist (topic: *Acrylamide in Foodstuffs in Slovenia*). 2004 to 2006 Maribor General Hospital. 2006 to 2013 Maribor Health Protection Institute. Since 2014 the head of the Centre for Environment and Health at the National Laboratory of Health, Environment and Food. Since 2007, registered as a researcher at the Slovenian Research Agency – code 29652. Research activity: medicine / public health. She participates regularly in the research projects of the Slovenian Research Agency (ARRS) and others. Principal research fields: risk factors of environmental elements that come into direct contact with humans (drinking water, foodstuffs, tattoo ink, wastewater, air, other). Main and direct mentor to public health specialty registrars and trainees from other medical fields, mentor and co-mentor for graduate/master's/specialisation theses. In 2014 and 2015, a member of the technical expert working group at the European Commission (Consumer Safety Network Subgroup Tattoos and Permanent Make-up). From 2017, a member of the Slovenian National Hub for Human Biomonitoring. From 2017, she has also been a member of the Expert Council for Public Health at the Medical Association of Slovenia. Reviewer of the Zdravstveno varstvo magazine (Slovenian Journal of Public Health). Extract from the Cobiss 32 units, 2 original scientific papers and others represent professional and scientific contributions at conferences as well as other materials in the field of public health.



Benjamin Zorko

Življenjepis: Rojen 1968 v Ljubljani. Na fakulteti za matematiko in fiziko Univerze v Ljubljani je leta 1995 diplomiral iz fizike. Od 1995 do 2001 je bil mladi raziskovalec na Institut »Jožef Stefan« (IJS in tam ostal. Kot doktor znanosti je zaposlen kot višji strokovno-raziskovalni sodelavec. Je vodja skupine za meritve ionizirajočega sevanja na Odseku za fiziko nizkih in srednjih energij. Njegovo delo pokriva meritve radioaktivnosti v okolju, oceno izpostavljenosti prebivalstva ionizirajočemu sevanju, dozimetrijo ter je član radiološke mobilne enote. Je vodja več projektov z omenjenega področja. Je glavni koordinator za pripravo ocene učinkov delovanja jedrske elektrarne Krško ter drugih monitoringov radioaktivnosti v okolju. Ima bogate izkušnje s področja varstva pred ionizirajočimi sevanji, saj je sodeloval na različnih delavnicah, mednarodnih srečanjih in ekspertnih misijah po svetu. Benjamin Zorko je močno vpet tudi mednarodno skupnost, saj je, ali je bil član programskih skupin MODARIA I in II pod okriljem MAAE, EJP CONCERT pod okriljem EURATOM ter SIST/TC – CEN/TC 327/ WG6 v okviru Evropske Komisije. Benjamin Zorko je tudi predavatelj na Mednarodni podiplomski šoli Jožefa Stefana. V letu 2017 je bil izvoljen v naziv docent za predmetno področje ekotehnologije. Leta 2020 je bil Benjamin Zorko imenovan za člana iNET-EPR (Mednarodne mreže za izobraževanje in usposabljanje za pripravljenost in odzivanje na izredne razmere) in za nacionalno kontaktno osebo v okviru regionalnega projekta RER7014 "izboljšave okoljskega nadzora radioaktivnosti in ocene učinkov za zaščito pred ionizirajočim sevanjem" pod okriljem IAEA.

Benjamin Zorko

Biography: Born 1968 in Ljubljana. He studied physics at the Faculty of Mathematics and Physics of the University of Ljubljana, where he graduated in 1995. From 1995 to 2001 he was a young researcher at the Jožef Stefan Institute (JSI). From 2001 until today he has been employed at the JSI. Benjamin Zorko, PhD, is a Senior Professional Research Associate employed at the JSI and Assist. prof. at Jožef Stefan International Postgraduate School (IPS). His current position is the Head of the Infrastructural Group of Ionizing Radiation Measurements, a project leader (environmental radioactivity monitoring (ERM), dosimetry), and Head of the Laboratory for TLD. He is also a member of the radiological mobile unit. He is the key coordinator for the dose assessments in the scope of ERM in Republic of Slovenia. He has extensive experience in the field of ionizing radiation protection, as he participates in various workshops, international meetings and professional missions around the world. Benjamin Zorko is also strongly involved in the international community, as he was also a member of the MODARIA I and II program groups under the auspices of the IAEA, EJP CONCERT platform under the auspices of EURATOM and SIST / TC - CEN / TC 327 / WG6 within the European Commission. He works as an expert in the group CEN/TC 327/WG 6 Animal feeding stuffs - Methods of sampling and analysis - Radioactivity measurements. In 2020 Benjamin Zorko was appointed as a member of the iNET-EPR (International Network for Education and Training for Emergency Preparedness and Response) under the auspices of IAEA. Benjamin Zorko was appointed as a national contact person of the RER7014 *Improving Environmental Monitoring And Assessment for Radiation Protection in the Region* under the auspices of IAEA.

Udeleženci okrogle mize/Round Table Participants

1. mag. Aleš **Irgolič**, univ.dipl.inž.kmet., **Ministrstvo za kmetijstvo, gozdarstvo in prehrano:**
2. dr. Aleš **Kuhar**, uni.dipl.inž.kmet., **Biotehniška fakulteta, Univerza v Ljubljani:**
3. Breda **Kutin**, univ. dipl.iur, **Zveza potrošnikov Slovenije:**
4. mag. Mariča **Lah**, univ.dipl.oec. **predsednica Trgovinske zbornice Slovenije**
5. dr.Tatjana **Zagorc**, univ.dipl.inž.živil.teh., **Gospodarska Zbornica Slovenije:**
6. Roman **Žveglič**, kmet, **Kmetijsko Gozdarska zbornica Slovenije:**



Aleš Irgolič

Življenjepis: Rojen 14. 5. 1979. Odraščal je v kmečki družini v Slovenskih goricah. Kmetijstvo in delo z živalmi ga je privlačilo že kot otroka. Srednjo šolo je zaključil na srednji kmetijski šoli Maribor in nato nadaljeval s študijem na Fakulteti za kmetijstvo in biosistemske vede Maribor, smer zootehnika. Po končanem študiju zootehnike je na isti fakulteti diplomiral še iz kmetijstva ter magistrski študij zaključil s področja agrarne ekonomike. Svojo poklicno pot je začel leta 2005 na Kmetijsko-svetovalni službi Ptuj, kjer je sodeloval pri izpolnjevanju zbirnih vlog in takrat začetem projektu "vris grafičnih podlag". Še isto

leto se je zaposlil na Agenciji za kmetijske trge in razvoj podeželja, kjer je najprej delal na področju neposrednih plačil. V času službovanja na oddelku za neposredna plačila je deloval tudi v okviru ekspertnih skupin, ki delujejo na področju kmetijstva na nivoju EU. Maja 2019 je bil imenovan za vodjo sektorja za neposredna plačila na Agenciji za kmetijske trge in razvoj podeželja, kjer so bile glavne naloge izvajanje Skupne kmetijske politike. V celotnem obdobju dela na agenciji se je dodobra seznanil tudi z delovanjem javnega sektorja. Marca 2021 je bil imenovan na mesto državnega sekretarja na Ministrstvu za kmetijstvo, gozdarstvo in prehrano.

Aleš Irgolič

Biography: Born on 14 May 1979, grew up in a rural family in the northeast of Slovenia in the Slovenske gorice. From his childhood, he has been fond of animals and enjoyed all activities involving animals. Mr Irgolič finished his secondary education at the Secondary Agricultural School (Srednja kmetijska šola) of Maribor, and continued his studies at the Faculty of Agriculture and Life Sciences (Fakulteta za kmetijstvo in biosistemske vede) of Maribor, specifically in Animal Science (Zootechnics). On graduation in Zootechnics, he graduated in Agriculture from the same Faculty, and received his Master's degree in Agricultural Economics. In 2005, he started his professional career within the Agricultural Extension Service (Kmetijsko-svetovalna služba) at Ptuj, where he cooperated in a new "graphic layer plotting" project that had just been launched, by completing the collective applications. Later that year, he took up the employment with the Agency for Agricultural Markets and Rural Development – AMRD (Agencija za kmetijske trge in razvoj podeželja - AKTRP), where he worked in the Direct Payment Sector. In addition to his job and tasks within the AMRD Direct Payment Sector, he was active within Expert Groups covering the field of Agriculture at the level of the European Union. In May 2019, he was appointed Head of the Direct Payment Sector of the AMRD, and his principal job and tasks covered the implementation of the Common Agricultural Policy (CAP). In the period of his employment with the AMRD, he was in a position to familiarise himself in detail with the operation of the public sector in general. In March 2021, he was appointed Secretary of State within the Ministry of Agriculture, Forestry and Food (MAFF) of the Republic of Slovenia.



Aleš Kuhar

Življenjepis: Rojen leta 1974 v Murski Soboti. Dr. Aleš Kuhar je izredni profesor na Biotehniški fakulteti Univerze v Ljubljani. Po univerzitetni diplomski na Biotehniški fakulteti je magistriral iz ekonomike agroživilstva na Univerzi v Londonu (Imperial College) in doktoriral na področju makroekonomskega modeliranja in ekonometrije na Univerzi v Ljubljani. Poučuje in raziskuje na področju: ekonomike in konkurenčnosti agroživilskega sistema, podjetništva in trženja v agroživilstvu, vedenja potrošnikov, upravljanja inovacij in razvoja novih živilskih izdelkov in storitev. Vodil je in sodeloval v številnih interdisciplinarnih projektih in študijah povezanih z zgoraj omenjenimi temami vključno s poglobljenimi analizami podpornih sistemov za razvoj agroživilske industrije. Deluje kot evalvator pri REA (BBI-JU in Horizon 2020). Trenutno je svetovalec odbora: »Towards a Fair Food Supply Chain - NAT /823« pri Evropskem ekonomsko-socialnem odboru. Ima intenzivne odnose z različnimi nacionalnimi in mednarodnimi strokovnimi institucijami na področju agroživilstva in številnimi vodilnimi podjetji. Je aktiven promotor podjetništva v agroživilskem sektorju z uspešnimi mentorskimi izkušnjami tako za študentske ekipe, ki se udeležujejo državnih ali mednarodnih tekmovanj, kot tudi za zagonska podjetja.

Aleš Kuhar

Biography: Born 1974 in Murska Sobota. Aleš Kuhar PhD (M) is an associate professor at the University of Ljubljana. After graduating in applied biosciences from the University of Ljubljana, he did his scientific master in agricultural and food system economics at the University of London (Imperial College) and PhD in macroeconomic modelling and econometrics at the University of Ljubljana. He teaches and researches in the areas of: Agri-Food System Economics and competitiveness, Agri-Food Entrepreneurship and marketing, Consumer Behaviour, Innovation Management; New food products and Services Development. He has led and/or collaborated with numerous interdisciplinary studies on the above topics, including in-depth analyses of policy systems supporting agri-food development. He serves as an expert reviewer at REA (BBI-JU and Horizon 2020) and as an expert to the working group: 'Towards a Fair Food Supply Chain - NAT /823' at European Economic and Social Committee. He has intensive relations with various national and international professional institutions in the field of food industry and numerous leading food companies. He is an active promoter of entrepreneurship in the agri-food sector with a successful mentoring track record, both for student teams participating in national or international competitions and for start-ups in the agri-food sector.

Breda Kutin



Življenjepis: Rojena leta 1954 v Ljubljani, kjer je leta 1978 tudi diplomirala na Ekonomski fakulteti Univerze v Ljubljani in se kot svetovalka ministra zaposlila na Republiškem komiteju za sistem planiranja. L. 1983 je postala svetovalka za planiranje v SOZD Kemija, leta 1987 pa vodja raziskovalne enote na Zavodu Domus.. Je ustanovna članica Zveze potrošnikov Slovenije in njena predsednica od ustanovitve leta 1990. Je odgovorna urednica edine neodvisne revije za potrošnike (ZPStest) v Sloveniji in ustanoviteljica Mednarodnega inštituta za potrošniške raziskave, ki ga je vodila . od 1993 do 2020, od 2020 pa je predsednica upravnega odbora. Ima več kot 30 let izkušenj na področju varstva potrošnikov. Je strokovnjakinja za politiko varstva potrošnikov v EU in za razvoj nevladnih organizacij. Od leta 2004 je članica izvršnega odbora Mednarodne potrošniške organizacije (BEUC), med 2004 do 2012 tudi njegova podpredsednica. Med letoma 1994 in 2007 je bila članica sveta Consumers International, svetovne zveze potrošniških organizacij, od 2003 do 2007 pa tudi njegova izvršna članica ter zakladnica. Zastopa slovenske potrošnike v ANEC, Evropski potrošniški organizaciji za standardizacijo. Od leta 2004 je slovenska predstavnikinja potrošnikov v posvetovalnih odborih Evropske komisije za potrošnike, Je oz. je bila članica upravnih odborov zavodov v Sloveniji: 2008-2020 predsednica upravnega odbora Slovenskega inštituta za kakovost in meroslovje (SIQ); članica Sveta Nacionalnega laboratorija za zdravje, okolje in hrano od leta 2014; Je avtorica številnih publikacij in raziskav o potrošniški politiki v Evropi.

Breda Kutin

Biography: Born 1954 in Ljubljana, where she graduated from the Faculty of Economics, University of Ljubljana in 1978. Her professional path began as an adviser to the Minister in the Ministry of Economic Relations and Development. Later she became an Adviser for planning and development at the KEMIJA Corporation and Head of Research Unit at the Institute of Home Economics DOMUS. She is the founding member of the Slovene Consumers' Association ZPS and its President since 1990. She is the editor-in-chief of the only independent consumer magazine (ZPStest) in Slovenia. She is one of the founders of the International Consumer Research Institute and was its Director (1993-2020) and Chair of the Board since 2020. She has more than 30 years of experience in the consumer protection movement. She is an EU expert on consumer policy and capacity building of consumer NGOs. She has been a member of BEUC (EU Consumer Organization) Executive Board since 2004 and was its Vice-President (2004-2012). She was a Council member of Consumers International, the global federation of consumer organizations, from 1994 to 2007 and its Executive member and Treasurer from 2003 to 2007. She represents consumers at ANEC, EU consumer voice in standardization. As of 2004 she has been Slovenia 's consumer representative to the Europe Commissions'. She is a member of several management boards in Slovenia, president of the Board of the Slovene Institute of Quality and metrology (SIQ) from 2008-2020 member of the Board of National Lab of Health, Environment and Food 2014,. She is an author of several publications on consumer policy in Europe.

Mariča Lah



Življenjepis: Rojena 1956 v Ljubljani, 1976 – 1980 študij na Ekonomski fakulteti Univerze v Ljubljani. V letu 1980 se je zaposlila v gospodarski družbi Petrol kot pripravnik in sistematično spoznala vse ključne faze poslovnih procesov. Študij je nadaljevala na International development Center Brdo in v letu 1995 zaključila študij MBA, v letu 2005 pa je na IEDC Poslovna šola Bled – Fakulteta za podiplomski študij managementa zaključila magistrski študij. V gospodarski družbi Petrol je bila, s kratko prekinitvijo 4 let, zaposlena celotno poslovno kariero, zadnjih 15 let kot članica posloводства družbe oz. članica uprave družbe

odgovorna za nabavo in prodajo. Redno se je strokovno izpopolnjevala doma in v tujini, kot gostujoči predavatelj pa je tudi sodelovala z Ekonomsko fakulteto Univerze v Ljubljani, predvsem na področju kriznega managementa. V letu 2010 jo je Upravni odbor Trgovinske zbornice Slovenije izvolil za predsednico Trgovinske zbornice Slovenije in to funkcijo opravlja že tretji mandat. Trgovinska zbornica Slovenije je članica številnih domačih in tujih institucij, v okviru katerih skrbi za prenos dobrih praks in prispeva k razvoju stroke, obenem pa pred državnimi organi zastopa interese članov in celotne dejavnosti. V letu 2012 je bila kot svetnica izvoljena v Državni svet RS kot predstavnica gospodarstva, kjer ji teče že drugi mandat do leta 2022. V okviru delovnih teles Državnega sveta kot predsednica vodi Komisijo za gospodarstvo, obrt, turizem in finance, kot članica pa sodeluje v Komisiji za kmetijstvo, gozdarstvo in prehrano.

Mariča Lah

Biography: Born 1956 in Ljubljana, 1976 - 1980 studies at the Faculty of Economics, University of Ljubljana. In 1980, she joined Petrol as an intern and systematically learned about all the key phases of business processes. She continued her studies at the International Development Center Brdo and in 1995 completed the President's MBA studies, and in 2005 she completed her master's degree at the IEDC Business School Bled - Faculty of Postgraduate Studies in Management. In the company Petrol, with a short break of 4 years, she was employed throughout her business career, the last 15 years as a member of the company's management or. a member of the company's management board responsible for purchasing and sales. She regularly trained at home and abroad, and as a guest lecturer she also collaborated with the Faculty of Economics, University of Ljubljana, especially in the field of crisis management. In 2010, she was elected by the Management Board of the Chamber of Commerce of Slovenia as the President of the Slovenian Chamber of Commerce, and this is her third term in office. The Chamber of Commerce of Slovenia is a member of many domestic and foreign institutions, within which it takes care of the transfer of good practices and contributes to the development of the profession, while at the same time representing the interests of members and the entire activity. In 2012, she was elected a councilor to the National Council of the Republic of Slovenia as a representative of the economy, where she is running for a second term until 2022. Within the working bodies of the National Council, Commission for Agriculture, Forestry and Food.



Tatjana Zagorc

Življenjepis: rojena 1970 v Murski Soboti. Študira je na Biotehniški fakulteti, Oddelku za živilstvo, kjer je diplomirala leta 1995 na Katedri za biotehnologijo. Pri diplomski nalogi se je ukvarjala s koristno uporabo kvasovk (mikroorganizmov) v namene odstranjevanja kontaminantov iz odpadnih vod. Kvasovke so ostale njeno »orodje« tudi v nadaljnjem raziskovalnem delu. Po diplomi se je vpisala na Interdisciplinarni podiplomski študij biotehnologije, kjer je magistrirala leta 1998. V času magistrskega študija je svoje raziskave opravljala v Budimpešti na Madžarskem, na Univerzi Sv. Štefana, na Oddelku za mikrobiologijo. Raziskovalno delo na področju mikrobiologije kvasovk je nadaljevala v sklopu doktorskega študija, kjer jo je raziskovalna pot vodila na Inštitut za mikrobiologijo Univerze dežele Saarland, v Saarbrucknu v Nemčiji. Leta 2001 je doktorirala z disertacijo »Konstrukcija rekombinantne kvasovke *Schizosaccharomyces pombe* za heterologno proteinov«. V obdobju 1995-2001 je bila zaposlena kot mlada raziskovalka na Biotehniški fakulteti. Od leta 2002 je zaposlena na Gospodarski zbornici Slovenije najprej kot samostojna svetovalka za področje živilske industrije, nato pa od leta 2005 kot direktorica Zbornice kmetijskih in živilskih podjetij pri GZS. Znanje in izkušnje nadgrajuje tudi z vodstvenimi veščinami. Svoje delovne izkušnje deli tudi kot predavateljica in strokovna gostja na številnih srečanjih, dogodkih, konferencah v organizaciji drugih domačih in tujih inštitucij. Interes in stališča živilskopredelovalne industrije zastopa tudi v številnih odborih, nadzornih odborih, delovnih skupinah in forumih ministrstev in institucij.

Tatjana Zagorc.

Biography: was born in 1970 in Murska Sobota. She studied at the Biotechnical Faculty, Department of Food Science and Technology, where she graduated in 1995. In her diploma thesis she dealt with the useful use of yeasts (microorganisms) for the purpose of removing contaminants from wastewater. Yeasts remained her "tool" in further research work. After graduating, she enrolled in the Interdisciplinary Postgraduate Study of Biotechnology, where she received her master's degree in 1998. She conducted her research at the University of St. Istvan, at the Department of Microbiology in Budapest, Hungary. She continued her research work in the field of microbiology as part of her doctoral studies, where her research path led her to the Institute of Microbiology of the University of Saarland in Saarbrücken, Germany. In 2001, she received her PhD with the dissertation "Construction of recombinant yeast *Schizosaccharomyces pombe* for heterologous protein production". In the period 1995-2001, she was employed as a young researcher at the Biotechnical Faculty. Since 2002 she has been employed at the Chamber of Commerce and Industry of Slovenia, first as an independent consultant for the food industry, and then since 2005 as the director of the Chamber of Agricultural and Food Enterprises. She also upgrades her knowledge and experience with leadership skills. She also shares her work experience as a lecturer and professional guest at numerous meetings, events, conferences organized by other domestic and foreign institutions. She also represents the interests and positions of the food processing industry in numerous committees, supervisory boards, working groups and forums of ministries and institutions.



Roman Žveglič

Življenjepis: Rojen 1964 v Brežicah. Otroštvo je preživel na hribovski kmetiji v Stržišču pri Sevnici. Po končanem šolanju je bil deset let zaposlen v različnih podjetjih in ustanovah ter kasneje prevzel gospodarjenje hribovske kmetije v vasi Stržišče nad Sevnico, kjer se ukvarja z govedorejo. Leta 1988 je bil med ustanovnimi člani Slovenske kmečke zveze in Zveze slovenske kmečke mladine. Leta 1991 aktivni udeleženec osamosvojitvene vojne za Slovenijo. Od ustanovitve leta 1993 je član Sindikata kmetov Slovenije, med 2002–2006 je bil podpredsednik sindikata, med 2006–2014 njegov predsednik. Med 2012–2013 je bil nadomestni poslanec Slovenske ljudske stranke v Državnem zboru RS. V njem je bil podpredsednik Odbora za kmetijstvo, gozdarstvo, prehrano in okolje, član Odbora za finance in član Komisije za nadzor javnih financ. Leta 2007 je postal član sveta za kmetijstvo pri Vladi RS. V mandatu 2016-2020 je bil član sveta Kmetijsko gozdarske zbornice Slovenije. Leta 2020 je nastopil mesto predsednika Kmetijsko gozdarske zbornice Slovenije. Skozi vse te funkcije vlaga napore v to, da je problematika kmetijstva jasno, konkretno in razumljivo predstavljena javnosti. Je zagovornik lokalnih kratkih verig, ki so z vidika okoljevarstva, načel varne hrane ter skrbi za dolgoročno javno zdravje, izjemnega pomena.

Roman Žveglič

Biography: Born in 1964 in Brežice. He spent his childhood on a hill farm in Stržišče near Sevnica. After finishing school, he spent ten years working in various companies and institutions and later took over the management of a hill farm in the village of Stržišče near Sevnica, where he is engaged in cattle farming. In 1988, he was one of the founding members of the Slovene Farmers' Association and the Association of Slovenian Farmers' Youth. In 1991, he was an active participant in the independence war for Slovenia. Since its founding in 1993, he has been a member of the Slovenian Farmers' Union, between 2002 and 2006 he was vice-president of the trade union, and president between 2006 and 2014. Between 2012 and 2013, he was a deputy member of the Slovenian People's Party in the National Assembly of the Republic of Slovenia. He was the vice president of the Committee on Agriculture, Forestry, Food and the Environment, a member of the Committee on Finance and a member of the Commission on Public Finance Control. In 2007, he became a member of the Agriculture Council at the Government of the Republic of Slovenia. During his term of office 2016–2020, he was a member of the Council of the Chamber of Agricultural and Forestry of Slovenia. In 2020, he became President of the Chamber of Agricultural and Forestry of Slovenia. Through all these functions, he invests in making the issue of agriculture clear, concrete and understandable to the public. He is a supporter of local short chains, which are of the utmost importance in terms of environmental protection, food safety principles and long-term public health.

Predsedujoči / Chairs

1. dr. Bety **BREZNIK**, dr. vet. med., Ministrstvo za kmetijstvo, gozdarstvo in prehrano R Slovenije
2. dr. Bojan **BUTINAR**, Znanstveno raziskovalno središče Koper
3. g. Matjaž **GUČEK** dr. vet. med., generalni direktor, Uprava za varno hrano, veterinarstvo in varstvo rastlin
4. dr. Peter **RASPOR**, zaslužni profesor Univerza v Ljubljani
5. dr. Mojca **JEVŠNIK**, dipl. san. inž., Zdravstvena fakulteta, Univerza v Ljubljani
6. Janez **PODOBNIK**, dr. med., ECPD Slovenija
7. dr. Janez **POSEDI**, dr. vet. med., Veterinarska fakulteta, Univerza v Ljubljani
8. dr. Sonja **SMOLE MOŽINA**, univ.dipl.inž. živil.teh., Biotehniška fakulteta, Univerza v Ljubljani



Bety Breznik

Življenjepis: Rojena 1966 v Slovenj Gradcu, zaključila je študij veterinarske medicine na Veterinarski fakulteti Univerze v Ljubljani 1986-1993, podiplomski magistrski študij, smer nadzor živil na Veterinarski fakulteti Univerze v Ljubljani od 1993-1996 in univerzitetni doktorski študij s področja biomedicine, znanstveno področje veterinarska medicina (2005-2015). **Pedagoško delo:** Od leta 2008 sodeluje z Višjo šolo Biotehniškega centra Naklo, kot predavateljica strokovnih predmetov (zakonodaja, zdravstveno varstvo živali, higijene živil z varno hrane). Prav tako je tudi mentorica številnim diplomantom. **Raziskovalno/strokovno delo:** Stažist asistent na Inštitutu za higieno živil na Veterinarski fakulteti v Ljubljani, magistrski študij (1993-1996), veterinarska inšpektorica za področje mesno predelovalne industrije/ prometa z živali na Veterinarski upravi RS (1996-2001) in strokovna sodelavka v mikrobiološkem laboratoriju Nacionalnega veterinarskega inštituta (2001-2003). Od leta 2003 je zaposlena na Ministrstvu za kmetijstvo, gozdarstvo in prehrano na različnih strokovnih področjih, ker svoje izkušnje ter kompetence uspešno preliva prakso. V zadnjih 10 letih dela na evropskih projektih s področja ribištva, promocije ter osveščanja potrošnikov /deležnikov vzdolž celotne verige. Aktivno sodeluje pri pripravi nacionalne, in EU zakonodaje vseh vključenih EU politik- SKP, SRP in področja varnost hrane ter izvedbi številnih delavnic/seminarjev za deležnike na lokalni ravni in širše. **Bibliografija:** Cobiss izpis obsega 69 enot, kjer poleg strokovnih člankov prevladujejo znanstveni in strokovni prispevki na konferencah ter učna gradiva za področje varne hrane.

Bety Breznik

Biography: Born in 1966 in Slovenj Gradec. After veterinary studies at the Faculty of Veterinary Medicine, University of Ljubljana 1986-1993, she graduated from Master of Science within a department of foodstuffs supervision at the Faculty of Veterinary Medicine, University of Ljubljana 1993-1997 and Doctor of Science (biomedicine), scientific field of veterinary medicine (2005-2015). **Pedagogical work:** since 2008 she collaborates with the College of the Naklo Biotechnical Center, as a lecturer (legislation, health animal protection, food hygiene/ food safety with consumer protection). She is also a mentor to several graduates. **Research/a professional work:** intern assistant at the Institute of Food Hygiene at the Faculty of Veterinary Medicine in Ljubljana (1993-1996), veterinary inspector in the field of meat processing industry/ food trade at the Veterinary Administration of the Republic of Slovenia (1996-2001) and as a research associate in the microbiological laboratory of the National Veterinary Institute (2001-2003). Since 2003, she has been employed at the Ministry of Agriculture, Forestry and Food at various professional areas. For the last 10 years, she has been involved in European projects in the field of fisheries, promotion and consumer awareness. She actively participates in the preparation of national and EU legislation of all involved EU policies – CAP, CFP and food safety and the implementation of a number of workshops and seminars for stakeholders at local level and beyond. **Bibliography:** 69 units in Cobiss, where, in addition to professional articles, scientific and professional papers at conferences and teaching materials in the field of food safety prevail.



Bojan Butinar

Življenjepis: Rojen 1957 v Kopru, 1981 diploma iz kemije na UL, 1989 specializacija iz fizikalne kemije na IJS, 1992-1998 status zasebnega raziskovalca, od 2004 zaposlen na ZRS Koper kot raziskovalec, 2012 doktorat (Zasnova analitičnega postopka ugotavljanja pristnosti in stopnje predelave bučnega olja). 1981-1982 poučevanje kemije na Gimnaziji Bežigrad (s posredovanjem spoštovane prof. dr. Aleksandre Kornhauser), 1992-1994 poučevanje kemije na Gimnaziji Sežana, 2006-2016 predavatelj kemije in

docent na UP FVZ. 1981-1992 raziskovanje utrjevanja poliestrskih smol, raziskovanje sinteze nizkomolekularnih polielektrolitov in njihove uporabe v formulacijah za obdelavo velikih odprtih hladilnih sistemov. Na ZRS raziskovanje v polju oljčnega olja, oljk in oljčnih listov, postavitve akreditiranega laboratorija za preskušanje oljčnega olja, pristnost bučnega in oljčnega olja, metrološki segment za veličino 'množina snovi' (mol) v matrici oljčnega olja. Odgovorni analitik v referenčnem laboratoriju Inštituta za oljkarstvo, nosilec več ciljnih raziskovalnih projektov, sodelovanje v projektu »Oleum« H2020, sodelovanje v »MetroFOOD« - evropski infrastrukturi za promocijo metrologije v hrani in prehrani. Član sveta za oljkarstvo, predstavnik RS pri mednarodnem svetu za oljke (IOC), predstavnik RS pri Evropski komisiji za oljčno olje v Bruslju (AGRI G4). COBISS izpis obsega 232 enot, soavtorstvo pri patentu.

Bojan BUTINAR

Biography: Born 1957 in Koper, 1981 degree in chemistry at UL, 1989 specialization in physical chemistry at JSI, 1992-1998 status of private researcher, since 2004 employed at ZRS Koper as a researcher, 2012 doctorate (Design of analytical procedure for authentication and processing of pumpkin oil). 1981-1982 teaching chemistry at Gimnazija Bežigrad (with the mediation of the respected Prof. Dr. Aleksandra Kornhauser), 1992-1994 teaching chemistry at Gimnazija Sežana, 2006-2016 lecturer in chemistry and assistant professor at UP FVZ. 1981-1992 research of hardening of polyester resins, research of synthesis of low molecular weight polyelectrolytes and their use in formulations for treatment of large open cooling systems. At ZRS research in the field of olive oil, olives and olive leaves, establishment of accredited laboratory for testing olive oil, genuineness of pumpkin seed oil and metrological segment for the amount of substance (mol) in the olive oil matrix. Responsible analyst in the reference laboratory of the Institute of Oliveculture, holder of several targeted research projects, participation in the project "Oleum" H2020, participation in "MetroFOOD" - European infrastructure for the promotion of metrology in food and nutrition. Member of the Slovenian Olive Council, representative of the Republic of Slovenia at the International Olive Council (IOC), representative of the Republic of Slovenia for the chemistry of Olive Oil at the European Commission in Brussels (AGRI G4). The COBISS report comprises 232 units, co-authorship of a patent.



Matjaž Guček

Življenjepis: Rojen 1964 v Celju, 1984–1990 študij veterine na Veterinarski fakulteti v Ljubljani. Diplomiral leta 1990. 1990-1995 veterinar praktik na Veterinarski postaji Laško, 1995-2000 pooblaščen veterinar na Veterinarskem zavodu Slovenije. 2000-2004 uradni veterinar na Veterinarski upravi RS Območni urad Celje. Od leta 2007 je vodja Sektorja za Živila, krmo in zdravila, najprej na Veterinarski uprava RS, po reorganizaciji leta 2013 pa na Upravi RS za varno hrano, veterinarstvo in varstvo rastlin (UVHVVR). Marca 2021 je bil imenovan za generalnega direktorja UVHVVR. Hkrati opravlja tudi funkcijo Vodje veterinarske službe za Slovenijo (Chief Veterinary Officer - CVO) Od 2003-2006 soorganiziral in vodil več TAIEX dogodkov na temo varne hrane s poudarkom na živilih živalskega izvora. Je kontaktna točka OIE za področje varne hrane živalskega izvora. 2015 in 2016 je sodeloval v mednarodnem projektu Evropske Komisije – Dobre higienske prakse na področju zakola živali. Kot nacionalni ekspert je sodeloval v presojah Urada za zdravje, presoje in analize (bivši FVO) v Braziliji, Ruski federaciji, Srbiji in Avstriji in sicer na področju perutninskega mesa. Ima opravljen tečaj za notranjega presojevalca skladno z ISO 9001:2008 in certifikat za uporabo načel HACCP v praksi. Trenutno je predstavnik RS v Stalnem odboru EK za rastline, živali, krmo in živila – Sekcija biološka tveganja v prehranski verigi. Je tudi član delovnih skupin Sveta EU za področje veterine ter vodij veterinarskih služb.

Matjaž Guček

Curriculum vitae: Born 1964 in Celje, 1984–1990 veterinary studies at the Veterinary Faculty in Ljubljana. Graduated in 1990. In 1990 -1995 private veterinary practitioner at the Veterinary practice in Laško, from 1995 to 2000, authorized veterinarian at the Veterinary Institute of Slovenia. 2000-2004 official veterinarian at the Veterinary Administration of the R. of Slovenia Regional Office Celje. Since 2007, he is head of the Food, Feed and Veterinary Medicine Division, first at the Veterinary Administration of the R. of Slovenia, and after the reorganization in 2013, at the Administration of the R. of Slovenia for Food Safety, Veterinary Sector and Plant Protection (AFSVSPP). In March 2021 he was appointed as director general of AFSVSPP. He is also a Chief Veterinary Officer for Slovenia. Since 2003-2006, he co-organized and led several TAIEX events on food safety with an emphasis on foods of animal origin. It is the focal point of the OIE for the safe of food of animal origin. In 2015 and 2016 he participated in EC project "Share of Best Practice and Slaughter Hygiene". As a national expert, he participated in the audits of the Directorate 'Health and Food Audits and Analysis', (formerly FVO) in Brazil, the Russian Federation, Serbia and Austria in the field of poultry meat. Has passed the internal auditor course in accordance with ISO 9001: 2008 and obtained the certificate for the application of HACCP principles in practice (The Royal Institute of Public Health, UK). He is currently a representative of the R. of Slovenia in the EC's Standing Committee on Plants, Animals, Feed and Food - Section of Biological Risks in the Food Chain. He is also a member of the Council Working Party of Veterinary Experts and CVOs.



Mojca Jevšnik

Življenjepis: Rojena 1972 v Celju, 1991–1997 – študij na Visoki šoli za zdravstvo, UL. Leta 1997 se je zaposlila na Zavodu za zdravstveno varstvo v Celju. Od 1998 je zaposlena na Zdravstveni fakulteti (ZF). Na Biotehniški fakulteti UL je 2001 zaključila magisterij, 2008 doktorat s področja živilstva. V letu 2002 je bila imenovana kot presojevalka za ISO 9001 in 2003 kot presojevalka sistema HACCP pri certifikacijski hiši TÜV Management Service. V letu 2003 je pridobila naziv vodilne presojevalke sistema HACCP pri SIQ. Je notranja presojevalka sistemov kakovosti IFS in ISO 22000. V obdobju od 2006 do

2008 je bila predstojnica Oddelka za sanitarno inženirstvo, sedaj je članica senata ZF. **Pedagoško delo:** Docentka za področje sanitarno inženirstvo (SI), nosilka predmetov na dodiplomskem študijskem programu SI: Osnove higijene in etika, Higiena objektov in procesov, nosilka predmetov Komunalna higiena, Tehnologija in varnost živil, Dobre prakse v živilski verigi; nosilka pri podiplomskih predmetih Novi trendi v SI in Metode vzorčenja. Je mentorica in somentorica pri diplomskih, magistrskih in doktorskih nalogah. Urednica in soavtorica univerzitetnih učbenikov Higiena objektov in procesov, Uvod v varnost in kakovost živil in Metode vzorčenja. **Raziskovalno delo:** Aktivna udeležba na domačih in tujih konferencah. Raziskave na področju higijene in varnosti živil v različnih stopnjah živilske verige. Vodi laboratorij za higieno objektov in procesov. **Bibliografija:** SICRIS izpis obsega 484 enot, od tega 59 izvirnih in preglednih znanstvenih člankov. **Dodatne zadolžitve:** Aktivna članica Zbornice sanitarnih inženirjev Slovenije ter Inštituta za sanitarno inženirstvo. Predsednica Certifikacijskega odbora TÜV SÜD Sava d.o.o.

Mojca Jevšnik

Curriculum vitae: Born 1972 in Celje, 1991-1997 Bachelor study of sanitary engineering at University of Ljubljana. In 1997 she was employed at the Health Care Institute in Celje. From 1998 she works at Faculty of Health Sciences, UL. In 2008 she obtained a PhD in the field of food safety at Biotechnical Faculty, UL. In 2002, she was appointed as an auditor of the ISO 9001 and 2003 leading auditor of the HACCP system at SIQ. She is an internal auditor of quality systems IFS and ISO 22000. From 2006 to 2008 she was a Head of the Sanitary Engineering Department. **Pedagogical work:** Assistant professor in the field of sanitary engineering, lecturer at the undergraduate sanitary engineering study program - subjects: Fundamentals of Hygiene and Professional Ethics, Hygiene of Premises and Processes, Technology and Food Safety, Good Practices in the Food Chain; postgraduate subjects: New trends in Sanitary Engineering and Sampling methods. She is a mentor and co-mentor at graduation, master and doctoral theses. Editor and co-author of three university textbooks. **Research work:** Research in the field of hygiene and food safety in food supply chain. She is a Head of the Laboratory for the Hygiene of Premises and Processes. **Bibliography:** In total 484 units among which 59 original and review scientific papers. **Additional assignments:** Active member of the Chamber of Sanitary Engineers of Slovenia and the Institute of Public and Environmental Health. Chairman of the Certification Committee TÜV SÜD Sava d.o.o.



Janez Podobnik

Življenjepis : Rojen 1959 v Ljubljani. Po osnovni izobrazbi zdravnik. Študij medicine zaključil 1984 na Medicinski fakulteti v Ljubljani. Kot zdravnik je služboval med leti 1984 in 1992 na Cerkljanskem in Idrijskem. Leta 1990 po prvih demokratičnih volitvah izvoljen za predsednika Skupščine občine Idrija. To funkcijo opravljal do jeseni 1994. Decembra leta 1992 izvoljen za poslanca Državnega zbora Republike Slovenije. Po tej izvolitvi ni več opravljal delo zdravnika. V Državnem zboru je bil 12 let poslanec Slovenske ljudske stranke. Med leti 1996 in 2000 je bil predsednik Državnega zbora. Vmes, med leti 1994 in 1998 je bil nepoklicni župan novo nastale občine Cerklje. Kot poslanec Državnega zbora je bil med leti 2000 in 2004 član Parlamentarne skupščine Sveta Evrope v Strasbourgu. Med leti 2002 in 2004 je bil opazovalec v evropskem parlamentu in leta 2004, ko je Slovenija vstopila v Evropsko Zvezo tudi član evropskega parlamenta v Bruslju. Med leti 2004 in 2008 je bil minister za okolje in prostor v Vladi Republike Slovenije. V prvi polovici leta 2008, ko Slovenija predseduje Evropskemu svetu je predsedoval Svetu evropskih okoljskih ministrov. Po umiku iz aktivne politike je aprila 2009 prevzel vodenje Mednarodnega inštituta ECPD za trajnostni razvoj, prostorsko načrtovanje in okoljske študije . To delo opravlja še danes. Mednarodne izkušnje , še posebej na področju razvojnih tematik so mu omogočile, da je uspešno vodil, med leti 2012 in 2015 ICPE, Mednarodni center za promocijo podjetij. Pri vodenju obeh mednarodnih organizacij se je največ ukvarjal z izzivi trajnostnega razvoja.

Janez Podobnik

Curriculum vitae: born in 1959 in Ljubljana, Slovenia. Basic procession: doctor. Medical studies accomplished in 1984 on Faculty of medicine in Ljubljana. Worked as a doctor between 1984 and 1992 in the Cerkljansko and Idrijsko regions. In 1990 after the first democratically held elections in Slovenia, elected as President of Idrija municipality. Held this position until autumn 1994. Elected as member of National Assembly (MP) of the Republic of Slovenia in 1992. Ended the medical profession after these elections. Held the position of MP for the Slovenian people's party for 12 years. Between 1996 and 2000 held the position of President of the National Assembly. Between 1994 and 1998 also held (non-professionally) position of mayor of Cerklje municipality. As MP held position of member of Parliamentary Assembly of the Council of Europe in Strasbourg between 2000 and 2004. Also held position of MEP observer between 2002 and 2004, and MEP in Brussels for one year when Slovenia entered the EU in 2004. Held the position of Minister for Environment and Spatial Planning in the Government of Slovenia between 2004 and 2008. In the first half of 2008 when Slovenia assumed presidency of the European Council also held presidency of European environmental ministers. After leaving active politics in April 2009 he took over the ECPD International Institute for Sustainable Development, Urban Planning and Environmental Studies. He has held the position ever since. His international experience, especially in field of development, helped him successfully lead the ICPE - International Center for Promotion of Enterprises between 2012 and 2015. In leadership of both organizations his main field of work remained challenges of sustainable development.

Janez Posedi



Življenjepis: Rojen leta 1967 v Frankfurtu, Zvezna Republika Nemčija. Študiral je na Univerzi v Ljubljani, kjer je na Veterinarski Fakulteti pridobil naziv doktor veterinarske medicine (1994). Na Univerzi v Ljubljani je pridobil tudi naziva Magister znanosti iz področja veterinarske mikrobiologije (2000) in Doktor znanosti na področju Parazitologije (leta 2003). Od leta 1994 je zaposlen na Veterinarski fakulteti Univerze v Ljubljani. Tam se je naprej ukvarjal s tuberkulozo živali nato s parazitologijo. Bil je namestnik predstojnika Inštituta za mikrobiologijo in parazitologijo (od 1.12.2009 do 15.3.2015), vodja Nacionalnega referenčnega

laboratorija za parazite (od 1.5.2007 do 15.3.2015), vodja Laboratorija za parazite na Enoti za diagnostiko kužnih in drugih bolezni na Nacionalnem veterinarskem inštitutu - NVI (od 1.8.2008 do 15.3.2015), vodja Enote za parazitologijo na Inštitutu za mikrobiologijo in parazitologijo (od 12.11.2004 do 15.3.2015), vodja Nacionalnega referenčnega laboratorija za parazite (od 1.5.2007 do 15.3.2015), vodja Enote za parazitologijo na Inštitutu za mikrobiologijo in parazitologijo (od 12.11.2004 do 15.6.2015) ter vodja Sprejemnice vzorcev na Nacionalnem veterinarskem inštitutu - NVI (od 1.1.2003 do 1.10.2005). Trenutno dela kot veterinar specialist v parazitološkem laboratoriju. Od marca 2015 do marca 2020 je bil Generalni direktor Uprave Republike Slovenije za varno hrano, veterinarstvo in varstvo rastlin. **Bibliografija:** SICRIS izpis obsega 59 enot, od tega 15 izvirnih in preglednih znanstvenih člankov.

Janez Posedi

Curriculum vitae: Born in 1967 in Frankfurt, Federal Republic of Germany. He studied at the University of Ljubljana, where he obtained the degree of Doctor of Veterinary Medicine (1994) at the Faculty of Veterinary Medicine. He also obtained the title of Master of Science in Veterinary Microbiology (2000) and Doctor of Science in Parasitology (2003) at the University of Ljubljana. Since 1994 he has been employed at the Faculty of Veterinary Medicine, University of Ljubljana. There he further dealt with animal tuberculosis then parasitology. He was the Deputy Head of the Institute of Microbiology and Parasitology (from 1 December 2009 to 15 March 2015), Head of the National Reference Laboratory for Parasites (from 1 May 2007 to 15 March 2015), Head of the Laboratory for Parasites at the Unit for Diagnosis of Infectious and Other Diseases. National Veterinary Institute - NVI (from 1.8.2008 to 15.3.2015), Head of the Parasitology Unit at the Institute of Microbiology and Parasitology (from 12.11.2004 to 15.3.2015), Head of the National Reference Laboratory for Parasites (2015), Head of the Unit for Parasitology at the Institute of Microbiology and Parasitology (from 12.11.2004 to 15.6.2015) and Head of the Sample Receiver at the National Veterinary Institute - NVI (from 1.1.2003 to 1.10.2005). He currently works as a veterinarian specialist in a parasitology laboratory. From March 2015 to March 2020, he was the Director General of the Administration of the Republic of Slovenia for Food Safety, Veterinary Medicine and Plant Protection. Bibliography: The SICRIS report comprises 59 units, of which 15 are original and reviewed scientific articles.

Peter Raspor



Življenjepis: Rojen v Dolgi poljani, 1954. Maribor: Pekovska šola (1971), živilska tehnična šola (1975). Ljubljana Živilska tehnologija, BF Univerza v Ljubljani. Diploma na živilstvu 1983 Zagreb: Doktorat iz področja biotehnologije (1987) London Institut Labatt 1989 podoktorska specializacija. Docent za področje biotehnologije in industrijske mikrobiologije (1989), izredni profesor (1992), redni profesor (1996). Ustanovitev katedre za biotehnologijo (1992) **Dela:** Mlinotest Ajdovščina 1969-86, Labatt (1987-89), Univerzi v Ljubljani (1989-2013). Univerza na Primorskem 2014-2016. **Pedagoško delo:** Postavil je podiplomski študij biotehnologije na UL (1994); dodiplomski študij biotehnologije na BF (2004). mentoriral je 55 disertacij, 18 magisterijev, 145 diplom, med njimi ducat nagrajencev. **Raziskovalno delo:** Vodil je več deset projektov: živilstvo, industrijsko mikrobiologijo in biotehnologijo ter varnost živil. **Bibliografija:** SICRIS obsega 1810 enot, 214 znanstvenih člankov, preko 100 vabljenih predavanj **Nagrade in priznanja:** Za svoje delo je med drugim prejel tri častne doktorate in tri najvišje državne nagrade. **Drugo:** Sopostavitelj LUI inkubator na UL, pomagal pri nastanku 5 biotehnoških podjetij. Vključen v sisteme kakovosti ISO in v mednarodne presoje kakovosti v visokem šolstvu. Snoval in vodil je sprejetje dveh deklaracij: o mikrobiologiji leta 2004, in deklaracija o hrani, prehrani in tehnologiji leta 2008. Postavil je tri kongresne mreže, ki so začele svojo pot v Ljubljani, CEFood 2002, FEMS 2004 in EFFoST 2008.

Peter Raspor

Curriculum vitae: Born in Dolga Poljana, 1954. Maribor: Bakery school (1971), food technical school (1975). Ljubljana: Food Technology, BF.UL Graduate diploma in food technology 1983, Zagreb: Doctorate in Biotechnology (1987) Faculty of Food Technology Biotechnology, London Labatt 1989 Institute. Postdoctoral specialization Assistant Professor in Biotechnology and Industrial Microbiology (1989), associate professor (1992), full professor (1996). Establishment of the Department of Biotechnology (1992). **Working activity:** Mlinotest Ajdovščina 1969-86, Labatt (1987-89), University of Ljubljana (1989-2013). University of Primorska 2014-2016. **Pedagogical work:** He has established post-graduate biotechnology study at UL (1994); undergraduate biotechnology study at BF (2004). He has mentored 55 dissertations, 18 master's degrees, 145 diplomas, among them a dozen of prize-winners. **Research work:** He has led dozens of projects. food, industrial microbiology and biotechnology, and food safety. **Bibliography:** SICRIS lists 1810 bibliographic units, 214 scientific articles, 27 expert articles, few dozen book chapters more patents, over 100 invited lectures. **Awards and recognitions:** He received three honorary doctorates and three top state awards for his work. **Additionaly:** He helped to set up the LUI incubator at UL, to create 5 biotech companies. He was involved ISO and international audits in higher education for research and teaching. He established and led the adoption of two declarations: on microbiology in 2004, and a declaration on food, nutrition and technology in 2008. He set up three congressional networks that began their journey in Ljubljana, CEFood 2002, FEMS 2004 and EFFoST 2008.



Sonja Smole Možina

Življenjepis: Rojena l. 1963 v Ljubljani. Študij živilske tehnologije BF-UL (1982-86), doktorat znanosti s področja mikrobiologije l. 1996. L. 1997 docentka za področje industrijske mikrobiologije, l. 1999 pa predstojnica Katedre za živilsko mikrobiologijo. Leta 2002 je postala izredna, leta 2008 redna profesorica mikrobiologije. **Poučuje** splošno in živilsko mikrobiologijo ter mikrobiološko varnost živil na študijih mikrobiologije, biotehnologije ter živilstva in prehrane na BF UL ter kot stalna gostujoča profesorica MSc študija SIFC, »Varnost v živilski proizvodno-prehranski oskrbovalni verigi«, šestih univerz EU, s koordiniranjem Univerze BOKU na Dunaju (A). Na BF UL je dolgoletna koordinatorka tematske mreže CEEPUS ("Za boljšo varnost hrane v EU") in koordinatorka področja živilstva doktorskega programa Bioznanosti. Mentorica ali somentorka 93 BSc, 29 MSc in 13 PhD študentom. Od l. 2014 vodi Katedro za biotehnologijo, mikrobiologijo in varnost živil na Oddelku za živilstvo, BF UL. **Glavna področja raziskovalnega dela** so mikrobna ekologija hrane in živilskih procesov, stresni odziv in mikrobiološka odpornost v okolju proizvodnje hrane, izkoriščanje naravnih bioaktivnih snovi in stranskih proizvodov živilstva za izboljšanje varnosti, kakovosti in trajnosti živil. **Bibliografija:** 838 enot COBISS, 122 originalnih znanstvenih člankov, 6 preglednih znanstvenih člankov, 35 poglavij v monografijah ali univerzitetnih učbenikih. **Druge mednarodne zadolžitve:** Članica uredniškega odbora in recenzentka raziskovalnih revij in slovenska predstavnik v zvezi ICFMH in COST.

Sonja Smole Možina

Curriculum vitae: Born in Ljubljana in 1963. Graduated in Food Science and Technology in 1986 and defended PhD thesis in Microbiology in 1996 at BF UL Ljubljana. She started **teaching** at BF UL as assistant professor in 1997, associate professor in 2002 and full professor in 2008 in the fields of general and food microbiology on different levels of study programmes Microbiology, Biotechnology, Food Science and Nutrition. She is a regular guest professor at MSc study of SIFC (»Safety in the Food Chain«) at BOKU, Vienna (Austria). At BF UL she is coordinating thematic CEEPUS network (»For Better Food Safety in EU«) and the field of Food Technology at doctoral programme of Biosciences. In the last 20 years she has been/is mentoring or co-mentoring of 93 BSc, 29 MSc and 13 PhD students. From 2014 she is the Head of Chair of Biotechnology, Microbiology and Food Safety. **Research interests include** microbial ecology of food and nutrition, microbiology of food processing, microbial stress response and resistance in food-related environment, bioactive components from plant origin, including by-products and waste materials from food and related industries and their potential for improving safety, quality and shelf-life of food products. **Bibliography:** 838 units in COBISS, 122 original scientific papers, 6 review articles, 35 chapters (in monographies, university textbooks). **Other international professional functions:** Member of the editorial board of several research journals and Slovenian representative in the International Commission for Food Microbiology and Hygiene (ICFMH) and in COST network.

Varnost in strah

Ko se svet s kovidom zlije,
človek ne vidi več norčije,
slehernika v strah zavije.

Takrat ni vprašanje varnosti,
takrat nasveti niso več preprosti,
saj mnogi rojevajo norosti.

Človekova usoda se vrti ob hrani,
saj ta telo in dušo hrani,
ko življenje in kulturo brani.

Varnost pa v zakulisju prede,
človeka gleda kako se vede,
ko ta (z)greši, hitro ga posede.

Ni konca niti tej rdeči,
nihče ji ne more čisto uteči,
vsi prekrški so boleči.

Zato je modro varnost obdržati,
nevarnost urno stran poslati,
da bi se izogniti zagati.

To je lažje reči kot storiti,
saj radoživost vodi nas po tanki niti,
a razsodnost pravi: nikar ne hiti!
(Peter Raspor. 1.6.2021)