FA COST Action FA1203
Sustainable management of Ambrosia artemisiifolia in Europe (SMARTER)

Ambrosia facts

February 2013

[Serbia]
Present distribution (geographic and habitat) of Ambrosia and impact on Serbia

During 2005-2006 (first monitoring) and 2007-2008 (second monitoring) a survey was conducted by several scientific institutions (Faculty of Agriculture, Belgrade; Institute for Plant Protection and the Environment Belgrade; Institute of Pesticide and Environmental Protection, Belgrade; Institute of Field and Vegetable Crops, Novi Sad) and 34 regional services on the territory of Serbia. Both Projects were funded by the Ministry for Agriculture, Forestry and Water Management of the Republic of Serbia.

For common ragweed mapping the proportion at UTM net 10x10km was selected. The software was created as the basis for importing terrain data. Skilled persons (graduated engineers for plant protection) from Regional services (34 services on the territory of Serbia) monitored common ragweed presence and numerical value during the vegetation period both on arable and non-arable land and alongside traffic roads. The scale from 1 to 4 was used for numerical value estimation: 1- the species covered up to 5% of the surface area (symbol grey), 2- the species covered 5 – 25% of the surface area (symbol blue), 3- the species covered 25-50% of the surface area (symbol green), 4- the species covered over 50% of the surface area (symbol red). All categories of cultivated land were involved in surveying the terrain: arable crops, stubble, fodder crops, perennial crops, etc. The 18 representative site surveys (6 categories x 3 surveys two times per vegetation period) were conducted at each square quadrant, according to the dynamics of crop growth.

UTM map distribution and frequency of Ambrosia artemisiifolia in Serbia (Vrbničanin et al., 2008)

In Summary

Problems arise with regard to ragweed on roadsides, old and poor households, small gardens, field margins, stick-in-the-mud plots, etc. Public green area utility companies organize ragweed control in urban areas while rural areas due to deficiency of organized services are left without ragweed control.
Past and present activities on *Ambrosia* research with national (regional) participation **Serbia**

2003-ongoing Project “Mapping of terrain under ragweed and other allergens plants, laboratory and field research and monitoring on the territory of Novi Sad” (project leader prof. Branko Konstantinović, Faculty of Agriculture-Novis Sad), funded by Provincial Secretariat of Agriculture, Water Economy and Forestry.

2004-2006 Project “Mapping of quarantine, invasive and economic noxious weeds in Serbia with proposal of their control” (project leader prof. Sava Vrbičanin, Faculty of Agriculture-Belgrade), funded by Ministry for Agriculture, Forestry and Water Management of Republic of Serbia.

2006-2010 Project “Monitoring and control ragweed (*Ambrosia artemisiifolia* L.) in the city of Belgrade” (project leader dr. Vaskrsija Janjić, IPEP-Belgrade), funded by City of Belgrade, Department of Environmental Protection and the Department for Housing and Utilities.

2006, Weed Science Society of Serbia organized one day meeting on title “*Ambrosia artemisiifolia* L.” at the University of Belgrade, Faculty of Agriculture, and 2007 published a monograph “Regweed”.

2006-2007, Project “Action plan for the control input, monitoring and control of alien invasion species” (project leader dr Predrag Ćakić, IBISS, Belgrade), founded by Ministry of Environmental Protection of Republic of Serbia.

2007-2008 Project “Identification and monitoring of alien invasive weed species on the territory of Serbia and proposed measurements to control” (project leader prof. Sava Vrbičanin, Faculty of Agriculture-Belgrade), funded Ministry for Agriculture, Forestry and Water Management of Republic of Serbia.


2009-2010 Project “Monitoring and control ragweed (*Ambrosia artemisiifolia* L.) in the municipality of Obrenovac” (project leader dr. Vaskrsija Janjić, IPEP-Belgrade), funded by Fund for Environmental Protection Obrenovac.


1999-2013 Aeropalinological research, Projects of monitoring aeroallergens (Funding provided by Authorities in several cities as well as Authorities of Autonomous Province Vojvodina). Particular attention to ragweed airborne pollen and assessment of risk for allergy symptoms and to evaluation of success of eradication activities. Information available to public through www.nspolen.com

2005-2008 SNF-SCOPES project “Monitoring and forecasting airborne ragweed pollen concentrations in the South-eastern part of its European distribution” lead by MeteoSwiss and in collaboration with Center of Environmental and Health Protection, Tirana, Albania; Inst. of Occupational Health, Skopje, Macedonia; Medical University of Sofia, Bulgaria.

2011-2013 IPA Cross-border cooperation programme Hungary-Serbia “Podrška životnoj sredini bez alergena” HUSRB/1002/122/195-EKOVOJVODINA-07

2003, 2005 Organization of the International regional meeting “Live without ragweed” that gathers people and institutions regionally involved in the fight against ragweed.

2007-2009 ragweed phenological observation as a part of the International Ambrosia Forecasting Collaboration (Penn State University, US MeteoSwiss)

2006-2012 continuous monitoring and mapping of ragweed population dynamics, changes in the character of vegetation and threat to autochthonous species in Pannonian biogeography region. (Projects funded by Authorities of the City of Novi Sad and the Municipality of Bačka Palanka)

2007-2010 project “Diversity of Pannonian flora in Serbia – threatened by expansion of invasive weeds” (project leader Prof. Pal Boža, UNSPMF) funded by Ministry of Science, R. Serbia

Over the years various media events (TV, radio, newspapers, forums) were organized on the topic of recognized and control measures of ragweed in arable and non-arable lands.
Ambrosia_facts_2013_RS
Publications on Ambrosia

Serbia


ndstigating atmospheric transport of Ambrosia pollen from the region in the Pannonian Plain in Southern Pannonian plain and National Symposium Interdisciplinary Regional Research, Novi Sad, 6. ISIRR (International Symposium Interdisciplinary Regional Research), Novi Sad, Serbia and Montenegro.


Radišić P., Šikoparija B., Pejak T., Šimić S. 2006. Airborne grass and ragweed pollen in the southern panonian valley-consideration of rural and urban environment. Annals Agricultural Environmental Medicine, 13, 263-266.


Leaflet 1: Promotional material following International regional meeting “Live without ragweed” that indicates temporal variations of ragweed airborne pollen concentration in relation to plant phenology (Photos of different phenophases aim to improve recognition of plant).

1. Prof. Sava Vrbničanin, University of Belgrade, Faculty of Agriculture, Belgrade, Serbia
2. Dr Dragana Božić, University of Belgrade, Faculty of Agriculture, Belgrade, Serbia
3. Branko Šikoparija, University of Novi Sad Faculty of Sciences, Serbia
4. Milica Rat, University of Novi Sad Faculty of Sciences, Serbia
5. Prof. Branko Konstantinović, University of Novi Sad, Faculty of Agriculture, Serbia
6. Dr Goran Malidža, Institute of Field and Vegetable Crops, Novi Sad, Serbia
7. Dr Danijela Pavlović, Institute of Plant protection and Environment, Belgrade, Serbia
8. Dr Ljiljana Radivojević, Institute of Pesticides and Environmental Protection, Serbia
9. Dr Katarina Jovanović-Radovanov, University of Belgrade, Faculty of Agriculture, Belgrade, Serbia
10. Maja Meseldžija, University of Novi Sad, Faculty of Agriculture, Serbia
11. Marija Sarić-Krsmanović, Institute of Pesticides and Environmental Protection, Serbia
12. Jelena Gajić Umiljendić, Institute of Pesticides and Environmental Protection, Serbia
13. Darko Stojičević, University of Belgrade, Faculty of Agriculture, Belgrade, Serbia
Name: Sava Vrbnicanin  
Position: Full professor  
Institution: University of Belgrade-Faculty of Agriculture  
Address: Nemanjina 6, 11080 Zemun-Belgrade, Serbia  
Email: sava@agrif.bg.ac.rs

**Expertise (general)**

**Areas of research expertise:** Weed and crop resistance to herbicides, Invasive weeds, Parasitic weeds, Weed response to herbicides, Weed biodiversity, Weed-crop competition  
**Other expertise relevant to SMARTER:** Coordination of the national research programs “Mapping quarantine, invasive and economically important weeds in Serbia and recommendations for their control” (2004-2006) and “Identification and monitoring of alien invasive weeds on the territory of Serbia and recommendations for control” (2007-2009) and coordination of project of bilateral cooperation with Slovenia “Weed flora and vegetation of arable land and changes in agroecosystems” (2006-2007).

**Work on Ambrosia**

**Past work on Ambrosia:** Projects “Mapping quarantine, invasive and economically important weeds in Serbia and recommendations for their control” and “Identification and monitoring of alien invasive weeds on the territory of Serbia and recommendations for control” including *Ambrosia*; Project bilateral cooperation with Slovenia; Editor of the national monograph “Ambrozija” (in Serbian); Study of *A. artemisiifolia* anatomy, effects of plant growth promoting rhizobacteria on *A. artemisiifolia* seed germination.  
**Ongoing work on Ambrosia:** Experiments: seed germination; response to herbicides; competitive interactions between *Ambrosia trifida* and sunflower.

**Role in SMARTER**

**Anticipated role in SMARTER:** member of MC and and member of working groups WG2 and WG3

**Max. five publications relevant to SMARTER**


**Scientific collaborations relevant to SMARTER**

**National:** Dr. Dragana Bozic, University of Belgrade- Faculty of agriculture, Dr. Goran Malidza, Institute of Field and Vegetable Crops, Dr. Danijela Pavlovic, Institute for Plant Protection and Environment  
**European:** Dr. Urban Silc, Institute of Biology, Scientific Research Centre of the Slovenian Academy of Sciences and Arts, Slovenia, Dr. Andrej Simoncic, Agricultural Institute of Slovenia, Prof. Ahmet Uludag, Igdir University, Faculty of Agriculture, Turkey, Prof. Edita Stefanic, Faculty of Agriculture, Croatia, Prof. Garifalia Economou, Agricultural University of Athens, Greece
Outside Europe:
1 indicate also if fixed or limited until when
2 including policy development at the European or at the national level, communication with stakeholders or the general public, etc.
3 MC, WG leader, WG member etc.; for specific topics see next page
4 please add pdfs of your publication
5 give names and institutions or research programs, and keywords for collaborations

## Contribution to SMARTER

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<thead>
<tr>
<th>WG 1 Biological control</th>
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Curriculum vitae of Sava Vrbnicanin

Address: University of Belgrade-Faculty of Agriculture
Nemanjina 6, 11080 Zemun-Belgrade, Serbia
E-mail: sava@agrif.bg.ac.rs
Tel: +381 11 2615 315
Fax: +381 11 2193 659
Gender: Female
Date of Birth: 25 November 1963, Sehovici, Mrkonjic Grad, B&H
Marital Status: married
Languages: Serbian, English, Russian

EDUCATION
1982-1987 BSc Degree in Plant Protection, Faculty of Agriculture, University of Belgrade, Serbia
1987-1991 M.Sc. in Plant Protection Products, Faculty of Agriculture, University of Belgrade, Serbia
Thesis: The effect of some herbicides on phytocenological changes in weed communities of maize
1991-1996 Ph.D. thesis in Weed science, Faculty of Agriculture, University of Belgrade, Serbia, Thesis: Phytocenological and ecophysiological changes in weed vegetation of small grains, depending on the height gradient

EMPLOYMENT
1989 - 1992 - Teaching and research assistant with a BSc degree, University of Belgrade, Faculty of Agriculture, Serbia
1992 - 1997 - Teaching and research assistant with a MSc degree, University of Belgrade, Faculty of Agriculture, Serbia
1997-2002 - Assistant Professor at the University of Belgrade, Faculty of Agriculture, Serbia
2002 - 2007- Associate Professor at the University of Belgrade, Faculty of Agriculture, Serbia
2007 - present- Full Professor at the University of Belgrade, Faculty of Agriculture, Serbia

EXPERTISE
• 25 years of experience in teaching in weed science.
• 25 years experience of field and laboratory studies of weeds.
• Author of more than 150 publications, including 20 papers in international and many papers in national peer-reviewed journals.
• Reviewer of manuscripts for several international and national journals and projects of bilateral cooperation

FUNDING
• Participant on national project - „Research for the development of new and improvement of existing formulations of herbicides“ (2005-2007)
• Coordinator of project of bilateral cooperation with Slovenia „Weed flora and vegetation of arable land and changes in agroecosystems (2006-2007)
• Participant on project of bilateral cooperation with Slovenia „Synchronization and application of methods for detection of weed species resistant to herbicides“ (2006-2007)
• Coordinator of national project “Mapping quarantine, invasive and economically important weeds in Serbia and recommendations for their control” (2004-2006)
• Coordinator of national project „Identification and monitoring of alien invasive weeds on the territory of Serbia and recommendations for control“, (2007-2009)
- Participant on national project „Biological, chemical, toxicological and ecotoxicological study of herbicides and their application (2008-2011)
- Coordinator of project of bilateral cooperation with Germany „Monitoring and Managing Herbicide Resistance in Weeds”, (2009-2010)
- Participant on national project - „Development of integrated systems for harmful organisms management in crop production in order to overcome resistance and improve the quality and safety of food” (2011-2014)
- Participant on COST action MP1102 „Chemical imaging by Coherent Raman microscopy – microCoR“, (2011-2015)
- Participant on TEMPUS project „International Master Plant Medicine, Project TEMPUS IV“ (2010-2013)

PUBLICATIONS (past five years):
| Name: Dragana Bozic  
| **Position**: Assistant Professor  
| **Institution**: University of Belgrade-Faculty of Agriculture  
| **Address**: Nemanjina 6, 11080 Zemun-Belgrade, Serbia  
| **Email**: dbozic@agrif.bg.ac.rs  

### Expertise (general)

**Areas of research expertise:**
Weed and crop resistance to herbicides, Invasive weeds, Parasitic weeds, Weed response to herbicides, Weed biodiversity, Weed-crop competition

**Other expertise relevant to SMARTER**: Mapping of invasive plant species; Response weeds (including invasive weeds) to herbicides; Integrated Weed Management; Communication with public.

### Work on Ambrosia

**Past work on Ambrosia:** Project “Identification and monitoring of alien invasive weeds on the territory of Serbia and recommendations for control” (2007-2009) including *Ambrosia*; Project bilateral cooperation with Slovenia „Weed flora and vegetation of arable land and changes in agroecosystems“ (2006-2007); Chapter in the national monograph “Ambozija” (in Serbian); Study of *A. artemisiifolia* anatomy, effects of plant growth promoting rhizobacteria on *A. artemisiifolia* seed germination, Morphoanatomical alterations of *A. artemisiifolia* induced by Aceria spp. (Acari: Eriophyoidea)

**Ongoing work on Ambrosia:** Experiments: seed germination; response to herbicides; competitive interactions between *Ambrosia trifida* and sunflower

### Role in SMARTER

**Anticipated role in SMARTER**: substitute in MC and member of working groups WG2 and WG3

### Max. five publications relevant to SMARTER


### Scientific collaborations relevant to SMARTER

**National**: Prof. Sava Vrbnicanin, University of Belgrade- Faculty of agriculture, Dr. Goran Malidza, Institute of Field and Vegetable Crops, Dr. Danijela Pavlovic, Institute for Plant Protection and Environment

**European**: Dr. Urban Silc, Institute of Biology, Scientific Research Centre of the Slovenian Academy of Sciences and Arts, Slovenia, Dr. Andrej Simoncic, Agricultural Institute of
**Contribution to SMARTER**

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Curriculum vitae of Dragana Bozic

Address: University of Belgrade-Faculty of Agriculture
Nemanjina 6, 11080 Zemun-Belgrade, Serbia
E-mail: dbozic@agrif.bg.ac.rs
Tel: +381 11 2615 315
Fax: +381 11 2193 659
Gender: Female
Date of Birth: 26 March 1977, Kragujevac, Serbia
Marital Status: married
Languages: Serbian, English, Rusian.

EDUCATION
1996-2001 BSc Degree in Plant Protection, Faculty of Agriculture, University of Belgrade, Serbia
2001-2006 M.Sc. in Weed science, Faculty of Agriculture, University of Belgrade, Serbia
Thesis: Researching of plant resistance to herbicides ALS inhibitors
2006-2011 Ph.D. thesis in Weed science, Faculty of Agriculture, University of Belgrade, Serbia,
Thesis: Responses of weed populations and sunflower hybrids to acetolactate inhibiting herbicides.

EMPLOYMENT
• 2001 - 2006 - Teaching and research assistant with a BSc degree, University of Belgrade, Faculty of Agriculture, Serbia
• 2006-2012 - Teaching and research assistant with a MSc degree, University of Belgrade, Faculty of Agriculture, Serbia
• 2012 – present - Assistant Professor at the University of Belgrade, Faculty of Agriculture, Serbia

EXPERTISE
• 11 years of experience in the practical trainings in weed science for students.
• 11 years experience of field and laboratory studies of weeds.
• Author of more than 80 publications, including 11 papers in international and 15 papers in national peer-reviewed journals.
• Reviewer of manuscripts for journal Notulae Botanicae Horti Agrobotanici Cluj-Napoca

FUNDING
• Participant on national project - „Research for the development of new and improvement of existing formulations of herbicides“ (2005-2007)
• Participant on project of bilateral cooperation with Slovenia „Weed flora and vegetation of arable land and changes in agroecosystems“ (2006-2007)
• Participant on project of bilateral cooperation with Slovenia „Synchronization and application of methods for detection of weed species resistant to herbicides“ (2006-2007)
• Participant on national project „Identification and monitoring of alien invasive weeds on the territory of Serbia and recommendations for control“, (2007-2009)
• Participant on national project „Biological, chemical, toxicological and ecotoxicological study of herbicides and their application” (2008-2011)
• Participant on project of bilateral cooperation with Germany „Monitoring and Managing Herbicide Resistance in Weeds”, (2009-2010)
- Participant on national project - „Development of integrated systems for harmful organisms management in crop production in order to overcome resistance and improve the quality and safety of food" (2011-2014)
- Participant on COST action MP1102 „Chemical imaging by Coherent Raman microscopy – microCoR“ (2011-2015)
- Participant on TEMPUS project „International Master Plant Medicine, Project TEMPUS IV“ (2010-2013),

PUBLICATIONS (past five years):
Junior Scientist in SCOPES-Joint Research Project "Monitoring and forecasting airborne ragweed pollen concentrations in the South-Eastern part of its European distribution"

Junior Scientist in research project: Diversity of Pannonian flora in Serbia – threatened by expansion of invasive weeds (no. 1770 Ministry of Science R. Serbia)

COST Action ES0603, Assessment of production, release, distribution and health impact of allergenic pollen in Europe (EUPOL) “Committee Member deputy

Palynological expert in the IPA Cross-border cooperation programe Romania-Serbia entitled as “Monitoring and control of the invasive biological pollutant – Ambrosia artemisiifolia L. (spp.) STOP AMBROSIA” (90960/30.12.2010)

Co-organizer of the regional workgroup meeting “Life without ragweed”

Ongoing work on Ambrosia:
Aeropalinological research, Project of monitoring aeroallergens in Vojvodina, Novi Sad and Smederevo

Biosensing technologies and global systems for continuous monitoring and integrated management of ecosystems (no.III43002 Ministry of Science R. Serbia)

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<th>Role in SMARTER</th>
<th>Anticipated role in SMARTER ³:</th>
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<tr>
<td>Representative of Serbia in the Management Committee</td>
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<td>Planned contribution to/participation in WPs and Tasks:</td>
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<tr>
<td>Participation in the WP4 in particular related to airborne pollen monitoring and modeling ragweed population dynamics.</td>
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Max. five publications relevant to SMARTER*


Scientific collaborations relevant to SMARTER

National: dr Zivoslav Tesic (Faculty of Chemistry, Belgrade). Institutes of public health in a number of Serbian cities.

European: Carsten Skjøth Ambelas (University Worcester), Matt Smith (University of Vienna), Bernard Clot (MeteoSwiss), European Aeroallergen Network, Ana Paldy (Institute of Public Health Hungary), Barbara Stjepanovic (Institute of public health, Zagreb, Croatia), Snezana Milkovska (Institute for Occupational Health of Republic of Macedonia)

Outside Europe: -

¹ indicate also if fixed or limited until when
including policy development at the European or at the national level, communication with stakeholders or the general public, etc.

MC, WG leader, etc.

please add pdfs of your publication

give names and institutions or research programs, and keywords for collaborations

### Contribution to SMARTER

| WG 1 Biological control | Task 1 Biological Control | Pathogens □
|-------------------------|---------------------------|------------------------
|                         |                           | Insects □
|                         |                           | Classical □
|                         |                           | Inundative □
|                         |                           | Augmentative □
| WG 2 Vegetation Management | Task 2 Vegetation Management | Weed biology □
|                         |                           | x Weed abundance and distribution □
|                         |                           | Soil seed bank □
|                         |                           | Plant population dynamics/Modelling □
|                         |                           | Plant competition/Allelopathy □
|                         |                           | Vegetation management □
|                         |                           | Chemical □
|                         |                           | Mechanical □
|                         |                           | Integration □
|                         |                           | x Aerobiology □
|                         |                           | Allergology □
|                         |                           | Air quality modelling □
|                         |                           | Ecological impact assessment □
|                         |                           | Economic & social impact assessment □
|                         |                           | Website □
|                         |                           | Workshops: Plant invasions & management □
|                         |                           | x Workshop: Modelling impact & evaluation □
|                         |                           | Biological Control □
|                         |                           | Invasive alien species □

### Curriculum Vitae of Branko Sikoparija

**Adress:** Futoški put 18c, 21000 Novi Sad, Serbia

**Phone:** +38121402421, mob. +381642135132

**E-mail:** sikoparijabranco@yahoo.co.uk

**Personal**

Date of Birth: 16th June 1979.

Place of Birth: Jagodina, Serbia

Sex: Male

Marital Status: married (children two)
Education
2003–2007 Taxonomy Magister of Science studies at the Faculty of Natural Sciences and Mathematics, University of Novi Sad, Serbia. GPA 10 (based on scale of 5-10, 6 passing).
1998-2003 Bachelor of Sciences degree. Faculty of Natural Sciences and Mathematics, University of Novi Sad, Serbia. GPA: 9.34 (based on scale of 5-10, 6 passing).

Courses and training programs
2005 research training program "Aerobiology and health", National Pollen and Aerobiology Research Unit (NPARU), University College of Worcester, Worcester, UK
2006 Advanced Aerobiology Course “Pollen dispersion in alpine environment”, Switzerland
2010 Short Term Scientific Mission to Medical University of Vienna within the COST Action ES0603 Assessment of production, release, distribution and health impact of allergenic pollen in Europe (EUPOL)

Foreign Languages
English – excellent, German - passive

Professional experience in education
Faculty of Sciences and Mathematics, Department of biology and ecology, University of Novi Sad:
Assisted Dr Smiljka Simic, Practical exercises Course: General Zoology
Assisted Dr Smiljka Simic, Lectures and practical exercises on Palynology in Taxonomical research, Aerobiology and Melissopalynology Course: Palynology
Assisted Dr Ante Vujic, Lectures on Biogeography of Balkan peninsula, Course: Ecology and Environment Protection
Assisted Dr Desanka Kostic, Practical exercises considering frog and bird dissection Course: Biology and Professor of Biology
Assisted Dr Smiljka Simic, Lectures on Biodiversity of Rotifera Course: Biology.
Assisted Dr Ivo Karaman, Lectures and Practical exercises about House Dust Mites Course: Applied entomology with acarology
2006, 2007, 2008 Organization of training program “Pollen all around us” for teachers in Primary and Secondary schools accredited by Zavod za unapredjenje obrazovanja i vaspitanja R Serbia
Organization of 8th European Basic Course on Aerobiology 2007

Research Experience
2001 Multidisciplinary Explorations of Kopaonik Mountain and Fruska Gora Mountain, International research project
1999-2002 Fieldwork concerning insect ecology
2003-2012 Aeropalinological research, Project of monitoring aeroallergens in Vojvodina, Novi Sad and Smederevo
2004-2006 Junior Scientist: Monitoring of biodiversity in protected natural reserves (no.1770; Ministry of Science R. Serbia)
2006-2007 Monitoring indoor aeroallergens in Novi Sad kindergartens
2006-2008 Junior Scientist: SCOPES-Joint Research Project "Monitoring and forecasting airborne ragweed pollen concentrations in the South-Eastern part of its European distribution"
2007-2010 Junior Scientist: Diversity of Pannonian flora in Serbia – threatened by expansion of invasive weeds
2008-2010 Project Leader: Protection of geographic origin of Fruska gora lime honey (AP Vojvodina, Provincial secretariat for industry)

2008-2011 COST Action ES0603, „Assessment of production, release, distribution and health impact of allergenic pollen in Europe (EUPOL)“ Committee Member deputy

2011 Aeropalinological research, Project of monitoring aeroallergens in Smederevo (400-3730/2011-14 od 04.07.2011. i 0601-81/84 od 08.07.2011) – project leader

2011 Palynological expert in the IPA Cross-border cooperation programme Romania-Serbia entitled as “Monitoring and control of the invasive biological pollutant – Ambrosia artemisiifolia L. (spp.) STOP AMBROSIA” (90960/30.12.2010)

2011-2014 Research assistant (Projects funded by Ministry of Sciences, Republic Serbia)
Biosensing technologies and global systems for continuous monitoring and integrated management of ecosystems (no.III/43002)
Strategy for conservation of protected species in Serbia – hoverflies (Diptera: Syrphidae) as model organisms (no.OI/173002)

Current Research Interests:
Palynology, Aerobiology, Environmental Studies, hoverfly larval development

Scientific production
- 11 publications in scientific journals
- 46 presentations at scientific meetings in Serbia and abroad
- 4 expert texts
- 7 chapters in books

Reviewing Experience
1. Annals of Agricultural and Environmental Medicine; 2. Environmental Monitoring and Assessment; 3. Collegium Antropologicum; 4. Archives of Industrial Hygiene and Toxicology

Membership
International Honey Commission (since 2006)
International Association for Aerobiology (since 2006)
European Association of Aerobiology: Member of Committee and involved in workgroup responsible for education (since 2008)

Scholarships
1999 Ministry of sports and education Republic Serbia
2000 University of Novi Sad
2001-2003 Foundation for development of research and artistic young people of R. Serbia
2003-2007 Ministry for science and environment protection Republic Serbia
2008-2010 Ministry of Sciences, Republic Serbia

Grants and Awards received
Embassy of Kingdom Norwegian Grant “15 million for 500 the best”, 2002
University of Novi Sad Award for success during undergraduate studies, 2000
GlaxoSmithKline Award for participating TESA, Worcester UK, September 2003
The British Scholarship Trust Award for conducting three month research training program in UK, 2005
Austrian Exchange Service (ÖAD), Academic Mobility Unit (ACM) grant for One-month research at Oto-, Rhino-, Laryngology University Clinic - Medical University of Vienna, Austria
### Contact details

**Name:** Milica Rat  
**Position:** Herbarium curator, fixed  
**Institution:** University of Novi Sad, Faculty of Sciences, Department of biology and ecology  
**Address:** Serbia, Novi Sad, 21000, Trg Dositeja Obradovica 2  
**Email:** milica.rat@dbe.uns.ac.rs

### Expertise (general)

**Areas of research expertise:** Plant taxonomy (family Hyacinthaceae), Plant diversity in Pannonian Plain and Balkan peninsula, Botanical nomenclature,  

**Other expertise relevant to SMARTER²:** Invasive alien species in Pannonian plain, Distribution of Ambrosia species, biology of ragweed in Pannonia, ecological differentiation of ragweed

### Work on Ambrosia

**Past work on Ambrosia:** morphological differentiation in different habitats type, on the different soils, distribution, spreading into the native habitats,  

**Ongoing work on Ambrosia:** morphological differentiation in different semi-natural habitats, predicting of new invasions, vegetation management

### Role in SMARTER

**Anticipated role in SMARTER³:** Co-MC for Serbia

**Planned contribution to/participation in WPs and Tasks:**  
Participation in Task 3 that will be developed by WG 3: Primarily dealing with an experimental approach to test the impact of context-specific combinations of Ambrosia management options at the local (population) scale.  
Also, contribution is planned in WG 4, management evaluation.

### Max. five publications relevant to SMARTER⁴


Scientific collaborations relevant to SMARTER

National:
1) Collaboration with governmental organization in Municipalities with the aim to decrease ragweed fields and further spread: Municipality Novi Sad, Novi Sad City – Monitoring and suppression of ragweed (2006-2012); Municipality Baćka Palanka – Monitoring and suppression of ragweed (2010-2012); Municipality Vrbas - Monitoring and suppression of ragweed (2009)

2) cooperation with Provincial Nature Protection Agency from Novi Sad, Department for Botany - with aim to conserve native habitats and reduce the environmental impact and spread of ragweed and other alien species (2011 and 2012)

European: Co-coordinator of ESENIAS (East and South-East European Network of Invasive Alien Species) network

Outside Europe: share of information with scientist on ragweed distribution and herbarium records (Herbarium database)

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1 indicate also if fixed or limited until when

2 including policy development at the European or at the national level, communication with stakeholders or the general public, etc.

3 MC, WG leader, etc.

4 please add pdfs of your publication

5 give names and institutions or research programs, and keywords for collaborations

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Evaluation

Air quality modelling
x Ecological impact assessment
□ Economic & social impact assessment

Task 5 Training and KTT
□ Website
□ Workshops: Plant invasions & management
□ Workshop: Modelling impact & evaluation

Task 6 Policy Support
□ Biological Control
□ Invasive alien species

Curriculum Vitae of Milica Rat

ADDRESS: Herbarium BUNS, Laboratory for Invasive and Alergenic Plants, Faculty of Sciences, University of Novi Sad
Trg Dositeja Obradovica 2, 21000 Novi Sad, Serbia
E-MAIL: milica.rat@dbe.uns.ac.rs
Tel. +381 (21) 485 2666
Gender: Female
Date of birth: 12/07/1981
Status: Married

EDUCATION
2000-2006 - Bachelor studies - B. Sc in Biology, University of Novi Sad, Faculty of Sciences, Department of biology and ecology
2007-2008 - Master studies - Msc in Biology (Botany), University of Novi Sad, Faculty of Sciences, Department of biology and ecology
2008 - Phd studies, University of Novi Sad, Faculty of Sciences, Department of biology and ecology

WORK EXPERIENCE
2006 - „Pokret gorana Novog Sada“ (Novi Sad Environmental Movement) - volunteer associate, organizer and implemeter of summer school of biology and ecology for children
2007-2010 - Scholar of Ministry of Science, Republic of Serbia; Project name: Floristic Diversity of Pannonian Part of Serbia, Endangerment by spreading of invasive weeds and their influence of human health
2010 - Expert associate in Herbarium (plant collection), University of Novi Sad, Faculty of Sciences, Department of biology and ecology
PROJECTS:
2011-2014: Plant biodiversity of Serbia and the Balkans – assessment, sustainable use and protection, 173030 Grant, supported by Ministry of Education, Science and Technological Development, Republic of Serbia (participant)
2006-2010: Floristic Diversity of Pannonian Part of Serbia, Endangerment by spreading of invasive weeds and their influence of human health, 143037 Grant, supported by Ministry of Education and Science, Republic of Serbia (scholar)
2011-2014: Bioactive natural products as a potential sources of new pharmaceuticals and food supplements, supported by Provincial Secretariat for Science and Technological Development, AP Vojvodina, Republic of Serbia (participant)
2010: List of invasive species in Vojvodina, supported by Provincial Secretariat for Environmental Protection, Fund for Environmental Protection, Republic of Serbia (participant)
2010: Reintroduction of native plant species on natural habitats in Vojvodina, supported by Provincial Secretariat for Environmental Protection, Fund for Environmental Protection, Republic of Serbia (participant)
2010-2012: ESENIAS – East and South European Network for Invasive Alien Species (Co-Chair in period 2012/13.)
2011: "Stop Ambrosia", the education of the area of the Municipality of Pančevo, Republic of Serbia
2009-2012: Mapping the terrain with ragweed and other allergenic plants
REFERENCES:
Montenegro, 5. International Balkan Botanical Congress, Beograd: Faculty of Biology, University of Belgrade, Serbian Academy of Sciences and Arts, 7-11 September, 2009, p. 32.


Name: Branko Konstantinović
Position: Full Professor
Institution: University of Novi Sad, Faculty of Agriculture, Department for Environmental and Plant Protection.
Address: Trg Dositeja Obradovica 8, 21000 Novi Sad, Serbia.
Email: brankok@polj.uns.ac.rs.

Expertise (general)
Areas of research expertise:
Phytopharmacy, Herbology, Invasive weed species, Seed bank, Aquatic weed species, Herbicide resistance

Other expertise relevant to SMARTER:
Vice-dean for Science and International Cooperation, lecturer, Faculty of Agriculture, Trg Dositeja Obradovića 8, 21000 Novi Sad, Serbia

Work on Ambrosia
Past work on Ambrosia:
- Mapping of terrain under ragweed and other allergens plants, laboratory and field research and monitoring on the territory of Novi Sad. 2003-ongoing (Coordinator)
- Mapping of terrain under ambrosia on AP Vojvodina, 2008. (Coordinator)
- Profesional supervision to control ragweed on the territory of R Srbia, ID: 404-02-15/08-1, 2008. (Coordinator)
EUPHRESCO Peer Review, Topid D: Optimising control of Ambrosia artemisiifolia <Strategies for Ambrosia Control, Proposal No. 5

Ongoing work on Ambrosia:
- Mapping of terrain under ragweed and other allergens plants, laboratory and field research and monitoring on the territory of Novi Sad.

Role in SMARTER
Anticipated role in SMARTER: WG 2 Vegetation Management,
### Max. five publications relevant to SMARTER


### Scientific collaborations relevant to SMARTER

**National:**
- Mapping of terrain under ragweed and other allergens plants, laboratory and field research and monitoring on the territory of Novi Sad. 2003-present (Coordinator)
- Mapping of terrain under ambrosia on AP Vojvodina, 2008. (Coordinator)
- Professional supervision to control ragweed on the territory of R Srbia, ID: 404-02-15/08-1, 2008. (Coordinator)

**European:** - EUPHRESCO Peer Review, Topid D: Optimising control of Ambrosia artemisiifolia <Strategies for Ambrosia Control, Proposal No. 5

**Outside Europe:** -

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1 indicate also if fixed or limited until when
2 including policy development at the European or at the national level, communication with stakeholders or the general public, etc.
3 MC, WG leader, WG member etc.; for specific topics see next page
4 please add pdfs of your publication
5 give names and institutions or research programs, and keywords for collaborations

### Contribution to SMARTER

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<thead>
<tr>
<th>Task</th>
<th>Biological Control</th>
<th>(Pathogens)</th>
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WG 4 Management Evaluation  Task 4 Management Evaluation (Aerobiology (Allergology (Air quality modelling (Ecological impact assessment (Economic & social impact assessment)

Task 5 Training and KTT  X Website (Workshops: Plant invasions & management (Workshop: Modelling impact & evaluation

Task 6 Policy Support  X Biological Control  X Invasive alien species

Curriculum vitae of Branko Konstantinović

Address: University of Novi Sad, Faculty of Agriculture, Department for Environmental and Plant Protection, Trg Dositeja Obradovića 8, 21 000 Novi Sad, Serbia  E-mail: brankok@polj.uns.ac.rs  Tel: +381-21-485 33-19;  Fax: +381-21-450 616
Gender: Male  Date of Birth: 27 June 1949; Novi Sad, Serbia.  Marital Status: married  Languages: English (excellent), French (basic)

EDUCATION
1977-1980 M.Sc. in Agricultural Sciences, University of Osijek, Faculty of Agriculture, Plant Protection
Thesis: Study of emergent weed species control in water facilities of localities Zrenjanin and Vrsac
Thesis: Study of emergent weed species control with the special regard to contamination of soil and water

EMPLOYMENT
• 1977 - 1992 Teaching assistant, Faculty of Agriculture in Osijek at the Josip Juraj Strossmayer University of Osijek
• 1992- 1998 Head of the Department for Plant Protectin, Scientific work, Institute for Field and Vegetable Crops, Novi Sad, Serbia
• 1998 - present Full time professor, Faculty of Agriculture, Novi Sad, Serbia

EXPERTISE
• Member of the European Weed Research Society (EWRS), International Weed Science Society (IWSS), International Seed Science Society (ISSS), Invasive Weeds Working Group (IWWG) and Serbian Society for Plant Protection.
• Participant in numerous conferences and seminars in the field of plant protection and phytopharmacy in the country and abroad.
• Authorized examiner of biological properties of herbicides for the purpose of their registration in the Republic of Serbia
• 10 reviews in referee journals
• Chairing in national and international meetings
• 5 keynote lectures at European meetings

FUNDING
• Serbian-Hungarian Co-operation on Agrochemistry and Pest-control Education, acronym SHAPE, ID: HUSR/0901/221/045 (Local coordinator)
• Development of Products and Protection Methods Aiming at Sustainable Use of Pesticides and Environmental Protection. TR-20135. 2008-2010 (Coordinator)
• The study of the Occurrence and Spread of Weeds Species Resistant to Herbicides in Order to Find the Most Effective Measures TR: 6841, 2005-2008 (Coordinator)
• Professioonal Supervision on Control Ragweed on the Territory of Republic Srbia, ID: 404-02-15/08-1, 2008. (Coordinator)
• Mapping of Terrain Under Ambrosia on AP Vojvodina, 2008. (Coordinator)
• Mapping of Terrain Under Ambrosia and other Alergy Weed, Field Research and Monitoring on the Territory of Novi Sad. 2003- present (Coordinator)

PUBLICATIONS (past five years):

Name: Goran Malidža
Position¹: Senior Research Associate
Institution: Institute of Field and Vegetable Crops
Address: Maksima Gorkog 30, 21000 Novi Sad, SERBIA
Email: goran.malidza@nsseme.com

Expertise (general)
Areas of research expertise: chemical and physical weed control, herbicide-resistant crops and weeds, biology and control of parasitic weeds, tolerance of field and vegetable crops to herbicides.
Other expertise relevant to SMARTER²: Crop-weed competition

Work on Ambrosia
Past work on Ambrosia:
Mapping of Common ragweed (Ambrosia artemisiifolia L.) on Serbia and recommendation for control.
Ongoing work on Ambrosia:
Common ragweed control by flaming and some mechanical measures

Role in SMARTER
Anticipated role in SMARTER³: WG member (WG 3 - Integration of Management Options)

Max. five publications relevant to SMARTER⁴

Scientific collaborations relevant to SMARTER
National: University of Belgrade, Faculty of Agriculture
European: Dr. Andrej Simoncic and Dr. Robert Leskošek, Agricultural Institute of Slovenia.
Outside Europe: Dr. Stevan Knežević, Department of Agronomy and Horticulture,
University of Nebraska, United States.

1. Indicate also if fixed or limited until when
2. Including policy development at the European or at the national level, communication with stakeholders or the general public, etc.
3. MC, WG leader, WG member etc.; for specific topics see next page
4. Please add pdfs of your publication
5. Give names and institutions or research programs, and keywords for collaborations

### Contribution to SMARTER

| WG 1 Biological control | Task 1 Biological Control | □ Pathogens  
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<td>☒ Invasive alien species</td>
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</tbody>
</table>
**Name:** Danijela Pavlovic  
**Position**: weed researcher  
**Institution:** Institute for Plant Protection and Environment  
**Address:** Teodora Drajzera 9, Belgrade, Serbia  
**Email:** dulekaca@yahoo.com

### Expertise (general)

**Areas of research expertise:** invasive weed, weed resistance, biological efficacy of herbicide  
**Other expertise relevant to SMARTER**

### Work on Ambrosia

**Past work on Ambrosia:**

1. The study of the occurrence and spread of resistant weed to herbicides aimed at finding the most effective control measures, Project Ministry of Education and Science
2. Identification and monitoring of allergens and quarantine weed species *Ambrosia artemisiifolia* L. the territory of the Republic of Serbia, Project Ministry of Agriculture
3. Identification and monitoring of alien and invasive weed (AIK) on the territory of Serbia and proposed measures to combat, Ministry of Agriculture
4. Providing services in the field of scientific research and technical assistance in combating chemical vegetation stripes PC "Serbian Railways"
5. "Monitoring and control ragweed (*Ambrosia atremisiifolia* L.) in the city of Belgrade", funded by City of Belgrade, Department of Environmental Protection

**Ongoing work on Ambrosia:**

"Development of integrated management system harmful organisms in crop production in order to overcome resistance and improve food quality and safety, Project: Ministry of Education and Science.

### Role in SMARTER

**Anticipated role in SMARTER**

**Max. five publications relevant to SMARTER**


### Scientific collaborations relevant to SMARTER
National:
1. Faculty of Agriculture, University of Belgrade, Institute of Phytomedicine
2. Faculty of Agriculture, University of Novi Sad, Institute for Environmental and Plant Protection
3. Institute of Pesticides and Environmental Protection, Belgrade

European:
1. Department of Agroenvironmental Science and Technology, University of Bologna (Italy), Research group on Plant Physiology, project “Determination of gene flux and pollen dispersal of Brassica napus under field conditions”, 2011-2013.

Outside Europe:
1. Research station of BASF "ARS Dinuba" in Dinuba and University "DAVIS" in Davis, California (2 months), 2003.

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Task 5 Training and KTT (Website)
Curriculum vitae of Danijela Pavlovic

(February 2013)
Address: Institute for Plant Protection and Environment, Teodora Drajzera 9, 11000 Belgrade, Serbia
E-mail: pavlovicdm@gmail.com
Tel: ++ 381 11 2660049
Fax: ++ 381 63 8233344
Gender: Female
Date of Birth: 01 September 1971, Senta, Serbia.
Marital Status: divorced
Languages: English (fluent)

EDUCATION
2010 - PhD, Agronomy, Pesticide Science, Faculty of Agriculture, University of Belgrade, Serbia, Thesis: Susceptibility of plants to glyphosate: morpho-anatomical, physiological and biological aspect.
2005 - MSc Degree, Agronomy, Plant Protection, Faculty of Agriculture, University of Belgrade, Serbia, Thesis: Determination of weed resistance to herbicides inhibitors of photosynthesis.
1999 - BSc Degree, Agronomy, Plant Protection, Faculty of Agriculture, University of Belgrade, Serbia.

EMPLOYMENT
2000- present Institute for plant protection and environment, Department of herbology.

EXPERTISE
-13 years experience of invasive species, weed research, weed resistance, efficacy of herbicides
-13 years experience of field work in Serbia
Member of the Plant Protection Society of Serbia; EWRS – European Weed Research Society; WSSA – Weed Science Society of America; Herbology Society of Serbia
-Author of more than 60 publications, 23 – first author
-Research area: Weed resistance to herbicides in terms of the mechanism of the symptoms and determination; Efficacy of new herbicides on weed species present in some crops with emphasis on monitoring activities of some invasive species; Study and representation of invasive species in Serbia in order to determine the representation of maps and level of presence, forecasting the dispersion of individual species and the presence of new species not yet being determined from the neighboring countries; The possibility of no chemical weed control.
-Colaborated in 9 project, management of subproject (1)
-Bilateral: Slovenia and Serbia (2006-2007; 2010-2011); Germany and Serbia (2009-2010);
-International training course on pesticides held at Hunan Research Institute of Chemical Industry, Changsha, Kina, 15-30. septembar 2006. godine.
FUNDING

- Occurrence and spread of resistant weeds to herbicides and reduce the possibility of the application of herbicides to prevent excessive use of herbicides. Project Ministry of Science and Environmental Protection of the Republic of Serbia (2004-2007).
- Optimization of chemical plant protection by increasing the efficiency of diagnostic methods and risk of disease, pests and weeds. Project Ministry of Science and Environmental Protection of the Republic of Serbia (2008-2011).
- Identification and monitoring of alien and invasive weed (AIK) on the territory of Serbia and proposed measures to combat, Project Ministry of Agriculture (2008-2010).
- Effects of certain glyphosate formulations on leaf cytology of glyphosate resistant and non-resistant Maize, Soybean and Lolium sp.” Project University of Pretoria and company Syngenta (31.08.-02.11.2007)
- Determination of gene flux and pollen dispersal of Brassica napus under field conditions, Department of Agroenvironmental Science and Technology, University of Bologna (Italy), Research group on Plant Physiology, 2011-2013.

PUBLICATIONS (past five years):
Name: Ljiljana Radivojevic
Position: Head Department of weed (from 2011)
Institution: Institute for Pesticides and Environmental Protection
Address: Banatska 31b, 11080 Belgrade, Serbia
Email: ljiljana.radivojevic@pesting.org.rs

Expertise (general)
Areas of research expertise:
Weed control; Weed response to herbicides; Herbicides-soil microorganisms; Invasive weeds.

Other expertise relevant to SMARTER:
Mapping of invasive plant species; Response weeds (including invasive weeds) to herbicides; Integrated Weed Management.

Work on Ambrosia

Ongoing work on Ambrosia: Experiments: seed germination; response to herbicides; Monitoring and control ragweed (Ambrosia artemisiifolia L.) around the city Belgrade.

Role in SMARTER
Anticipated role in SMARTER: Member of working groups WG2 and WG3

Max. five publications relevant to SMARTER
<table>
<thead>
<tr>
<th>Scientific collaborations relevant to SMARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>National:</strong> Prof. Sava Vrbnicanin, University of Belgrade- Faculty of agriculture, Dr Dragana Bozic, University of Belgrade- Faculty of agriculture, Dr. Goran Malidza, Institute of Field and Vegetable Crops, Dr. Danijela Pavlovic, Institute for Plant Protection and Environment, Dr. Dragana Marisavljevic, Institute for Plant Protection and Environment</td>
</tr>
<tr>
<td><strong>European:</strong> Prof. Ahmet Uludag, Igdir University, Faculty of Agriculture, Turkey</td>
</tr>
</tbody>
</table>

**Outside Europe:**

1. indicate also if fixed or limited until when
2. including policy development at the European or at the national level, communication with stakeholders or the general public, etc.
3. MC, WG leader, WG member etc.; for specific topics see next page
4. please add pdfs of your publication
5. give names and institutions or research programs, and keywords for collaborations

## Contribution to SMARTER

### WG 1 Biological control

- **Task 1 Biological Control**
  - Pathogens
  - Insects
  - Classical
  - Inundative
  - Augmentative

### WG 2 Vegetation Management

- **Task 2 Vegetation Management**
  - Weed biology
  - Weed abundance and distribution
  - Soil seed bank
  - Plant population dynamics/Modelling
  - Plant competition/Allelopathy
  - Vegetation management

### WG 3 Integration of Management Options

- **Task 3 Integration of Management Options**
  - Chemical
  - Mechanical
  - Integration

### WG 4 Management Evaluation

- **Task 4 Management Evaluation**
  - Aerobiology
  - Allergology
  - Air quality modelling
  - Ecological impact assessment
  - Economic & social impact assessment

### Task 5 Training and KTT

- Website
- Workshops: Plant invasions & management
- Workshop: Modelling impact & evaluation

### Task 6 Policy Support

- Biological Control
- Invasive alien species
Curriculum vitae of Ljiljana Radivojevic

Address: Institute of Pesticides and Environmental Protection
Banatska 31b, 11080 Zemun-Belgrade, Serbia
E-mail: ljiljana.radivojevic@pesting.org.rs
Tel: +381 11 3076133
Fax: +381 11 3073136
Gender: Female
Date of Birth: 27 May 1965, Ljig, Serbia
Marital Status: married
Languages: Serbian (native), English (fluent), Russian (basic)

EDUCATION
1984-1989 BSc Degree in Plant Protection, Faculty of Agriculture, University of Belgrade, Serbia
1991-1998 M.Sc. in Plant Protection, Faculty of Agriculture, University of Belgrade, Serbia
Thesis: Effects of alachlor, metolachlor and metribuzin on soil microflora

EMPLOYMENT
• 1991-1999 Institute Serbia Center for Pesticides, Belgrade, Serbia with a BSc and MSc degree (research assistant, research associate)
  1999-2003 Institute for Plant Protection and Environment, Belgrade, Serbia, with a MSc degree (research associate and Head Department of Weeds)
  2003-Institute of Pesticides and Environmental Protection, Belgrade, Serbia, with a MSc and PhD degree (research associate and Head Department of Weeds)

EXPERTISE
• 24 years experience of field and laboratory studies of herbicides, weeds, effects herbicides on soil microorganisms.
• Author of more than 90 publications, including 9 papers in international and 33 papers in national peer-reviewed journals.
• Reviewer of manuscripts for Agriculture Science, Experimental Agriculture and Horticulture and national journals Pesticides and Phytochemistry, Acta herbologica.

FUNDING
• Participant on national project - „Research for the development of new and improvement of existing formulations of herbicides“ (2005-2007).
• Participant on national project „Identification and monitoring of alien invasive weeds on the territory of Serbia and recommendations for control“, (2007-2009)
• Participant on national project „Biological, chemical, toxicological and ecotoxicological study of herbicides and their application” (2008-2011)
Participant on national project „Monitoring and control ragweed (Ambrosia artemisiifolia L.) in the city of Belgrade”, funded by City of Belgrade, Department of Environmental Protection and the Department for Housing and Utilities (2006-2010).

Participant on national project „Monitoring and control ragweed (Ambrosia artemisiifolia L.) in the municipality of Obrenovac”, funded by Fund for Environmental Protection Obrenovac (2009-2010).

Participant on national project - „Study of plant pathogens, arthropods, weeds and pesticides in order to develop biorational methods of plant protection and food safety, subproject leader „Study of weeds, biological chemical and toxicological properties of herbicides” (2011-2014).

PUBLICATIONS (past five years):
Name: Katarina Jovanovic-Radovanov  
Position: Assistant Professor  
Institution: University of Belgrade-Faculty of Agriculture  
Address: Nemanjina 6, 11080 Zemun-Belgrade, Serbia  
Email: katarinajr@agrif.bg.ac.rs

Expertise (general)  
Areas of research expertise: Herbicide use and efficacy in crops and on non-crop areas, Weed and crop response to herbicides, Invasive weeds,

Other expertise relevant to SMARTER: Mapping of invasive plant species; Weed and crop resistance to herbicides; Integrated Weed Management;

Work on Ambrosia  
Past work on Ambrosia: Project “Identification and monitoring of alien invasive weeds on the territory of Serbia and recommendations for control” (2007-2009) including Ambrosia; Efficacy testing of herbicides in various crops.

Ongoing work on Ambrosia: Herbicide efficacy testing.

Role in SMARTER  
Anticipated role in SMARTER: WG2 and WG3.

Max. five publications relevant to SMARTER:  

Scientific collaborations relevant to SMARTER  
National: Prof. Sava Vrbnicanin, University of Belgrade- Faculty of agriculture; Dr. Dragana Bozic (Assistant Professor) University of Belgrade- Faculty of agriculture; Dr. Goran Malidza, Institute of Field and Vegetable Crops, Dr. Danijela Pavlovic, Institute for Plant Protection and Environment.

European: Prof. Ahmet Uludag, Igdir University, Faculty of Agriculture, Turkey,

Contribution to SMARTER  
WG 1 Biological control  
Task 1 Biological Control  
☐ Pathogens  
( Insects  
( Classical  
( Augmentative  

WG 2 Vegetation Management  
Task 2 Vegetation Management  
X Weed abundance and distribution  
( Soil seed bank  
( Plant population
WG 3 Integration of Management Options  
Task 3 Integration of Management Options  
WG 4 Management Evaluation  
Task 4 Management Evaluation  
Task 5 Training and KTT  
Task 6 Policy Support

Curriculum vitae of Katarina Jovanovic-Radovanov

Address: University of Belgrade-Faculty of Agriculture  
Nemanjina 6, 11080 Zemun-Belgrade, Serbia  
E-mail: katarinajr@agrif.bg.ac.rs  
Tel: +381 11 2615 315  
Fax: +381 11 2193 659  
Gender: Female  
Date of Birth: 08 May 1964, Belgrade, Serbia  
Marital Status: married  
Languages: Serbian (exellent), English (excellent),

EDUCATION
1983-1990 BSc Degree in Plant Protection, Faculty of Agriculture, University of Belgrade, Serbia  
1991-2002 M.Sc. in Pesticide science, Faculty of Agriculture, University of Belgrade, Serbia  
Thesis: Susceptibility of hybrid maize (Zea mays L.) to carryover potential of trifluralin and imazethapyr  
2003-2012 Ph.D. thesis in Pesticide science, Faculty of Agriculture, University of Belgrade, Serbia  
Thesis: Susceptibility of crops to carryover potential of imazethapyr and clomazone.

EMPLOYMENT
1994 - 2003 - Teaching and research assistant with a BSc degree, University of Belgrade, Faculty of Agriculture, Serbia  
2003-2013 - Teaching and research assistant with a MSc degree, University of Belgrade, Faculty of Agriculture, Serbia  
2013 – present - Assistant Professor at the University of Belgrade, Faculty of Agriculture, Serbia
EXPERIENCE
20 years of experience in the practical trainings in pesticide science for students.
20 years experience of field and laboratory studies of pesticides and weeds.
Author of more than 60 publications, including 2 papers in international and 21 papers in national peer-reviewed journals.

FUNDING
- Participant on national project „„Mapping quarantine, invasive and economically important weeds in Serbia and recommendations for their control” “, (2004-2006)
- Participant on national project - „Research for the development of new and improvement of existing formulations of herbicides“ (2005-2007)
- Participant on national project „Identification and monitoring of alien invasive weeds on the territory of Serbia and recommendations for control“, (2007-2009)
- Participant on national project „Biological, chemical, toxicological and ecotoxicological study of herbicides and their application“ (2008-2011)
- Participant on TEMPUS project „International Master Plant Medicine, Project TEMPUS IV“ (2010-2013),

PUBLICATIONS (past five years):
### Name: Maja Meseldzija

**Position**: Assistant Professor, 2010-2015.

**Institution**: University of Novi Sad, Faculty of Agriculture

**Address**: Trg Dositeja Obрадовића 8, 21 000 Novi Sad, Serbia

**Email**: maja@polj.uns.ac.rs

### Expertise (general)

**Areas of research expertise**: Weed biology, weed control, phytopharmacy, herbicides, herbicide resistance studies of economically harmful weeds.

**Other expertise relevant to SMARTER**: weed research in crops and non agricultural land, a additional member of the Board of the European Weed Research Society (EWRS) for period 2012-2015, member of Weed mapping working group of the EWRS (regional coordinator for Serbia, Croatia, Bosnia, Montenegro, Bulgaria).

### Work on Ambrosia

**Past work on Ambrosia**: monitoring and mapping common ragweed to design and implement sustainable system of weed management (mechanical and/or chemical), soil weed seedbank research

**Ongoing work on Ambrosia**: research on allelopathy, impact of herbicides use on resistant development in ragweed population on the fields, mapping and monitoring

### Role in SMARTER

**Anticipated role in SMARTER**: WG member

### Max. five publications relevant to SMARTER


### Scientific collaborations relevant to SMARTER

**National**: Ministry of Science and Technological Development of Republic of Serbia

**European**: European Weed Research Society – Weed Mapping group

**Outside Europe**: 

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3. MC, WG leader, WG member etc.; for specific topics see next page
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### Contribution to SMARTER

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<th>WG</th>
<th>Task</th>
<th>Biological Control</th>
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<th>Insects</th>
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<tr>
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<td>WG 2 Vegetation Management</td>
<td>Task 2 Vegetation Management</td>
<td>Classical</td>
<td>Inundative</td>
<td>Augmentative</td>
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<td></td>
<td>Weed abundance and distribution</td>
<td>Soil seed bank</td>
<td>Plant population dynamics/Modelling</td>
</tr>
<tr>
<td>WG 3 Integration of Management Options</td>
<td>Task 3 Integration of Management Options</td>
<td>Chemical</td>
<td>Mechanical</td>
<td>Integration</td>
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<td></td>
<td>Task 5 Training and KTT</td>
<td>Website</td>
<td>Workshops: Plant invasions &amp; management</td>
<td>Workshop: Modelling impact &amp; evaluation</td>
</tr>
<tr>
<td>Task 6 Policy Support</td>
<td>Biological Control</td>
<td>Invasive alien species</td>
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</tr>
</tbody>
</table>

**Curriculum vitae of Maja Meseldzija**

Address: University of Novi Sad, Faculty of Agriculture; Trg Dositeja Obradovica 8, 21 000 Novi Sad, Serbia
E-mail: maja@polj.uns.ac.rs
Tel: ++ 381-21-4853-448
Fax: ++ 381-21-450-616
Gender: Female
Date of Birth: 24 December 1973; Subotica, Serbia.
Marital Status: married
Languages: Serbian (native), English (fluent), German (basic), Hungarian (basic)

**EDUCATION**
• 1997 B.Sc. in Biology, University of Novi Sad, Faculty of Science (Biology).
  Thesis: "Biochemical studies of Hypericum perforatum L. (f.Hypericaceae) from different localities"
**EMPLOYMENT**

- **1998** onwards  
  Teaching assistant, teaching and scientific researches,  
  University of Novi Sad, Faculty of Agriculture, Department for Environmental and Plant Protection Trg Dositeja Obradovića 8,21 000 Novi Sad, Serbia

- **2005** onwards  
  Assistant, teaching and scientific researches,  
  University of Novi Sad, Faculty of Agriculture, Department for Environmental and Plant Protection Trg Dositeja Obradovića 8,21 000 Novi Sad, Serbia

- **2010** onwards  
  Assistant Professor, teaching and scientific researches,  
  University of Novi Sad, Faculty of Agriculture, Department for Environmental and Plant Protection Trg Dositeja Obradovića 8,21 000 Novi Sad, Serbia

**EXPERTISE**

- 14 years experience of weed research in crops and non agricultural land
- Authorized examiner of biological properties of herbicides for the purpose of their registration in the Republic of Serbia
- 10 years experience of invasive plant mapping in Serbia and herbicide resistance studies of economically harmful weeds
- Participant in 2 international research projects
- A additional member of the Board of the European Weed Research Society (EWRS) for period 2012-2015
- Member of Weed mapping working group of the EWRS, regional coordinator for Serbia, Croatia, Bosnia, Montenegro, Bulgaria
- Author of more than 90 scientific and expert publications

**FUNDING**

- Development of products and methods of protection against harmful agents aimed at sustainable use of pesticides and environment protection, Ministry of Science and Technological Development of Republic of Serbia, project no. TR 20135, 2008-2010. (participant)
- Study of the occurrence and spread of herbicide resistant weed species with the aim of most effective control measures determination, Ministry of Science and Technological Development of Republic of Serbia, No. TR-6841, 2005-2008. (participant).
- Terrain Mapping of *Ambrosia artemisiifolia* L. and other Allergenic Plants, Laboratory and Terrain Studies and Monitoring, Project financed by the City of Novi Sad, 2003-2012 (participant)

**PUBLICATIONS** (past five years):


Name: Marija Saric-Krsmanovic  
Position¹: Research trainee  
Institution: Institute of Pesticides and Environmental Protection  
Address: Banatska 31b, 11080 Zemun-Belgrade, Serbia  
Email: marijasaric.MSaric@gmail.com

**Expertise (general)**  
Areas of research expertise: Parasitic weeds, Weed and crop resistance to herbicides, Invasive weeds, Weed response to herbicides, Weed-crop competition  
Other expertise relevant to SMARTER²: Response weeds (including invasive weeds) to herbicides; Mapping of invasive plant species; Integrated Weed Management.

**Work on Ambrosia**  
Past work on Ambrosia: Study of effect of Plant Growth Promoting Rhizobacteria on *Ambrosia artemisiifolia* L. seed germination.

Ongoing work on Ambrosia: Experiments: seed germination; response to herbicides; competitive interactions between *Ambrosia trifida* and sunflower.

**Role in SMARTER**  
Anticipated role in SMARTER³: member of working groups WG2 and WG3

Max. five publications relevant to SMARTER⁴  
### Scientific collaborations relevant to SMARTER

**National:** Prof. Sava Vrbnicanin, University of Belgrade - Faculty of Agriculture, Dr. Goran Malidza, Institute of Field and Vegetable Crops, Dr. Danijela Pavlovic, Institute for Plant Protection and Environment, Dr. Dragana Bozic, University of Belgrade - Faculty of Agriculture  
**European:** Prof. Ahmet Uludag, Igdir University, Faculty of Agriculture, Turkey, Prof. Edita Stefanic, Faculty of Agriculture, Croatia  
**Outside Europe:** Prof. Sasa Stefanovic, University of Toronto Mississauga, Department of Biology, Canada

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3. MC, WG leader, WG member etc.; for specific topics see next page  
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<th>Task 1 Biological Control</th>
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</tr>
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<tbody>
<tr>
<td>(Biological Control)</td>
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</table>
Curriculum vitae of Marija Saric-Krsmanovic

Address: Institute of Pesticides and Environmental Protection
Banatska 31b, 11080 Zemun-Belgrade, Serbia
E-mail: marija.saric@pesting.org.rs
Tel: +381 11 3076133
Fax: +381 11 3076136
Gender: Female
Date of Birth: 7 June 1983, Sabac, Serbia
Marital Status: married
Languages: Serbian (native), English (excellent)

EDUCATION
2002-2008 BSc Degree in Plant Protection, Faculty of Agriculture, University of Belgrade, Serbia
2008- present PhD student in Weed science, Faculty of Agriculture, University of Belgrade, Serbia,
Thesis: Biology of field dodder (Cuscuta campestris Yunck.) and possibility its control

EMPLOYMENT
• 2008 - 2012 – Scholar of Ministry of education, science and technology with a BSc degree, University of Belgrade, Faculty of Agriculture, Serbia
• 2012-present - Research trainee with a BSc degree, Institute of Pesticides and Environmental

EXPERTISE
• 4 years of experience in the practical trainings in weed science for students.
• 4 years experience of field and laboratory studies of weeds.
• Author of more than 35 publications

FUNDING
□ Participant on national project „Biological, chemical, toxicological and ecotoxicological study of herbicides and their application” (2008-2011)
□ Participant on national project - „Development of integrated systems for harmful organisms management in crop production in order to overcome resistance and improve the quality and safety of food” (2011-2014)

PUBLICATIONS (past five years):

<table>
<thead>
<tr>
<th>Name: Jelena Gajic Umiljendic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Position</strong>: Research assistant (from 2009)</td>
</tr>
<tr>
<td><strong>Institution</strong>: Institute of Pesticides and Environmental Protection</td>
</tr>
<tr>
<td><strong>Address</strong>: Banatska 31b, 11080 Belgrade, Serbia</td>
</tr>
<tr>
<td><strong>Email</strong>: <a href="mailto:pecikos@gmail.com">pecikos@gmail.com</a></td>
</tr>
</tbody>
</table>

**Expertise (general)**

- Weed control; Weed response to herbicides; Herbicides-soil residues; Invasive weeds.
- Other expertise relevant to SMARTER:
  - Mapping of invasive plant species; Response weeds (including invasive weeds) to herbicides; Integrated Weed Management.

**Work on Ambrosia**


**Ongoing work on Ambrosia**: Experiments: seed germination; response to herbicides; Monitoring and control ragweed (Ambrosia artemisiifolia L.) around the city Belgrade.

**Role in SMARTER**

- Anticipated role in SMARTER: Member of working groups WG2 and WG3

**Max. five publications relevant to SMARTER**


Scientific collaborations relevant to SMARTER

**National:** Prof. Sava Vrbnicanin, University of Belgrade- Faculty of agriculture, Dr Dragana Bozic, University of Belgrade- Faculty of agriculture, Dr. Goran Malidza, Institute of Field and Vegetable Crops, Dr. Dani jela Pavlovic, Institute for Plant Protection and Environment, Dr. Dragana Marisavljevic, Institute for Plant Protection and Environment

**European:** Prof. Ahmet Uludag, Igdır University, Faculty of Agriculture, Turkey

**Outside Europe:**

1. indicate also if fixed or limited until when
2. including policy development at the European or at the national level, communication with stakeholders or the general public, etc.
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</table>
Curriculum vitae of Jelena Gajic Umiljendic

Address: Institute of Pesticides and Environmental Protection
Banatska 31b, 11080 Zemun-Belgrade, Serbia
E-mail: pecikos@gmail.com
Tel: +381 11 3076133
Fax: +381 11 3073136
Gender: Female
Date of Birth: 08 January 1976, Belgrade, Serbia
Marital Status: married
Languages: Serbian (native), English (excellent), Russian (basic)

EDUCATION
1997-2004 B.Sc. Degree in Plant Protection, Faculty of Agriculture, University of Belgrade, Serbia
2007-present Ph.D. student in Phytopharmacy, Faculty of Agriculture, University of Belgrade, Serbia, Thesis: Sensitivity of tomato, paprika and cucumber to clomazone and imazamox residues in soil

EMPLOYMENT
☐ 2005 –Faculty of Agriculture, University of Belgrade, Teaching assistant with B.Sc. degree (Herbology)
☐ 2006 –present -Institute of Pesticides and Environmental Protection, Belgrade, Serbia, Research assistant

EXPERTISE
• 1 year of experience in the practical trainings in weed science for students.
• 7 years experience of field and laboratory studies of weeds and herbicides
• Author of more than 35 publications

FUNDING
☐ Participant on national project - „Research for the development of new and improvement of existing formulations of herbicides“ (2005-2007)
☐ Participant on national project „Identification and monitoring of alien invasive weeds on the territory of Serbia and recommendations for control“, (2007-2009)
☐ Participant on national project „Biological, chemical, toxicological and ecotoxicological study of herbicides and their application“ (2008-2011)
☐ Participant on national project „Monitoring and control ragweed (Ambrosia artemisiifolia L.) in the city of Belgrade”, funded by City of Belgrade, Department of Environmental Protection and the Department for Housing and Utilities (2006-2010)
Participant on national project „Monitoring and control ragweed (Ambrosia artemisiifolia L.) in the municipality of Obrenovac”, funded by Fund for Environmental Protection Obrenovac (2009-2010)

Participant on national project - „Study of plant pathogens, arthropods, weeds and pesticides in order to develop biorational methods of plant protection and food safety, subproject leader „Study of weeds, biological chemical and toxicological properties of herbicides” (2011-2014)

PUBLICATIONS (past five years):

Name: Darko Stojicevic
Position: PhD student
Institution: University of Belgrade-Faculty of Agriculture
Address: Nemanjina 6, 11080 Zemun-Belgrade, Serbia
Email: michule87@gmail.com

Expertise (general)
Areas of research expertise:
Gene flow, Weed and crop resistance to herbicides, Invasive weeds, Weed biodiversity, Weed-crop competition

Other expertise relevant to SMARTER:
Mapping of invasive plant species; Response weeds (including invasive weeds) to herbicides; Integrated Weed Management.

Work on Ambrosia
Ongoing work on Ambrosia: Experiments: seed germination; response to herbicides; competitive interactions between *Ambrosia trifida* and sunflower

**Role in SMARTER**

*Anticipated role in SMARTER*\(^3\): member of working groups WG2 and WG3

**Max. five publications relevant to SMARTER**\(^4\)

**Scientific collaborations relevant to SMARTER**

*National:* Prof. Sava Vrbnicanin, University of Belgrade- Faculty of agriculture, Dr. Goran Malidza, Institute of Field and Vegetable Crops, Dr. Dragana Bozic, University of Belgrade- Faculty of agriculture, Dr. Danijela Pavlovic, Institute for Plant Protection and Environment

*European:*

*Outside Europe:*

\(^1\) indicate also if fixed or limited until when
\(^2\) including policy development at the European or at the national level, communication with stakeholders or the general public, etc.
\(^3\) MC, WG leader, WG member etc.; for specific topics see next page
\(^4\) please add pdfs of your publication
\(^5\) give names and institutions or research programs, and keywords for collaborations

**Contribution to SMARTER**

**WG 1 Biological control**

Task 1 Biological Control

- Pathogens
- Insects
- Classical
- Inundative
- Augmentative

**WG 2 Vegetation Management**

Task 2 Vegetation Management

- Weed biology
- Weed abundance and distribution
- Soil seed bank
- Plant population dynamics/Modelling
- Plant competition/Allelopathy
- Vegetation management

**WG 3 Integration of Management Options**

Task 3 Integration of Management Options

- Chemical
- Mechanical
- Integration

**WG 4 Management Evaluation**

Task 4 Management Evaluation

- Aerobiology
- Allergology
- Air quality modelling
- Ecological impact assessment
- Economic & social impact assessment

- Website
- Workshops: Plant invasions & management
- Workshop: Modelling impact & evaluation

**Task 5 Training and KTT**

**Task 6 Policy Support**

- Biological Control
- Invasive alien species
**Curriculum vitae of Darko Stojicevic**

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| E-mail | michule87@gmail.com Tel: +381 12 266 566 |
| Gender | Male |
| Date of Birth | 16 December 1987, Pozarevac, Serbia |
| Marital Status | not married |
| Languages | Serbian(excellent), English(fluent), Russian(fluent) |

**EDUCATION:**
- 2006-2011 BSc Degree in Plant Protection, Faculty of Agriculture, University of Belgrade, Serbia
- 2011-2014 PhD student, Plant Protection, Faculty of Agriculture, University of Belgrade, Serbia

**EMPLOYMENT:**
- Unemployed, PhD student

**EXPERTISE:**

**FUNDING:**
- Participant of national project- “Development of integrated systems for harmful organisms management in crop production in order to overcome resistance and improve the quality and safety of food” (2011-2014)

**PUBLICATION:**