

Health Research in Serbia: Challenges of Involvement in ERA

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Coordinator of SERBPARZOOM, an FP6 SSA for WBC
Member of Programme Committee for Health (expert), EC

Presentation Plan

- *Serbian Health Research sector*
 - *Major performers*
 - *Funding*
 - *PEOPLE*
 - *Infrastructure*
 - *SWOT analysis*
- *Research priorities*
- *Case study (INCO SERBPARZOOM)*

Health Research in Serbia

MAJOR PERFORMERS

~ 20 institutions at 4 universities:

➤ **Schools** of

- medicine (incl. dentistry, pharmaceuticals, veterinary med.)
- biology, chemistry, sports and PE

➤ **Research institutes**

- All public
- As opposed to the **private HES** – no private **research** university
- Commercial enterprises – pharmaceutical cos ∅ ?

Health Research in Serbia

FUNDING

- **Single funding institution**
MINISTRY OF SCIENCE & TECHNOLOGICAL DEVELOPMENT (MSTD)
- **MSTD Budget for research in medicine**
 - > **3.500.000 €** 2007
 - ≈ **4.500.000 €** 2008
- **Selection: upon published **open calls** for tenders, competitive**
- **Thematically: **bottom-up** approach**
- **106 ongoing national projects**
of which 36 “large” (budget >100.000 €)
- **Ministry of Health – **no funding** for *pure* health research**

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PEOPLE

- Researchers (registered by MSTD) :

At present

- **medicine** **905**
decreased by 30% in 2005 due to ↗ criteria,
slightly ↗ thereafter
- **Biology** **619**
- **≈ 2300 publishing in the field of biomedicine**
- **Slight annual increase in number of new PhDs**
(from 83 in 2002 to >100 in 2008)

Health Research Serbia

PEOPLE

- Research output:
significant ↗ in quality & quantity (2.5-fold):

ISI-listed publications:

2000	N/A	465
2003	<u>146</u>	<u>636</u>
2006	292	1278
2007	362	1524
2008	<u>371</u>	<u>1720</u>

- **Niches of scientific excellence** (internationally competitive top quality research)
- Only 10% of all basic research funds for pure medicine, < 30% for all health res

Health Research in Serbia

PEOPLE - Involvement of Serbia health research in FP

FP6 / 7 Health:

- **MEDRESIN** – Medical research initiative South-East. *School of Medicine, University of Belgrade*
- **NANOMYC** – Multiparametric detection of biomolecule-conjugated nanoparticles for diagnostic investigation of mycobacterial infections of humans and animals. *Vinča Institute, University of Belgrade*
- **TRIOH** – Targeting replication and integration of HIV. *Vinča Institute, University of Belgrade*
- **EUROGENTEST** – Genetic testing in Europe – Network for test development, harmonization, validation and standardization of services. *IMGGE, University of Belgrade*
- **EUROPEHIVRESISTANCE** – European cohort coordinating network on HIV drug resistance. *School of Medicine, University of Belgrade*
- **BECAN** - Balkan Epidemiological Study on Child Abuse and Neglect, *Faculty for Special Education and Rehabilitation, University of Belgrade*
- **PsychCNVs** - Copy number variations conferring risk of psychiatric disorders in children, *Institute of mental health, Belgrade*

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PEOPLE - Involvement of Serbia health research in FP

FP6 / 7 INCO

- **CONNECT** – Components, organization, cost and outcomes of healthcare and community-based interventions for people with posttraumatic stress following war and conflict in the Balkans, *School of Medicine, University of Belgrade*
- **PBPTSD** – Psychobiology of posttraumatic stress disorder, *School of Medicine, University of Belgrade*
- **HISERBS** - Health improvement in Serbia through reinforcement of biomedical science and technology, *Institute for Medical Research, University of Belgrade*
- **SERBPARTZOO** - Reinforcement of the Serbian Centre for Parasitic Zoonoses, *Institute for Medical Research, University of Belgrade*
- **CPCTAS** – Centre for preclinical testing of active substances, *School of Medicine, University of Kragujevac (FP7 REGPOT)*

FP6 / 7 – Food

Nutrition & metabolism group, Institute for Medical Research, BU:

- **EUROFIR** - European Food Information Resource Network (NoE)
- **EURRECA** - Harmonizing nutrient recommendations across Europe with special focus on vulnerable groups and consumer understanding (NoE)
- **BaSeFOOD** - Sustainable exploitation of bioactive components from the Black Sea Area traditional foods

Health Research in Serbia

INFRASTRUCTURE

- **Devastated in the nineties**
 - **Largely improving since 2000**
 - **Contribution to research infrastructure:**
 - **National: Ministry of Science, Ministry of Health**
 - **International: FP 6/7, EBRD, EAR...**
 - **Several niches of advanced infrastructure**
- Q: Sustainability & growth ?** continuous influx of money req –
- 2009 budget already cut

Health Research in Serbia

SWOT Analysis

Strengths

- Health recognized among national priorities
- **NEW: Health research a strategic R&D priority**
- **Institutional support** for R&D in health by the MSTD
- **Policy of R&D funding growth**
- **No. of performers**
- **No. of well-trained highly-motivated individuals**
- **Increasing performance of researchers** as measured by number of publications in ISI / SCI journals
- **Presence in EU research programmes**

Health Research in Serbia

SWOT Analysis

Weaknesses

- **No priorities up to now**
- **Little / no joint research** between research institutions & industry
- **Lack of wide-based info** on EU-funded research programmes
- **Lack of skills** for preparation of proposals for EU-funded research programmes
- **Lack of project management skills**
- **Insufficient support** for young researchers
- **Uneven research infrastructure** among and within research institutions

Health Research in Serbia

SWOT Analysis

Opportunities

- *National strategy for science and technological development* currently being developed
- Health research among priorities
- Presence in EU research programmes
- EU accession process in perspective

Health Research in Serbia

SWOT Analysis

Threats

- **Economic crisis** – endangered national RTD funding
- **Unstable economic situation**
- **Research infrastructure** - continuous need for institutional support for acquisition of latest technologies; large equipment requires new facilities
- **Brain drain.** Loss of health researchers to both foreign research institutions and to the private health sector

Health Research in Serbia

National R&D Strategy in field of Health

- to build on strengths
- to minimize weaknesses / threats

Priority setting aims:

- **to include existing capacities & human resources**
in both basic and clinical research
- **to heighten cooperation with industry**

Health Research in Serbia

Research priorities

Specific priorities in field of **medicine:**

- **to include existing capacities & human resources:**
 - molecular basis of monogenic, poligenic and multifactorial diseases
 - enhancement of diagnostic, therapeutic and predictive approaches in clinical practice
- **to heighten cooperation with industry:**
 - pharmacogenomics, regulatory mechanisms and pharmacological modifications
 - nutrigenomics and nutrigenetics

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Research priorities cont'd

Specific priorities in field of biology:

- Molecular basis of endo- and exogenous factor-induced genomic and extragenomic mechanisms in physiological and pathological conditions
- Environment and adaptive mechanisms
- Molecular basis of hormone signalling transduction
- Biochemical and cytogenetic effects of radiation

Health Research in Serbia

Increasing participation in ERA

MSTD logistics:

- **NCPs**
- **Bureau for international cooperation**
- **INFO Days**
- **Educational Wshps**
- **Membership in Programme Committee**

EC: cooperation with MSTD

- **WBC-INCO.net**
- **INCO REGPOT**

Health Research in Serbia

Research priorities

WBC-INCO.NET

Setting of regional priorities session

May 2009, Tirana

Exercise: from top-down expectations →
networking and creating a discussion forum, focusing on
creating opportunities at local, regional and European level

Challenge: Create regular regional level forums!
- To create regional networks



SerbParZOON

2007-2009:

**REINFORCEMENT OF THE
SERBIAN CENTRE FOR PARASITIC ZOOSES**

FP6-2005-INCO-WBC/SSA-3

contract no. INCO-CT-043702 SERBPARZOOM

*EU Research Information Event: Towards Integration into the European Research Area
29 June 2009, Belgrade*



SerbParZOON

- **Capacity building project →**
STRENGTHENING HUMAN & MATERIAL RESOURCES
 - **≈ 300.000 €**
- **SCPZ: Dept of Parasitology, IMR**
with associated lab
Lab for Immunoparasitology, INEP



SerbParZ00N Partners

EU PARTNERS:

✓ France:

- Jean DUPOUY-CAMET, Universite René Descartes, Paris VI
- Isabelle VILLENA, Universite Champagne-Ardenne, Reims

✓ Italy:

- Edoardo POZIO, Istituto Superiore di Sanita, Rome

✓ UK:

- Richard GRENCIS, School of Life Sciences, University of Manchester

✓ Greece:

- Maria ANTONIOU, School of Medicine, University of Crete, Heraklion

REGIONAL PARTNERS:

- ✓ Institute for Public Health, Podgorica, Montenegro
- ✓ University of Skopje School of Medicine, Skopje, Macedonia

*EU Research Information Event: Towards Integration into the European Research Area
29 June 2009, Belgrade*



SerbParZOON

Activities:

- **Equipment:**
 - setting up Lab for molecular parasitology
 - microscopes, freezers, fridges
- **Mobility / Advanced training** of personnel → to and from EU
- **Enhancement of human resources** → young researchers hired by the project
- **Increased visibility** → local / regional / international
- **Broadened scope of activities** → better response to societal needs

- **equipment**

Activities performed:

- **Lab for molecular parasitology**



Other equipment

- Microscopes



- Serum bank



- Laboratory information system (Stomis IMI)

- Chamber for insect rearing





SerbParZOON

■ **Human resources**

Ongoing activities:

- *Mobility* (to and from EU)
 - training and joint research
- *Enhancement of human resources*
 - 2 new young researchers hired by project:

Mobility - to SCPZ

- March 2007: **Seminar + IAB 1**

Edoardo POZIO



- June 2008: **Seminar + IAB 2**

Jean DUPOUY-CAMET

Maria ANTONIOU



- June 2008: **Training Session**

Helene YERA & SERBPARZOOM team

4 colleagues from Macedonia and Montenegro

- March 2009: **Seminar**

Isabelle VILLENA



Mobility - from SCPZ (Jrs)

- May 2007: **Vladimir IVOVIĆ**
Istituto Superiore di Sanita, Rome, Italy



- Octobar 2007: **Ivana KLUN, Marija VUJANIĆ**
*Hopital Cochin, Service de Parasitologie-Mycologie, Univ Paris V
AFSSA - Agence Française de Sécurité Sanitaire des Aliments*



- Jan-Feb 2008: **Nataša ILIĆ**
School of Life Sciences, Manchester, England



- April 2008: **Vladimir IVOVIĆ**
Universite Chamagne-Ardenne, Reims, France

- June 2009: **Željko RADULOVIĆ, Snežana TOMANOVIĆ**
University of Crete, Heraklion, Greece

Visibility: www.serbparzoon.org

Serbian Centre for Parasitic Zoonoses
University of Belgrade, Institute for Medical Research

HOME

Vision & Mission

The strategic objective of the Serbian Centre for Parasitic Zoonoses (SCPZ) is to evolve into a **CENTRE OF EXCELLENCE** for the research of diverse aspects of parasitic infections shared by animals and man, and thus establish itself as a preferred partner in the Western Balkan Countries (WBC) for EU institutions working in the field of medical and veterinary parasitology.

The foundation for achieving this strategic objective is provided by the FP6-INCO-CT-2006-043702 - **SERBPARTOON** project. The SERBPARTOON project is aimed at reinforcement of the research capacities of the SCPZ by the following:

- training and mobility of the research personnel
- hiring young researchers
- upgrading of the material resources, including the laboratory infrastructure and equipment

Navigation menu:

- » HOME
- » LABORATORIES
- » MEMBERS
- » PROJECTS
- » ACTIVITIES
- » EDUCATION
- » PUBLICATIONS
- » LINKS
- » HUMAN RESOURCES
- » CONTACTS

Footer: created by Bojan Spasojević

*EU Research Information Event: Towards Integration into the European Research Area
29 June 2009, Belgrade*

Open House Day 07 Dec 2007



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29 June 2009, I*

and with our friends...



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2008 Workshop ANNOUNCEMENT & PROCEEDINGS



SERBPARTOON WORKSHOP
ACHIEVEMENTS AND PERSPECTIVES
(What we have done and where we are going)

Country Club Baebenius
near Belgrade
19-20.06.2008.

(EU project FP6-INCO-043702)



SERBPARTOON
(EU project FP6-INCO-043702)

WORKSHOP
ACHIEVEMENTS AND PERSPECTIVES
(What we have done and where we are going)

PROCEEDINGS

Country Club Baebenius, Belgrade, SERBIA
19-20.06.2008

EU Research Information Event: Towards Integration into the European Research Area
29 June 2009, Belgrade



Response to societal needs

Two SCPZ labs nominated in 2008 by
Serbian Ministry of Health as:

- **National Reference Laboratory for Toxoplasmosis (IMR)**
- **National Reference Laboratory for Trichinellosis (INEP)**
 - Expert diagnosis
 - Surveillance and Monitoring
 - Research

Response to societal needs: Outreach to the community

Zaključak:

- ✓ pre jela perite ruke!
- ✓ jedite samo dobro kuvano ili pečeno meso!
- ✓ izbegavajte kontakt sa materijalom zagađenim mačjim ekskretima!



Za sva pitanja u vezi sa toksoplazmozom možete se obratiti na

adresu: ili telefon:

Laboratorija za toksoplazmozu	011/2685-788
Instituta za medicinska istraživanja	011/2684-484
Univerziteta u Beogradu	lokal 106
Bulevar oslobođenja 18	
11000 Beograd	

svakog radnog dana od 9-16h

Priredili:

Dr sc. med. Olgica Đurković-Đaković, naučni savetnik,
rukovodilac Laboratorije za toksoplazmozu;
Mr. Sc. vet Ivana Klun, istraživač saradnik, Dipl. biol. Marija
Vujanić, istraživač i Dr sc. biol. Vladimir Ivović, naučni
saradnik

SCPZ
Serbian Centre
for
Parasitic Zoonoses


UNIVERSITY OF BELGRADE
INSTITUTE FOR MEDICAL RESEARCH
DE BEOGRICA 4, P.O. Box 102, 11128 BELGRADE,
SERBIA
TEL: +381 11 2666 790, FAX: +381 11 2643 891
www.imb.ac.rs

TOKSOPLAZMOZA



**DA LI STE ZAŠTITILI VAŠU BEBU?
SVAKA ŽENA TREBA DA ZNA DA LI JE
NJENO NERODENO DETE ZAŠTIĆENO OD
TOKSOPLAZMOZE**

Zaključak:

- ✓ Kupujte uvek meso i mesne prerađevine za koje ste sigurni da su predhodno pregledani!
- ✓ jedite samo dobro kuvano ili pečeno meso!



Za sva pitanja u vezi sa trihinelozom možete se obratiti na

adresu:

ili

telefon:

Odeljenje za imunologiju i
imunoparazitologiju;

Institut za primenu nuklearne energije
Univerzitet u Beogradu

Banatska 31b
11080 Beograd

011/619-525
011/2618-666
lokal 122

svakog radnog dana od 8-15h

Priredili:

Dr sc. med. Ljiljana Sofronić-Milosavljević, viši naučni
saradnik, rukovodilac Odeljenja za imunologiju i
imunoparazitologiju;

Dr Alisa Gruden-Movsesijan, naučni saradnik,
Mr. Nataša Ilić, istraživač saradnik

SCPZ
Serbian Centre
for
Parasitic Zoonoses



Univerzitet u Beogradu
Institut za primenu
nuklearne energije,
E.O. 9001

Zavod za laboratorijsku
dijagnostiku «INEP»
JUS E.O. IEC 17015

Banatska 31b, 11080 Beograd, Srbija
Tel: (+381 11) 2618 696, Fax: (+381 11) 616 724
www.inep.co.yu mail@inep.co.yu

TRIHINELOZA



Trichinella spiralis u Srbiji i svetu

**Parazitska bolest životinja i ljudi
koja stalno preti**

**ŠTA O NJOJ TREBA ZNATI I KAKO SE
ZAŠTITITI ?**

Zato ...

- ✓ tražite pregled i na đardiozu kod svakog rutinskog pregleda kako vaše tako i stolice vaših kućnih ljubimaca, a obavezno kod pojave akutnih i hroničnih proliva!
- ✓ u slučaju pojave proliva kod vas dajte na pregled vašu stolicu, ali obavezno i stolicu vaših ljubimaca i *vice versa* ... u slučaju pojave proliva kod vaših ljubimaca dajte na pregled njihovu stolicu, ali obavezno i vašu!
- ✓ poseban oprez kada u vašem okruženju postoje legla vaših ljubimaca (štenci i mačići)!



i na kraju ...

- ✓ samo ponovljeni pregled najmanje TRI stolice daje pouzdan nalaz!

Za sva pitanja u vezi sa đardiozom možete se obratiti na

adresu: ili telefon:

Odeljenje za parazitologiju 011/2685-788
Institut za medicinska istraživanja 011/2684-484
Univerzitet u Beogradu lokal 106
Bulevar oslobođenja 18
Isprat, soba 111
11000 Beograd

svakog radnog dana od 9-16h

Priredili:

Dr sc. med. Aleksandra Nikolić, naučni savetnik

Mr sc. vet. Ivana Klun, istraživač saradnik

Dr sc. biol. Vladimir Ivović, naučni saradnik

SCPZ
Serbian Centre
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TEL: +381 11 2685 788, FAX: +381 11 2643 881
www.imr.bg.ac.rs

ĐARDIOZA



**BOLEST LJUDI ALI
I KUĆNIH LJUBIMACA**

Prevenција

U oblastima gde je rasprostranjena lajšmanioza potrebno je:

- ✦ redovno upotrebljavati repelente tj. komercijalna kao i druga sredstva za odbijanje insekata
- ✦ postaviti zaštitne mrežice (sa sitnim otvorima) na prozore i vrata
- ✦ u večernjim satima izbegavati šetnje i boravak u blizini mesta gde se skrivaju papatači
- ✦ i posebno izbegavati slabo uhranjene pse sa delimično otpalom dlakom i dugim noktima

Za sva pitanja u vezi sa lajšmaniozom možete se obratiti na

adresu: ili telefon:

Odeljenje za parazitologiju 011/2685-788
Instituta za medicinska istraživanja 011/2684-484
Univerziteta u Beogradu lokal 106
Bulevar oslobođenja 18
11000 Beograd

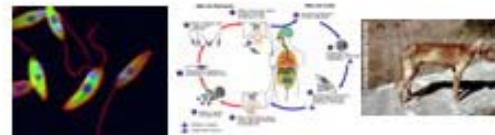
svakog radnog dana od 9-16h

Priredili:
Dr sc. biol. Vladimir Ivović, naučni saradnik, Dr sc. med.
Olgica Đurković-Đaković, naučni savetnik, rukovodilac
Odeljenja; Mr. Sc. vet Ivana Klun, istraživač saradnik, Dipl.
biol. Marija Vujanić, istraživač

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www.imr.edu.rs

LAJŠMANIOZA



BOLEST LJUDI I PASA

Zaključak:

- ✓ Nakon boravka u prirodi detaljno pregledajte telo i odeću
- ✓ Pravilno uklonite pričvršćenog krpelja
- ✓ U slučaju uboda krpelja ili pojave karakterističnog crvenila kože obratite se stručnom licu



Za sva pitanja u vezi lajmske bolesti možete se obratiti na

adresu:	ili	telefon:
Laboratorija za medicinsku arahnentomologiju		011/2685-788
Institut za medicinska istraživanja		011/2684-484
Univerzitet u Beogradu		lokal 110
Bulevar oslobođenja 18		
I sprat, soba 110		
11000 Beograd		

Svakog radnog dana od 9-16 h

Priredili:

Dr Marija Milutinović, naučni savetnik, rukovodilac
Laboratorije za medicinsku arahnentomologiju;
Mr Željko Radulović, istraživač saradnik,
Mr Snežana Tomanović, istraživač saradnik

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11129 Belgrade, Serbia
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Fax: +381 11 2643 691
www.imr.ac.rs

LAJMSKA BOLEST



Bolest ljudi i domaćih životinja
koju prenose krpelji

Kako se zaštititi?

EU Scientific Officer Mr. Armand Beuf visited IMR 05 Sep 2008



From: Armand.Beuf@ec.europa.eu [mailto:Armand.Beuf@ec.europa.eu]
Sent: 10. september 2008 8:38
To: olgicadj@imi.bg.ac.yu
Subject: Grateful thanks to you and to your team

Dear Pr Djurkovic-Djakovic,

I have really enjoyed this mission benefitting from your hospitality and richness of presentations which gives me a clear picture of promising achievements for your Research Unit and in terms of socio medical awareness for your society at large .

Thanks for the information package I am going to rediscover and add to my SERBPARTOON live archive .
Please pass my kind salutations on to all of your team members. I do hope they will keep up the good work they are developing with you.

We keep in touch .
Best season greetings and kind regards,

Armand BEUF

From: Olgica [mailto:olgicadj@imi.bg.ac.yu]
Sent: Friday, September 05, 2008 6:56 PM
To: BEUF Armand (RTD)
Subject:
Importance: High



Open House Day

05 Dec 2008

to promote

National Reference Laboratory for Toxoplasmosis



NACIONALNA REFERENTNA LABORATORIJA
ZA TOKSOPLAZMOZU

DAN OTVORENIH VRATA

POZIVNICA



DOBRODOŠLI !

Poštovane kolegice i kolegi,

Zelovoša bi nam je da Vas pozovemo na

2. DAN OTVORENIH VRATA

Centra za parazitologiju 2008/09

omogućava uzorkovanje i ispitivanje projekta PR6-010 (0-043702)
posetom i poslaženja

Nacionalna referentna laboratorija za toksoplazmozu

06. strane Ministarstva zdravlja Republike Srbije i
Evropske agencije za referentnu laboratoriju

iz petak, 05.12.2008, od 08.00 do 13.00h

U ul. oslobođenja 18 (opšta bolnica) Klinički fakultet,
Izpr. sobe 110-111.

Dođite da Vas uz posetu:

- predstavimo naučne rezultate i rezultate biološke i
medicinske kole primenjene u kliničkoj praksi, naučne,
plata i inovativnog dela
- poročimo o trenutnim laboratorijskim rezultatima
- poročimo u odlici kako treba posetiti i referentnu
laboratoriju

*EU Research Information Event: Towards Integration into the European Research Area
29 June 2009, Belgrade*

Activities 2009

- Further **training & mobility** – continuous
- **Organization of Scientific Meeting** (25 March 2009) to celebrate the **Centennial of *Toxoplasma*** by invitation of the **Medical Academy of the Serbian Medical Society**
- **Open House Day** (to promote the National Reference Laboratory for Trichinellosis, INEP)

&



Project Conference in Belgrade
18-20 November 2009

EU Research Information Event: Towards Integration into the European Research Area
29 June 2009, Belgrade



SCPZ

Strategic goal:

Centre of Excellence for Parasitic Zoonoses

at national level, to be pronounced by government

- Food-borne parasitic pathogens
- Parasitic opportunistic pathogens
- Host-parasite relationship
- Molecular diagnosis of parasitic infections
- Biology & ecology of arthropod vectors of infections



Perspectives

- Creation of
**SOUTHEAST EUROPEAN CENTRE
FOR PARASITIC ZOOSES**
(proposal to FP7 REGPOT- **if ???**)

- Inclusion in COST actions
 - **CAPARA (2009)**
 - **Apicomplexa of Man and Animals (proposal)**

- **Lobbying with network for specific thematic priorities**

Health Research in Serbia

Conclusion

- The presented case study → **the significance of capacity building projects** (e.g. the INCO WBC / REGPOT type):
 - for enhancing capacities
 - for increased visibility for potential FP7 partnerships
- **Strong support of Serbia for a new WBC REGPOT call to increase the number of groups w/ enhanced capacities and networks for future FP7 calls**