

## **Dusanka Krajnovic, Assoct. Professor**

Dr. Dusanka Krajnovic (maiden name Parojcic) PhD holds presently an Associate Professor position and Head of the Department for Social Pharmacy and Pharmacy Legislation at the University of Belgrade –Faculty of Pharmacy. She works at the Belgrade University Faculty of Pharmacy where she graduated, and earned her M Science and PhD in pharmacy. Dr. Krajnović has MA degree in Pharmaceutical Marketing and Management from the same Faculty and MA degree in Pharmaceutical Legislation and Pharmaceutical economy. Prof. Krajnovic teaches at Belgrade university several graduate and Pharm.D. courses on pharmacy law and ethics, social pharmacy and pharmacy practice. She has supervised/co-supervised various students reading for MSc and PhDs for the University of Belgrade – Faculty of Pharmacy and Faculty of Organizational Sciences. She is involved in postgraduate training for pharmacists and physicians in Serbia.

Since 1998, dr Krajnovic has been deeply involved in the area of biomedical ethics, especially on ethical issues in pharmacy practice and code of ethics for pharmacists. Later in 2004 she extended her involvement with clinical bioethics. Her areas of research is multi-disciplinary with an overarching focus on various fields of bioethics, including studying ethical competences and moral distress in health care, public health, health equity and drug accessibility, off label use of medicines, drug development and promotion, e-health and e-pharmacy, pharmacotherapy literacy and patient safety, as well as orphan drugs` availability and affordability.

For many years she has been researching the ethical and social issues surrounding rare diseases and availability of treatments through national project concerning rare diseases (Project funded by the Serbian Ministry of Education, Science and Technological Development:

“Rare diseases: molecular pathophysiology, diagnostic and therapeutic modalities, and social, ethical, and legal aspects”. For the last couple of years she has been carrying out applied ethical research, mapping ethical problems at community pharmacy practice on national level, planning future international research collaboration in this area. In 2006, she was the project coordinator on a project in the field of Women health promotion and public health. She is also involved in two EU project concerning bioethics and serves as national coordinator on these projects (ISCH COST Action IS1201- Disaster Bioethics: addressing ethical issues triggered by disasters; 2012-2016) and (ISCH COST Action IS1303 Citizen's Health through public-private Initiatives: Public health, Market and Ethical perspectives (CHIP ME) 2013-2017). Other on-going international collaborations include Erasmus + Project on reinforcement of the Framework for Experiential Education in Healthcare in Serbia (ReFEEHS) where Prof. Krajnovic is co-ordinating the research line for work-package on experiential education.

Prof. Krajnovic is the author of the Pharmacists` Oath (2008) and Code of Ethics for the members of Pharmaceutical Chamber of Serbia (2006, 2017) and the author of one monograph on pharmacy ethics and co-author of two textbooks on pharmacy practice and communication. Dr Krajnovic is a fellow of the Center for the Study of Bioethics at the University of Belgrade since its founding and serves as Deputy Director since 2016. The professional membership of dr Krajnovic includes prominent associations, such as: Serbian Unit of the UNESCO Chair in Bioethics(member of the Steering Committee from 2011, General Secretary (2011-2015),Deputy Head (2015-));Pharmaceutical Society of Serbia (member from 1998, General Secretary of the History of Pharmacy section from 2000,

President of the History of Pharmacy Section from 2017); International Academy for the History of Pharmacy (full member from Serbia since 2009); International Society for History of pharmacy (member since 2004, General Secretary (2014-2017)); PCNE; Association of teachers of ethics (since its founding 2014); Association for Medical Law of Serbia (UMPS). Furthermore, dr Krajinovic is listed at the Global Ethics Observatory (GEObs) UNESCO database for experts in bioethics. Her expertise is recognised through her membership to the Ethics board of Pharmaceutical Chamber of Serbia (Chair), as well as in the Ethics committee of University of Belgrade-Faculty of Pharmacy (Chair) and Ethics committee for biomedical research at Faculty of Pharmacy (co-Chair). She has been a health services research & pharmacy practice researcher for over 10 years. Her particular expertise is in qualitative methodologies - interviews, focus groups, and has also used the nominal group technique. Moreover, she has considerable experience in designing questionnaires and conducting surveys. She has a strong publication record, ensuring timely dissemination at academic and professional conferences, and effective engagement with various stakeholders. To date, she has published over 25 articles in peer-reviewed, international journals and more than thirty articles in national journals. Additionally, 4 books and 3 book chapters have been published on healthcare ethics, pharmacy ethics, ethical competences and moral issues in health care.

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#### **List of selected publications at international journals (indexed at SCIE, SCI, SSCI lists)**

- 1) **Krajinović D**, Jocić D. Experience and Attitudes Toward Informed Consent in Pharmacy Practice Research: Do Pharmacists Care? *Science and Engineering Ethics* (2016) doi:10.1007/s11948-016-9853-3
- 2) Milosavljevic J, Bogavac-Stanojevic N, **Krajinovic D**, Mitrovic-Jovanovic A. Serbian gynecologists' and pharmacists' beliefs about emergency contraception. *Women and Health* 2016 April 11:1-12 (Epub ahead of print) <http://dx.doi.org/10.1080/03630242.2016.1176099>;
- 3) Milica Zekovic, Marija Djekic-Ivankovic, Marina Nikolic, Mirjana Gurinovic, **Dusanka Krajinovic**, Marija Glibetic. Validity of the Food Frequency Questionnaire assessing the folate intake in women of reproductive age living in the country without food fortification: application of the method of triads. *Nutrients* *Nutrients*, 2017, 128;9:1-17. Accepted for publication in 2017
- 4) Crnjanski T, **Krajinovic D**, Tadic I, Stojkov S, Savic M. An Ethical Issue Scale for Community Pharmacy Setting (EISP): Development and Validation. *Science and Engineering Ethics* 2016;22(2):497-508.
- 5) Milosavljevic J, **Krajinovic D**, Bogavac-Stanojevic N. Predictors of pharmacists' provision of emergency contraceptive pills. *Health Care Women Int*: 2016 vol. 3; 10: 1170-1181. DOI:10.1080/07399332.2016.1215464
- 6) Budin-Ljøsne I, Mascalonzi D, Soini S, Machado H, Kaye J, Bentzen HB, Rial-Sebbag E, D'Abramo F, Witt M, Schamps G, Katić V, **Krajinovic D**, Working Group 1 COST Action CHIP ME IS1303 "Citizen's Health through public-private Initiatives: Public health,

- Market and Ethical perspectives”, Harris JR. Feedback of individual genetic results to research participants: Is it feasible in Europe? *Biopreservation and Biobanking* 2016; 14 (3) , 241 -248. DOI: 10.1089/bio.2015.0115
- 7) Bekčić S, Kelečević N, Marinković V, Tasić Lj, **Krajnović D.** Developing a quality management tool for preparing Good Distribution Practice audit of pharmaceutical contract vaccine distributor. *Indian Journal of Pharmaceutical Education and Research* 2015;49(3):147-82.
  - 8) Tatjana Crnjanski; **Dusanka Krajnovic**; Mirko Savic. Pharmacists’ assessment of the difficulty and frequency of ethical issues encountered at community pharmacy settings. *Science and Engineering Ethics* 2017- in press
  - 9) Milošević Georgiev A, **Krajnović D.** Manojlović J, Ignjatović S, Majkić Singh N. Seventy Years of Biochemical Subjects’ Development in Pharmacy Curricula: Experience from Serbia (Sedamdeset godina razvoja biohemijskih predmeta u kurikulumu farmacije: Iskustvo iz Srbije). *J Med Biochem.* 2016; 35 (1) 69–79.
  - 10) Suzana Miljković, Đorđe Baljuzović, **Dusanka Krajnovic**, Ljiljana Tasić, Gorica Sbutega-Milosević. The Impact of Education on Adolescents' Sun Behavior: Experiences from Serbia. *Srp Arh Celok Lek.* 2014 May-Jun;142(5-6):330-336.
  - 11) Jocić D., **Krajnović D.** Development and initial validation of a scale to measure attitudes and beliefs of pharmacists toward their work with patients. *Vojnosanit Pregl* 2014; April Vol. 71 (No. 4): p. 373-82
  - 12) Jocić D, **cD.** State anxiety, stress and burnout syndrome among community pharmacists: Relation with pharmacists' attitudes and beliefs. *Indian Journal of Pharmaceutical Education and Research*, **2014; 48(2):9-15.**
  - 13) Stojkov S., Tadic I., Crnjanski T., **Krajnović D.,** Bates I. Evaluation of competences at the community pharmacy settings. *Indian Journal of Pharmaceutical Education and Research* 2014;48(4):22-30.
  - 14) **Krajnović D.,** Arsić J., Milošević Georgiev A., Manojlović J. The opening of the first Pharmacy in Vranje with educated pharmacist and its development through time. *Vojnosanitetski pregled* 2014, 71(10): 978–84.
  - 15) Arsić J, **Krajnović D,** Arsić S, Milošević Georgiev A, Marinković V. Doprinos farmaceuta razvoju zdravstvene kulture u Vranju krajem 19. i u prvoj polovini 20. veka. (Contribution of Pharmacists to the Development of Healthcare Culture in Vranje by the End of the 19th Century and in the First Half of the 20th Century) *Srp Arh Celok Lek.* 2014; 142(11-12): 768-76.
  - 16) Milosavljević J, **Krajnović D,** Bogavac-Stanojević N, Mitrović A. Gynaecologists’ views on contraception and abortion – an example from Serbia. *The European Journal of Contraception and Reproductive Health Care* 2015; 20: 141–148.
  - 17) Svetlana Stojkov, Ivana Tadic, Tatjana Crnjanski, **Dusanka Krajnovic.** Assessment and Self-assessment of the Pharmacists' Competencies using the Global competency framework (GBcF) in Serbia. *Vojnosanit Pregl* 2016; Mart vol. 73 (No. 9):2016-OnLine-First (00):40-40  
DOI:10.2298/VSP140728040S

- 18) Dragana Lakić, Ljiljana Tasić, Mitja Kos, Guenka Petrova, Assena Stoimenova, **Dusanka Krajnovic** Pharmacy network and access to medicines in selected eastern European countries: comparative analysis. *Croatian Medical Journal* 2012; 53: 53-9.
- 19) Savic Ivan, Marinkovic Valentina, Tasic Ljiljana, **Krajnovic Dusanka**, Savic Ivana. From experimental design to quality by design in pharmaceutical legislation. Accreditation and quality assurance 2012, 17 (6):627-633. ISSN: 0949-1775 DOI: 10.1007/s00769-012-0926-y  
Springer-Verlag, Berlin/Heidelberg
- 20) Bekčić S., Kelečević N., Marinković V., Tasić LJ, **Krajnović D.** Approach to the Integration of Management Systems in a Pharmaceutical Organization. *Indian Journal of Pharmaceutical Education and Research*, 2013; 47(3):19-25
- 21) Crnjanski T, **Krajnovic D.** Stojkov-Rudinski S, Tadic I. Ethical dilemmas and moral distress in pharmacy: a qualitative study. *HealthMED Journal*. 2012; 6(7):2485-93. IF= 0.435 za 2011; ISSN:1840-2291
- 22) Jocić D., **Krajnovic D.** "The influence of autogenic training on state anxiety reduction among community pharmacists in Serbia" *HealthMED Journal*, 2012; 6 (8): 2675 – 85. IF= **0.435 za 2011**; ISSN:1840-2291.
- 23) Milošević Georgiev A, **Krajnović D.** Milovanović S, Ignjatović S, Đurić D, Marinković V. Analiza razvoja regulatorno-etičkog okvira za klinička ispitivanja. *Srp Arh Celok Lek*. 2013; 141(9-10):660-7.

#### **Selection of articles published in national journals**

1. **Krajnovic D.** Stojković T, Babić S. Etički aspekti upotrebe matičnih ćelija kao zdravstvenih tehnologija u personalizovanoj medicine. *Engrami*, 2016; jan-mart. vol.38 (1):5-15.
2. Zekovic M, **Krajnovic D.** Marinkovic V, Tasic Lj. The complexity of adherence issue: a Review of its scope and determinants, *Acta Medica Medianae* 2016, 55 (1): 51-58.
3. Stojkovic T, Marinkovic V, **Krajnovic D.** Tasic Lj, Milosevic Georgiev A. Patient safety and medication errors in the provision of health care services-challenges for contemporary practice, *Acta Medica Medianae* 2016, 55 (2):57-64.
4. **Krajnović D.** Arsić J, Jocić D, Milošević Georgiev A, Tasić Lj, Marinković V. Evaluation of Pharmacists Knowledge and Attitudes Regarding Rare Diseases and Orphan Drugs. *Acta Medicae Medianae*, 2013: Vol. 52, No 2, Jun, 2013:23-32.
5. **Krajnovic D.** Ethical and Social Aspects on Rare Diseases. *Filozofija i društvo* 2012; XXIII (4): 32-48.
6. **Krajnović D.**, Jocić D. Barijere u komunikaciji u javnoj apoteci i načini za njihovo prevazilaženje. *Arhiv za farmaciju* 2010, vol. 60, (1): 56-71.

7. **Parojić D**, Stupar D, Perić B, Brdarski M. Dioskoridovo delo De Materia Medica – Kritički osvrt na različite prepise i interpretacije Dioskoridovog dela De Materia Medica, Arhiv za farmaciju 2005, vol. 56, (1): 43-73.
8. **Parojić D**. A Historical overview of the discovery of aspirin with some new aspects on its development (Istorijski razvoj aspirina sa osvrtom na novije podatke o njegovom otkriću), Arhiv za farmaciju 2003, 1-2: 51-70.
9. **Parojić D**, Stupar D.: Deontološki aspekt razvoja farmacije u Srbiji između dva svetska rata Prilog proučavanju istorije farmacije u Srbiji, Tokovi istorije 2002, 3-4: 69-84.
10. **Parojić D**, D. Stupar D. Farmakopeje na teritoriji Srbije u periodu od 1863. do 2000. godine, Arhiv za farmaciju 2001, 1-2: 163-180 .
11. Milošević-Georgiev A, **Krajnović D**. Faktori rizika za razvoj hipertenzije u vezi sa navikama u ishrani studenata Univerziteta u Beogradu. Timočki medicinski glasnik 41(3):2016;203-207.
12. Zeković M, Stojković T, Milošević-Georgiev A, **Krajnović D**. Research on presence of chosen risk factors for hypertension in medical students. Praxis Medica 2015;44(2):13-19.
13. Milošević Georgiev A, **Krajnović D**, Jocić D, Rodić I, Knežević M. Motivisanost studenata davalaca krvi na Farmaceutskom fakultetu Univerziteta u Beogradu. Bilten za transfuziologiju 2013- u štampi
14. **Krajnović D**, Jocić D, Milošević Georgiev A. Etika u savremenoj farmaceutskoj praksi. Zdravstvena zaštita 2013 (1): 88-99.
15. Stojkov Rudinski S. Tadic I, Crnjanski T, **Krajnović D**. Analiza, adaptacija i validacija dokumenta za procenu kompetencija farmaceuta. Arhiv za farmaciju 2012, vol. 62, 3: 208-18.
16. **Krajnović D**, Jocić D, Kerničan L, Stupar D, Gašić M, Perić B. Prva državna apoteka u Srbiji (The first state-owned pharmacy in Serbia). Acta med hist Adriat 2012;10(1):.23-44.
17. **Krajnović D**, Kerničan L. History of pharmacy museum of the Faculty of pharmacy University of Belgrade. Acta medico-historica Adriatica 2009; 7(2): 179-190;
18. Mandić I, **Krajnović D**. Talidomidska tragedija - lekcija iz prošlosti, Timočki medicinski glasnik 2009; vol. 34, 2:126-34.
19. **Parojić D**, Stupar D, Stupar M. Profesionalni odnos farmaceuta i lekara od 13. do 20. veka: etički i stručni aspekt, Timočki medicinski glasnik 2004; vol 29, 2: 118-26.
20. **Parojic D**. Spécialités médicamenteuses, leur fabrication et leur publicité en Serbie vers la fin du XIXe et début XXe siècle, Revue d'Histoire de la Pharmacie 2004, 342: 229-246 .
21. **Parojic D**, Stupar D, Miric M. La Thériaque:Médicament et Antidote, Vesalius: acta internationales historiae medicinae IX, 1: 28-32 (2003); SJR= 0 0,037 za 2003. god.
22. **Parojic D**, Stupar D, Stupar M: The Municipal Pharmacy in Kotor, 14th - 16th century, Pharmacy in History 2003; Vol. 45: 1, 31-36.
23. **Parojić D**, Stupar D. Medicinal plants and the use in pharmacotherapy - a historical review (Istorijski osvrt na lekovito bilje i njegovu upotrebu u farmakoterapiji), Timočki medicinski glasnik 2003; vol 28, 3-4: 101-109.
24. **Krajnović D**., Mujović Zornić H. Etički i pravni aspekti zaštite vulnerabilnih skupina: međunarodni i nacionalni normativi JAHR (tematski broj, saopštenja u celini sa mini simpozijuma "Integrativna bioetika i vulnerabilne grupe" 2013, 8(4): 725-737.

25. **Krajnović D**, Arsić J. Etička pitanja u pedijatrijskim kliničkim studijama: izazovi i problemi kod pacijenata sa retkim bolestima. JHR 2014; 10: 277-89.
26. Radoš Lj, **Krajnović D**, Stojković T, Tasić Lj. Health literacy-”sine qua non” for quality of pharmaceutical care and patient safety. Int J Adv Quality. 2014; 42(3): 7-14.
27. Бркић Ј.,Тасић Љ.,Крајновић Д.Учинак фармацеута на клиничке исходе код пацијената на палијативној нези:кратак приказ. Архив за фармацију 2014,6: 487-498.
28. Одаловић М, Тасић Љ, Крајновић Д, Везмар Ковачевић С. Интервенције фармацеута у популацији трудница и препоруке за унапређење. Арх фарм 2015; 65 (1): 17-32.
29. Убавић С, **Крајновић Д**, Маринковић В. Анализа инструмената за процену здравствене писмености који се могу применити на примарном нивоу здравствене заштите. Арх фарм 2015; 65 (1): 72-87.
30. Тасић Љ, Паројчић Ј, **Крајновић Д**. Промене у образовању фармацеута-друштвени и професионални изазови. Арх фарм 2015; 65 (1): 1-16.

#### Monographs

[Parojčić D. Pharmacy Ethics` Development from Theory to Practice. Belgrade: Konstisi, 2006. – in Serbian](#)

#### Textbooks

1. Tasic LJ., Krajnovic D., Petric M., Lakic D., Tadic I. Pharmacy Practice. Belgrade: Faculty of Pharmacy, University of Belgrade 2010, 2011, 2013,2015 – in Serbian
2. Tasic. Lj., Krajnovic D., Jovic S., Jovic D. Comunication in Pharmacy Practice, Belgrade: Faculty of Pharmacy, University of Belgrade, 2011. ISBN: 978-86-80263-86-1

#### Chapters in Monographs

1. **Krajnovic D**. Ethical and Social Issues related to Rare Diseases (in Serbian: Etički i društveni aspekti u vezi sa retkim bolestima) In:Drezgić R., Radinković Ž, Krstić P (eds.) Horizont bioetike: moral u doba tehničke reprodukcije života, Beograd: Univerzitet u Beogradu-Instistit za filozofiju i društvenu teoriju 231-52.
2. Parojcic D. Pharmacy ethics. In: Nikolin M. ed. Gallery of Pharmaceutical Arts. Belgrade; Placebo, 2005– in Serbian
3. Krajnović D. Ethical aspects of pharmaceutical care. In: Tasić LJ., Ilić K. (eds.) Women`s health in Serbia: Health promotion, desease prevention and therapy: Belgrade: Faculty of Pharmacy University of Belgrade. 2009: 49-63. – in Serbian
4. Kostić L, **Krajnović D**. Promocija zdravlja žena u javnoj apoteci – veštine u komunikaciji. U: Ilić K, Tasić Lj. Zdravlje žena u Srbiji – Promocija zdravlja, prevencija bolesti i terapija. Farmaceutski fakultet Univerziteta u Beogradu 2009: 35-47. M45

#### Plenary and invited lectures

1. Krajnovic D. Community Pharmacists Services- an Overview of Practice, regulatory and Ethical Issues. VI Kongres farmaceuta Srbije: Beograd, 15-18. oktobar 2014.
2. Krajnović D, Stojkov S. Applying the Competences Framework at the Community Pharmacy Settings in Serbia: Experience and Challenges for the Development of Pharmacy Practice. VI Kongres farmaceuta Srbije: Beograd, 15-18. oktobar 2014.
3. Kovačević N, Medić S, Krajnović D, Parojčić J, Tasić Lj. National Qualifications Framework of the Republic of Serbia-qualifications and competencies of pharmacists. VI Kongres farmaceuta Srbije: Beograd, 15-18. oktobar 2014.
4. Крајновић Д. Етичка основа професионализма – како сачувати аутономију фармацеутске струке? Трећи конгрес фармацеута БИХ са међународним учешћем, Сарајево 14-16 мај 2015, Фармација 1 сунпл 1 ( вол18) 2015: 97
5. **Krajnović D**, Milošević Georgiev A. Do ethics committees contribute to a morally enhanced health care system in Serbia? International conference Enhancement: Cognitive, Moral and Mood, Beograd, May 14-16, 2013.
6. Krajnovic D. Ethical Issues of Treatments for Rare Diseases. Interantional Conference (New) Perspectives in Bioethics; 13-15 October 2011: Belgrade, Serbia.
7. D. Parojcic, D. Stupar, K. Ilić: Ethics in the professional relations between pharmacists and physicians – since the Edict of Salerno until modern practice – 5th Archive for Pharmacy, pg. 954-957 (2006) – in Serbian
8. Dusanka Parojcic. Ethical and social implications of E-pharmacy. 28th Annual Congress of European Pharmaceutical Students` Association (EPSA) in Bucharest and Sinaia, Romania between 18th-24th April 2005. (invitation letter proof)
9. Dusanka Parojcic. Code of ethics for pharmacists (Kodeksi etike za farmaceute). Annual Meeting of the Serbian Pharmaceutical Society Section for Pharmaceutical Technology and Cosmetology , 18th April 2005. – in Serbian
10. Dusanka Parojcic, Axel Helmstaedter. Role of the pharmacist in the last centuries. 27th Annual Congress of European Pharmaceutical Students` Association (EPSA) in Pamporovo, Bulgaria between 10th-16th April 2004.
11. **Krajnović D**, Jocić D, Marinković V. Self – assesment of Pharmacists Communication skills with Patients: A Way to Improve the Quality of Care. International Working Conference "Total Quality Management – Advanced and Intelligent Approaches", 4th – 7th June, Proceedings 2013: 415-419.
12. **Krajnović D**, Simić S. Pharmacists interventions in Public Health and Patient Safety ( Intervencije farmaceuta u službi javnog zdravlja i bezbednost pacijenata) II naučni simpozijum Farmaceutskog fakulteta „Zdravstveni ishodi i socijalna farmacija“, Beograd, 2012: 28-41.
13. **Krajnović D**, Jocić D. Etički kodeksi i izazovi savremene farmaceutske prakse. Zbornik radova. Peta konferencija sa međunarodnim učešćem „Marketing u farmaciji – Farmaceutska delatnost u vreme krize“ Beograd, 2012: 35-37.
14. Krajnović D. Enhancing our knowledge of ethically responsible decision making models in genetic testing. Abstract book: International Conference "Enhancing understanding of enhancement", Belgrade, 27-28 October, 2015: 10
15. **Krajnović D**, Kocić-Pešić V, Tadić I. Etika i timski rad zdravstvenih radnika kao preduslov bezbednosti pacijenata. Zbornik radova. Treća konferencija sa međunarodnim učešćem „Marketing u farmaciji - Briga za pacijenta - odgovornost farmaceuta „ Beograd, 27. mart 2010.44-5.

16. **Krainović D**, Miljković S, Tadić I, Lakić D, Petrić M, Tasić Lj. Oglašavanje dijetetskih suplemenata regulatorni, etički i zdravstveni aspekti – predavanje na 2. kongresu o dijetetskim suplementima. Knjiga. Drugi kongres o dijetetskim suplementima. Beograd 2009: 41-43.
17. **Parojčić D**, Stupar D, Ilić K. Ethics in the profesional relations between pharmacists and physicians-since the Edict of Salerno until modern practice. (Etika u profesionalnom odnosu farmaceuta i lekara – od Salernskog edikta do savremene prakse). Četvrti kongres farmaceuta Srbije sa međunarodnim učešćem, Farmaceutsko društvo Srbije, Beograd. Arhiv za farmaciju 2006,5:954-7.