

Curriculum Vitae

Section 1 - Personal Details, Qualifications and Experience

1.1 Personal details

Name: Dragan Antic

Address: Department of Livestock and One Health, Institute of Infection, Veterinary and Ecological Sciences, University of Liverpool,

Date of birth

1.2 Higher education

2017 **FHEA** (Fellow of The Higher Education Academy, University of Liverpool)

2013 **DipECVPH** (Diplomate of the European College of Veterinary Public Health, Subspecialty Food Science)

2011 **PhD** (Doctor of Philosophy, Veterinary Medicine, Food Hygiene)
University of Novi Sad, Department of Veterinary Medicine, 2009-2011

2009 **MScVM** (Master degree in Veterinary Medicine, Food Hygiene)
University of Novi Sad, Department of Veterinary Medicine, 2006-2009

2003 **DVM** (Doctor of Veterinary Medicine)
University of Belgrade, Faculty of Veterinary Medicine, 1996-2003

1.3 Other training and qualifications

2014-2017 Certificate in Professional Studies in Learning and Teaching in Higher Education
University of Liverpool

2009-2012 Resident in Veterinary Public Health, Food Science
University of Novi Sad, Department of Veterinary Medicine

1.4 Employment record

2017 - present: Senior Lecturer in Veterinary Public Health,
Institute of Infection, Veterinary and Ecological Sciences, University of Liverpool

2014 - 2017: Lecturer in Veterinary Public Health,
Institute of Veterinary Science, University of Liverpool

2012 – 2014: Assistant Professor in Meat Hygiene and Safety,
Department of Veterinary Medicine, University of Novi Sad

2004 – 2012: Research and Teaching Assistant in Meat Hygiene and Safety,
Department of Veterinary Medicine, University of Novi Sad, Serbia

1.5 Teaching experience and activity

1.5.1 University of Liverpool, Institute of Infection, Veterinary and Ecological Sciences (undergraduate teaching, 2014-present)

Bachelor in Veterinary Science (BVSc) and Bachelor in Bioveterinary Science (Biovet course)

Main teaching duties - Theoretical and practical teaching of Veterinary Public Health, Food Science, Food safety, Food microbiology and technology in years 1-5 of BVSc and years 1-3 of Biovet course; subject design and delivery of lectures, case-based integrated practicals, small group tutorials and clinical rotations (consisting of tutorials, visits to food producing premises (meat and dairy), and practical exercises in food microbiology, food safety risk management systems and meat inspection); supervision of research project for undergraduate students; introduction of new concepts in teaching stemming from my previous and current policy-led research and ongoing changes in European legislation pertaining to food safety.

1.5.2 University of Liverpool, Institute of Infection, Veterinary and Ecological Sciences (postgraduate teaching, 2014-present)

Supervision of postgraduate (PhD) students and residents of the European College of Veterinary Public Health (ECVPH), two past residents and one ongoing residency programme as a primary supervisor; food safety training for Population medicine curriculum in ECVPH programme.

1.5.3 University of Novi Sad, Department of Veterinary Medicine (undergraduate teaching 2004-2014)

Doctor of Veterinary Medicine degree (DVM, 6 years)

Main teaching duties - Theoretical and practical teaching and risk assessment exercises with undergraduate students, in meat production and processing premises and microbiological and technology laboratories; Modules: Meat Hygiene and Safety and several elective modules in Food Science and Safety area and Veterinary Public Health.

1.5.4 University of Novi Sad, Department of Veterinary Medicine (postgraduate teaching, 2011-2014)

Doctoral studies in Veterinary Science (Food Hygiene, 3 years)

Theoretical and practical teaching (in food production premises, microbiology and technology laboratories) in several modules related to Food Science, Safety, Microbiology and Technology. Supervision of one PhD student.

1.6 Leadership, professional and collegial experience

1.6.1 Leadership

- Member of the Food Standards Agency's Advisory Committee on the Microbiological Safety of Food (ACMSF), 2022-ongoing
- Programme Director for residencies in ECVPH at University of Liverpool (Approved Residency Training Institute) (2023-present); and
- Residency Advisor for residencies in ECVPH at University of Liverpool - training and supervision for candidates willing to undertake three year ECVPH residency programme enabling them to sit for examination to be certified as a Diplomate of the ECVPH (2014-present)

- Management Committee member from the UK for COST Action CA18105 (Risk-based meat inspection and integrated meat safety assurance), 2019-2023
- Working group 3 leader (Abattoir-level controls) in COST Action CA18105 (Risk-based meat inspection and integrated meat safety assurance), 2019-2023
- Member of Clinical (Year 4-5) Education Committee (reporting to Undergraduate Board of Studies) (2017-present)
- Subject leader for Veterinary Public Health clinical rotations (2014-present)

1.6.2 Membership of professional bodies

2017-present FHEA (Fellow of The Higher Education Academy)
 2014-2022 VPHA (Veterinary Public Health Association (UK))
 2013-present ECVPH (Diplomate of the European College of Veterinary Public Health) and EBVS (European Board of Veterinary Specialization)

1.6.3 Professional and collegial experience

- Member of the Education Committee of the European College of Veterinary Public Health
- Member of the Examination Ad-hoc panels for the examination of candidates sitting the exam to be certified as a Diplomate of the European College of Veterinary Public Health.
- Member of the Scientific Editorial Board of Veterinarski Glasnik Journal (publisher University of Belgrade, Faculty of Veterinary Medicine)

Regular and/or ad hoc peer reviewer of several scientific journals, including:

- Foodborne Pathogens and Disease
- Poultry Science
- Trends in Food Science & Technology
- International Journal of Food Contamination
- Food Control
- Meat Science
- Irish Veterinary Journal
- Journal of Food Protection
- Preventive Veterinary Medicine.

1.7 Research experience and knowledge exchange activity

My main research interest is integrated control of microbiological foodborne hazards in the meat chain (pre-harvest, harvest and post-harvest stage), including process hygiene, development of interventions at slaughter and modernisation of the meat inspection and its change into a more comprehensive, risk-based meat safety assurance system. I have more than 19 years of working and scientific experience in microbial risk assessment in respect to zoonotic foodborne pathogens and food safety management systems. I have worked extensively in the development of interventions for cattle hides (novel microbial immobilisation treatment) and beef (use of lactic and other organic acids for decontamination of meat trimmings intended for fermented sausages production).

1.7.1 External grants awarded

- Risk-based meat inspection and integrated meat safety assurance (COST Action CA18105); European Commission (2019 - 2023); Role: project applicant and Working Group 3 leader (Abattoir level controls and risk categorisation of abattoirs);

- A critical literature review to assess the significance of intervention methods to reduce the microbiological load on beef through primary production (project FS301044) and Meta-analysis of the efficacy of interventions applied during primary processing to reduce microbiological contamination in beef (project FS430388); Food Standards Agency (2018-2020); PI.
- Decontamination of food (project FS101193); Food Standards Agency (2017-2018); PI
- A study to review current evidence and outline work-streams to support the development of a policy for smoked, skin-on sheep meat (project FS102128); Food Standards Agency (2015); PI
- Selected biological hazards for safety/quality of food of animal origin and control measures from farm to consumer (Work package: Decontamination strategies to improve microbial meat safety); Ministry of Education, Science and Technological Development of Serbia (2011-2014); Work package leader.

1.7.2 Research students' supervision

- PhD studentship for Mr Khalid Abdulla (primary supervisor). The presence and dynamics of extended-spectrum/AmpC beta-lactamase (ESBL/AmpC)-producing *E. coli* in poultry chain (University of Liverpool, 2019-2024).
- Undergraduate BVSc Students' summer projects
- Supervision of residency programmes in ECVPH, including research projects which are parts of these programmes, University of Liverpool (2014-present)
- Several undergraduate students supervision, year 2 and 3 research projects, University of Liverpool (2015-present)
- One PhD student supervision, University of Novi Sad (2013-2016), research advisor

1.7.3 Knowledge exchange

- Risk-based meat inspection and integrated meat safety assurance at abattoir level (2023). Training School on RB-MSAS focusing on risk categorisation of farms and abattoirs. 13th to 16th June 2023, online (co-organiser)
- Risk-based meat inspection and integrated meat safety assurance at abattoir level (2022). Training School on Farm and Abattoir Interventions in a Risk-Based Meat Safety Assurance System, 20th - 22nd June, online (main organiser)
- Risk-based meat inspection and integrated meat safety assurance at abattoir level (2019). Workshop at the Annual Scientific Conference and Annual General Meeting of the European College of Veterinary Public Health „Membership of the European Union – Challenges for Veterinary Public Health“, 2-4th October, Edinburgh
- Decontamination methods in abattoirs (2019). Workshop at RIBMINS project Workshops and Working Group meetings, Copenhagen, Denmark, 7-8 November 2019
- International trade fair of the meat industry (IFFA Exhibition) – Microbial immobilisation treatment of cattle hides with aqueous shellac solution BeefLac®. Frankfurt May 2019
- Workshop on smoked, skin-on sheep meat, organised by the FSA Wales, to present findings from the project FS102128 on the development of the policy for smoked, skin-on sheep meat. The workshop attracted different stakeholders, including farmers, sheep meat producers and consumer organisations. Cardiff, 6 July 2016
- Chair of organising committee of the International Conference “Biological Food Safety and Quality”, BFSQ 2012, 4-5 October 2012, Belgrade
- Various courses and workshops for meat industry in Serbia (2008-2013)

Section 2 - Selected Publications

Books and book chapters

1. S. Buncic, **D. Antic** and B. Blagojevic (2017). Microbial ecology of poultry and poultry products. In: Anderson de Souza Sant'Ana (Ed.), *Quantitative Microbiology in Food Processing: Modelling the Microbial Ecology*. John Wiley & Sons, Ltd, pp. 483-498.

Reviews in refereed journals

1. Kuruca L., Belluco S., Vieira-Pinto M., **Antic D.** & Blagojevic B. (2023). Current control options and a way towards risk-based control of *Toxoplasma gondii* in the meat chain, *Food Control*, 146, 109556.
2. **Dragan Antic**, Kurt Houf, Eleni Michalopoulou, Bojan Blagojevic (2021). Beef abattoir interventions in a risk-based meat safety assurance system, *Meat Science*, 182, 108622. (Corresponding author).
3. Blagojevic B., Nesbakken T., Alvseike O., Vågsholm I., **Antic D.**, Johler S., Houf K., Meemken D., Nastasijevic I., Pinto M.V., Antunovic B., Georgiev M. & Alban L. (2021). Drivers, opportunities, and challenges of the European risk-based meat safety assurance system, *Food Control*, 124, 107870.
4. Karabasil Nedjeljko, Bošković Tamara, Tomašević Igor, Vasilev Dragan, Dimitrijević Mirjana, Katanić Nenad, **Antić Dragan** (2018). Production of traditional meat products in small and micro establishments in Serbia: current status and future perspectives. *Acta Veterinaria*, 68 (4), 373-390.
5. Sava Buncic, George-John Nychas, Michael R. F. Lee, Kostas Koutsoumanis, Michel Hébraud, Mickaël Desvaux, Nikos Chorianopoulos, Declan Bolton, Bojan Blagojevic, **Dragan Antic** (2014). Microbial pathogen control in the beef chain: recent research advances. *Meat Science*, 97, 288-297.

Book reviews in refereed journals

1. **Antic, D.** (2019). Book review: 'Chemical hazards in foods of animal origin', edited by Frans J.M. Smulders, Ivonne M.C.M. Rietjens and Martin Rose. *Quality Assurance and Safety of Crops & Foods*, 11(3), 313 - 314.

Research papers in refereed international journals

1. Morgane Salines, Thomai Lazou, Jose Gomez-Luengo, Janne Holthe, Ivan Nastasijevic, Martijn Bouwknegt, Nikolaos Dadios, Kurt Houf, Bojan Blagojevic, **Dragan Antic**. (2023). Risk categorisation of abattoirs in Europe: current state of play. *Food control*, 152, 109863.
2. Sandberg, M., Ghidini, S., Alban, L., Capobianco Dondona, A., Blagojevic, B., Bouwknegt, M., Lipman, L., Seidelin Dam, J., Nastasijevic, I., **Antic, D.** (2023). Applications of Computer Vision Systems for meat safety assurance in abattoirs: A systematic review. *Food control*, 159, 109768. (Corresponding author).
3. Nevijo Zdolec, Aurelia Kotsiri, Kurt Houf, Avelino Alvarez-Ordóñez, Bojan Blagojevic, Nedjeljko Karabasil, Morgane Salines, **Dragan Antic** (2022). Systematic review and meta-analysis of the efficacy of interventions applied during primary processing to reduce microbiological contamination on pig carcasses. *Foods* 11(14), 2110. (Corresponding author).

4. Arden, K., Gedye, K., Angelin-Bonnet, O., Murphy, E., & **Antic, D.** (2022). *Yersinia enterocolitica* in wild and peridomestic rodents within Great Britain, a prevalence study. *Zoonoses and Public Health*, 69, 537-549.
5. Jelena Petrović, Jovan Mirčeta, Jelena Babić, Miloš Malešević, Bojan Blagojević, Jasna Prodanov Radulović, **Dragan Antić** (2022) *Salmonella* in wild boars (*Sus scrofa*): Characterisation and epidemiology. *Acta Veterinaria Beograd* 2022, 72(2), 184-194.
6. Zdolec, N.; Kiš, M.; Jankuloski, D.; Blagojevska, K.; Kazazić, S.; Pavlak, M.; Blagojević, B.; **Antić, D.**; Fredriksson-Ahomaa, M.; Pažin, V. (2022). Prevalence and persistence of multidrug-resistant *Yersinia enterocolitica* 4/O:3 in slaughter pigs from different housing systems in Croatia. *Foods*, 11, 1459.
7. Simo Cegar, Ljiljana Kuruca, Bojana Vidovic, **Dragan Antic**, Sigrun J. Hauge, Ole Alvseike, Bojan Blagojevic (2022). Risk categorisation of poultry abattoirs on the basis of the current process hygiene criteria and indicator microorganisms. *Food control*, 132, 108530.
8. Mirceta, J., Petrovic, J., Malesevic, M., Blagojevic, B., & **Antic, D.** (2017). Assessment of microbial carcass contamination of hunted wild boars. *European Journal of Wildlife Research*, 63(2) (8 pages). (Corresponding author).
9. Djekic I., Blagojevic B., **Antic D.**, Cegar S., Tomasevic. I, Smigic N. (2016). Assessment of environmental practices in Serbian meat companies, *Journal of Cleaner Production*, 112(4), 2495-2504.
10. Nada Smigic, **Dragan Antic**, Bojan Blagojevic, Igor Tomasevic, Ilija Djekic (2016). The level of food safety knowledge among meat handlers. *British Food Journal*, 118(1), 9-25.
11. Bojan Blagojevic, **Dragan Antic**, Bojan Adzic, Tatjana Tasic, Predrag Ikonic, Sava Buncic (2015). Decontamination of incoming beef trimmings with hot lactic acid solution to improve microbiological safety of resulting dry fermented sausages - a pilot study. *Food Control*, 54, 144-149.
12. Blagojevic B. and **Antic D.** (2014). Assessment of potential contribution of official meat inspection and abattoir process hygiene to biological safety assurance of final beef and pork carcasses. *Food Control*, 36, 174-182.
13. Blagojevic B., **Antic D.**, Ducic M. and Buncic S. (2012). Visual cleanliness scores of cattle at slaughter. *Veterinary Record*, 170, 563 (4 pages).
14. Blagojevic B., **Antic D.**, Ducic M. and Buncic S. (2011). A study of Haptoglobin levels in groups of cattle and pigs with and without abnormalities at meat inspection. *Foodborne Pathogens and Disease*, 8 (10), 1119-1124.
15. **Antic D.**, Blagojevic B. and Buncic S. (2011). Treatment of cattle hides with Shellac solution to reduce hide-to-beef microbial transfer. *Meat Science*, 88, 498-502.
16. Blagojevic B., **Antic, D.**, Ducic M. and Buncic S. (2010) Ratio between carcass- and skin-microflora as an abattoir process hygiene indicator. *Food Control*, 22, 186-190.
17. **Antic, D.**, Blagojevic B., Ducic M., Mitrovic R., Nastasijevic I. and Buncic S. (2010) Treatment of cattle hides with Shellac-in-ethanol solution to reduce bacterial transferability - A preliminary study. *Meat Science*, 85, 77-81.
18. **Antic, D.**, Blagojevic B., Ducic M., Nastasijevic I., Mitrovic R. and Buncic S. (2010) Distribution of microflora on cattle hides and its transmission to meat via direct contact. *Food Control*, 21, 1025-1029.