



Curriculum Vitae

Personal information **Frane Božić**

Work experience

1. Employer: Veterinary Faculty University of Zagreb, Department of Parasitology and
 - Start date: 061992
 - End date: 051996
 - Position: Research Assistant
 - Activities: _ Scientific research in the field of immunoparasitology; assessment of impact of *Trichinella spiralis* invasion on cell mediated immunity in the gut of mice (first characterization of intestinal $\gamma\delta$ TCR+ T cells during *Trichinella spiralis* gut infection). _ In addition, testing anti-inflammatory drugs (e.g. glucocorticoids) in the process of expulsion of intestinal nematode *Trichinella spiralis* from the gut of infected animals.
 - Country: Croatia
2. Employer: Veterinary Faculty University of Zagreb, Department of Pharmacology and
 - Start date: 051996
 - End date: 092003
 - Position: Assistant at the Department of Veterinary Pharmacology and Toxicology
 - Activities: _ Scientific research in the field of immunopharmacology; assessment of an immunomodulating drug (levamisole) in weaned pigs vaccinated against colibacillosis. _ Work with students (seminars, exercises)
 - Country: Croatia
3. Employer: Veterinary Faculty University of Zagreb, Department of Pharmacology and
 - Start date: 092003
 - End date:
 - Position: Professor of Veterinary Pharmacology
 - Activities: _ Scientific research in the field of immunopharmacology; assessment of an immunomodulating drug (levamisole) in weaned pigs vaccinated against colibacillosis. _ Work with students (lecture, seminars, exercises)
 - Country: Croatia

Education and training

1. Subject: Faculty of Veterinary Medicine, University of Zagreb, Zagreb
 - Start date: 101984
 - End date: 041992
 - Qualification: Doctor of Veterinary Medicine (DVM)
 - Organisation: Theoretical knowledge of Veterinary Medicine
 - Country: Croatia
2. Subject: Faculty of Science, University of Zagreb, Zagreb
 - Start date: 021992
 - End date: 021996
 - Qualification: Master of Science (MSc) in Biology and Biomedicine
 - Organisation: Scientific work
 - Country: Croatia
3. Subject: Faculty of Veterinary Medicine, University of Zagreb, Zagreb
 - Start date: 021996
 - End date: 062000
 - Qualification: Doctor of Philosophy (PhD) in Pharmacology
 - Organisation: Scientific work Teaching work
 - Country: Croatia

Additional information

Publications

1. Božić, Frane. Koncept "One Health": važnost racionalne primjene antimikrobnih lijekova. 7th International Congress "Veterinary Science and Profession" Book of Abstracts (Brkljača Bottegaro, N. ; Dolce, N. ; Vrbanac, Z. (ur.). Zagreb: Faculty of Veterinary Medicine, University of Zagreb, 2017. 178_178 (pozvano predavanje). 2. Marić, Klara; Šoštarić, Petra; Valpotic, Hrvoje; Šuran, Jelena; Lipar, Marija; Božić, Frane; Prevendar Crnić, Andreja; Brozić, Diana. Activity of salivary enzymes and level of salivary urea in gingivitis of dogs. Book of Abstracts 7th International Congress "Veterinary Science and Profession" (Brkljača Bottegaro, Nika ; Zdolec, Nevijo ; Vrbanac, Zoran (ur.). Zagreb: Faculty of Veterinary Medicine, University of Zagreb, 2017. 136_136 (poster, sažetak). 3. Šuran, Jelena; Milošević, Karla; Galović, Mihael; Mašek, Tomislav; Brozić, Diana; Matanović, Krešimir; Radin, Lada; Aladrović, Jasna; Šeol Martinec, Branka; Radić, Božo; Radić, Saša; Benić, Miroslav; Kostelić, Antun; Božić, Frane; Bačić, Goran; Mačesić, Nino. Intramammary propolis solution (Apimast) for subclinical mastitis treatment in dairy cows. Book of Abstracts 7th International Congress "Veterinary Science and Profession" (Brkljača Bottegaro, Nika; Zdolec, Nevijo ; Vrbanac, Zoran (ur.). Zagreb: Faculty of Veterinary Medicine, University of Zagreb, 2017. 66_66. (predavanje). 4. Brozić, Diana; Bačić, Goran; Mačesić, Nino; Mašek, Tomislav; Radin, Lada; Aladrović, Jasna; Matanović, Krešimir; Božić, Frane; Šeol Martinec, Branka; Radić, Božo; Šuran, Jelena. „Intramamarna formulacija propolisa za prevenciju i tretman mastitisa kod mliječnih preživača“, prvi projekt suradnje Veterinarskoga fakulteta u gospodarstvu financiran iz strukturnih fondova Europske unije. Hrvatski veterinarski vjesnik. 24 (2016) , 1_2; 56_63. 5. Šuran, Jelena; Matanović, Krešimir; Božić, Frane; Šeol Martinec, Branka; Aladrović, Jasna; Bačić, Goran; Mačesić, Nino; Mašek, Tomislav; Brozić, Diana; Benić, Miroslav; Radić, Božo; Radin, Lada. Intramammary propolis formulation for prevention and treatment of mastitis in dairy ruminants. Journal of Veterinary Pharmacology and Therapeutics (Riviere, Jim ; Fink_Gremmels, Johanna (ur.). Wiley, 2015. 67_67. 6. Konjević, Dean; Janicki, Zdravko; Slavica, Alen; Severin, Krešimir; Krapinec, Krešimir; Želježić, Darko; Božić, Frane. Monitoring cortisol

metabolites in the faeces of captive fallow deer (*Dama dama* L.). *Veterinarski arhiv*. 86 (2016), 3; 363_371. 7. Šuran, Jelena; Matanović, Krešimir; Brozić, Diana; Mašek, Tomislav; Mačević, Nino; Radin, Lada; Aladrović, Jasna; Božić, Frane; Šeol Martinec, Branka; Lipar, Marija; Smolec, Ozren; Benić, Miroslav; Radić, Božo; Bačić, Goran. Antimikrobno djelovanje propolisa i mogućnost njegove primjene u veterinarskoj medicini. *Veterinarska stanica: znanstveno-stručni veterinarski časopis*. 47 (2016), 4; 381_385. 8. Valpotić, Hrvoje; Barić_Rafaj, Renata; Mrljak, Vladimir; Božić, Frane; Grabarević, Željko; Samardžija, Marko; Folnožić, Ivan; Đuričić, Dražen; Gračner, Damjan; Valpotić, Ivica. The influences of immune modulation with levamisole and polyoxyethylene_polyoxypropylene copolymers on the immunohematological, serum biochemical parameters and intestinal histocytomorphology of weaned pigs. *Veterinarski arhiv*. 86 (2016), 5; 667_683. 9. Prevendar Crnić, Andreja; Šuran, Jelena; Cipriš Madunić, Heidi; Božić, Frane. Cadmium concentrations in the tissues of young wild boar (*Sus scrofa* L.) from Moslavina and Slavonia in lowland Croatia. *Veterinarski arhiv*. 85 (2015.), 3; 323_334. 10. Valpotić, Hrvoje; Šperanda, Marcela; Kovšca Janjatović, Ana; Didara, Mislav; Lacković, Gordana; Božić, Frane; Habrun, Boris; Srećec, Siniša; Mataušić_Pišl, Mirjana; Valpotić, Ivica. Levamisole stimulates proliferation of circulating and intestinal immune cell subsets, gut health and performance in weaned pigs. // *Canadian journal of animal science*. 94 (2014), 1; 43_53. 11. Šuran, Jelena; Flajs, Dubravka; Peraica, Maja; Prevendar Crnić, Andreja; Šperanda, Marcela; Božić, Frane. Pharmacokinetics of an immunomodulating dose of levamisole in weaned pigs. *Acta veterinaria Hungarica*. (2013), 61; 376_382. 12. Banović, Frane; Božić, Frane; Lemo, Nikša. In vitro comparison of the effectiveness of polihexanide and chlorhexidine against canine isolates of *Staphylococcus pseudintermedius*, *Pseudomonas aeruginosa* and *Malassezia pachydermatis*. *Veterinary dermatology*. (2013), 24; 409_e89. 13. Djedović, Dean; Janicki, Zdravko; Slavica, Alen; Severin, Krešimir; Krapinec, Krešimir; Božić, Frane; Palme, Rupert. Non_invasive monitoring of adrenocortical activity in free_ranging fallow deer (*Dama dama* L.). *European journal of wildlife research*. (2011), 57; 77_81. 14. Kovšca Janjatović, Ana; Lacković, Gordana; Božić, Frane; Kezić, Dubravka; Popović, Maja; Valpotić, Hrvoje; Harapin, Ivica; Pavičić, Željko; Njari, Bela; Valpotić, Ivica. Histomorphometric evaluation of intestinale cellular immune responses in pigs immunized with live oral F4ac+ non_enterotoxigenic vaccine *E. coli* against postweaning colibacillosis. *European journal of histochemistry*. (2010), 54; 18_24. 15. Valpotić, Hrvoje; Kovšca Janjatović, Ana; Lacković, Gordana; Božić, Frane; Dobranić, Vesna; Valpotić, Ivica; Popović, Maja. Increased number of intestinal villous M cells in levamisole _pretreated weaned pigs experimentally infected with F4ac+ enterotoxigenic *Escherichia coli* strain. *European journal of histochemistry*. (2010), 54; 88_91. 16. Kovšca Janjatović, Ana; Lacković, Gordana; Božić, Frane; Špoljarić, Daniel; Popović, Maja; Valpotić, Hrvoje; Vijić, Nada; Pavičić, Željko; Valpotić, Ivica. Histomorphometric characteristics of immune cells in small intestine of pigs perorally immunized with F18ac+ nonenterotoxigenic *E. coli* vaccinal strain. *European journal of histochemistry*. (2009), 53; 189_198. 17. Valpotić, Hrvoje; Šuran, Jelena; Prevendar Crnić, Andreja; Šperanda, Marcela; didara, Mislav; Valpotić, Ivica; Božić, Frane. Stimulation by levamisole of cell_mediated immunity in weaned pigs. *Italian journal of animal science*. 8 (2009), 8 (Suppl. 3); 122_124. 18. Kovšca Janjatović, Ana; Lacković, Gordana; Božić, Frane; Popović, Maja; Valpotić, Ivica. Levamisole synergizes proliferation of intestinal IgA(+) cells in weaned pigs immunized with vaccine candidate F4ac(+) nonenterotoxigenic *Escherichia coli* strain. *Journal of Veterinary Pharmacology and Therapeutics*. (2008), 31; 328_333. 19. Božić, Frane; Lacković, Gordana; Kovšca Janjatović, Ana; Smolec, Ozren; Valpotić, Ivica. Levamisole synergizes experimental F4ac+ *Escherichia coli* oral vaccine in stimulating ileal Peyer's patch T cells in weaned pigs. *Journal of Veterinary Pharmacology and Therapeutics*. (2006), 29; 199_204. 20. Vijić, Nada; Šver, Lidija; Lacković, Gordana; Popović, Maja; Božić, Frane; Valpotić, Ivica. Intestinal Immune Response of Weaned Pigs Experimentally Vaccinated with F4ac+ Nonenterotoxigenic Strains of *Escherichia coli*. *Acta veterinaria (Brno)*. (2005), 74; 595_601. 21. Božić, Frane; Bilić, Vitomir; Valpotić, Ivica. Levamisole mucosal adjuvant activity for a live attenuated *Escherichia coli* oral vaccine in weaned pigs. *Journal of Veterinary Pharmacology and Therapeutics*. (2003), 26; 225_231. 22. Božić, Frane; Lacković, Gordana; Prevendar Crnić, Andreja; Sakar, Darko; Valpotić, Ivica. Levamisole stimulates intestinal T_cell_mediated immune responses of weaned pigs to vaccination against colibacillosis. *Journal of Veterinary Pharmacology and Therapeutics*. (2003), 26 (Suppl 1); 229_230. 23. Božić, Frane; Bilić, Vitomir; Valpotić, Ivica. Modulation by levamisole of CD45RA and CD45RC isoforms expression in the gut of weaned pigs vaccinated against colibacillosis. *Journal of Veterinary Pharmacology and Therapeutics*. (2002), 25; 69_72. 24. Božić, Frane; Lacković, Gordana; Stokes, Christopher R; Valpotić, Ivica. Recruitment of intestinal CD45RA+ and CD45RC+ cells induced by a candidate oral vaccine against porcine post_weaning colibacillosis. *Veterinary Immunology and Immunopathology*. (2002), 86; 137_146. 25. Božić, Frane; Šver, Lidija; Valpotić, Ivica. CD45RA and CD45RC isoforms expression in weaned pigs vaccinated with non_enterotoxigenic F4ac+ *Escherichia coli* strain against colibacillosis. *Veterinari Medicina*. (2002), 47; 5_11. 26. Božić, Frane; Srebočan, Emil; Kozarić, Zvonimir. Starvation_induced pathobiology in the gut of carp (*Cyprinus carpio* L.). *Berliner und Munchener Tierarztliche Wochenschrift*. (2001), 114; 134_138. 27. Božić, Frane; Jašarević, Adem; Marinculić, Albert; Duraković, Emir; Kozarić, Zvonimir. Dexamethasone as a modulator of jejunal goblet cells hyperplasia during *Trichinella spiralis* gut infection of mice. *Helminthologia*. (2000), 37; 3_8. 28. Božić, Frane; Marinculić, Albert; Duraković, Emir. Analysis of intestinal intraepithelial lymphocyte populations in experimental *Trichinella spiralis* infection of mice. *Folia Parasitologica*. (2000), 47; 55_59. 29. Dominis Kramarić, Miroslava; Božić, Frane; Marinculić, Albert. Dose_dependent early recruitment of intestinal intraepithelial gamma delta T cells following experimental *Trichinella spiralis* gut infection. *Helminthologia*. (2000), 37; 187_193. 30. Božić, Frane; Forčić, Dubravko; Mažuran, Renata; Marinculić, Albert; Kozarić, Zvonimir. γ TCR+ intestinal intraepithelial lymphocytes (i_IEL) in reaction against intestinal nematode *Trichinella spiralis*. *Comparative Immunology, Microbiology and Infectious Diseases*. (1998), 21; 201_214. 31. Božić, Frane; Banović, Frane; Šuran, Jelena; Prevendar Crnić, Andreja. Adjuvant activity of levamisole for experimental F18ac+ *Escherichia coli* oral vaccine against porcine post_weaning colibacillosis. *Veterinarski arhiv*. (2011), 81; 199_209. 32. Kovšca Janjatović, Ana; Lacković, Gordana; Božić, Frane; Valpotić, Hrvoje; Tominac_Trcin, Mirna; Sladoljev, Srećko; Šeol, Branka; Valpotić, Ivica; Popović, Maja. De novo differentiation of intestinal villous M cells in weaned pigs immunized with levamisole_adjuvanted vaccine candidate F4ac+ or F18ac+ non_enterotoxigenic *Escherichia coli* strains. *Veterinarska Arhiv*. (2011), 81; 77_90. 33. Prevendar Crnić, Andreja; Pompe_Gotal, Jelena; Božić, Frane; Šuran, Jelena; Velev, Romel; Sakar, Darko. The effect of chloramphenicol on hepatic biotransformation enzyme activity and on the duration of pentobarbital or ketamine/xylazine anesthesia in guinea pigs (*Cavia porcellus*). *Veterinarski arhiv*. (2009.), 79; 385_396. 34. Valpotić, Hrvoje; Lacković, Gordana; Tomljenović, Andreja; Božić, Frane; Popović, Maja; Vijić, Nada; Kovšca Janjatović, Ana; Gračner Gregurić, Gordana; Valpotić, Ivica. Effect of levamisole on the number of intestinal goblet cells of weaned pigs experimentally vaccinated against colibacillosis. *Veterinarski arhiv*. (2009), 79; 543_554. 35. Sakar, Darko; Pompe_Gotal, Jelena; Prevendar Crnić, Andreja; Radin, Lada; Blažević, Ružica; Božić, Frane. Istraživanje sigurnosti primjene 0.04%_tne kupke diazinona u suzbijanju šuge ovaca. *Praxis veterinaria*. (2006), 54; 155_167. 36. Valpotić, Ivica; Božić, Frane. Imunokompetencija i stres u svinje. *Krmiva*. (2004), 46; 249_261. 37. Božić, Frane; Marinculić, Albert; Beck, Relja. Immunophenotyping of cells involved in early immune response to experimental *Trichinella spiralis* gut infection. *Veterinarski arhiv*. (2003), 73; 305_314. 38. Popović, Maja; Božić, Frane; Vijić, Nada; Valpotić Ivica. Adhezijske molekule: uloga u migraciji crijevnih limfocita. *Hrvatski veterinarski vjesnik*. (2002), 25; 67_74. 39. Božić, Frane; Mrljak, Vladimir. Levamisole modulates the numbers and phagocytic functions of leukocytes in weaned pigs vaccinated with non_enterotoxigenic F4ac+ *Escherichia coli*. *Praxis veterinaria*. (2001), 49; 21_30. 40. Božić, Frane; Bilić, Vitomir; Sakar, Darko; Valpotić, Ivica. Cell_mediated immune response in the gut of weaned pigs vaccinated with a live attenuated oral vaccine against colibacillosis. *Veterinarski arhiv*. (2000), 70; 339_349. 41. Božić, Frane. Isolation of carp (*Cyprinus carpio* L.) intestinal intraepithelial lymphocytes. *Veterinarski arhiv*. (1999), 69; 97_103. 42. Valpotić, Ivica; Madić, Josip; Terzić, Svjetlana; Popović, Maja; Božić, Frane. Veterinarska imunologija u Hrvatskoj _ prošlost, sadašnjost i budućnost _ I. dio. *Veterinarska stanica*. (2010), 41; 65_78. 43. Valpotić, Ivica; Madić, Josip; Terzić, Svjetlana; Popović, Maja; Božić, Frane. Veterinarska imunologija u Hrvatskoj _ prošlost, sadašnjost i budućnost _ II dio. *Veterinarska stanica*. (2010), 41; 127_143. 44. Božić, Frane. Imunost mladunčadi. *Hrvatski veterinarski vjesnik*. (2006), 29; 189_193. 45. Božić, Frane. Učinci i nusučinci nesteroidnih protu_upalnih lijekova kod pasa i mačaka. *Hrvatski veterinarski vjesnik*. (2002), 25; 5_12. 46. Božić, Frane. Use of non_steroidal anti_inflammatory agents in large animal species. *Praxis veterinaria*. (2001), 49; 75_83. 47. Božić, Frane. Levamisol: anthelmintik i imunomodulator. *Hrvatski veterinarski vjesnik*. (2000), 23; 94_98.

Projects

1. Trihinelozu: imunologija i imunopatologija zoonoze (1990_1995; MZT RH, br. 3_03_301 2. Postweaning colibacillosis in swine: mucosal immunity and vaccine potential (1996_1999; MZT RH i USDA_ARS, br. JF 204 3. Funkcionalne i citokemijske analize biološke aktivnosti humanih i svinjskih interferona (1999_2001; Hrvatsko_Slovenski projekt) 4. Immunocitochemical and morphometric studies of neuroendocrine and immune cells

in porcine GALT (2000_2001; MZT RH i British Council, br. AUS 053) 5. Development of recombinant live vaccine for mucosal immunity against postweaning colibacillosis in swine (2000_2002; Hrvatsko_Austrijski projekt) 6. Nova dijagnostika trihineloze svinja (2002_2007; MZT RH, br. 0053500) 7. Kolidijareja prasadi: mukozna imunost i oralna imunizacija (2002_2007; MZT RH, br. 0053305) 8. Primjena, biotransformacija i kinetika lijekova i vakcina u peradi i činčila (2002_2007; MZT RH, br. 0053359) 9. Kolidiareja i kolienterotoksemija prasadi: mukozna imunost i imunomodulacija (2007_MZOŠ RH, br. 053_0532265_2255) 10. "Upgrading the research performance in molecular medicine at the Faculty of Veterinary Medicine University of Zagreb" (FP7_ERA Chairs_Pilot Call_2013; budžet: € 2.378.334) 11. Intramamarna formulacija propolisa za prevenciju i tretman mastitisa kod mliječnih preživača (2014_2016; Projekt financiraju strukturni i kohezijski fond EU; RC.2.2.08_0003) 12. Immunomodulatory effects of levamisole in weaned pigs (2007_2010), head. Founded by Ministry of Science, Education and Sports of Croatia Project ID: 053_0532265_2248

Memberships

Member of the Croatian National Board of Drug Registration (since 2012) Member of the Croatian Veterinarian Society, Croatian Pharmacological Society, and Croatian Immunological Society

Other Relevant Information