

List of Publications

Nicole Borel, Prof. Dr. med. vet., DiplECVP, FVH (Pathologie)

1. Vidal S, Kegler K, Greub G, Aeby S, **Borel N**, Dagleish MP, Posthaus H, Perreten V, Rodriguez-Campos S. Neglected zoonotic agents in cattle abortion: tackling the difficult to grow bacteria. *BMC Vet Res*. 2017 Dec 2;13(1):373.
2. Li M, Jelocnik M, Yang F, Gong J, Kaltenboeck B, Polkinghorne A, Feng Z, Pannekoek Y, **Borel N**, Song C, Jiang P, Li J, Zhang J, Wang Y, Wang J, Zhou X, Wang C. Asymptomatic infections with highly polymorphic *Chlamydia suis* are ubiquitous in pigs. *BMC Vet Res*. 2017 Dec 1;13(1):370.
3. Taylor-Brown A, Spang L, **Borel N**, Polkinghorne A. Culture-independent metagenomics supports discovery of uncultivable bacteria within the genus *Chlamydia*. *Sci Rep*. 2017 Sep 6;7(1):10661.
4. Donati M, Cenacchi G, Biondi R, Papa V, **Borel N**, Nepita EV, Magnino S, Pasquinelli G, Levi A, Franco OL. Activity of synthetic peptides against *Chlamydia*. *Biopolymers*. 2017 May 27.
5. Leonard CA, Schoborg RV, **Borel N**. Productive and penicillin-stressed *Chlamydia pecorum* infection induces nuclear factor kappa B activation and interleukin-6 secretion in vitro. *Front Cell Infect Microbiol*. 2017 May 11;7:180.
6. Seth-Smith HMB, Wanninger S, Bachmann N, Marti H, Qi W, Donati M, di Francesco A, Polkinghorne A, **Borel N**. The *Chlamydia suis* genome exhibits high levels of diversity, plasticity, and mobile antibiotic resistance: comparative genomics of a recent livestock cohort shows influence on treatment regimens. *Genome Biol Evol*. 2017, doi.org/10.1093/gbe/evx043
7. Braun U, Warislohner S, Gerspach C, Ohlerth S, Wanninger S, **Borel N**. Clinical, sonographic and pathological findings in a Saanen goat with mediastinal thymoma. *Schweiz Arch Tierheilkd*. 2017 Mar;159(3):185-188.
8. Meletta R, Slavik R, Mu L, Rancic Z, **Borel N**, Schibli R, Ametamey SM, Krämer SD, Müller Herde A. Cannabinoid receptor type 2 (CB2) as one of the candidate genes in human carotid plaque imaging: Evaluation of the novel radiotracer [¹¹C]RS-016 targeting CB2 in atherosclerosis. *Nucl Med Biol*. 2017 Jan 8;47:31-43.
9. Wanninger S, Donati M, Di Francesco A, Hässig M, Hoffmann K, Seth-Smith HM, Marti H, **Borel N**. Selective Pressure Promotes Tetracycline Resistance of *Chlamydia Suis* in Fattening Pigs. *PLoS One*. 2016 Nov 28;11(11):e0166917.
10. Klöckner A, Nagel M, Greub G, Aeby S, Hoffmann K, Liégeois F, Rouet F, De Benedetti S, **Borel N**, Henrichfreise B. *Chlamydia*-Related Bacteria in Free-Living and Captive Great Apes, Gabon. *Emerg Infect Dis*. 2016 Dec;22(12):2199-2201
11. Rahn C, Marti H, Frohns A, Frohns F, Blenn C, Leonard CA, Barisani-Asenbauer T, Stein E, **Borel N**. Water-filtered infrared A reduces chlamydial infectivity in vitro without causing ex vivo eye damage in pig and mouse models. *J Photochem Photobiol B*. 2016 Nov 5;165:340-350.

12. Bünther JP, Seth-Smith HM, Rüegg S, Heikinheimo A, **Borel N**, Johler S. Wild type agr-negative livestock-associated MRSA exhibits high adhesive capacity to human and porcine cells. *Res Microbiol.* 2016 Oct 5. pii: S0923-2508(16)30116-4.
13. Leonard CA, Meli ML, Novacco M, **Borel N**. 18S ribosomal RNA evaluation as preanalytical quality control for animal DNA. *BioMed Research International*, vol. 2016, Article ID 6104323, 6 pages, 2016. doi:10.1155/2016/6104323.
14. Taylor-Brown A, Bachmann NL, **Borel N**, Polkinghorne A. Culture-independent genomic characterisation of *Candidatus Chlamydia sanzinia*, a novel uncultivated bacterium infecting snakes. *BMC Genomics.* 2016 Sep 5;17:710
15. Meletta R, Steier L, **Borel N**, Mu L, Keller C, Chiotellis A, Russo E, Halin C, Ametamey SM, Schibli R, Krämer SD, Müller Herde A. CD80 Is Upregulated in a Mouse Model with Shear Stress-Induced Atherosclerosis and Allows for Evaluating CD80-Targeting PET Tracers. *Mol Imaging Biol.* 2016 Jul 18. [Epub ahead of print]
16. Thierry S, Vorimore F, Rossignol C, Scharf S, Sachse K, Berthon P, Durand B, Virlogeux-Payant I, **Borel N**, Laroucau K. Oral Uptake of *Chlamydia psittaci* by Ducklings Results in Systemic Dissemination. *PLoS One.* 2016 May 11;11(5):e0154860.
17. Bolz M, Ruggli N, **Borel N**, Pluschke G, Ruf MT. Local Cellular Immune Responses and Pathogenesis of Buruli Ulcer Lesions in the Experimental *Mycobacterium Ulcerans* Pig Infection Model. *PLoS Negl Trop Dis.* 2016 Apr 29;10(4):e0004678.
18. Leonard CA, Dewez F, **Borel N**: Penicillin G-induced chlamydial stress response in a porcine strain of *Chlamydia pecorum*. *Int J Microbiol.* 2016;2016:3832917.
19. Donati M, Balboni A, Laroucau K, Aaziz R, Vorimore F, **Borel N**, Morandi F, Vecchio Nepita E, Di Francesco A: Tetracycline susceptibility in *Chlamydia suis* pig isolates. *PLoS One.* 2016 Feb 25;11(2):e0149914.
20. **Borel N**, Leonard C, Slade J, Schoborg RV: Chlamydial antibiotic resistance and treatment failure in veterinary and human medicine. *Curr Clin Micro Rpt* February 2016 (Review).
21. Lüttgenau J, Mang H, **Borel N**, Bruckmaier RM, Bollwein H. Ultrasonographic examination reduces the percentage of unsuccessful inseminations in dairy cows. *Theriogenology.* 2016 Mar 1;85(4):664-70.
22. Marti H, Blenn C, **Borel N**: The contribution of temperature, exposure intensity and visible light to the inhibitory effect of irradiation on acute chlamydial infection. *J Photochem Photobiol B.* 2015 Dec;153:324-33
23. Hoffmann K, Schott F, Donati M, Di Francesco A, Hässig M, Wanninger S, Sidler X, **Borel N**: Prevalence of chlamydial infections in fattening pigs and their influencing factors. *PLoS One.* 2015 Nov 30;10(11):e0143576.
24. **Borel N**: Der Pathologe ist kein schlechter Arzt, er kommt jeweils nur zu spät! *Schweiz Arch Tierheilkd.* 2015 Oct;157(10):527, 543.

25. Meletta R, **Borel N**, Stolzmann P, Astolfo A, Klohs J, Stampanoni M, Rudin M, Schibli R, Krämer SD, Müller Herde A: Ex vivo differential phase contrast and magnetic resonance imaging for characterization of human carotid atherosclerotic plaques. *Int J Cardiovasc Imaging*. 2015 Oct;31(7):1425-34.
26. Rüegg SR, Regenscheit N, Origgi FC, Kaiser C, **Borel N**: Detection of *Chlamydia pneumoniae* in a collection of captive snakes and response to treatment with marbofloxacin. *Vet J*. 2015 Sep;205(3):424-6.
27. Leonard CA, Schoborg RV, **Borel N**: Damage/Danger associated molecular patterns (DAMPs) modulate *Chlamydia pecorum* and *C. trachomatis* serovar E inclusion development in vitro. *PLoS One*. 2015 Aug 6;10(8):e0134943.
28. Opota O, Jatou K, Branley J, Vanrompay D, Erard V, **Borel N**, Longbottom D, Greub G: Improving the molecular diagnosis of *Chlamydia psittaci* and *Chlamydia abortus* infection with a species-specific duplex real-time PCR. *J Med Microbiol*. 2015 Jul 17.
29. Taylor-Brown A, Rüegg S, Polkinghorne A, **Borel N**: Characterisation of *Chlamydia pneumoniae* and other novel chlamydial infections in captive snakes. *Vet Microbiol*. 2015 Jul 9;178(1-2):88-93
30. Jelocnik M, Self R, Timms P, **Borel N**, Polkinghorne A. Novel sequence types of *Chlamydia pecorum* infect free-ranging Alpine ibex (*Capra ibex*) and red deer (*Cervus elaphus*) in Switzerland. *J Wildl Dis*. 2015 Apr;51(2):479-83
31. Basso W, Handke M, Sydler T, **Borel N**, Grimm F, Sidler X, Deplazes P: Involvement of *Toxoplasma gondii* in reproductive disorders in Swiss pig farms. *Parasitol. Int*. 2015 Apr;64(2):157-60.
32. Kreizinger Z, Szeredi L, Bacsadi Á, Nemes C, Sugár L, Varga T, Sulyok KM, Szigeti A, Ács K, Tóbiás E, **Borel N**, Gyuranecz M: Occurrence of *Coxiella burnetii* and *Chlamydiales* species in abortions of domestic ruminants and in wild ruminants in Hungary, Central Europe. *J Vet Diagn Invest*. 2015 Mar;27(2):206-10.
33. Meletta R, Müller Herde A, Chiotellis A, Isa M, Rancic Z, **Borel N**, Ametamey SM, Krämer SD, Schibli R: Evaluation of the radiolabeled boronic acid-based FAP inhibitor MIP-1232 for atherosclerotic plaque imaging. *Molecules*. 2015 Jan 27;20(2):2081-99.
34. **Borel N**, Grest P, Junge H, Wehrli Eser M: Vascular hamartoma in the central nervous system of a foal. *J Vet Diagn Invest*. 2014 Nov;26(6):805-9.
35. Leonard CL, **Borel N**: Chronic Chlamydial Diseases: From Atherosclerosis to Urogenital Infections. *Curr Clin Micro Rpt* August 2014; 1:61-72 (Review).
36. Burach F, Pospischil A, Hanger J, Loader J, Pillonel T, Greub G, **Borel N**: Chlamydiaceae and *Chlamydia*-like organisms in the koala (*Phascolarctos cinereus*)--organ distribution and histopathological findings. *Vet Microbiol*. 2014 Aug 6;172(1-2):230-40.

37. **Borel N**, Pospischil A, Hudson AP, Rupp J, Schoborg RV: The role of viable but non-infectious developmental forms in chlamydial biology. *Front Cell Infect Microbiol*. 2014 Jul 24;4:97
38. Marti H, Koschwanez M, Pesch T, Blenn C, **Borel N**: Water-filtered infrared a irradiation in combination with visible light inhibits acute chlamydial infection. *PLoS One*. 2014 Jul 14;9(7):e102239.
39. Müller A, Mu L, Meletta R, Beck K, Rancic Z, Drandarov K, Kaufmann PA, Ametamey SM, Schibli R, **Borel N**, Krämer SD: Towards non-invasive imaging of vulnerable atherosclerotic plaques by targeting co-stimulatory molecules. *Int J Cardiol*. 2014 Jul 1;174(3):503-15.
40. Beckmann KM, **Borel N**, Pocknell AM, Dagleish MP, Sachse K, John SK, Pospischil A, Cunningham AA, Lawson B: Chlamydiosis in British Garden Birds (2005-2011): Retrospective Diagnosis and Chlamydia psittaci Genotype Determination. *Ecohealth*. 2014; 11:544-563.
41. **Borel N**, Frey CF, Gottstein B, Hilbe M, Pospischil A, Franzoso F, Waldvogel A: Laboratory diagnosis of ruminant abortion in Europe. *Vet J*. 2014 May;200(2):218-29 (Review).
42. Stephan S, Guerra D, Pospischil A, Hilbe M, Weissenböck H, Novotný L, Greub G, Croxatto A, Teifke JP, Ulrich RG, Schlegel M, Ruhl S, Schotte U, Binder A, Sauer S, **Borel N**: Chlamydiaceae and Chlamydia-like organisms in free-living small mammals in Europe and Afghanistan. *J Wildl Dis*. 2014 Apr;50(2):195-204.
43. Schoborg RV, **Borel N**: Porcine epidemic diarrhea virus (PEDV) co-infection induced chlamydial persistence/stress does not require viral replication. *Front Cell Infect Microbiol*. 2014 Mar 13;4:20.
44. Baud D, Goy G, Osterheld MC, Croxatto A, **Borel N**, Vial Y, Pospischil A, Greub G: Role of *Waddlia chondrophila* placental infection in miscarriage. *Emerg Infect Dis*. 2014 Mar;20(3):460-4
45. Zbinden C, Stephan R, Johler S, **Borel N**, Bünter J, Bruckmaier R, Wellnitz O: The inflammatory response of primary bovine mammary epithelial cells to *Staphylococcus aureus* strains is linked to the bacterial phenotype. *PLoS One*. 2014 Jan 30;9(1):e87374.
46. Sa RCC, Cunningham AA, Dagleish MP, Wheelhouse N, Pocknell A, **Borel N**, Peck H, Lawson B: Psittacine beak and feather disease in a free-living ring-necked parakeet (*Psittacula krameri*) in Great Britain. *Eur J Wildl Res*. 2014;60:395-398.
47. **Borel N**, Pospischil A. Chapter 22: Pathogenic role of Chlamydia-related bacteria in ruminants and companion animals In: *Free-living amoebae: an evolutionary crib for emerging pathogens*, Editor: G. Greub, Wiley Blackwell, January 2014, ISBN: 978-1-118-10299-2.
48. Yin L, Lagae S, Kalmar I, **Borel N**, Pospischil A, Vanrompay D: Pathogenicity of low and highly virulent *Chlamydia psittaci* isolates for specific pathogen free chickens. *Avian Dis*. 2013, 57(2):242-247.
49. **Borel N**: A testing time for koalas. Editorial. *Vet J*. 2013 Mar;195(3):273-4.

50. Pospischil A, Kaiser C, Hofmann-Lehmann R, Lutz H, Hilbe M, Vaughan L, **Borel N**: Evidence for Chlamydia in wild mammals of the serengeti. *J Wildl Dis.* 2012 Oct;48(4):1074-8.
51. Koschwanez M, Meli M, Vöggtlin A, Greub G, Sidler X, Handke M, Sydler T, Kaiser C, Pospischil A, **Borel N**: Chlamydiaceae family, Parachlamydia spp., and Waddlia spp. in porcine abortion. *J Vet Diagn Invest.* 2012 Sep;24(5):833-9.
52. Regenscheit N, Holzwarth N, Greub G, Aeby S, Pospischil A, **Borel N**: Deer as a potential wildlife reservoir for Parachlamydia species. *Vet. J.* 2012 Aug;193(2):589-92.
53. **Borel N**, Regenscheit N, Di Francesco A, Donati M, Markov J, Masserey Y, Pospischil A. Selection for tetracycline-resistant Chlamydia suis in treated pigs. *Vet Microbiol.* 2012 Apr 23;156(1-2):143-6.
54. **Borel N**, Pospischil A, Dowling RD, Dumrese C, Gaydos CA, Bunk S, Hermann C, Ramirez JA, Summersgill JT. Antigens of persistent Chlamydia pneumoniae within coronary atheroma from patients undergoing heart transplantation. *J Clin Pathol.* 2012 Feb;65(2):171-7
55. Blumer S, Moestl K, Krametter-Froetscher R, Hässig M, Pospischil A, **Borel N**: [The seroconversion of *Chlamydia abortus* in sheep from the region of Vorarlberg before and after Alpine pasturing]. *Schweiz Arch Tierheilkd.* 2012 Jan;154(1):13-7.